The fifth spectrum of platinum (Pt V): analysis of the $(5d^6 + 5d^56s) - 5d^56p$ transition array

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Abstract. The spectrum of platinum was observed in the 300 - 2100 Å wavelength region. The $(5d^6 + 5d^56s) - 5d^56p$ transition array of four times ionized platinum, Pt V, has been investigated and 1659 spectral lines have been classified in the region of 460 - 1730 Å. The analysis has led to the determination of the $5d^6$, $5d^56s$ and $5d^56p$ configurations. Thirty two of 34 theoretically possible $5d^6$ levels, 45 of 74 possible $5d^56s$ levels and 181 of 214 possible $5d^56p$ levels have been established. The orthogonal operators technique was used to calculate the level structure and transition probabilities. The energy parameters have been determined by the least squares fit to the observed levels. Calculated transition probability and energy values, as well as LS -compositions obtained from the fitted parameters are presented.

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1. Introduction and experiment

In 1991, Pt II lines were used to demonstrate an outstanding abundance of platinum in the chemically peculiar star χ Lupi [1]. This application renewed interest in investigation of platinum spectra. Following year the newly observed and accurately measured low ionization laboratory platinum spectra [2] were complemented with the improved descriptions of Pt I [3] and Pt II [4]. An analysis of the third spectrum of platinum, Pt III, was reported in 1993 [5], thus extending complexity of the studied ground-state configuration of Pt ions from $5d^9$ to $5d^8$. Analyses of other Pt ions having rather simple ground-state configurations, $5d$ and $5d^2$, were published four and nine years later, Pt IX [6] and Pt VIII [7], respectively. Significantly more complicated platinum spectra with four to seven electrons in the outer $5d$ -shell, such as Pt IV, Pt V, Pt VI and Pt VII, have not been published yet.

The purpose of the present work is to study the spectrum of four times ionized platinum, Pt V, which has not been investigated before. The ion has the $5d^6$ ground-state configuration, and the lowest three configurations in both parities of Pt V are overlapping. Therefore, the spectrum is extremely complex. The current analysis became possible due to refinement in theoretical calculations utilizing the orthogonal operators approach [8-11], development of the program suite IDEN [12,13], and successful analyses of the neighboring Os VI, Os V, Os IV, Ir VI, Ir V, Au V, and Ir IV spectra [14-20].

The spectrograms for the current analysis have been photographed in the wavelength region of 300 - 2100 Å at the Institute of Spectroscopy, Troitsk, Russian Federation. The experimental setup was the same as described in Ref. [20]. Lines of different ionization stages could be discriminated in the spectrograms. The plates were measured on an automatic comparator controlled by the system for automatic processing of photo-spectrograms [21] and initially reduced by using impurity lines of O, C, N, Al and Si [22] present in the spectrograms.

The initial uncertainty of wavelength measurements was about 0.005 Å and 0.010 Å for the wavelengths below and higher than about 1000 Å, respectively, although it increased to about 0.015 Å locally for some sub-regions due to the lack of standards, imperfection of the plate holder and deformation of photo-emulsion, most notably at the ends of the photographic plates. We have improved the accuracy of our wavelength measurements in the course of the analysis. The final list of identified lines has standard deviations of isolated lines from the calculated positions amounting to 0.003 Å and 0.005 Å in the regions of 460 - 1165 Å and 1165 - 1730 Å, respectively, and the spectrograms contain Pt lines appeared in the second order. Although presence of these lines complicated the analysis, it helped us to improve wavelength measurements by using the secondary standards derived from these second-order lines because the lines resolved in the second order were measured more accurately. The use of internally derived Ritz standards also contributed to improvement of the measurements.

2. Level optimization

An iterative level optimization procedure (LOP) is utilized [20] in the IDEN computer program [12,13] for the energy level system optimization. The quality of the analysis was verified by considering the uncertainty of determination of each given level with respect to the levels directly connected to it by identified transitions. If the uncertainties of experimental wavelengths are correctly estimated, the weighted mean variance (WMV) of an energy level given by Eq. (7) of Ref. [20] is considered to represent the uncertainty (squared) of the level with respect to the levels directly connected to it. Eq. (8) of Ref. [20] re-estimates the uncertainties of the involved experimental wavelengths based on their deviations from the calculated (Ritz) values and uses these uncertainties for the WMV calculation of the level. All uncertainties given in this paper are at the level of one standard deviation.

Spectral lines that are masked, blended, or having doubtful identifications are not included in the LOP. We also have excluded from the optimization all levels determined by a single transition. If the uncertainties of wavelengths of the spectral lines used in the LOP are estimated correctly, and all disturbed lines are removed from the optimization, we expect the values given by Eq. (8) of Ref. [20] to be close to or smaller than those given by Eq. (7) of Ref. [20]. We verify this relation for each level and use it as a quality check of the results of LOP and the entire analysis.

3. Analysis

The ion under investigation belongs to the W I isoelectronic sequence. The ground-state configuration of Pt V is $5d^6$ and the lowest two excited configurations of different parities are $5d^56s$ and $5d^56p$. Only three spectra in the sequence have been investigated previously: W I, Re II, and Ir IV [24-26,20]. To obtain the initial parameters for the Pt^{4+} ion studied here, a general procedure for inter- and extrapolation of energy parameters of ions in a larger than a sequence group of neighboring elements (e.g., ions with open 5d-shell of the platinum group elements) has been employed [27]. The data on the W I and Re II spectra could not be used for extrapolation of parameters of Pt V because when the ionization stage lowers, the trends of parameters or scaling factors of their *ab initio* values become more irregular, especially when we approach the third and second spectra [8,28,29]. The published data on the Os VI, Os V, Os IV, Ir VI, Ir V, Au V, and Ir IV spectra [14-20] and our unpublished data on the Os III, Pt VI, and Pt IV spectra were the most helpful in the estimation of Pt V parameters.

In the current research we simultaneously have analyzed the Pt VII, Pt VI, Pt V, and Pt IV spectra by utilizing the same sets of spectrograms containing spectra photographed under different source conditions. This allowed us to avoid line misidentifications in the very dense platinum spectra recorded, where arrays of spectral lines belonging to different ions are overlapping, and it is difficult to distinguish lines belonging to ions of close ionization stages.

The process of finding levels, identification of lines and optimization of level energies was carried out by utilizing the program suite IDEN [12,13]. To verify our optimized (by IDEN) energy values, and to calculate level uncertainties and uncertainties of the calculated (Ritz) wavelengths, the program LOPT [23] was used. In the region of 460 - 1730 Å, we have identified 1659 spectral lines belonging to the $(5d^6 + 5d^56s) - 5d^56p$ transition array of Pt V. Sixty three spectral lines are doubly classified, two lines have triple classification and one line shares four classifications. The verification of the number of multiply classified lines was based on the following estimation. The most reach of lines region of 470 - 670 Å contains about 800 identified spectral lines. This gives us an average distance between two lines of about 250 mÅ. For our typical line widths of 25 - 50 mÅ, we may expect that 10% - 20% of lines will be overlapped. For 800 classified lines, it gives 80 - 160 possible blended lines. Thus, the number of multiply identified lines in our analysis is reasonable.

The list of identified lines is presented in Table 1. Transition probabilities (gA) have been calculated from the final fitted parameter values and intensities of the spectral lines (Int) have been obtained by measuring the plate darkening. The optical density was converted to spectral intensity and the spectral background approximated by a spline curve was subtracted. For the isolated, unperturbed and unsaturated lines originating from the same upper level or from close upper levels, the agreement between gA and Int is quite good. Accounting for the Boltzmann factor, describing a decrease of population for levels with increasing energy, agreement between the presented gA and Int is good throughout the entire list. In each case when the intensity of an identified spectral line is notably higher than expected, the expected value is given in Table 1. The program LOPT [23] was used to calculate the Ritz wavelength ($Unc \lambda_{calc}$) uncertainties. The numbers of observed transitions used to determine the odd and even level involved in the particular transition given in the table, N_{odd} and N_{even} , are helpful for detecting local systematic deviations (LSD) [30,20], which is done by comparing along the linelist values of differences between the measured and Ritz wavelengths, $\Delta(\lambda)$. Due to strong mixing of levels we omit labels in the *LS*-coupling scheme in Table 1. For each transition, we include a name of the linelist part (pa - pc) used to specify the wavelength uncertainty in Table A, the symbol "*" for transitions that were not used in the LOP, expected line intensity where appropriate, derived from the gA and Int comparison, and comments for masked and blended lines, and lines that are also identified as belonging to another ion or impurity. Transitions attributed to lines that are masked much stronger than expected, with suspiciously large deviations or small gA values, for which chances of wrong identification increase, were excluded from the LOP. If a known line of another ion or impurity blends line, we specify the blending spectrum in parentheses following the "bl" symbol. If the line is also identified with a transition in another ion but does not appear as a blend in the spectrogram, we do not give the "bl" symbol, although blending is possible due to a near coincidence of wavelengths. In addition, if the line is also identified with

another Pt ion (e.g., Pt IV) and, when using the same linelist, the expected intensity of that identification (e.g., 700) is lower than the observed line intensity, we give "Pt IV (700)".

These values have been obtained with two sets of plates, which could be under somewhat different experimental conditions. Parts pa and pb in Table A correspond to two plates from the same set (same exposure), and the part pc corresponds to a plate from a different set (exposure). Different exposures may have different kT values. Boltzmann factor, $\exp(-E/kT)$, is essential for the correct comparison of the presented gA and Int .

In Tables 2 and 3 we show experimental and calculated energy values of the even parity levels in the $5d^6$ and $5d^56s$ configurations and the odd parity levels in the $5d^56p$ and $5d^46s6p$ configurations of Pt V, respectively. The program LOPT [23] was used to calculate the level uncertainties. They are given with respect to the "base" even level at $106085.51 \text{ cm}^{-1} (J = 4)$. Excitation energy uncertainty for any level can be estimated by combining in quadrature the given uncertainty with the uncertainty of the base level. Previously we have mentioned that we excluded from the LOP procedure all single transition ($N_{opt} = 1$) levels. For each such level, we set its value equal to the sum (if the level is odd) or to the difference (if the level is even) of the opposite parity level value and the connecting wavenumber. The values of $rwmv_2$ of such levels are set equal to the calculated by Eq. (7) of Ref. [20] $rwmv_1$ values, which are, in turn, equal to the estimated uncertainties of the corresponding wavenumbers (see, for instance, the level at $218676.65 \text{ cm}^{-1}, J = 0$).

In the present analysis, 32 of 34 theoretically possible $5d^6$ levels, 45 of 74 possible $5d^56s$ levels, and 181 of 214 possible $5d^56p$ levels have been established. Levels that have not been established either produce too weak transitions to be observed on our plates or are expected to give rise to only one or two relatively weak lines that cannot be unambiguously separated among several possibilities.

For the assignment of initial estimated wavelength uncertainties, which are based on the available standards and their distribution around the wavelength interpolation curve, and also on expected increase of uncertainty near ends of the plates, the linelist was divided into three parts, pa - pc (see Table 1, last column). The root-mean-square (rms) deviation of wavelengths of the undisturbed experimental lines from their calculated (Ritz) positions have been calculated after the LSD corrections of the linelist in course of the analysis and after the final LOP run, for each part. These deviations are presented in Table A below, where for each linelist part the number of lines used in the LOP is also given. The analysis of the Pt V spectrum [7] that we have performed simultaneously with the present Pt IV analysis was very helpful in finding LSDs.

Table A
Description of linelist parts.

Linelist part	pa	pb	pc
Final estimated uncertainty, mÅ	3	4	6
Resulting <i>rms</i> , mÅ	3	3	5
Number of lines used in LOP	819	288	284
Wavelength range, Å	460 - 925	935 - 1165	1165 - 1730

The *rms* deviations of all undisturbed identified lines from their Ritz positions, including lines not used in the LOP, are 0.003 Å and 0.005 Å in the regions of $460 - 1165 \text{ Å}$ and $1165 - 1730 \text{ Å}$, respectively. The final estimated uncertainties of wavelength measurements that were used for the $rwmv_1$ and $rwmv_2$ calculations and in the program LOPT [23] are also shown in Table A. They are square root values of combinations of squares of the statistical and systematic uncertainties, where the latter were estimated from the standard deviations of wavelengths of reference lines from their positions derived from the calibration curves. We have found that the optimized level values given by the IDEN's LOP and those given by the program LOPT are in very good agreement - they differ by a small fraction of calculated level uncertainties. Values of the differences are close to (and resulted from) the rounding errors of the experimental wavelengths presented in Table 1 and the rounding errors of the level values given by the LOPT. The rounding error of the presented wavelengths is $< 0.5 \text{ mÅ}$. It corresponds to the wavenumber errors of $< 0.02 \text{ cm}^{-1}$ and $< 0.21 \text{ cm}^{-1}$ for the last and first lines presented in Table 1, respectively.

Comparison of the values of $rwmv_1$ and $rwmv_2$ in Tables 2 and 3 shows consistency: $rwmv_1 \geq rwmv_2$ for 80% of levels; 17% and 19% of levels have $rwmv_2$ values greater than $rwmv_1$ values, but within 30% and

50%, respectively. Only two of 258 found levels have rwmv_2 values twice greater than rwmv_1 values: levels at $222933.07 \text{ cm}^{-1}$ and $184216.83 \text{ cm}^{-1}$. They were represented in the LOP by three and five transitions with somewhat large but not critical deviations from the calculated values. These two levels also have one and three additional (not included in the LOP) supporting identified transitions, respectively. Therefore, we consider the identification of these two levels to be correct. We do not have cases when the value of the coefficient A given by Eq. (4) of Ref. [20] is large enough to treat the corresponding level in a special way, as we treated the levels determined by a single transition. The maximum coefficient value of 5.3 is shown by the level at $205835.07 \text{ cm}^{-1}$, $J = 7$. In the LOP, the level is represented by two lines at $543.052 \text{ \AA}$ and $1071.299 \text{ \AA}$, with their wavenumber weight ratio being about 8.2 that is responsible for the somewhat large value of A . This level has consistent rwmv_1 and rwmv_2 values and two lines are strong, as expected. It has an additional supporting identified line which is strong but shares identification with a transition from another level, therefore this line was not included in the LOP.

Finally, the examination of the values N , N_{opt} , rwmv_1 , and rwmv_2 in Tables 2 and 3 indicates the most accurately determined level at $106085.51 \text{ cm}^{-1}$. It has the smallest rwmv_1 (0.07 cm^{-1}), $\text{rwmv}_1 > \text{rwmv}_2$, ($0.07 \text{ cm}^{-1} > 0.04 \text{ cm}^{-1}$) and one of the largest $N_{\text{opt}} = 22$. This level was chosen as the "base" level in the current presentation of the analysis, and the same $5d^5 6s$ level was selected as the "base" level in the Ir IV analysis [20]. The values of N and N_{opt} , 26 and 22, respectively, are the same for this level in Pt V and Ir IV. These values of rwmv_1 and rwmv_2 for the Pt V base level (see above) are close to those of the Ir IV base level: 0.05 cm^{-1} and 0.04 cm^{-1} . Compositions of the two base levels are very close; the Pt V level composition is 38% (4G) 3G + 15% (2G_2) 3G + 14% (2F_1) 3F , while the Ir IV level has only slightly different percentage: 42%, 15% and 13%, respectively.

4. Calculations

The theoretical description and least squares fitting (LSF) of the configurations is given in the framework of the orthogonal operators approach. Tables 4 and 5 present the obtained (or kept fixed) parameters in the calculations for the even and odd systems. The parameter values were obtained in the final LSF. The *ab initio* values of the parameters were calculated using the Hartree-Fock method with relativistic correction (HFR) implemented in the code developed by Cowan [31]. For the orthogonal electrostatic parameters, the *ab initio* HFR values were calculated as in Ref. [10] from the Slater parameters given by the Cowan code. The obtained (or predetermined for fixed parameters) scaling factors (LSF/HFR) are also given in Tables 4 and 5.

In both the even and odd parity systems, three configurations were included in the calculations: ($5d^6 + 5d^5 6s + 5d^4 6s^2$) and ($5d^5 6p + 5d^4 6s 6p + 5d^3 6s^2 6p$). The interaction between the configurations was added explicitly. The interaction integrals, parameters of unknown configurations and some parameters of the studied configurations were kept fixed at the predetermined values.

As Tables 4 and 5 indicate, the scaling factors for the strong electrostatic core operators O_2 , O_2' and spin-orbit interaction parameter ζ_d for the $5d^6$, $5d^5 6s$ and $5d^5 6p$ configurations are close to each other. The parameters E_α and E_β are also consistent for the three configurations. The parameters of the 2-particle magnetic interaction of the *ds*-type (A_{mso}) in $5d^5 6s$ and of the *dp*-type (Z_{II}^k) in $5d^5 6p$ configuration are well defined with a small uncertainty. These values are in agreement with those obtained in Os V, Os IV, Au V, and Ir IV spectra [15,16,19,20]. The mean deviations of the fit for the even and odd systems in Pt V are 18 cm^{-1} and 30 cm^{-1} , close to those in Ir IV [20]: 20 cm^{-1} and 36 cm^{-1} .

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Explanation of Tables

Table 1. Classified lines in the ($5d^6 + 5d^56s$) - $5d^56p$ transition array of Pt V

gA	Transition probability ($10^7 s^{-1}$)
Int	Intensity of the experimental spectral line (relative)
λ	Wavelength of the experimental spectral line ($\text{\AA}$)
ν	Wavenumber of the experimental spectral line (cm^{-1})
λ_{calc}	Calculated (Ritz) wavelength ($\text{\AA}$)
Unc λ_{calc}	Uncertainty of the calculated (Ritz) wavelength ($\text{\AA}$)
$\Delta(\nu)$	Difference between the experimental and Ritz wavenumbers (cm^{-1})
$\Delta(\lambda)$	Difference between the experimental and Ritz wavelengths ($\text{\AA}$)
N_{odd}	Number of observed transitions used to determine the odd level involved in the transition
N_{even}	Number of observed transitions used to determine the even level involved in the transition
Even level	Experimental energy value (cm^{-1}), J -value (in parentheses) and the configuration of the even level involved in the transition
Odd level	Experimental energy value (cm^{-1}) and J -value (in parentheses) of the odd level involved in the transition
Remark	Remarks for the identified transitions:
m	The Pt V line is masked by some other line
200	Expected intensity value is 200
bl	The line is blended by a close line
*	The transition has been excluded from LOP
pa - pc	Parts of the linelist with assigned wavelength uncertainties (see text, Table A).
Pt IV	(without "bl") The line is also identified as Pt IV line. The line does not appear as a blend in the spectrogram, but blending is possible due to a near coincidence of wavelengths.
Pt IV (400)	The line is also identified as Pt IV line with expected intensity 400
2d ord	The line has a contribution from a line seen in the 2d order

Table 2. Experimental and calculated energy levels (cm^{-1}) in the $5d^6$ and $5d^56s$ configurations of Pt V

E_{obs}	Observed (experimental) energy value (cm^{-1})
E_{calc}	Calculated from the least squares fitting (LSF) energy value (cm^{-1})
Δ	Difference between the observed and calculated energy values, $E_{obs} - E_{calc}$ (cm^{-1})
N	Number of transitions used to identify the energy level
N_{opt}	Number of transitions to the level used in the LOP and WMV calculations for the level (see text).
$rwmv_1$	Square root value of the weighted mean variance given by Eq. (7) of Ref. [20]
$rwmv_2$	Square root value of the weighted mean variance given by Eq. (8) of Ref. [20], except for the levels determined by a single line (see text).
Unc	Uncertainty of the level with respect to the "base" even level with $J = 4$ at $106085.51 cm^{-1}$ (see text).
Composition	LS -composition of the level. The number preceding the symbol " " and the term name has the following meaning: 1 stands for $5d^6$ and 2 stands for $5d^56s$.

Table 3. Experimental and calculated energy levels (cm^{-1}) in the $5d^56p$ and $5d^46s6p$ configurations of Pt V

Calculated levels of the $5d^46s6p$ configuration that are inside the energy range of the $5d^56p$ configuration are given. Other $5d^46s6p$ levels are omitted.

E_{obs}	Observed (experimental) energy value (cm^{-1})
E_{calc}	Calculated from the least squares fitting (LSF) energy value (cm^{-1})
Δ	Difference between the observed and calculated energy values, $E_{\text{obs}} - E_{\text{calc}}$ (cm^{-1})
N	Number of transitions used to identify the energy level
N_{opt}	Number of transitions from the level used in the LOP and WMV calculations for the level (see text).
rwmv_1	Square root value of the weighted mean variance given by Eq. (7) of Ref. [20]
rwmv_2	Square root value of the weighted mean variance given by Eq. (8) of Ref. [20], except for the levels determined by a single line (see text).
Unc	Uncertainty of the level with respect to the "base" even level with $J = 4$ at $106085.51 \text{ cm}^{-1}$ (see text).
Composition	LS-composition of the level. The number preceding the symbol " " and the term name has the following meaning: 1 stands for $5d^36p$ and 2 stands for $5d^46s6p$.

Table 4. Fitted and calculated parameter values (cm^{-1}) in the $5d^6$, $5d^56s$ and $5d^46s^2$ configurations of Pt V

Parameter	Parameter name
Fitted value	Parameter value (cm^{-1}) obtained in the final least squares fitting (LSF). Uncertainty of the fitted parameter value is given in parentheses.
HFR	<i>Ab initio</i> value of the parameter. It was calculated using the Hartree-Fock method with relativistic correction (HFR) implemented in the code developed by Cowan [31].
Fitted/HFR	Obtained (or predetermined for fixed parameters) scaling factors

Table 5. Fitted and calculated parameter values (cm^{-1}) in the $5d^56p$, $5d^46s6p$ and $5d^36s^26p$ configurations of Pt V

Parameter	Parameter name
Fitted value	Parameter value (cm^{-1}) obtained in the final least squares fitting (LSF). Uncertainty of the fitted parameter value is given in parentheses.
HFR	<i>Ab initio</i> value of the parameter. It was calculated using the Hartree-Fock method with relativistic correction (HFR) implemented in the code developed by Cowan [31].
Fitted/HFR	Obtained (or predetermined for fixed parameters) scaling factors

Table 1Classified lines in the $(5d^6 + 5d^56s) - 5d^56p$ transition array of Pt V.

gA (10 ⁷ s ⁻¹)	Int	λ (Å)	ν (cm ⁻¹)	λcalc (Å)	Unc λcalc (Å)	Δ(ν) (cm ⁻¹)	Δ(λ) (Å)	N _{odd}	N _{even}	Even level	Odd level	Remark	
146	78	468.253	213559.54	468.2544	0.0006	0.40	-0.001	12	33	5d ⁶	0.00(4)	213559.13(5)	pa
169	632	485.257	206076.24	485.2567	0.0008	-0.26	0.001	10	25	5d ⁶	10826.80(1)	216903.30(2)	pa * 200
123	84	490.870	203719.80	490.8732	0.0007	1.20	-0.003	6	28	5d ⁶	21691.03(6)	225409.63(6)	pa *
115	95	492.870	202893.42	492.8699	0.0010	0.12	0.000	7	42	5d ⁶	6026.34(2)	208919.64(1)	pa
1323	463	493.210	202753.19	493.2109	0.0009	0.17	0.000	5	40	5d ⁶	33865.93(5)	236618.95(4)	pa
158	793	494.060	202404.77	494.0585	0.0005	-0.42	0.001	16	41	5d ⁶	7612.63(3)	210017.82(4)	pa 300, Pt VI(700)
2195	496	496.206	201529.20	496.2066	0.0016	0.23	-0.001	3	18	5d ⁶	38723.84(6)	240252.81(5)	pa
306	218	496.919	201239.88	496.9141	0.0009	-2.16	0.005	4	28	5d ⁶	21691.03(6)	222933.07(7)	pa
144	102	497.041	201190.57	497.0459	0.0011	1.89	-0.005	6	42	5d ⁶	22774.76(2)	223963.44(1)	pa
443	257	498.337	200667.46	498.3332	0.0008	-1.49	0.004	7	40	5d ⁶	16430.43(4)	217099.38(3)	pa
261	118	498.736	200507.00	498.7360	0.0007	0.12	0.000	8	40	5d ⁶	30610.18(4)	231117.06(3)	pa
322	128	499.993	200002.80	499.9867	0.0010	-2.52	0.006	5	46	5d ⁶	36613.63(3)	236618.95(4)	pa *
263	268	501.204	199519.40	501.2045	0.0007	0.06	0.000	13	42	5d ⁶	6026.34(2)	205545.67(2)	pa
2377	895	501.447	199422.95	501.4489	0.0010	0.83	-0.002	5	18	5d ⁶	38723.84(6)	238145.96(5)	pa Pt VI(450)
667	615	501.780	199290.72	501.7803	0.0008	0.32	-0.001	5	28	5d ⁶	21691.03(6)	220981.43(6)	pa 300, Pt VI(300)
48	65	501.943	199225.77	501.9460	0.0005	1.15	-0.003	13	40	5d ⁶	16430.43(4)	215655.04(5)	pa *
179	193	502.067	199176.48	502.0740	0.0006	2.65	-0.007	13	33	5d ⁶	0.00(4)	199173.83(4)	pa *
665	688	502.230	199112.00	502.2281	0.0012	-0.71	0.002	7	46	5d ⁶	36613.63(3)	235726.34(2)	pa 400
32	40	502.351	199064.16	502.3464	0.0008	-1.67	0.004	13	25	5d ⁶	10826.80(1)	209892.63(2)	pa *
267	227	503.106	198765.43	503.1065	0.0007	0.37	-0.001	10	28	5d ⁶	21691.03(6)	220456.09(5)	pa
204	160	503.183	198735.01	503.1821	0.0008	-0.18	0.000	9	41	5d ⁶	7612.63(3)	206347.83(3)	pa
240	200	503.753	198509.83	503.7521	0.0006	-0.50	0.001	18	42	5d ⁶	6026.34(2)	204536.67(3)	pa
317	159	504.258	198311.06	504.2586	0.0007	0.12	0.000	8	50	5d ⁶	32806.12(4)	231117.06(3)	pa
278	169	504.792	198101.32	504.7905	0.0012	-0.68	0.002	7	10	5d ⁶	10817.64(0)	208919.64(1)	pa
143	185	505.034	198006.47	505.0415	0.0007	2.95	-0.008	12	51	5d ⁶	24694.24(3)	222697.77(3)	pa *
212	371	505.215	197935.34	505.2209	0.0008	2.10	-0.005	10	25	5d ⁶	10826.80(1)	208760.03(2)	pa
91	48	505.684	197752.11	505.6767	0.0010	-2.69	0.007	11	40	5d ⁶	16430.43(4)	214185.23(3)	pa *
298	410	506.153	197568.76	506.1551	0.0005	0.87	-0.002	13	41	5d ⁶	7612.63(3)	205180.52(4)	pa
195	204	507.810	196924.24	507.8100	0.0006	0.21	-0.001	18	41	5d ⁶	7612.63(3)	204536.67(3)	pa
303	384	508.059	196827.49	508.0594	0.0006	0.13	0.000	12	41	5d ⁶	7612.63(3)	204440.00(4)	pa
847	430	508.648	196599.65	508.6445	0.0006	-1.31	0.003	14	33	5d ⁶	0.00(4)	196600.97(5)	pa
86	188	508.819	196533.62	508.8183	0.0007	-0.18	0.000	10	33	5d ⁶	0.00(4)	196533.80(3)	pa
388	144	509.120	196417.39	509.1187	0.0006	-0.48	0.001	10	40	5d ⁶	33865.93(5)	230283.80(4)	pa
1212	657	509.241	196370.83	509.2411	0.0008	0.21	-0.001	6	50	5d ⁶	32806.12(4)	229176.75(3)	pa
666	223	510.260	195978.64	510.2607	0.0017	0.37	-0.001	3	30	5d ⁶	44274.55(4)	240252.81(5)	pa

716	1028	511.096	195658.04	511.0870	0.0007	-3.35	0.009	12	42	5d ⁶	21096.97(5)	216758.36(4)	pa * 500, Pt VI(550)
249	200	511.766	195401.96	511.7663	0.0005	0.28	-0.001	19	42	5d ⁶	6026.34(2)	201428.01(3)	pa
933	386	512.144	195257.55	512.1443	0.0012	0.06	0.000	7	48	5d ⁶	40468.85(3)	235726.34(2)	pa
282	530	512.523	195113.08	512.5190	0.0006	-1.62	0.004	16	33	5d ⁶	0.00(4)	195114.70(4)	pa
297	508	512.556	195100.79	512.5607	0.0006	1.95	-0.005	14	40	5d ⁶	16430.43(4)	211529.26(4)	pa
235	150	512.783	195014.34	512.7792	0.0007	-1.38	0.004	12	42	5d ⁶	22774.76(2)	217790.49(3)	pa
118	354	513.284	194823.96	513.2884	0.0006	1.71	-0.004	12	42	5d ⁶	6026.34(2)	200848.59(2)	pa * 200, Pt VI(100)
116	147	513.563	194718.11	513.5609	0.0008	-0.76	0.002	13	25	5d ⁶	10826.80(1)	205545.67(2)	pa
168	73	514.128	194504.17	514.1298	0.0007	0.74	-0.002	8	46	5d ⁶	36613.63(3)	231117.06(3)	pa
446	325	514.858	194228.12	514.8610	0.0007	0.93	-0.002	11	42	5d ⁶	21096.97(5)	215324.16(4)	pa
75	111	515.341	194046.12	515.3446	0.0007	1.22	-0.003	13	42	5d ⁶	6026.34(2)	200071.24(2)	pa
969	972	515.566	193961.59	515.5595	0.0006	-2.43	0.006	13	28	5d ⁶	21691.03(6)	215655.04(5)	pa
116	129	515.660	193926.12	515.6679	0.0013	2.86	-0.008	5	48	5d ⁶	34478.40(3)	228401.66(3)	pa *
101	326	515.826	193863.82	515.8229	0.0013	-1.16	0.003	6	11	5d ⁶	30098.45(0)	223963.44(1)	pa
200	380	515.950	193817.12	515.9549	0.0005	1.74	-0.005	19	41	5d ⁶	7612.63(3)	201428.01(3)	pa 200
233	139	516.127	193750.84	516.1320	0.0007	1.93	-0.005	8	40	5d ⁶	30610.18(4)	224359.08(5)	pa
365	150	516.346	193668.62	516.3418	0.0007	-1.54	0.004	10	46	5d ⁶	36613.63(3)	230283.80(4)	pa
662	372	516.572	193583.93	516.5766	0.0007	1.82	-0.005	10	50	5d ⁶	32806.12(4)	226388.24(5)	pa
26	43	517.029	193412.79	517.0329	0.0006	1.50	-0.004	16	33	5d ⁶	0.00(4)	193411.29(5)	pa *
441	365	517.166	193361.33	517.1652	0.0012	-0.49	0.001	5	48	5d ⁶	40468.85(3)	233830.67(2)	pa
227	183	517.655	193178.70	517.6549	0.0011	-0.17	0.000	7	42	5d ⁶	22774.76(2)	215953.64(2)	pa
266	414	517.955	193066.93	517.9457	0.0008	-3.51	0.009	14	42	5d ⁶	6026.34(2)	199096.78(3)	pa * 300, bl
268	440	518.509	192860.65	518.5132	0.0012	1.54	-0.004	6	29	5d ⁶	31104.34(1)	223963.44(1)	pa
94	138	518.720	192782.31	518.7179	0.0008	-0.70	0.002	13	42	5d ⁶	21096.97(5)	213879.98(4)	pa *
117	186	519.315	192561.28	519.3178	0.0007	0.97	-0.003	13	40	5d ⁶	16430.43(4)	208990.74(3)	pa
2080	739	519.439	192515.54	519.4391	0.0007	0.19	-0.001	5	40	5d ⁶	33865.93(5)	226381.28(4)	pa
254	504	519.575	192465.11	519.5826	0.0007	2.95	-0.008	12	42	5d ⁶	21096.97(5)	213559.13(5)	pa * 200,bl
185	721	519.595	192457.59	519.5923	0.0007	-1.02	0.003	13	41	5d ⁶	7612.63(3)	200071.24(2)	pa * 200
147	99	520.136	192257.45	520.1364	0.0008	0.19	-0.001	10	50	5d ⁶	32806.12(4)	225063.38(3)	pa *
362	207	520.238	192219.68	520.2397	0.0012	0.58	-0.002	5	46	5d ⁶	36613.63(3)	228832.73(2)	pa
788	487	520.595	192087.71	520.5958	0.0007	0.13	0.000	12	40	5d ⁶	30610.18(4)	222697.77(3)	pa
160	205	520.656	192065.32	520.6595	0.0007	1.20	-0.003	12	51	5d ⁶	24694.24(3)	216758.36(4)	pa
253	161	520.766	192024.97	520.7655	0.0010	-0.03	0.000	9	36	5d ⁶	25632.35(2)	217657.35(1)	pa
125	247	521.239	191850.54	521.2401	0.0006	0.36	-0.001	13	42	5d ⁶	6026.34(2)	197876.51(3)	pa
261	532	521.413	191786.51	521.4090	0.0013	-1.51	0.004	5	46	5d ⁶	36613.63(3)	228401.66(3)	pa 300, Pt VI
22	64	521.627	191707.76	521.6306	0.0009	1.22	-0.003	9	42	5d ⁶	6026.34(2)	197732.88(1)	pa *
933	851	522.023	191562.33	522.0257	0.0006	0.87	-0.002	15	33	5d ⁶	0.00(4)	191561.46(4)	pa
343	847	522.069	191545.45	522.0665	0.0008	-1.03	0.003	4	42	5d ⁶	21096.97(5)	212643.45(6)	pa
1640	847	522.069	191545.45	522.0741	0.0007	1.76	-0.005	6	40	5d ⁶	33865.93(5)	225409.63(6)	pa *
493	465	522.234	191484.90	522.2365	0.0008	0.75	-0.002	14	41	5d ⁶	7612.63(3)	199096.78(3)	pa
285	247	522.278	191468.73	522.2831	0.0009	1.69	-0.005	7	36	5d ⁶	25632.35(2)	217099.38(3)	pa

318	366	522.849	191259.92	522.8501	0.0011	0.52	-0.001	7	51	5d ⁶	24694.24(3)	215953.64(2)	pa
419	460	523.396	191059.74	523.3986	0.0006	0.76	-0.002	18	33	5d ⁶	0.00(4)	191058.98(4)	pa
320	360	523.742	190933.89	523.7510	0.0007	3.45	-0.009	13	40	5d ⁶	16430.43(4)	207360.87(4)	pa *
549	613	524.014	190834.78	524.0187	0.0007	1.89	-0.005	11	40	5d ⁶	16430.43(4)	207263.31(3)	pa
211	465	524.521	190650.10	524.5251	0.0006	1.47	-0.004	15	33	5d ⁶	0.00(4)	190648.63(4)	pa
897	392	524.952	190493.79	524.9533	0.0007	0.64	-0.002	8	40	5d ⁶	33865.93(5)	224359.08(5)	pa
678	588	524.995	190477.90	524.9947	0.0006	-0.21	0.001	15	41	5d ⁶	7612.63(3)	198090.74(4)	pa
244	328	525.115	190434.30	525.1210	0.0007	2.01	-0.006	14	42	5d ⁶	21096.97(5)	211529.26(4)	pa
804	949	525.368	190342.80	525.3638	0.0008	-1.50	0.004	9	51	5d ⁶	24694.24(3)	215038.55(2)	pa
313	277	525.482	190301.62	525.4833	0.0016	0.62	-0.002	3	36	5d ⁶	25632.35(2)	215933.35(1)	pa
774	714	525.586	190263.67	525.5858	0.0006	-0.20	0.001	13	41	5d ⁶	7612.63(3)	197876.51(3)	pa
250	704	525.663	190236.06	525.6642	0.0013	0.55	-0.002	7	29	5d ⁶	45490.83(2)	235726.34(2)	pa 300
119	117	526.123	190069.73	526.1296	0.0007	2.48	-0.007	12	38	5d ⁶	32630.51(2)	222697.77(3)	pa *
229	297	526.158	190056.91	526.1600	0.0006	0.63	-0.002	16	42	5d ⁶	6026.34(2)	196082.61(3)	pa
91	220	526.258	190020.97	526.2554	0.0008	-0.81	0.002	12	25	5d ⁶	10826.80(1)	200848.59(2)	pa
118	217	527.089	189721.46	527.0926	0.0006	1.49	-0.004	15	33	5d ⁶	0.00(4)	189719.97(3)	pa
839	569	527.210	189677.56	527.2161	0.0006	2.01	-0.006	15	40	5d ⁶	16430.43(4)	206105.98(4)	pa
203	167	527.728	189491.59	527.7296	0.0010	0.60	-0.002	11	51	5d ⁶	24694.24(3)	214185.23(3)	pa
49	211	527.915	189424.43	527.9131	0.0010	-0.68	0.002	12	42	5d ⁶	6026.34(2)	195451.45(2)	pa
475	386	527.963	189407.28	527.9658	0.0009	1.08	-0.003	9	36	5d ⁶	25632.35(2)	215038.55(2)	pa
128	181	528.418	189244.05	528.4171	0.0008	-0.39	0.001	13	25	5d ⁶	10826.80(1)	200071.24(2)	pa
71	62	528.576	189187.48	528.5811	0.0008	1.74	-0.005	13	51	5d ⁶	24694.24(3)	213879.98(4)	pa *
126	553	529.041	189021.16	529.0392	0.0008	-0.74	0.002	9	51	5d ⁶	24694.24(3)	213716.14(2)	pa * 150, Pt VI(300)
1019	902	529.131	188989.05	529.1377	0.0007	2.34	-0.007	6	42	5d ⁶	21096.97(5)	210083.67(6)	pa
574	644	529.319	188921.81	529.3213	0.0008	0.65	-0.002	10	41	5d ⁶	7612.63(3)	196533.80(3)	pa
156	644	529.319	188921.81	529.3222	0.0006	0.96	-0.003	16	42	5d ⁶	21096.97(5)	210017.82(4)	pa * 200
266	190	529.376	188901.69	529.3773	0.0008	0.51	-0.001	11	42	5d ⁶	22774.76(2)	211675.95(2)	pa
2001	1093	529.537	188844.36	529.5338	0.0007	-0.99	0.003	14	33	5d ⁶	0.00(4)	188845.35(5)	pa
921	551	529.815	188745.31	529.8181	0.0005	1.29	-0.004	15	42	5d ⁶	21096.97(5)	209840.99(5)	pa
776	740	530.010	188675.83	530.0124	0.0016	0.99	-0.003	3	40	5d ⁶	30610.18(4)	219285.02(3)	pa
1183	925	531.295	188219.49	531.2949	0.0007	0.12	0.000	12	48	5d ⁶	34478.40(3)	222697.77(3)	pa
1276	1091	531.310	188213.86	531.3131	0.0007	0.92	-0.003	10	33	5d ⁶	0.00(4)	188212.93(3)	pa
5694	1297	531.494	188148.74	531.4909	0.0007	-1.22	0.003	15	28	5d ⁶	21691.03(6)	209840.99(5)	pa
221	343	531.632	188099.90	531.6336	0.0006	0.43	-0.001	13	40	5d ⁶	30610.18(4)	218709.64(4)	pa
286	300	531.872	188015.13	531.8712	0.0012	-0.33	0.001	7	29	5d ⁶	31104.34(1)	219119.79(2)	pa
228	269	532.105	187932.94	532.1051	0.0014	0.14	0.000	5	48	5d ⁶	40468.85(3)	228401.66(3)	pa
1447	575	532.863	187665.36	532.8661	0.0009	0.96	-0.003	10	18	5d ⁶	38723.84(6)	226388.24(5)	pa
331	269	532.908	187649.79	532.9071	0.0007	-0.17	0.000	10	50	5d ⁶	32806.12(4)	220456.09(5)	pa
75	157	533.035	187604.80	533.0384	0.0006	1.07	-0.003	20	41	5d ⁶	7612.63(3)	195216.37(3)	pa
977	419	533.101	187581.89	533.1015	0.0014	0.36	-0.001	5	21	5d ⁶	41251.20(1)	228832.73(2)	pa
96	132	533.166	187558.67	533.1659	0.0012	-0.23	0.001	9	11	5d ⁶	30098.45(0)	217657.35(1)	pa

11	132	533.725	187362.58	533.7228	0.0006	-0.58	0.002	13	33	5d ⁶	0.00(4)	187363.17(5)	pa
1464	986	533.911	187297.20	533.9134	0.0008	0.91	-0.003	5	30	5d ⁶	44274.55(4)	231570.84(4)	pa
170	394	534.432	187114.54	534.4225	0.0008	-3.32	0.009	13	42	5d ⁶	22774.76(2)	209892.63(2)	pa * 200
153	394	534.432	187114.54	534.4293	0.0008	-0.96	0.003	5	40	5d ⁶	33865.93(5)	220981.43(6)	pa
643	483	534.463	187103.55	534.4623	0.0006	-0.39	0.001	15	40	5d ⁶	16430.43(4)	203534.37(5)	pa
185	215	534.550	187073.13	534.5513	0.0015	0.34	-0.001	5	11	5d ⁶	30098.45(0)	217171.25(1)	pa
534	631	534.813	186981.31	534.8117	0.0008	-0.39	0.001	11	51	5d ⁶	24694.24(3)	211675.95(2)	pa
1994	850	535.124	186872.47	535.1249	0.0010	0.20	-0.001	3	40	5d ⁶	33865.93(5)	220738.20(4)	pa
295	288	535.230	186835.71	535.2316	0.0007	0.69	-0.002	14	51	5d ⁶	24694.24(3)	211529.26(4)	pa
462	395	536.042	186552.65	536.0407	0.0010	-0.36	0.001	9	29	5d ⁶	31104.34(1)	217657.35(1)	pa
400	632	536.103	186531.21	536.1051	0.0006	0.62	-0.002	17	42	5d ⁶	6026.34(2)	192556.93(2)	pa
2697	891	536.228	186487.80	536.2241	0.0009	-1.40	0.004	7	40	5d ⁶	30610.18(4)	217099.38(3)	pa
419	318	536.323	186454.98	536.3256	0.0007	1.08	-0.003	9	50	5d ⁶	32806.12(4)	219260.02(5)	pa
1252	852	536.875	186263.06	536.8727	0.0007	-0.83	0.002	13	42	5d ⁶	21096.97(5)	207360.87(4)	pa
107	174	536.980	186226.64	536.9850	0.0010	1.68	-0.005	8	36	5d ⁶	25632.35(2)	211857.30(3)	pa *
202	193	537.030	186209.37	537.0305	0.0014	0.19	-0.001	6	13	5d ⁶	37754.26(0)	223963.44(1)	pa
678	676	537.215	186145.25	537.2160	0.0011	0.37	-0.001	7	42	5d ⁶	22774.76(2)	208919.64(1)	pa
549	477	537.511	186042.64	537.5084	0.0008	-0.96	0.003	11	36	5d ⁶	25632.35(2)	211675.95(2)	pa
75	289	537.558	186026.37	537.5614	0.0006	1.09	-0.003	15	33	5d ⁶	0.00(4)	186025.28(3)	pa
905	531	537.603	186010.73	537.6077	0.0007	1.48	-0.004	10	30	5d ⁶	44274.55(4)	230283.80(4)	pa Pt IV (200)
2001	813	538.690	185635.56	538.6908	0.0010	0.31	-0.001	8	18	5d ⁶	38723.84(6)	224359.08(5)	pa
874	400	538.716	185626.70	538.7170	0.0009	0.47	-0.001	8	29	5d ⁶	45490.83(2)	231117.06(3)	pa
2067	924	539.394	185393.38	539.3915	0.0007	-0.71	0.002	9	40	5d ⁶	33865.93(5)	219260.02(5)	pa
3275	1144	539.854	185235.23	539.8531	0.0007	-0.33	0.001	10	42	5d ⁶	21096.97(5)	206332.53(5)	pa O II
460	520	539.924	185211.36	539.9261	0.0006	0.81	-0.002	15	42	5d ⁶	6026.34(2)	191236.88(3)	pa
803	886	539.961	185198.56	539.9647	0.0008	1.26	-0.004	7	42	5d ⁶	6026.34(2)	191223.64(1)	pa
615	467	540.042	185170.61	540.0388	0.0007	-1.26	0.004	8	40	5d ⁶	30610.18(4)	215782.05(3)	pa
263	350	540.074	185159.67	540.0735	0.0007	-0.30	0.001	12	38	5d ⁶	32630.51(2)	217790.49(3)	pa
569	660	540.127	185141.68	540.1243	0.0006	-0.90	0.003	17	33	5d ⁶	0.00(4)	185142.58(5)	pa
272	200	540.461	185027.26	540.4621	0.0010	0.42	-0.001	9	38	5d ⁶	32630.51(2)	217657.35(1)	pa
1129	850	540.581	184985.98	540.5862	0.0007	1.62	-0.005	12	50	5d ⁶	32806.12(4)	217790.49(3)	pa
510	282	540.790	184914.63	540.7908	0.0009	0.23	-0.001	6	48	5d ⁶	40468.85(3)	225383.25(2)	pa
1458	810	541.002	184842.37	540.9976	0.0006	-1.34	0.004	13	40	5d ⁶	33865.93(5)	218709.64(4)	pa
1023	649	541.041	184828.74	541.0406	0.0017	-0.27	0.001	3	29	5d ⁶	31104.34(1)	215933.35(1)	pa
739	423	541.107	184806.23	541.1061	0.0017	-0.39	0.001	3	48	5d ⁶	34478.40(3)	219285.02(3)	pa
2344	950	541.376	184714.44	541.3775	0.0008	0.46	-0.001	11	40	5d ⁶	30610.18(4)	215324.16(4)	pa
4330	1120	541.589	184641.86	541.5900	0.0008	0.36	-0.001	10	28	5d ⁶	21691.03(6)	206332.53(5)	pa
745	1120	541.589	184641.86	541.5904	0.0013	0.47	-0.001	7	48	5d ⁶	34478.40(3)	219119.79(2)	pa 300
184	361	541.641	184624.17	541.6395	0.0011	-0.48	0.001	12	25	5d ⁶	10826.80(1)	195451.45(2)	pa
637	413	541.725	184595.44	541.7279	0.0009	0.91	-0.003	10	48	5d ⁶	40468.85(3)	225063.38(3)	pa
114	244	541.973	184511.14	541.9729	0.0007	0.07	0.000	11	50	5d ⁶	32806.12(4)	217317.19(5)	pa

1554	673	542.000	184501.78	542.0011	0.0015	0.30	-0.001	5	13	5d ⁶	49329.20(1)	233830.67(2)	pa
1649	1070	542.051	184484.42	542.0522	0.0006	0.33	-0.001	16	42	5d ⁶	21096.97(5)	205581.06(5)	pa
1141	1004	542.336	184387.71	542.3354	0.0007	-0.04	0.000	7	41	5d ⁶	7612.63(3)	192000.38(2)	pa
323	800	542.470	184341.89	542.4606	0.0015	-3.30	0.010	9	10	5d ⁶	10817.64(0)	195162.83(1)	pa * 200, bl(2d ord)
150	802	542.489	184335.40	542.4875	0.0013	-0.63	0.002	9	25	5d ⁶	10826.80(1)	195162.83(1)	pa 300
102	300	542.523	184323.95	542.5242	0.0006	0.38	-0.001	13	42	5d ⁶	6026.34(2)	190349.90(3)	pa
1727	781	542.807	184227.48	542.8109	0.0010	1.27	-0.004	5	33	5d ⁶	53919.76(4)	238145.96(5)	pa Pt VI(100)
1299	613	542.861	184209.29	542.8610	0.0012	0.06	0.000	4	18	5d ⁶	38723.84(6)	222933.07(7)	pa
3061	1060	543.052	184144.36	543.0531	0.0012	0.32	-0.001	3	28	5d ⁶	21691.03(6)	205835.07(7)	pa
545	548	543.231	184083.61	543.2316	0.0006	0.06	0.000	13	42	5d ⁶	21096.97(5)	205180.52(4)	pa
278	408	543.280	184067.01	543.2840	0.0008	1.22	-0.004	10	51	5d ⁶	24694.24(3)	208760.03(2)	pa
247	756	543.623	183951.04	543.6295	0.0006	2.22	-0.007	15	41	5d ⁶	7612.63(3)	191561.46(4)	pa * Pt VI
223	756	543.623	183951.04	543.6194	0.0008	-1.19	0.004	12	50	5d ⁶	32806.12(4)	216758.36(4)	pa * 250, Pt VI
1789	881	543.804	183889.92	543.8033	0.0007	-0.11	0.000	16	28	5d ⁶	21691.03(6)	205581.06(5)	pa
5247	1313	544.170	183766.07	544.1676	0.0006	-0.86	0.003	13	33	5d ⁶	0.00(4)	183766.93(4)	pa
465	529	544.590	183624.41	544.5904	0.0006	0.17	0.000	15	41	5d ⁶	7612.63(3)	191236.88(3)	pa
230	749	544.739	183574.22	544.7422	0.0009	1.15	-0.003	9	42	5d ⁶	22774.76(2)	206347.83(3)	pa * 200
1325	749	544.739	183574.22	544.7363	0.0011	-0.83	0.002	11	40	5d ⁶	30610.18(4)	214185.23(3)	pa
960	675	545.104	183451.30	545.1039	0.0007	0.04	0.000	11	40	5d ⁶	33865.93(5)	217317.19(5)	pa
433	552	545.375	183360.07	545.3731	0.0006	-0.63	0.002	14	40	5d ⁶	16430.43(4)	199791.13(5)	pa
255	552	545.375	183360.07	545.3800	0.0008	1.68	-0.005	13	36	5d ⁶	25632.35(2)	208990.74(3)	pa * 200
447	428	545.427	183342.46	545.4291	0.0014	0.56	-0.002	5	29	5d ⁶	45490.83(2)	228832.73(2)	pa
422	319	545.485	183323.23	545.4849	0.0012	0.10	0.000	7	38	5d ⁶	32630.51(2)	215953.64(2)	pa
154	200	545.520	183311.47	545.5178	0.0007	-0.62	0.002	12	48	5d ⁶	34478.40(3)	217790.49(3)	pa
196	294	545.644	183269.54	545.6436	0.0009	-0.26	0.001	13	40	5d ⁶	30610.18(4)	213879.98(4)	pa
114	275	545.678	183258.43	545.6826	0.0006	1.72	-0.005	13	41	5d ⁶	7612.63(3)	190869.34(2)	pa
406	304	545.991	183153.30	545.9960	0.0008	1.77	-0.005	8	38	5d ⁶	32630.51(2)	215782.05(3)	pa
1098	663	546.108	183114.06	546.1077	0.0030	0.00	0.000	1	29	5d ⁶	45490.83(2)	228604.89(1)	pa
288	369	546.309	183046.52	546.3141	0.0009	1.64	-0.005	7	25	5d ⁶	10826.80(1)	193871.68(1)	pa
856	925	546.781	182888.71	546.7817	0.0006	0.35	-0.001	18	33	5d ⁶	0.00(4)	182888.36(3)	pa
477	370	546.901	182848.45	546.8996	0.0006	-0.47	0.001	13	50	5d ⁶	32806.12(4)	215655.04(5)	pa
363	449	547.124	182774.02	547.1330	0.0008	3.11	-0.009	13	42	5d ⁶	22774.76(2)	205545.67(2)	pa * 350
2122	566	547.351	182698.06	547.3478	0.0011	-1.14	0.003	5	33	5d ⁶	53919.76(4)	236618.95(4)	pa
2191	1115	547.447	182666.25	547.4462	0.0009	-0.10	0.000	14	40	5d ⁶	16430.43(4)	199096.78(3)	pa
300	434	547.611	182611.51	547.6097	0.0009	-0.30	0.001	9	29	5d ⁶	31104.34(1)	213716.14(2)	pa
1557	931	547.746	182566.51	547.7379	0.0008	-2.57	0.008	11	51	5d ⁶	24694.24(3)	207263.31(3)	pa *
262	931	547.746	182566.51	547.7422	0.0009	-1.13	0.003	12	51	5d ⁶	24694.24(3)	207261.88(2)	pa
3033	1035	547.897	182515.92	547.8910	0.0008	-2.11	0.006	11	50	5d ⁶	32806.12(4)	215324.16(4)	pa
1971	806	547.931	182504.57	547.9267	0.0013	-1.59	0.005	7	46	5d ⁶	36613.63(3)	219119.79(2)	pa
998	782	548.115	182443.33	548.1188	0.0010	1.14	-0.003	3	40	5d ⁶	30610.18(4)	213052.38(3)	pa
1355	682	548.222	182407.96	548.2215	0.0009	-0.08	0.000	9	38	5d ⁶	32630.51(2)	215038.55(2)	pa

535	748	548.604	182280.81	548.6028	0.0008	-0.45	0.001	11	42	5d ⁶	6026.34(2)	188307.59(2)	pa
1099	748	548.604	182280.81	548.6067	0.0008	0.85	-0.003	12	48	5d ⁶	34478.40(3)	216758.36(4)	pa
4902	1019	548.673	182257.99	548.6740	0.0010	0.39	-0.001	5	18	5d ⁶	38723.84(6)	220981.43(6)	pa
315	565	548.892	182185.30	548.8878	0.0007	-1.30	0.004	10	42	5d ⁶	6026.34(2)	188212.93(3)	pa
832	775	548.971	182158.98	548.9724	0.0007	0.47	-0.001	7	42	5d ⁶	21096.97(5)	203255.48(6)	pa
639	406	549.108	182113.60	549.1075	0.0008	-0.09	0.000	10	30	5d ⁶	44274.55(4)	226388.24(5)	pa
709	425	549.159	182096.52	549.1608	0.0006	0.51	-0.002	13	46	5d ⁶	36613.63(3)	218709.64(4)	pa
1694	1041	549.428	182007.50	549.4283	0.0006	0.12	0.000	17	33	5d ⁶	0.00(4)	182007.38(4)	pa
279	223	549.739	181904.64	549.7443	0.0007	1.88	-0.006	8	48	5d ⁶	40468.85(3)	222371.61(4)	pa
1416	984	549.923	181843.64	549.9239	0.0007	0.30	-0.001	15	28	5d ⁶	21691.03(6)	203534.37(5)	pa
426	345	550.089	181788.83	550.0880	0.0006	-0.28	0.001	13	40	5d ⁶	33865.93(5)	215655.04(5)	pa
287	284	550.167	181763.02	550.1703	0.0007	1.12	-0.003	18	42	5d ⁶	22774.76(2)	204536.67(3)	pa
804	638	550.216	181746.67	550.2206	0.0015	1.40	-0.004	5	36	5d ⁶	25632.35(2)	207377.62(1)	pa
632	1090	550.264	181730.82	550.2665	0.0008	0.69	-0.002	17	25	5d ⁶	10826.80(1)	192556.93(2)	pa
5613	1090	550.264	181730.82	550.2601	0.0010	-1.43	0.004	10	18	5d ⁶	38723.84(6)	220456.09(5)	pa *
1534	937	550.478	181660.27	550.4780	0.0006	-0.05	0.000	15	40	5d ⁶	16430.43(4)	198090.74(4)	pa
371	1000	550.500	181653.11	550.4984	0.0009	-0.48	0.001	9	51	5d ⁶	24694.24(3)	206347.83(3)	pa 650
2768	1000	550.500	181653.11	550.5111	0.0015	3.72	-0.011	7	21	5d ⁶	54076.95(2)	235726.34(2)	pa *
80	154	550.566	181631.33	550.5669	0.0008	0.37	-0.001	11	36	5d ⁶	25632.35(2)	207263.31(3)	pa
1707	1092	550.769	181564.26	550.7686	0.0008	-0.20	0.001	7	28	5d ⁶	21691.03(6)	203255.48(6)	pa
269	474	550.801	181553.81	550.7981	0.0011	-0.91	0.003	11	38	5d ⁶	32630.51(2)	214185.23(3)	pa
1722	846	551.039	181475.39	551.0393	0.0012	0.15	0.000	7	48	5d ⁶	34478.40(3)	215953.64(2)	pa
422	300	551.091	181458.23	551.0910	0.0008	0.01	0.000	11	40	5d ⁶	33865.93(5)	215324.16(4)	pa
202	538	551.127	181446.38	551.1279	0.0007	0.30	-0.001	13	40	5d ⁶	16430.43(4)	197876.51(3)	pa
524	874	551.234	181411.19	551.2323	0.0006	-0.54	0.002	15	51	5d ⁶	24694.24(3)	206105.98(4)	pa 500
320	398	551.283	181395.00	551.2809	0.0006	-0.73	0.002	14	42	5d ⁶	21096.97(5)	202492.70(5)	pa
786	806	551.338	181376.94	551.3456	0.0015	2.50	-0.008	6	29	5d ⁶	31104.34(1)	212478.78(1)	pa * 500
1041	806	551.338	181376.94	551.3314	0.0011	-2.17	0.007	11	50	5d ⁶	32806.12(4)	214185.23(3)	pa * 700
1171	532	551.558	181304.50	551.5609	0.0007	0.85	-0.003	8	48	5d ⁶	34478.40(3)	215782.05(3)	pa
100	783	551.946	181177.14	551.9569	0.0009	3.57	-0.011	7	25	5d ⁶	10826.80(1)	192000.38(2)	pa * 200
1133	783	551.946	181177.14	551.9469	0.0008	0.29	-0.001	12	46	5d ⁶	36613.63(3)	217790.49(3)	pa
652	497	551.994	181161.52	551.9947	0.0010	0.36	-0.001	6	42	5d ⁶	22774.76(2)	203935.93(1)	pa
99	69	552.262	181073.48	552.2608	0.0008	-0.38	0.001	13	50	5d ⁶	32806.12(4)	213879.98(4)	pa *
1361	1026	552.588	180966.68	552.5876	0.0007	-0.09	0.000	15	33	5d ⁶	0.00(4)	180966.77(3)	pa
510	907	552.727	180921.24	552.7333	0.0008	2.16	-0.007	14	40	5d ⁶	30610.18(4)	211529.26(4)	pa *
2260	907	552.727	180921.24	552.7247	0.0009	-0.65	0.002	6	48	5d ⁶	40468.85(3)	221390.74(2)	pa
1708	943	552.940	180851.48	552.9400	0.0008	0.05	0.000	13	51	5d ⁶	24694.24(3)	205545.67(2)	pa
1750	993	553.092	180801.75	553.0922	0.0007	0.07	0.000	14	28	5d ⁶	21691.03(6)	202492.70(5)	pa
1864	659	553.134	180787.95	553.1315	0.0009	-0.88	0.003	10	30	5d ⁶	44274.55(4)	225063.38(3)	pa
571	417	553.239	180753.74	553.2411	0.0008	0.73	-0.002	12	50	5d ⁶	32806.12(4)	213559.13(5)	pa
295	690	553.359	180714.67	553.3560	0.0010	-0.81	0.002	9	36	5d ⁶	25632.35(2)	206347.83(3)	pa

3916	1313	553.422	180693.90	553.4189	0.0008	-1.05	0.003	11	41	5d ⁶	7612.63(3)	188307.59(2)	pa
83	350	553.708	180600.74	553.7089	0.0007	0.43	-0.001	10	41	5d ⁶	7612.63(3)	188212.93(3)	pa
237	301	553.792	180573.11	553.7969	0.0009	1.50	-0.005	11	29	5d ⁶	31104.34(1)	211675.95(2)	pa
1717	687	553.832	180560.20	553.8321	0.0009	0.05	0.000	9	48	5d ⁶	34478.40(3)	215038.55(2)	pa
4984	1081	553.907	180535.66	553.9056	0.0010	-0.53	0.002	9	18	5d ⁶	38723.84(6)	219260.02(5)	pa
164	300	554.303	180406.78	554.3053	0.0012	0.78	-0.002	7	10	5d ⁶	10817.64(0)	191223.64(1)	pa
788	1461	554.534	180331.46	554.5334	0.0006	-0.33	0.001	13	33	5d ⁶	0.00(4)	180331.80(5)	pa
1003	700	554.659	180290.95	554.6630	0.0010	1.29	-0.004	10	46	5d ⁶	36613.63(3)	216903.30(2)	pa
1343	1041	554.688	180281.40	554.6880	0.0007	-0.14	0.000	13	42	5d ⁶	21096.97(5)	201378.51(4)	pa
1102	711	554.820	180238.60	554.8184	0.0011	-0.57	0.002	6	50	5d ⁶	32806.12(4)	213045.29(4)	pa
592	455	555.110	180144.64	555.1092	0.0008	-0.09	0.000	12	46	5d ⁶	36613.63(3)	216758.36(4)	pa
1295	687	555.179	180122.09	555.1744	0.0008	-1.50	0.005	16	42	5d ⁶	22774.76(2)	202898.36(3)	pa
181	800	555.243	180101.49	555.2367	0.0008	-1.89	0.006	10	40	5d ⁶	16430.43(4)	196533.80(3)	pa * 300
991	800	555.292	180085.53	555.2948	0.0008	0.99	-0.003	8	30	5d ⁶	44274.55(4)	224359.08(5)	pa
2605	1209	555.422	180043.38	555.4243	0.0008	0.84	-0.003	13	25	5d ⁶	10826.80(1)	190869.34(2)	pa
3417	1022	555.514	180013.63	555.5122	0.0009	-0.42	0.001	13	40	5d ⁶	33865.93(5)	213879.98(4)	pa
537	432	555.828	179911.71	555.8232	0.0009	-1.62	0.005	13	36	5d ⁶	25632.35(2)	205545.67(2)	pa
368	300	555.853	179903.84	555.8548	0.0012	0.75	-0.002	9	13	5d ⁶	37754.26(0)	217657.35(1)	pa
920	500	555.885	179893.26	555.8878	0.0010	0.84	-0.003	6	29	5d ⁶	45490.83(2)	225383.25(2)	pa
1198	761	555.926	179880.06	555.9275	0.0009	0.50	-0.002	4	28	5d ⁶	21691.03(6)	201570.58(7)	pa
141	420	556.025	179848.19	556.0243	0.0014	-0.08	0.000	6	38	5d ⁶	32630.51(2)	212478.78(1)	pa
348	364	556.341	179745.84	556.3414	0.0007	0.08	0.000	12	51	5d ⁶	24694.24(3)	204440.00(4)	pa
287	561	556.396	179727.98	556.3942	0.0007	-0.72	0.002	12	42	5d ⁶	6026.34(2)	185755.03(2)	pa
511	397	556.457	179708.24	556.4619	0.0011	1.41	-0.004	11	48	5d ⁶	34478.40(3)	214185.23(3)	pa
180	746	556.508	179691.94	556.5094	0.0009	0.45	-0.001	7	42	5d ⁶	6026.34(2)	185717.82(1)	pa
1165	746	556.508	179691.94	556.5041	0.0008	-1.26	0.004	12	40	5d ⁶	33865.93(5)	213559.13(5)	pa
280	197	556.882	179571.16	556.8780	0.0010	-1.39	0.004	10	29	5d ⁶	45490.83(2)	225063.38(3)	pa
1019	722	557.082	179506.69	557.0806	0.0009	-0.55	0.002	3	51	5d ⁶	24694.24(3)	204201.48(2)	pa
280	372	557.359	179417.51	557.3608	0.0016	0.52	-0.002	5	13	5d ⁶	37754.26(0)	217171.25(1)	pa
336	569	557.391	179407.14	557.3899	0.0007	-0.50	0.002	16	40	5d ⁶	30610.18(4)	210017.82(4)	pa
846	673	558.106	179177.30	558.1000	0.0012	-2.05	0.006	6	40	5d ⁶	33865.93(5)	213045.29(4)	pa
2003	840	558.137	179167.55	558.1341	0.0008	-0.87	0.003	8	46	5d ⁶	36613.63(3)	215782.05(3)	pa
1624	864	558.517	179045.58	558.5175	0.0009	0.14	0.000	11	38	5d ⁶	32630.51(2)	211675.95(2)	pa
4679	1243	558.762	178967.07	558.7609	0.0008	-0.37	0.001	7	28	5d ⁶	21691.03(6)	200658.47(6)	pa
1148	795	559.265	178806.21	559.2596	0.0008	-1.63	0.005	14	40	5d ⁶	30610.18(4)	209418.01(3)	pa
2620	1158	559.329	178785.62	559.3281	0.0006	-0.32	0.001	20	40	5d ⁶	16430.43(4)	195216.37(3)	pa
6712	1449	559.496	178732.29	559.4947	0.0006	-0.42	0.001	13	41	5d ⁶	7612.63(3)	186345.35(4)	pa
1587	1248	559.617	178693.67	559.6154	0.0007	-0.48	0.002	14	42	5d ⁶	21096.97(5)	199791.13(5)	pa
3420	1281	559.645	178684.83	559.6463	0.0006	0.56	-0.002	16	40	5d ⁶	16430.43(4)	195114.70(4)	pa
2050	977	559.744	178653.00	559.7435	0.0006	-0.24	0.001	19	42	5d ⁶	22774.76(2)	201428.01(3)	pa
422	977	559.744	178653.00	559.7508	0.0014	2.07	-0.006	7	48	5d ⁶	40468.85(3)	219119.79(2)	pa * 300

3958	1011	559.931	178593.43	559.9312	0.0010	0.08	0.000	11	18	5d ⁶	38723.84(6)	217317.19(5)	pa
822	720	560.013	178567.28	560.0142	0.0011	0.39	-0.001	6	48	5d ⁶	34478.40(3)	213045.29(4)	pa
2159	997	560.201	178507.39	560.1989	0.0013	-0.65	0.002	6	42	5d ⁶	22774.76(2)	201282.81(1)	pa
952	527	560.312	178472.12	560.3101	0.0014	-0.49	0.002	6	29	5d ⁶	45490.83(2)	223963.44(1)	pa
841	644	560.461	178424.71	560.4652	0.0008	1.49	-0.005	12	30	5d ⁶	44274.55(4)	222697.77(3)	pa
2730	1308	560.500	178411.97	560.4984	0.0006	-0.67	0.002	15	41	5d ⁶	7612.63(3)	186025.28(3)	pa
1145	651	560.598	178381.07	560.5992	0.0008	0.51	-0.002	13	40	5d ⁶	30610.18(4)	208990.74(3)	pa
345	363	560.837	178304.83	560.8412	0.0011	1.25	-0.004	6	36	5d ⁶	25632.35(2)	203935.93(1)	pa
570	330	561.039	178240.70	561.0388	0.0006	-0.09	0.000	13	48	5d ⁶	40468.85(3)	218709.64(4)	pa
295	370	561.151	178205.25	561.1543	0.0008	1.14	-0.004	16	51	5d ⁶	24694.24(3)	202898.36(3)	pa
692	969	561.203	178188.51	561.1972	0.0011	-1.98	0.006	8	42	5d ⁶	6026.34(2)	184216.83(1)	pa
1502	1054	561.351	178141.69	561.3487	0.0006	-0.71	0.002	12	41	5d ⁶	7612.63(3)	185755.03(2)	pa
329	957	561.492	178096.86	561.4820	0.0007	-3.24	0.010	14	28	5d ⁶	21691.03(6)	199791.13(5)	pa * 400
2412	957	561.492	178096.86	561.4916	0.0007	-0.20	0.001	8	30	5d ⁶	44274.55(4)	222371.61(4)	pa
2405	1108	561.558	178076.09	561.5553	0.0007	-0.77	0.002	13	42	5d ⁶	21096.97(5)	199173.83(4)	pa
587	383	561.863	177979.42	561.8627	0.0030	0.00	0.000	1	29	5d ⁶	45490.83(2)	223470.25(2)	pa
256	256	562.215	177867.87	562.2128	0.0014	-0.72	0.002	7	21	5d ⁶	41251.20(1)	219119.79(2)	pa
415	382	562.378	177816.41	562.3813	0.0013	1.10	-0.003	7	29	5d ⁶	31104.34(1)	208919.64(1)	pa
769	336	562.513	177773.73	562.5116	0.0020	-0.39	0.001	3	20	5d ⁶	62478.69(4)	240252.81(5)	pa
273	503	562.680	177721.00	562.6819	0.0009	0.69	-0.002	9	42	5d ⁶	6026.34(2)	183746.65(1)	pa
491	447	562.864	177662.94	562.8624	0.0008	-0.39	0.001	14	40	5d ⁶	33865.93(5)	211529.26(4)	pa
406	436	562.890	177654.67	562.8865	0.0010	-1.03	0.003	10	29	5d ⁶	31104.34(1)	208760.03(2)	pa
1679	805	563.153	177571.57	563.1531	0.0011	-0.02	0.000	11	46	5d ⁶	36613.63(3)	214185.23(3)	pa
134	156	563.444	177480.02	563.4413	0.0009	-0.77	0.002	11	25	5d ⁶	10826.80(1)	188307.59(2)	pa
369	597	563.493	177464.56	563.4897	0.0007	-0.98	0.003	11	42	5d ⁶	6026.34(2)	183491.87(2)	pa
1759	512	563.617	177425.45	563.6170	0.0030	0.00	0.000	1	21	5d ⁶	41251.20(1)	218676.65(0)	pa
1156	675	563.764	177379.06	563.7649	0.0010	0.16	-0.001	8	48	5d ⁶	34478.40(3)	211857.30(3)	pa
699	643	563.811	177364.37	563.8111	0.0017	-0.01	0.000	4	42	5d ⁶	22774.76(2)	200139.14(1)	pa
698	499	563.944	177322.54	563.9470	0.0008	0.90	-0.003	12	48	5d ⁶	40468.85(3)	217790.49(3)	pa
474	596	564.026	177296.79	564.0270	0.0008	0.32	-0.001	13	42	5d ⁶	22774.76(2)	200071.24(2)	pa
198	548	564.084	177278.47	564.0821	0.0016	-0.70	0.002	5	11	5d ⁶	30098.45(0)	207377.62(1)	pa
195	710	564.118	177267.78	564.1239	0.0009	1.77	-0.006	16	36	5d ⁶	25632.35(2)	202898.36(3)	pa * 200, Pt VI(200)
229	710	564.118	177267.78	564.1229	0.0009	1.43	-0.005	13	46	5d ⁶	36613.63(3)	213879.98(4)	pa * 300, Pt VI(200)
544	373	564.339	177198.55	564.3419	0.0009	1.00	-0.003	11	48	5d ⁶	34478.40(3)	211675.95(2)	pa
3424	975	564.643	177102.93	564.6447	0.0009	0.42	-0.001	9	46	5d ⁶	36613.63(3)	213716.14(2)	pa
1493	825	564.809	177050.88	564.8095	0.0007	0.02	0.000	14	48	5d ⁶	34478.40(3)	211529.26(4)	pa
1568	981	564.890	177025.74	564.8907	0.0009	0.33	-0.001	9	42	5d ⁶	22774.76(2)	199800.17(2)	pa
6978	1455	564.991	176993.85	564.9916	0.0007	0.07	0.000	15	42	5d ⁶	21096.97(5)	198090.74(4)	pa
263	400	565.033	176980.75	565.0328	0.0006	-0.11	0.000	16	40	5d ⁶	16430.43(4)	193411.29(5)	pa
10835	1418	565.125	176952.06	565.1236	0.0019	-0.38	0.001	2	30	5d ⁶	44274.55(4)	221226.99(3)	pa
7829	1218	565.193	176930.68	565.1914	0.0010	-0.53	0.002	13	18	5d ⁶	38723.84(6)	215655.04(5)	pa

2046	1114	565.414	176861.68	565.4125	0.0006	-0.34	0.001	18	42	5d ⁶	6026.34(2)	182888.36(3)	pa
450	382	565.650	176787.70	565.6508	0.0008	0.20	-0.001	14	38	5d ⁶	32630.51(2)	209418.01(3)	pa
5752	1286	565.766	176751.55	565.7687	0.0008	0.86	-0.003	13	40	5d ⁶	30610.18(4)	207360.87(4)	pa
670	548	565.820	176734.74	565.8228	0.0006	0.98	-0.003	19	51	5d ⁶	24694.24(3)	201428.01(3)	pa
76	88	565.986	176682.94	565.9813	0.0007	-1.33	0.004	13	51	5d ⁶	24694.24(3)	201378.51(4)	pa *
2207	881	566.213	176611.98	566.2133	0.0007	0.09	0.000	14	50	5d ⁶	32806.12(4)	209418.01(3)	pa
70	323	566.358	176566.64	566.3606	0.0007	0.69	-0.002	14	33	5d ⁶	0.00(4)	176565.95(3)	pa
2442	946	566.689	176463.76	566.6889	0.0012	0.11	0.000	3	30	5d ⁶	44274.55(4)	220738.20(4)	pa
8719	1129	566.721	176453.70	566.7209	0.0030	0.00	0.000	1	20	5d ⁶	62478.69(4)	238932.39(4)	pa
1139	701	566.781	176434.96	566.7827	0.0010	0.51	-0.002	10	48	5d ⁶	40468.85(3)	216903.30(2)	pa
2299	919	566.875	176405.61	566.8736	0.0012	-0.55	0.002	9	21	5d ⁶	41251.20(1)	217657.35(1)	pa
208	591	567.013	176362.74	567.0213	0.0008	2.51	-0.008	13	38	5d ⁶	32630.51(2)	208990.74(3)	pa * 200
1185	591	567.013	176362.74	567.0090	0.0008	-1.30	0.004	10	33	5d ⁶	53919.76(4)	230283.80(4)	pa
942	867	567.146	176321.44	567.1442	0.0009	-0.57	0.002	14	42	5d ⁶	22774.76(2)	199096.78(3)	pa
482	321	567.252	176288.49	567.2487	0.0009	-1.01	0.003	12	48	5d ⁶	40468.85(3)	216758.36(4)	pa
511	413	567.302	176272.92	567.3009	0.0016	-0.36	0.001	5	29	5d ⁶	31104.34(1)	207377.62(1)	pa
554	452	567.479	176217.91	567.4797	0.0008	0.17	-0.001	6	40	5d ⁶	33865.93(5)	210083.67(6)	pa
3135	1077	567.590	176183.45	567.5864	0.0008	-1.17	0.004	13	50	5d ⁶	32806.12(4)	208990.74(3)	pa
1434	1416	567.689	176152.85	567.6841	0.0006	-1.44	0.005	13	41	5d ⁶	7612.63(3)	183766.93(4)	pa
946	1416	567.689	176152.85	567.6737	0.0011	-4.69	0.015	12	29	5d ⁶	31104.34(1)	207261.88(2)	pa *
7166	1416	567.689	176152.85	567.6919	0.0007	0.96	-0.003	16	40	5d ⁶	33865.93(5)	210017.82(4)	pa *
306	443	567.768	176128.25	567.7640	0.0009	-1.28	0.004	10	38	5d ⁶	32630.51(2)	208760.03(2)	pa
831	412	568.010	176053.15	568.0074	0.0013	-0.90	0.003	6	13	5d ⁶	49329.20(1)	225383.25(2)	pa
2126	837	568.265	175974.27	568.2624	0.0006	-0.79	0.003	15	40	5d ⁶	33865.93(5)	209840.99(5)	pa
730	438	568.441	175919.81	568.4400	0.0017	-0.24	0.001	5	21	5d ⁶	41251.20(1)	217171.25(1)	pa
596	400	568.508	175899.08	568.5051	0.0010	-0.83	0.003	6	29	5d ⁶	45490.83(2)	221390.74(2)	pa
894	977	568.574	175878.54	568.5719	0.0007	-0.70	0.002	11	41	5d ⁶	7612.63(3)	183491.87(2)	pa
4329	1320	568.737	175828.29	568.7322	0.0007	-1.38	0.004	10	33	5d ⁶	0.00(4)	175829.67(3)	pa
352	371	568.845	175794.81	568.8422	0.0007	-0.85	0.003	19	36	5d ⁶	25632.35(2)	201428.01(3)	pa
3139	1110	569.030	175737.81	569.0300	0.0010	0.16	-0.001	9	40	5d ⁶	30610.18(4)	206347.83(3)	pa
1278	426	569.265	175665.17	569.2580	0.0012	-2.10	0.007	5	20	5d ⁶	62478.69(4)	238145.96(5)	pa *
1268	897	569.314	175650.05	569.3125	0.0014	-0.41	0.001	6	36	5d ⁶	25632.35(2)	201282.81(1)	pa
651	897	569.314	175650.05	569.3072	0.0012	-2.05	0.007	10	21	5d ⁶	41251.20(1)	216903.30(2)	pa * 300
938	650	569.675	175538.68	569.6726	0.0006	-0.74	0.002	16	48	5d ⁶	34478.40(3)	210017.82(4)	pa
4334	1254	569.788	175503.90	569.7876	0.0007	-0.09	0.000	14	42	5d ⁶	21096.97(5)	196600.97(5)	pa
2594	1214	569.814	175495.80	569.8142	0.0007	0.00	0.000	15	40	5d ⁶	30610.18(4)	206105.98(4)	pa
257	300	569.853	175483.95	569.8500	0.0013	-0.85	0.003	7	48	5d ⁶	40468.85(3)	215953.64(2)	pa
209	1113	569.992	175441.00	569.9921	0.0008	-0.04	0.000	9	42	5d ⁶	6026.34(2)	181467.37(2)	pa
2085	1113	569.992	175441.00	569.9920	0.0007	-0.08	0.000	11	42	5d ⁶	21096.97(5)	196538.04(4)	pa
831	468	570.076	175415.08	570.0792	0.0009	0.85	-0.003	13	48	5d ⁶	34478.40(3)	209892.63(2)	pa
991	782	570.199	175377.34	570.2002	0.0008	0.34	-0.001	13	51	5d ⁶	24694.24(3)	200071.24(2)	pa

1699	1155	570.529	175275.77	570.5297	0.0006	0.05	0.000	18	41	5d ⁶	7612.63(3)	182888.36(3)	pa
2480	838	570.594	175255.99	570.5907	0.0011	-1.00	0.003	6	33	5d ⁶	53919.76(4)	229176.75(3)	pa
2638	1070	570.632	175244.41	570.6340	0.0010	0.74	-0.002	8	46	5d ⁶	36613.63(3)	211857.30(3)	pa
456	353	570.724	175216.16	570.7233	0.0008	-0.08	0.000	12	36	5d ⁶	25632.35(2)	200848.59(2)	pa
2921	1185	571.001	175130.98	571.0010	0.0007	-0.05	0.000	15	40	5d ⁶	16430.43(4)	191561.46(4)	pa
169	355	571.097	175101.51	571.0965	0.0007	-0.24	0.001	13	42	5d ⁶	22774.76(2)	197876.51(3)	pa
233	201	571.226	175062.00	571.2252	0.0009	-0.32	0.001	11	46	5d ⁶	36613.63(3)	211675.95(2)	pa
562	998	571.488	174981.86	571.4842	0.0007	-1.10	0.004	13	33	5d ⁶	0.00(4)	174982.96(4)	pa
4047	1362	571.627	174939.28	571.6231	0.0007	-1.15	0.004	15	42	5d ⁶	6026.34(2)	180966.77(3)	pa
343	1362	571.627	174939.28	571.6258	0.0009	-0.33	0.001	14	48	5d ⁶	34478.40(3)	209418.01(3)	pa
250	500	571.659	174929.31	571.6630	0.0008	1.08	-0.004	12	25	5d ⁶	10826.80(1)	185755.03(2)	pa
7669	1442	571.725	174909.27	571.7228	0.0008	-0.67	0.002	14	28	5d ⁶	21691.03(6)	196600.97(5)	pa
146	500	571.757	174899.54	571.7547	0.0013	-0.64	0.002	7	10	5d ⁶	10817.64(0)	185717.82(1)	pa
2924	1226	571.786	174890.64	571.7846	0.0010	-0.38	0.001	7	25	5d ⁶	10826.80(1)	185717.82(1)	pa
66	76	571.906	174853.82	571.9014	0.0009	-1.49	0.005	11	48	5d ⁶	40468.85(3)	215324.16(4)	pa *
147	200	571.968	174834.96	571.9669	0.0011	-0.34	0.001	12	18	5d ⁶	38723.84(6)	213559.13(5)	pa
6257	1357	572.062	174806.14	572.0613	0.0007	-0.32	0.001	15	40	5d ⁶	16430.43(4)	191236.88(3)	pa
1191	426	572.230	174754.91	572.2271	0.0015	-0.87	0.003	5	21	5d ⁶	54076.95(2)	228832.73(2)	pa
1016	760	572.333	174723.49	572.3295	0.0017	-1.03	0.003	6	13	5d ⁶	37754.26(0)	212478.78(1)	pa
1651	760	572.333	174723.49	572.3319	0.0015	-0.31	0.001	5	17	5d ⁶	61895.15(3)	236618.95(4)	pa
565	374	572.401	174702.64	572.4018	0.0014	0.19	-0.001	7	21	5d ⁶	41251.20(1)	215953.64(2)	pa
1954	1176	572.642	174629.14	572.6440	0.0006	0.59	-0.002	18	40	5d ⁶	16430.43(4)	191058.98(4)	pa
581	1176	572.642	174629.14	572.6348	0.0010	-2.22	0.007	12	38	5d ⁶	32630.51(2)	207261.88(2)	pa *
308	232	572.837	174569.64	572.8371	0.0010	-0.06	0.000	9	48	5d ⁶	40468.85(3)	215038.55(2)	pa
97	106	572.884	174555.35	572.8862	0.0008	0.60	-0.002	13	50	5d ⁶	32806.12(4)	207360.87(4)	pa *
948	737	573.044	174506.55	573.0436	0.0018	-0.25	0.001	4	36	5d ⁶	25632.35(2)	200139.14(1)	pa
1869	953	573.135	174478.96	573.1329	0.0007	-0.63	0.002	13	51	5d ⁶	24694.24(3)	199173.83(4)	pa
575	680	573.211	174455.74	573.2065	0.0008	-1.45	0.005	11	50	5d ⁶	32806.12(4)	207263.31(3)	pa
1731	1003	573.270	174437.93	573.2667	0.0008	-0.96	0.003	13	36	5d ⁶	25632.35(2)	200071.24(2)	pa
307	400	573.386	174402.61	573.3862	0.0009	0.08	0.000	14	51	5d ⁶	24694.24(3)	199096.78(3)	pa
927	1082	573.410	174395.44	573.4118	0.0006	0.69	-0.002	17	41	5d ⁶	7612.63(3)	182007.38(4)	pa
914	437	573.639	174325.70	573.6421	0.0016	0.99	-0.003	5	21	5d ⁶	54076.95(2)	228401.66(3)	pa
767	574	573.785	174281.31	573.7839	0.0009	-0.33	0.001	10	48	5d ⁶	34478.40(3)	208760.03(2)	pa
754	287	573.885	174250.82	573.8891	0.0016	1.13	-0.004	7	9	5d ⁶	61476.65(2)	235726.34(2)	pa
2395	1144	574.656	174017.15	574.6541	0.0007	-0.58	0.002	16	42	5d ⁶	21096.97(5)	195114.70(4)	pa
696	751	574.692	174006.37	574.6914	0.0007	-0.05	0.000	12	42	5d ⁶	21096.97(5)	195103.39(5)	pa
3705	1200	574.979	173919.43	574.9783	0.0012	-0.18	0.001	4	18	5d ⁶	38723.84(6)	212643.45(6)	pa
1146	1109	575.197	173853.57	575.1949	0.0007	-0.54	0.002	9	42	5d ⁶	6026.34(2)	179880.44(2)	pa
320	1109	575.197	173853.57	575.1928	0.0008	-1.17	0.004	9	41	5d ⁶	7612.63(3)	181467.37(2)	pa
1415	1032	575.251	173837.19	575.2500	0.0013	-0.29	0.001	6	11	5d ⁶	30098.45(0)	203935.93(1)	pa
939	850	575.273	173830.51	575.2753	0.0008	0.69	-0.002	12	40	5d ⁶	30610.18(4)	204440.00(4)	pa

429	850	575.273	173830.51	575.2708	0.0016	-0.68	0.002	7	17	5d ⁶	61895.15(3)	235726.34(2)	pa
354	282	575.414	173787.92	575.4159	0.0011	0.56	-0.002	9	21	5d ⁶	41251.20(1)	215038.55(2)	pa
325	411	575.513	173758.17	575.5096	0.0009	-0.86	0.003	10	42	5d ⁶	22774.76(2)	196533.80(3)	pa
2101	928	575.654	173715.40	575.6510	0.0012	-0.98	0.003	11	48	5d ⁶	40468.85(3)	214185.23(3)	pa
1911	950	576.232	173541.09	576.2304	0.0010	-0.62	0.002	9	50	5d ⁶	32806.12(4)	206347.83(3)	pa
453	368	576.277	173527.69	576.2812	0.0008	1.28	-0.004	10	50	5d ⁶	32806.12(4)	206332.53(5)	pa
433	417	576.386	173494.97	576.3857	0.0008	0.03	0.000	13	40	5d ⁶	33865.93(5)	207360.87(4)	pa
76	114	576.490	173463.55	576.4871	0.0010	-0.88	0.003	14	36	5d ⁶	25632.35(2)	199096.78(3)	pa *
4370	1348	576.663	173411.63	576.6602	0.0008	-0.73	0.002	12	28	5d ⁶	21691.03(6)	195103.39(5)	pa
1207	600	576.690	173403.42	576.6873	0.0007	-0.77	0.003	16	46	5d ⁶	36613.63(3)	210017.82(4)	pa
1976	1532	576.708	173397.98	576.7040	0.0015	-1.21	0.004	8	10	5d ⁶	10817.64(0)	184216.83(1)	pa *
659	1532	576.708	173397.98	576.7129	0.0006	1.47	-0.005	15	51	5d ⁶	24694.24(3)	198090.74(4)	pa *
668	956	576.854	173354.00	576.8538	0.0007	-0.14	0.000	15	41	5d ⁶	7612.63(3)	180966.77(3)	pa
1419	1049	576.884	173345.11	576.8875	0.0010	1.07	-0.004	7	42	5d ⁶	22774.76(2)	196118.80(2)	pa
1233	910	577.040	173298.15	577.0345	0.0007	-1.71	0.006	15	50	5d ⁶	32806.12(4)	206105.98(4)	pa
540	1006	577.070	173289.29	577.0689	0.0007	-0.26	0.001	15	40	5d ⁶	16430.43(4)	189719.97(3)	pa
664	595	577.107	173278.21	577.1040	0.0009	-0.79	0.003	13	46	5d ⁶	36613.63(3)	209892.63(2)	pa
137	135	577.207	173248.04	577.2096	0.0009	0.75	-0.002	9	48	5d ⁶	40468.85(3)	213716.14(2)	pa
2829	1103	577.428	173181.67	577.4263	0.0007	-0.60	0.002	13	51	5d ⁶	24694.24(3)	197876.51(3)	pa
710	1458	578.290	172923.62	578.2720	0.0014	-5.39	0.018	9	10	5d ⁶	10817.64(0)	183746.65(1)	pa * 800
964	1458	578.290	172923.62	578.3026	0.0010	3.77	-0.013	9	25	5d ⁶	10826.80(1)	183746.65(1)	pa * 900
5262	1458	578.290	172923.62	578.2881	0.0007	-0.57	0.002	15	40	5d ⁶	30610.18(4)	203534.37(5)	pa
3689	1492	578.564	172841.73	578.5640	0.0030	0.01	0.000	1	38	5d ⁶	32630.51(2)	205472.23(1)	pa
1043	726	578.688	172804.72	578.6890	0.0008	0.34	-0.001	14	46	5d ⁶	36613.63(3)	209418.01(3)	pa
404	663	578.762	172782.51	578.7542	0.0008	-2.41	0.008	11	48	5d ⁶	34478.40(3)	207263.31(3)	pa *
402	663	578.762	172782.51	578.7590	0.0010	-0.97	0.003	12	48	5d ⁶	34478.40(3)	207261.88(2)	pa
296	448	578.792	172773.76	578.7877	0.0007	-1.18	0.004	16	50	5d ⁶	32806.12(4)	205581.06(5)	pa
221	625	578.864	172752.09	578.8621	0.0008	-0.61	0.002	7	42	5d ⁶	6026.34(2)	178779.04(1)	pa
8708	473	578.984	172716.23	578.9844	0.0030	0.01	0.000	1	20	5d ⁶	62478.69(4)	235194.91(3)	pa
282	555	579.117	172676.68	579.1170	0.0012	-0.01	0.000	12	42	5d ⁶	22774.76(2)	195451.45(2)	pa
1783	1374	579.157	172664.84	579.1559	0.0009	-0.23	0.001	11	25	5d ⁶	10826.80(1)	183491.87(2)	pa
292	200	579.453	172576.43	579.4534	0.0012	-0.01	0.000	6	48	5d ⁶	40468.85(3)	213045.29(4)	pa
657	971	579.476	172569.70	579.4760	0.0030	0.00	0.000	1	25	5d ⁶	10826.80(1)	183396.51(0)	pa
5541	1351	579.761	172484.90	579.7646	0.0010	1.09	-0.004	12	30	5d ⁶	44274.55(4)	216758.36(4)	pa
11036	1841	579.828	172464.91	579.8224	0.0008	-1.69	0.006	10	40	5d ⁶	33865.93(5)	206332.53(5)	pa *
677	1841	579.828	172464.91	579.8280	0.0011	-0.04	0.000	9	21	5d ⁶	41251.20(1)	213716.14(2)	pa
3923	1841	579.828	172464.91	579.8161	0.0009	-3.57	0.012	10	33	5d ⁶	53919.76(4)	226388.24(5)	pa *
4393	1841	579.828	172464.91	579.8395	0.0009	3.39	-0.011	5	33	5d ⁶	53919.76(4)	226381.28(4)	pa *
618	643	579.908	172441.06	579.9065	0.0007	-0.55	0.002	20	42	5d ⁶	22774.76(2)	195216.37(3)	pa
1917	1188	579.995	172415.22	579.9962	0.0007	0.29	-0.001	14	40	5d ⁶	16430.43(4)	188845.35(5)	pa
1110	996	580.132	172374.62	580.1326	0.0007	0.22	-0.001	13	50	5d ⁶	32806.12(4)	205180.52(4)	pa

3279	955	580.202	172353.71	580.2012	0.0016	-0.31	0.001	5	9	5d ⁶	61476.65(2)	233830.67(2)	pa
3350	1568	580.336	172314.12	580.3348	0.0006	-0.20	0.001	16	42	5d ⁶	21096.97(5)	193411.29(5)	pa
325	300	580.382	172300.40	580.3842	0.0010	0.74	-0.002	12	29	5d ⁶	45490.83(2)	217790.49(3)	pa
1152	958	580.419	172289.21	580.4229	0.0009	1.03	-0.003	16	40	5d ⁶	30610.18(4)	202898.36(3)	pa
726	618	580.585	172239.95	580.5851	0.0007	-0.10	0.000	15	40	5d ⁶	33865.93(5)	206105.98(4)	pa
1078	532	580.831	172167.18	580.8330	0.0012	0.65	-0.002	9	29	5d ⁶	45490.83(2)	217657.35(1)	pa
362	442	580.902	172146.08	580.9009	0.0009	-0.33	0.001	10	46	5d ⁶	36613.63(3)	208760.03(2)	pa
1380	1079	581.054	172100.98	581.0557	0.0011	0.45	-0.002	9	36	5d ⁶	25632.35(2)	197732.88(1)	pa
2355	1263	581.309	172025.52	581.3086	0.0008	-0.16	0.001	11	42	5d ⁶	22774.76(2)	194800.44(2)	pa
4501	1422	581.506	171967.39	581.5059	0.0007	0.09	0.000	9	40	5d ⁶	33865.93(5)	205833.23(6)	pa
823	314	581.613	171935.75	581.6134	0.0016	0.23	-0.001	5	17	5d ⁶	61895.15(3)	233830.67(2)	pa
678	655	581.708	171907.44	581.7127	0.0007	1.28	-0.004	18	38	5d ⁶	32630.51(2)	204536.67(3)	pa
286	475	581.794	171882.23	581.7927	0.0007	-0.29	0.001	14	40	5d ⁶	30610.18(4)	202492.70(5)	pa
948	653	581.832	171870.83	581.8370	0.0010	1.40	-0.005	9	48	5d ⁶	34478.40(3)	206347.83(3)	pa
391	615	581.925	171843.36	581.9238	0.0006	-0.44	0.001	11	51	5d ⁶	24694.24(3)	196538.04(4)	pa
799	918	582.134	171781.76	582.1314	0.0008	-0.75	0.003	10	40	5d ⁶	16430.43(4)	188212.93(3)	pa
2722	1263	582.308	171730.34	582.3076	0.0007	-0.21	0.001	18	50	5d ⁶	32806.12(4)	204536.67(3)	pa
352	500	582.343	171720.10	582.3425	0.0007	-0.16	0.001	16	28	5d ⁶	21691.03(6)	193411.29(5)	pa
1820	1229	582.358	171715.68	582.3599	0.0007	0.55	-0.002	16	40	5d ⁶	33865.93(5)	205581.06(5)	pa
203	229	582.479	171679.98	582.4776	0.0017	-0.44	0.002	5	29	5d ⁶	45490.83(2)	217171.25(1)	pa
6378	1504	582.640	171632.42	582.6355	0.0008	-1.46	0.005	12	50	5d ⁶	32806.12(4)	204440.00(4)	pa *
1159	1000	582.652	171628.89	582.6569	0.0007	1.31	-0.004	15	48	5d ⁶	34478.40(3)	206105.98(4)	pa
424	318	582.721	171608.71	582.7215	0.0011	0.16	-0.001	7	29	5d ⁶	45490.83(2)	217099.38(3)	pa
8203	1947	582.933	171546.27	582.9321	0.0007	-0.28	0.001	11	33	5d ⁶	0.00(4)	171546.55(5)	pa
3629	1574	583.119	171491.52	583.1191	0.0007	-0.04	0.000	11	42	5d ⁶	6026.34(2)	177517.90(2)	pa
381	430	583.345	171425.08	583.3470	0.0010	0.53	-0.002	7	51	5d ⁶	24694.24(3)	196118.80(2)	pa
1556	800	583.392	171411.48	583.3881	0.0011	-0.99	0.003	10	29	5d ⁶	45490.83(2)	216903.30(2)	pa
2467	1342	583.473	171387.65	583.4702	0.0006	-0.71	0.002	16	51	5d ⁶	24694.24(3)	196082.61(3)	pa
2295	1264	583.505	171378.17	583.4970	0.0008	-2.33	0.008	13	30	5d ⁶	44274.55(4)	215655.04(5)	pa
15289	1710	583.570	171359.20	583.5673	0.0011	-0.64	0.002	6	18	5d ⁶	38723.84(6)	210083.67(6)	pa
1061	994	583.752	171305.71	583.7527	0.0011	0.29	-0.001	6	38	5d ⁶	32630.51(2)	203935.93(1)	pa
324	994	583.752	171305.71	583.7497	0.0012	-0.59	0.002	6	21	5d ⁶	54076.95(2)	225383.25(2)	pa * 200
358	261	584.018	171227.48	584.0181	0.0016	-0.10	0.000	6	21	5d ⁶	41251.20(1)	212478.78(1)	pa
129	137	584.093	171205.73	584.0880	0.0009	-1.36	0.005	11	48	5d ⁶	40468.85(3)	211675.95(2)	pa
658	548	584.233	171164.59	584.2303	0.0015	-0.79	0.003	7	13	5d ⁶	37754.26(0)	208919.64(1)	pa
340	205	584.308	171142.73	584.3046	0.0010	-0.89	0.003	10	33	5d ⁶	53919.76(4)	225063.38(3)	pa
2755	1205	584.395	171117.26	584.3950	0.0010	0.10	0.000	15	18	5d ⁶	38723.84(6)	209840.99(5)	pa
632	865	584.462	171097.55	584.4641	0.0009	0.63	-0.002	7	42	5d ⁶	22774.76(2)	193871.68(1)	pa
2425	1360	584.561	171068.49	584.5621	0.0007	0.25	-0.001	16	42	5d ⁶	21096.97(5)	192165.20(4)	pa
911	620	584.626	171049.58	584.6257	0.0010	-0.03	0.000	11	30	5d ⁶	44274.55(4)	215324.16(4)	pa
1381	959	584.951	170954.40	584.9513	0.0030	0.00	0.000	1	29	5d ⁶	31104.34(1)	202058.74(0)	pa

873	1728	585.019	170934.59	585.0254	0.0007	1.85	-0.006	13	40	5d ⁶	16430.43(4)	187363.17(5)	pa *
3694	1606	585.033	170930.44	585.0326	0.0007	-0.19	0.001	15	33	5d ⁶	0.00(4)	170930.63(4)	pa
764	1606	585.047	170926.38	585.0444	0.0007	-0.81	0.003	10	42	5d ⁶	21096.97(5)	192024.16(6)	pa
442	372	585.132	170901.64	585.1325	0.0010	0.18	-0.001	10	36	5d ⁶	25632.35(2)	196533.80(3)	pa
2244	1226	585.419	170817.88	585.4190	0.0007	0.05	0.000	19	40	5d ⁶	30610.18(4)	201428.01(3)	pa
3103	1303	585.628	170756.80	585.6268	0.0012	-0.40	0.001	12	51	5d ⁶	24694.24(3)	195451.45(2)	pa
622	605	585.663	170746.60	585.6610	0.0008	-0.63	0.002	13	46	5d ⁶	36613.63(3)	207360.87(4)	pa
440	568	585.818	170701.39	585.8158	0.0007	-0.73	0.003	13	48	5d ⁶	34478.40(3)	205180.52(4)	pa
1183	1290	585.997	170649.25	585.9958	0.0009	-0.43	0.001	11	46	5d ⁶	36613.63(3)	207263.31(3)	pa
2338	1290	585.997	170649.25	586.0008	0.0010	1.01	-0.003	12	46	5d ⁶	36613.63(3)	207261.88(2)	pa
505	1076	586.027	170640.57	586.0271	0.0009	0.00	0.000	9	25	5d ⁶	10826.80(1)	181467.37(2)	pa
587	688	586.252	170575.20	586.2556	0.0008	1.13	-0.004	12	40	5d ⁶	33865.93(5)	204440.00(4)	pa
57	206	586.374	170539.71	586.3740	0.0007	0.10	0.000	14	42	5d ⁶	6026.34(2)	176565.95(3)	pa
331	645	586.435	170521.77	586.4342	0.0007	-0.36	0.001	20	51	5d ⁶	24694.24(3)	195216.37(3)	pa
2276	1332	586.558	170485.98	586.5569	0.0011	-0.47	0.002	7	36	5d ⁶	25632.35(2)	196118.80(2)	pa
745	1155	586.638	170462.96	586.6324	0.0007	-1.53	0.005	15	42	5d ⁶	21096.97(5)	191561.46(4)	pa *
676	1155	586.638	170462.96	586.6382	0.0014	0.15	-0.001	7	29	5d ⁶	45490.83(2)	215953.64(2)	pa
2912	1305	586.682	170450.12	586.6814	0.0007	-0.15	0.000	16	36	5d ⁶	25632.35(2)	196082.61(3)	pa
230	576	586.773	170423.63	586.7840	0.0007	3.17	-0.011	16	51	5d ⁶	24694.24(3)	195114.70(4)	pa *
454	576	586.773	170423.63	586.7692	0.0011	-1.12	0.004	11	21	5d ⁶	41251.20(1)	211675.95(2)	pa
14246	1858	587.086	170332.83	587.0848	0.0008	-0.31	0.001	10	28	5d ⁶	21691.03(6)	192024.16(6)	pa
2378	912	587.228	170291.61	587.2293	0.0009	0.39	-0.001	8	29	5d ⁶	45490.83(2)	215782.05(3)	pa
346	479	587.309	170268.01	587.3100	0.0009	0.16	-0.001	16	38	5d ⁶	32630.51(2)	202898.36(3)	pa
554	509	587.618	170178.61	587.6184	0.0015	0.14	0.000	6	29	5d ⁶	31104.34(1)	201282.81(1)	pa
1827	1088	587.872	170105.03	587.8680	0.0008	-1.17	0.004	11	51	5d ⁶	24694.24(3)	194800.44(2)	pa
274	409	587.917	170092.04	587.9163	0.0009	-0.20	0.001	16	50	5d ⁶	32806.12(4)	202898.36(3)	pa
619	501	588.033	170058.37	588.0337	0.0007	0.10	0.000	18	48	5d ⁶	34478.40(3)	204536.67(3)	pa
911	707	588.094	170040.93	588.0945	0.0019	0.24	-0.001	4	11	5d ⁶	30098.45(0)	200139.14(1)	pa
147	549	588.371	169960.93	588.3668	0.0006	-1.08	0.004	18	42	5d ⁶	21096.97(5)	191058.98(4)	pa
1100	1153	588.533	169914.04	588.5298	0.0007	-0.88	0.003	13	40	5d ⁶	16430.43(4)	186345.35(4)	pa
375	827	588.564	169905.17	588.5633	0.0007	-0.10	0.000	11	41	5d ⁶	7612.63(3)	177517.90(2)	pa
110	318	588.631	169885.57	588.6283	0.0016	-0.92	0.003	6	21	5d ⁶	54076.95(2)	223963.44(1)	pa
229	487	588.861	169819.25	588.8619	0.0013	0.14	0.000	12	36	5d ⁶	25632.35(2)	195451.45(2)	pa
291	623	588.920	169802.49	588.9166	0.0007	-0.84	0.003	10	42	5d ⁶	6026.34(2)	175829.67(3)	pa
351	300	588.961	169790.59	588.9608	0.0016	0.00	0.000	7	13	5d ⁶	49329.20(1)	219119.79(2)	pa
272	473	588.988	169782.63	588.9900	0.0007	0.46	-0.002	17	42	5d ⁶	22774.76(2)	192556.93(2)	pa
124	202	589.130	169741.71	589.1216	0.0009	-2.54	0.009	12	29	5d ⁶	31104.34(1)	200848.59(2)	pa *
901	856	589.321	169686.81	589.3218	0.0007	0.23	-0.001	14	50	5d ⁶	32806.12(4)	202492.70(5)	pa
484	329	589.357	169676.39	589.3596	0.0012	0.70	-0.002	5	17	5d ⁶	61895.15(3)	231570.84(4)	pa
57	189	589.384	169668.76	589.3848	0.0007	0.32	-0.001	15	40	5d ⁶	33865.93(5)	203534.37(5)	pa *
248	118	589.483	169640.15	589.4822	0.0013	-0.26	0.001	8	9	5d ⁶	61476.65(2)	231117.06(3)	pa

2060	1324	589.644	169594.00	589.6405	0.0007	-0.85	0.003	15	40	5d ⁶	16430.43(4)	186025.28(3)	pa
729	605	589.800	169549.09	589.8044	0.0011	1.36	-0.005	9	29	5d ⁶	45490.83(2)	215038.55(2)	pa
568	627	589.865	169530.37	589.8644	0.0014	-0.11	0.000	9	36	5d ⁶	25632.35(2)	195162.83(1)	pa
1565	840	590.000	169491.47	589.9971	0.0008	-0.88	0.003	15	46	5d ⁶	36613.63(3)	206105.98(4)	pa
103	186	590.241	169422.38	590.2359	0.0010	-1.40	0.005	13	48	5d ⁶	40468.85(3)	209892.63(2)	pa
455	463	590.355	169389.63	590.3552	0.0008	0.08	0.000	7	40	5d ⁶	33865.93(5)	203255.48(6)	pa
538	357	590.720	169284.88	590.7212	0.0009	0.30	-0.001	12	30	5d ⁶	44274.55(4)	213559.13(5)	pa
1326	602	590.938	169222.38	590.9400	0.0011	0.46	-0.002	8	17	5d ⁶	61895.15(3)	231117.06(3)	pa
1564	1091	591.079	169182.07	591.0831	0.0007	1.12	-0.004	14	40	5d ⁶	30610.18(4)	199791.13(5)	pa
1013	916	591.128	169167.98	591.1280	0.0008	-0.11	0.000	11	36	5d ⁶	25632.35(2)	194800.44(2)	pa
4881	1108	591.389	169093.44	591.3935	0.0011	1.29	-0.005	5	20	5d ⁶	62478.69(4)	231570.84(4)	pa
3918	1924	591.460	169073.20	591.4597	0.0007	-0.03	0.000	15	33	5d ⁶	0.00(4)	169073.23(3)	pa
465	397	591.833	168966.64	591.8319	0.0009	-0.26	0.001	13	29	5d ⁶	31104.34(1)	200071.24(2)	pa
88	184	591.888	168950.94	591.8940	0.0008	1.78	-0.006	14	48	5d ⁶	40468.85(3)	209418.01(3)	pa *
19	109	591.957	168931.30	591.9540	0.0009	-0.74	0.003	13	46	5d ⁶	36613.63(3)	205545.67(2)	pa *
2214	1190	592.424	168797.91	592.4258	0.0007	0.41	-0.001	19	38	5d ⁶	32630.51(2)	201428.01(3)	pa
140	146	592.494	168778.19	592.4943	0.0009	0.18	-0.001	12	33	5d ⁶	53919.76(4)	222697.77(3)	pa
1426	1220	592.725	168712.42	592.7255	0.0006	0.27	-0.001	17	40	5d ⁶	16430.43(4)	185142.58(5)	pa
222	664	592.785	168695.37	592.7829	0.0011	-0.47	0.002	9	29	5d ⁶	31104.34(1)	199800.17(2)	pa
525	664	592.785	168695.37	592.7879	0.0013	0.97	-0.003	11	29	5d ⁶	45490.83(2)	214185.23(3)	pa
210	240	592.931	168653.80	592.9359	0.0015	1.51	-0.005	6	38	5d ⁶	32630.51(2)	201282.81(1)	pa
847	637	592.973	168641.77	592.9741	0.0011	0.34	-0.001	13	21	5d ⁶	41251.20(1)	209892.63(2)	pa
2264	913	593.045	168621.38	593.0466	0.0010	0.56	-0.002	12	21	5d ⁶	54076.95(2)	222697.77(3)	pa
443	664	593.242	168565.24	593.2477	0.0008	1.59	-0.006	13	40	5d ⁶	30610.18(4)	199173.83(4)	pa *
348	664	593.242	168565.24	593.2363	0.0007	-1.64	0.006	13	46	5d ⁶	36613.63(3)	205180.52(4)	pa *
4899	1245	593.396	168521.41	593.3947	0.0008	-0.47	0.002	13	48	5d ⁶	40468.85(3)	208990.74(3)	pa
1250	999	593.609	168460.97	593.6053	0.0007	-1.14	0.004	15	42	5d ⁶	22774.76(2)	191236.88(3)	pa
1789	927	593.639	168452.49	593.6414	0.0008	0.64	-0.002	8	33	5d ⁶	53919.76(4)	222371.61(4)	pa
2097	1395	593.709	168432.60	593.7047	0.0010	-1.31	0.005	7	42	5d ⁶	6026.34(2)	174460.24(1)	pa
1636	1015	593.756	168419.46	593.7539	0.0009	-0.49	0.002	16	48	5d ⁶	34478.40(3)	202898.36(3)	pa
3785	1008	593.861	168389.71	593.8643	0.0010	1.07	-0.004	10	17	5d ⁶	61895.15(3)	230283.80(4)	pa
2743	1420	594.151	168307.47	594.1528	0.0008	0.59	-0.002	13	33	5d ⁶	0.00(4)	168306.88(3)	pa
732	706	594.210	168290.76	594.2082	0.0010	-0.42	0.001	10	48	5d ⁶	40468.85(3)	208760.03(2)	pa
24	161	594.390	168239.77	594.3913	0.0010	0.43	-0.002	7	36	5d ⁶	25632.35(2)	193871.68(1)	pa *
1378	971	594.439	168225.76	594.4408	0.0011	0.44	-0.002	9	29	5d ⁶	45490.83(2)	213716.14(2)	pa
2405	1363	594.471	168216.64	594.4701	0.0007	-0.39	0.001	10	41	5d ⁶	7612.63(3)	175829.67(3)	pa
529	1363	594.471	168216.64	594.4664	0.0008	-1.43	0.005	12	38	5d ⁶	32630.51(2)	200848.59(2)	pa * 400
457	636	594.903	168094.55	594.9032	0.0007	-0.03	0.000	13	42	5d ⁶	22774.76(2)	190869.34(2)	pa
83	328	595.373	167961.90	595.3749	0.0013	0.51	-0.002	7	10	5d ⁶	10817.64(0)	178779.04(1)	pa
267	233	595.509	167923.46	595.5109	0.0008	0.43	-0.002	18	46	5d ⁶	36613.63(3)	204536.67(3)	pa
113	254	595.724	167863.03	595.7250	0.0007	0.34	-0.001	17	51	5d ⁶	24694.24(3)	192556.93(2)	pa

1871	1311	595.805	167840.18	595.8038	0.0008	-0.32	0.001	6	28	5d ⁶	21691.03(6)	189531.52(6)	pa
472	1311	595.805	167840.18	595.7983	0.0020	-1.87	0.007	5	13	5d ⁶	49329.20(1)	217171.25(1)	pa * 300
562	484	595.854	167826.38	595.8539	0.0008	0.00	0.000	12	46	5d ⁶	36613.63(3)	204440.00(4)	pa
1068	429	595.929	167805.34	595.9294	0.0010	0.23	-0.001	10	20	5d ⁶	62478.69(4)	230283.80(4)	pa
434	592	596.131	167748.25	596.1309	0.0008	-0.13	0.000	14	42	5d ⁶	21096.97(5)	188845.35(5)	pa
2619	844	596.303	167699.95	596.3026	0.0015	-0.14	0.001	6	9	5d ⁶	61476.65(2)	229176.75(3)	pa
131	134	596.418	167667.59	596.4152	0.0015	-0.86	0.003	7	21	5d ⁶	41251.20(1)	208919.64(1)	pa
131	291	596.533	167635.29	596.5362	0.0013	0.87	-0.003	9	11	5d ⁶	30098.45(0)	197732.88(1)	pa
957	1338	596.621	167610.65	596.6184	0.0008	-0.67	0.002	10	33	5d ⁶	0.00(4)	167611.32(5)	pa
1033	788	596.722	167582.20	596.7201	0.0011	-0.56	0.002	8	30	5d ⁶	44274.55(4)	211857.30(3)	pa
1325	741	596.751	167574.14	596.7509	0.0014	0.04	0.000	10	13	5d ⁶	49329.20(1)	216903.30(2)	pa
1177	1104	596.972	167511.93	596.9701	0.0008	-0.65	0.002	13	40	5d ⁶	33865.93(5)	201378.51(4)	pa
1953	1244	597.084	167480.59	597.0842	0.0007	0.03	0.000	15	40	5d ⁶	30610.18(4)	198090.74(4)	pa
2730	1277	597.123	167469.66	597.1184	0.0007	-1.30	0.005	16	51	5d ⁶	24694.24(3)	192165.20(4)	pa
589	607	597.224	167441.39	597.2263	0.0009	0.66	-0.002	13	38	5d ⁶	32630.51(2)	200071.24(2)	pa
583	925	597.593	167338.08	597.5982	0.0007	1.58	-0.006	13	40	5d ⁶	16430.43(4)	183766.93(4)	pa
1782	695	597.678	167314.17	597.6794	0.0011	0.38	-0.001	6	21	5d ⁶	54076.95(2)	221390.74(2)	pa
1250	599	597.798	167280.47	597.7944	0.0014	-1.12	0.004	6	17	5d ⁶	61895.15(3)	229176.75(3)	pa O III
505	673	597.845	167267.41	597.8489	0.0008	1.08	-0.004	13	40	5d ⁶	30610.18(4)	197876.51(3)	pa
115	178	598.198	167168.81	598.1947	0.0010	-0.85	0.003	9	38	5d ⁶	32630.51(2)	199800.17(2)	pa
568	736	598.249	167154.45	598.2495	0.0009	0.12	0.000	14	28	5d ⁶	21691.03(6)	188845.35(5)	pa
1065	1254	598.408	167110.07	598.4104	0.0011	0.67	-0.002	9	18	5d ⁶	38723.84(6)	205833.23(6)	pa *
2368	1254	598.408	167110.07	598.4038	0.0016	-1.17	0.004	3	18	5d ⁶	38723.84(6)	205835.07(7)	pa *
195	233	598.855	166985.19	598.8562	0.0007	0.18	-0.001	14	50	5d ⁶	32806.12(4)	199791.13(5)	pa
1292	1010	598.986	166948.67	598.9831	0.0007	-0.94	0.003	19	48	5d ⁶	34478.40(3)	201428.01(3)	pa
276	400	599.003	166944.16	598.9989	0.0008	-1.05	0.004	15	42	5d ⁶	22774.76(2)	189719.97(3)	pa
698	765	599.077	166923.56	599.0729	0.0008	-1.02	0.004	17	36	5d ⁶	25632.35(2)	192556.93(2)	pa
175	243	599.163	166899.38	599.1608	0.0008	-0.73	0.003	13	48	5d ⁶	34478.40(3)	201378.51(4)	pa
253	1282	599.549	166792.07	599.5472	0.0008	-0.47	0.002	7	40	5d ⁶	33865.93(5)	200658.47(6)	pa 300
1402	1282	599.549	166792.07	599.5455	0.0011	-0.95	0.003	12	48	5d ⁶	40468.85(3)	207261.88(2)	pa
47	157	599.909	166692.03	599.9121	0.0009	0.93	-0.003	11	25	5d ⁶	10826.80(1)	177517.90(2)	pa
285	429	600.142	166627.18	600.1373	0.0012	-1.37	0.005	9	29	5d ⁶	31104.34(1)	197732.88(1)	pa
425	349	600.226	166603.97	600.2252	0.0021	-0.18	0.001	3	13	5d ⁶	49329.20(1)	215933.35(1)	pa
193	279	600.448	166542.20	600.4468	0.0007	-0.43	0.002	15	51	5d ⁶	24694.24(3)	191236.88(3)	pa
487	349	600.473	166535.38	600.4696	0.0009	-0.95	0.003	10	33	5d ⁶	53919.76(4)	220456.09(5)	pa
904	827	600.718	166467.40	600.7223	0.0010	1.14	-0.004	14	38	5d ⁶	32630.51(2)	199096.78(3)	pa
507	764	600.756	166456.96	600.7524	0.0007	-0.97	0.004	18	40	5d ⁶	16430.43(4)	182888.36(3)	pa
707	917	600.940	166406.05	600.9424	0.0011	0.74	-0.003	4	28	5d ⁶	21691.03(6)	188096.33(7)	pa
653	981	601.075	166368.53	601.0692	0.0008	-1.66	0.006	12	48	5d ⁶	34478.40(3)	200848.59(2)	pa *
990	981	601.075	166368.53	601.0826	0.0012	2.06	-0.007	8	29	5d ⁶	45490.83(2)	211857.30(3)	pa *
102	104	601.353	166291.71	601.3567	0.0010	1.05	-0.004	14	50	5d ⁶	32806.12(4)	199096.78(3)	pa

563	796	601.444	166266.63	601.4452	0.0007	0.43	-0.002	13	42	5d ⁶	21096.97(5)	187363.17(5)	pa	
164	101	601.741	166184.32	601.7386	0.0011	-0.80	0.003	11	29	5d ⁶	45490.83(2)	211675.95(2)	pa	
47	45	601.775	166174.95	601.7749	0.0007	-0.15	0.001	13	51	5d ⁶	24694.24(3)	190869.34(2)	pa *	
221	212	601.952	166126.26	601.9512	0.0018	-0.16	0.001	5	21	5d ⁶	41251.20(1)	207377.62(1)	pa	
178	218	602.369	166011.20	602.3709	0.0012	0.52	-0.002	12	21	5d ⁶	41251.20(1)	207261.88(2)	pa	
5083	1417	602.525	165968.27	602.5246	0.0008	-0.05	0.000	9	42	5d ⁶	21096.97(5)	187065.29(6)	pa	
489	719	602.577	165953.76	602.5752	0.0007	-0.63	0.002	15	51	5d ⁶	24694.24(3)	190648.63(4)	pa	
556	976	602.689	165923.00	602.6869	0.0010	-0.62	0.002	10	40	5d ⁶	30610.18(4)	196533.80(3)	pa	
962	490	602.851	165878.36	602.8492	0.0011	-0.62	0.002	9	48	5d ⁶	40468.85(3)	206347.83(3)	pa	
1043	589	603.342	165743.37	603.3427	0.0008	0.09	0.000	16	30	5d ⁶	44274.55(4)	210017.82(4)	pa	
83	426	603.455	165712.41	603.4555	0.0008	0.12	0.000	8	33	5d ⁶	0.00(4)	165712.29(4)	pa	
196	288	603.661	165656.00	603.6618	0.0007	0.34	-0.001	13	51	5d ⁶	24694.24(3)	190349.90(3)	pa	
872	576	603.728	165637.51	603.7294	0.0008	0.38	-0.001	15	48	5d ⁶	40468.85(3)	206105.98(4)	pa	
494	523	603.848	165604.53	603.8482	0.0008	0.00	0.000	15	36	5d ⁶	25632.35(2)	191236.88(3)	pa	
127	793	603.893	165592.28	603.8965	0.0011	0.98	-0.004	7	36	5d ⁶	25632.35(2)	191223.64(1)	pa	300
634	793	603.893	165592.28	603.8908	0.0009	-0.56	0.002	13	48	5d ⁶	34478.40(3)	200071.24(2)	pa	600
582	792	603.952	165575.96	603.9488	0.0007	-0.99	0.004	17	40	5d ⁶	16430.43(4)	182007.38(4)	pa	
736	250	603.988	165566.31	603.9871	0.0007	-0.13	0.000	15	30	5d ⁶	44274.55(4)	209840.99(5)	pa	
65	225	604.105	165534.14	604.1098	0.0009	1.31	-0.005	11	42	5d ⁶	22774.76(2)	188307.59(2)	pa	
49	140	604.335	165471.11	604.3303	0.0007	-1.32	0.005	16	40	5d ⁶	30610.18(4)	196082.61(3)	pa	
502	588	604.686	165374.98	604.6890	0.0009	0.71	-0.003	9	28	5d ⁶	21691.03(6)	187065.29(6)	pa	
196	309	604.879	165322.35	604.8810	0.0010	0.57	-0.002	9	48	5d ⁶	34478.40(3)	199800.17(2)	pa	
268	322	604.932	165307.75	604.9318	0.0008	-0.15	0.001	13	40	5d ⁶	33865.93(5)	199173.83(4)	pa	
813	486	605.016	165284.83	605.0170	0.0007	0.21	-0.001	15	50	5d ⁶	32806.12(4)	198090.74(4)	pa	
347	533	605.146	165249.35	605.1497	0.0007	0.98	-0.004	13	42	5d ⁶	21096.97(5)	186345.35(4)	pa	
798	508	605.298	165207.74	605.2973	0.0021	-0.33	0.001	3	21	5d ⁶	54076.95(2)	219285.02(3)	pa	
174	124	605.780	165076.35	605.7786	0.0009	-0.47	0.002	13	48	5d ⁶	40468.85(3)	205545.67(2)	pa	
547	258	605.898	165044.34	605.9033	0.0017	1.50	-0.005	7	21	5d ⁶	54076.95(2)	219119.79(2)	pa	
326	306	606.745	164813.99	606.7432	0.0007	-0.39	0.001	19	46	5d ⁶	36613.63(3)	201428.01(3)	pa	
1411	586	606.833	164789.90	606.8334	0.0008	0.02	0.000	13	33	5d ⁶	53919.76(4)	218709.64(4)	pa	
497	486	606.921	164766.09	606.9255	0.0008	1.21	-0.004	13	46	5d ⁶	36613.63(3)	201378.51(4)	pa	
695	603	607.114	164713.71	607.1215	0.0007	2.04	-0.008	13	48	5d ⁶	40468.85(3)	205180.52(4)	pa	
173	172	607.466	164618.18	607.4656	0.0010	-0.19	0.001	14	48	5d ⁶	34478.40(3)	199096.78(3)	pa	
165	510	607.536	164599.38	607.5364	0.0008	0.20	-0.001	14	33	5d ⁶	0.00(4)	164599.18(3)	pa	
743	812	607.767	164536.77	607.7685	0.0007	0.42	-0.002	15	40	5d ⁶	16430.43(4)	180966.77(3)	pa	
224	144	608.265	164401.92	608.2658	0.0011	0.12	0.000	13	29	5d ⁶	45490.83(2)	209892.63(2)	pa	
779	525	608.464	164348.32	608.4682	0.0014	1.20	-0.004	12	29	5d ⁶	31104.34(1)	195451.45(2)	pa	
36	67	608.666	164293.61	608.6632	0.0012	-0.87	0.003	13	21	5d ⁶	41251.20(1)	205545.67(2)	pa *	
258	210	609.504	164067.86	609.5041	0.0008	0.05	0.000	18	48	5d ⁶	40468.85(3)	204536.67(3)	pa	
331	410	609.533	164059.92	609.5387	0.0015	1.43	-0.005	9	29	5d ⁶	31104.34(1)	195162.83(1)	pa	
935	847	609.581	164047.03	609.5866	0.0007	1.42	-0.005	17	42	5d ⁶	21096.97(5)	185142.58(5)	pa	

947	857	609.861	163971.90	609.8634	0.0009	0.75	-0.003	12	48	5d ⁶	40468.85(3)	204440.00(4)	pa
607	463	610.028	163926.79	610.0269	0.0010	-0.39	0.001	14	29	5d ⁶	45490.83(2)	209418.01(3)	pa
2253	745	610.098	163907.99	610.0926	0.0011	-1.56	0.006	10	20	5d ⁶	62478.69(4)	226388.24(5)	pa
2905	1277	610.124	163901.05	610.1230	0.0007	-0.32	0.001	13	40	5d ⁶	16430.43(4)	180331.80(5)	pa
198	162	610.235	163871.35	610.2371	0.0009	0.62	-0.002	12	33	5d ⁶	53919.76(4)	217790.49(3)	pa
473	334	610.519	163794.99	610.5198	0.0007	0.14	-0.001	14	50	5d ⁶	32806.12(4)	196600.97(5)	pa
296	299	610.600	163773.26	610.6004	0.0013	0.03	0.000	7	11	5d ⁶	30098.45(0)	193871.68(1)	pa
154	344	610.750	163733.04	610.7545	0.0007	1.11	-0.004	11	50	5d ⁶	32806.12(4)	196538.04(4)	pa
270	183	610.820	163714.38	610.8230	0.0012	0.84	-0.003	12	21	5d ⁶	54076.95(2)	217790.49(3)	pa
341	262	610.886	163696.58	610.8881	0.0009	0.48	-0.002	11	29	5d ⁶	31104.34(1)	194800.44(2)	pa
58	158	611.091	163641.86	611.0878	0.0014	-0.75	0.003	7	10	5d ⁶	10817.64(0)	174460.24(1)	pa
127	267	611.119	163634.28	611.1220	0.0011	0.84	-0.003	7	25	5d ⁶	10826.80(1)	174460.24(1)	pa
380	454	611.192	163614.60	611.1971	0.0009	1.25	-0.005	11	51	5d ⁶	24694.24(3)	188307.59(2)	pa
1900	1094	611.241	163601.64	611.2443	0.0009	0.94	-0.003	5	28	5d ⁶	21691.03(6)	185291.73(7)	pa
1092	479	611.297	163586.52	611.2965	0.0014	-0.20	0.001	10	9	5d ⁶	61476.65(2)	225063.38(3)	pa
443	200	611.322	163579.91	611.3202	0.0015	-0.49	0.002	9	21	5d ⁶	54076.95(2)	217657.35(1)	pa
308	254	611.517	163527.86	611.5140	0.0017	-0.69	0.003	6	13	5d ⁶	37754.26(0)	201282.81(1)	pa
122	201	611.547	163519.65	611.5509	0.0008	0.96	-0.004	10	51	5d ⁶	24694.24(3)	188212.93(3)	pa
567	300	611.661	163489.25	611.6653	0.0014	1.15	-0.004	6	17	5d ⁶	61895.15(3)	225383.25(2)	pa
903	940	611.798	163452.62	611.8021	0.0009	1.06	-0.004	17	28	5d ⁶	21691.03(6)	185142.58(5)	pa
328	940	611.798	163452.62	611.8000	0.0008	0.52	-0.002	16	38	5d ⁶	32630.51(2)	196082.61(3)	pa
509	341	611.885	163429.48	611.8872	0.0015	0.67	-0.003	7	29	5d ⁶	45490.83(2)	208919.64(1)	pa
206	519	612.003	163397.84	612.0022	0.0008	-0.28	0.001	13	48	5d ⁶	34478.40(3)	197876.51(3)	pa
816	519	612.003	163397.84	612.0047	0.0009	0.40	-0.002	11	33	5d ⁶	53919.76(4)	217317.19(5)	pa
762	816	612.302	163318.15	612.3024	0.0007	0.16	-0.001	15	41	5d ⁶	7612.63(3)	170930.63(4)	pa
270	357	612.457	163276.82	612.4580	0.0007	0.33	-0.001	16	50	5d ⁶	32806.12(4)	196082.61(3)	pa
353	269	612.483	163269.92	612.4854	0.0011	0.71	-0.003	10	29	5d ⁶	45490.83(2)	208760.03(2)	pa
71	129	612.553	163251.10	612.5555	0.0007	0.59	-0.002	15	42	5d ⁶	22774.76(2)	186025.28(3)	pa
405	299	612.822	163179.65	612.8216	0.0011	0.03	0.000	7	33	5d ⁶	53919.76(4)	217099.38(3)	pa
1075	473	612.857	163170.10	612.8644	0.0012	1.87	-0.007	10	17	5d ⁶	61895.15(3)	225063.38(3)	pa
779	407	612.934	163149.60	612.9345	0.0018	0.02	0.000	6	13	5d ⁶	49329.20(1)	212478.78(1)	pa
147	109	613.170	163086.99	613.1722	0.0009	0.67	-0.003	13	30	5d ⁶	44274.55(4)	207360.87(4)	pa
141	286	613.282	163057.05	613.2852	0.0007	0.78	-0.003	17	40	5d ⁶	16430.43(4)	179486.69(4)	pa
183	347	613.315	163048.35	613.3205	0.0007	1.46	-0.006	15	42	5d ⁶	6026.34(2)	169073.23(3)	pa
595	227	613.409	163023.31	613.4125	0.0012	0.88	-0.003	7	21	5d ⁶	54076.95(2)	217099.38(3)	pa
129	138	613.538	162989.01	613.5392	0.0010	0.24	-0.001	11	30	5d ⁶	44274.55(4)	207263.31(3)	pa
192	283	613.565	162981.97	613.5712	0.0008	1.70	-0.006	12	42	5d ⁶	22774.76(2)	185755.03(2)	pa *
42	44	613.714	162942.37	613.7113	0.0010	-0.68	0.003	7	42	5d ⁶	22774.76(2)	185717.82(1)	pa
804	447	614.074	162846.77	614.0743	0.0013	0.02	0.000	4	18	5d ⁶	38723.84(6)	201570.58(7)	pa
1434	441	614.104	162838.82	614.1050	0.0010	0.21	-0.001	12	33	5d ⁶	53919.76(4)	216758.36(4)	pa
411	188	614.149	162826.94	614.1512	0.0012	0.58	-0.002	10	21	5d ⁶	54076.95(2)	216903.30(2)	pa

71	70	614.723	162674.98	614.7217	0.0010	-0.27	0.001	11	36	5d ⁶	25632.35(2)	188307.59(2)	pa
639	524	615.062	162585.29	615.0596	0.0008	-0.57	0.002	20	38	5d ⁶	32630.51(2)	195216.37(3)	pa
502	524	615.062	162585.29	615.0641	0.0012	0.60	-0.002	10	20	5d ⁶	62478.69(4)	225063.38(3)	pa
289	300	615.079	162580.71	615.0796	0.0009	0.13	0.000	10	36	5d ⁶	25632.35(2)	188212.93(3)	pa
178	208	615.265	162531.62	615.2622	0.0015	-0.70	0.003	9	38	5d ⁶	32630.51(2)	195162.83(1)	pa
340	497	615.305	162520.97	615.3110	0.0008	1.53	-0.006	12	42	5d ⁶	6026.34(2)	168545.78(2)	pa
81	53	615.449	162483.13	615.4485	0.0011	-0.01	0.000	14	46	5d ⁶	36613.63(3)	199096.78(3)	pa *
191	128	615.644	162431.48	615.6517	0.0010	1.98	-0.008	16	48	5d ⁶	40468.85(3)	202898.36(3)	pa *
101	71	615.724	162410.43	615.7247	0.0007	0.18	-0.001	20	50	5d ⁶	32806.12(4)	195216.37(3)	pa
218	414	615.823	162384.22	615.8323	0.0011	2.34	-0.009	6	42	5d ⁶	6026.34(2)	168408.21(1)	pa *
319	414	615.823	162384.22	615.8209	0.0023	-0.67	0.003	4	13	5d ⁶	37754.26(0)	200139.14(1)	pa *
1839	742	616.145	162299.56	616.1533	0.0008	2.30	-0.009	12	50	5d ⁶	32806.12(4)	195103.39(5)	pa *
435	673	616.212	162281.81	616.2168	0.0008	1.27	-0.005	13	42	5d ⁶	6026.34(2)	168306.88(3)	pa
96	607	616.640	162169.31	616.6371	0.0009	-0.63	0.002	11	38	5d ⁶	32630.51(2)	194800.44(2)	pa 200
962	1510	617.059	162059.14	617.0568	0.0007	-0.51	0.002	11	48	5d ⁶	34478.40(3)	196538.04(4)	pa 1000
602	1510	617.065	162057.53	617.0729	0.0010	2.13	-0.008	10	48	5d ⁶	34478.40(3)	196533.80(3)	pa *
237	279	617.299	161996.00	617.2979	0.0019	-0.34	0.001	7	8	5d ⁶	73730.00(2)	235726.34(2)	pa
235	124	617.738	161880.93	617.7400	0.0011	0.54	-0.002	8	20	5d ⁶	62478.69(4)	224359.08(5)	pa
734	406	617.811	161861.75	617.8091	0.0010	-0.54	0.002	8	33	5d ⁶	53919.76(4)	215782.05(3)	pa
218	339	618.162	161769.81	618.1576	0.0012	-1.23	0.005	12	29	5d ⁶	45490.83(2)	207261.88(2)	pa Pt IV (200)
167	216	618.612	161652.21	618.6163	0.0007	1.11	-0.004	13	51	5d ⁶	24694.24(3)	186345.35(4)	pa
129	118	618.983	161555.40	618.9842	0.0008	0.38	-0.001	16	40	5d ⁶	30610.18(4)	192165.20(4)	pa
121	142	619.281	161477.53	619.2828	0.0008	0.42	-0.002	15	46	5d ⁶	36613.63(3)	198090.74(4)	pa
54	117	619.343	161461.50	619.3462	0.0007	0.91	-0.003	15	41	5d ⁶	7612.63(3)	169073.23(3)	pa
132	129	619.372	161453.89	619.3769	0.0009	1.29	-0.005	17	29	5d ⁶	31104.34(1)	192556.93(2)	pa
291	124	619.563	161404.11	619.5618	0.0011	-0.29	0.001	11	33	5d ⁶	53919.76(4)	215324.16(4)	pa
29	187	619.839	161332.19	619.8435	0.0007	1.16	-0.004	15	51	5d ⁶	24694.24(3)	186025.28(3)	pa
18	95	619.934	161307.55	619.9378	0.0008	1.04	-0.004	16	30	5d ⁶	44274.55(4)	205581.06(5)	pa *
957	1096	620.152	161250.74	620.1505	0.0008	-0.44	0.002	9	42	5d ⁶	6026.34(2)	167277.52(2)	pa
193	1096	620.152	161250.74	620.1598	0.0008	1.97	-0.008	16	40	5d ⁶	33865.93(5)	195114.70(4)	pa * 400
140	206	620.199	161238.52	620.2033	0.0008	1.06	-0.004	12	40	5d ⁶	33865.93(5)	195103.39(5)	pa
113	251	620.633	161125.71	620.6354	0.0014	0.53	-0.002	7	11	5d ⁶	30098.45(0)	191223.64(1)	pa
51	433	620.850	161069.61	620.8510	0.0014	0.37	-0.001	3	33	5d ⁶	0.00(4)	161069.23(4)	pa 300, Pt IV(300)
62	106	621.223	160972.77	621.2220	0.0014	-0.29	0.001	12	48	5d ⁶	34478.40(3)	195451.45(2)	pa
98	103	621.277	160958.80	621.2756	0.0007	-0.36	0.001	19	48	5d ⁶	40468.85(3)	201428.01(3)	pa
38	123	621.301	160952.58	621.3060	0.0008	1.30	-0.005	15	40	5d ⁶	30610.18(4)	191561.46(4)	pa *
411	874	621.377	160932.84	621.3760	0.0007	-0.30	0.001	12	41	5d ⁶	7612.63(3)	168545.78(2)	pa
304	983	621.465	160910.03	621.4638	0.0008	-0.38	0.001	17	42	5d ⁶	21096.97(5)	182007.38(4)	pa
534	983	621.465	160910.03	621.4667	0.0008	0.37	-0.001	13	48	5d ⁶	40468.85(3)	201378.51(4)	pa
506	714	621.517	160896.54	621.5193	0.0010	0.50	-0.002	7	29	5d ⁶	31104.34(1)	192000.38(2)	pa
137	154	621.882	160802.11	621.8804	0.0012	-0.51	0.002	12	17	5d ⁶	61895.15(3)	222697.77(3)	pa

256	294	622.126	160739.04	622.1305	0.0007	1.07	-0.004	20	48	5d ⁶	34478.40(3)	195216.37(3)	pa
273	431	622.211	160717.21	622.2113	0.0008	0.11	0.000	11	42	5d ⁶	22774.76(2)	183491.87(2)	pa
173	558	622.300	160694.15	622.2998	0.0008	-0.10	0.000	13	41	5d ⁶	7612.63(3)	168306.88(3)	pa
1135	891	622.645	160605.19	622.6450	0.0007	0.02	0.000	16	50	5d ⁶	32806.12(4)	193411.29(5)	pa
665	403	622.804	160564.24	622.8068	0.0014	0.81	-0.003	13	13	5d ⁶	49329.20(1)	209892.63(2)	pa
225	136	623.148	160475.52	623.1444	0.0011	-0.94	0.004	8	17	5d ⁶	61895.15(3)	222371.61(4)	pa
185	450	623.254	160448.12	623.2518	0.0007	-0.68	0.003	18	40	5d ⁶	30610.18(4)	191058.98(4)	pa
386	610	623.464	160394.16	623.4689	0.0008	1.23	-0.005	15	36	5d ⁶	25632.35(2)	186025.28(3)	pa
192	334	623.743	160322.49	623.7445	0.0008	0.45	-0.002	11	48	5d ⁶	34478.40(3)	194800.44(2)	pa
198	334	624.356	160164.93	624.3544	0.0010	-0.52	0.002	12	30	5d ⁶	44274.55(4)	204440.00(4)	pa
111	348	624.469	160136.03	624.4711	0.0007	0.51	-0.002	14	40	5d ⁶	16430.43(4)	176565.95(3)	pa
297	547	624.535	160119.13	624.5343	0.0011	-0.18	0.001	7	29	5d ⁶	31104.34(1)	191223.64(1)	pa
285	292	624.607	160100.80	624.6070	0.0019	0.13	0.000	5	8	5d ⁶	73730.00(2)	233830.67(2)	pa
84	198	624.851	160038.26	624.8498	0.0008	-0.19	0.001	15	40	5d ⁶	30610.18(4)	190648.63(4)	pa
80	272	625.079	159979.80	625.0835	0.0014	1.19	-0.005	9	13	5d ⁶	37754.26(0)	197732.88(1)	pa
1485	854	625.153	159960.84	625.1554	0.0011	0.62	-0.002	13	33	5d ⁶	53919.76(4)	213879.98(4)	pa
329	448	625.292	159925.26	625.2876	0.0008	-1.16	0.005	17	38	5d ⁶	32630.51(2)	192556.93(2)	pa
301	250	625.335	159914.26	625.3358	0.0015	0.18	-0.001	6	9	5d ⁶	61476.65(2)	221390.74(2)	pa
631	1091	625.853	159781.83	625.8430	0.0008	-2.66	0.010	8	42	5d ⁶	21096.97(5)	180881.45(6)	pa * m(O IV)
48	253	625.922	159764.42	625.9193	0.0009	-0.59	0.002	13	29	5d ⁶	31104.34(1)	190869.34(2)	pa *
182	299	626.018	159739.94	626.0184	0.0009	0.22	-0.001	13	40	5d ⁶	30610.18(4)	190349.90(3)	pa
128	637	626.277	159673.78	626.2811	0.0009	1.07	-0.004	8	33	5d ⁶	0.00(4)	159672.71(3)	pa
978	1250	626.313	159664.60	626.3118	0.0008	-0.28	0.001	9	41	5d ⁶	7612.63(3)	167277.52(2)	pa
126	445	626.419	159637.53	626.4119	0.0010	-1.84	0.007	12	33	5d ⁶	53919.76(4)	213559.13(5)	pa *
648	445	626.419	159637.53	626.4126	0.0012	-1.66	0.007	9	21	5d ⁶	54076.95(2)	213716.14(2)	pa
278	444	626.566	159600.05	626.5571	0.0009	-2.33	0.009	13	48	5d ⁶	40468.85(3)	200071.24(2)	pa *
231	444	626.566	159600.05	626.5767	0.0011	2.66	-0.010	12	21	5d ⁶	41251.20(1)	200848.59(2)	pa *
31	28	626.777	159546.28	626.7810	0.0007	0.92	-0.004	16	40	5d ⁶	33865.93(5)	193411.29(5)	pa *
210	354	626.943	159504.11	626.9389	0.0012	-1.06	0.004	7	46	5d ⁶	36613.63(3)	196118.80(2)	pa
233	197	627.232	159430.57	627.2312	0.0014	-0.27	0.001	10	13	5d ⁶	49329.20(1)	208760.03(2)	pa
156	319	627.623	159331.37	627.6230	0.0011	0.05	0.000	9	48	5d ⁶	40468.85(3)	199800.17(2)	pa
41	154	628.001	159235.31	628.0033	0.0007	0.49	-0.002	13	42	5d ⁶	21096.97(5)	180331.80(5)	pa
42	194	628.139	159200.53	628.1432	0.0009	1.17	-0.005	8	42	5d ⁶	6026.34(2)	165225.70(1)	pa
220	667	628.181	159189.91	628.1785	0.0009	-0.51	0.002	8	28	5d ⁶	21691.03(6)	180881.45(6)	pa
246	907	628.339	159149.78	628.3377	0.0009	-0.30	0.001	8	42	5d ⁶	6026.34(2)	165176.42(2)	pa
49	205	628.643	159072.77	628.6434	0.0007	0.08	0.000	13	51	5d ⁶	24694.24(3)	183766.93(4)	pa
201	237	629.030	158975.01	629.0280	0.0014	-0.42	0.002	3	21	5d ⁶	54076.95(2)	213052.38(3)	pa
40	194	629.566	158839.63	629.5730	0.0015	1.81	-0.007	12	46	5d ⁶	36613.63(3)	195451.45(2)	pa *
327	512	629.900	158755.28	629.9001	0.0008	-0.06	0.000	15	50	5d ⁶	32806.12(4)	191561.46(4)	pa
205	280	630.106	158703.46	630.0999	0.0009	-1.52	0.006	13	48	5d ⁶	40468.85(3)	199173.83(4)	pa
108	335	630.148	158693.00	630.1491	0.0009	0.40	-0.002	9	42	5d ⁶	22774.76(2)	181467.37(2)	pa

92	265	630.423	158623.68	630.4224	0.0011	-0.13	0.001	16	30	5d ⁶	44274.55(4)	202898.36(3)	pa *
283	287	630.495	158605.52	630.4917	0.0008	-0.85	0.003	15	38	5d ⁶	32630.51(2)	191236.88(3)	pa
47	236	630.629	158571.91	630.6250	0.0008	-0.93	0.004	14	42	5d ⁶	6026.34(2)	164599.18(3)	pa
148	617	630.705	158552.76	630.7058	0.0008	0.22	-0.001	13	40	5d ⁶	16430.43(4)	174982.96(4)	pa
78	180	630.918	158499.23	630.9106	0.0008	-1.84	0.007	16	46	5d ⁶	36613.63(3)	195114.70(4)	pa *
54	94	631.130	158445.91	631.1334	0.0014	0.81	-0.003	6	29	5d ⁶	45490.83(2)	203935.93(1)	pa *
812	513	631.303	158402.64	631.3058	0.0017	0.81	-0.003	6	21	5d ⁶	54076.95(2)	212478.78(1)	pa
282	627	631.356	158389.17	631.3541	0.0007	-0.55	0.002	17	42	5d ⁶	21096.97(5)	179486.69(4)	pa
445	642	631.714	158299.58	631.7149	0.0008	0.31	-0.001	16	40	5d ⁶	33865.93(5)	192165.20(4)	pa
70	462	631.900	158252.86	631.9001	0.0007	0.00	0.000	18	50	5d ⁶	32806.12(4)	191058.98(4)	pa
633	642	632.039	158218.04	632.0387	0.0008	-0.12	0.000	14	30	5d ⁶	44274.55(4)	202492.70(5)	pa
160	405	632.135	158194.16	632.1348	0.0007	0.04	0.000	18	51	5d ⁶	24694.24(3)	182888.36(3)	pa
222	390	632.142	158192.33	632.1432	0.0008	0.32	-0.001	15	42	5d ⁶	22774.76(2)	180966.77(3)	pa
202	397	632.279	158157.98	632.2782	0.0008	-0.25	0.001	10	40	5d ⁶	33865.93(5)	192024.16(6)	pa
50	186	632.600	158077.67	632.5970	0.0008	-0.86	0.003	17	48	5d ⁶	34478.40(3)	192556.93(2)	pa
393	259	632.997	157978.58	633.0020	0.0011	1.19	-0.005	10	20	5d ⁶	62478.69(4)	220456.09(5)	pa
191	352	633.161	157937.71	633.1617	0.0013	0.17	-0.001	8	33	5d ⁶	53919.76(4)	211857.30(3)	pa
98	366	633.173	157934.82	633.1812	0.0016	2.14	-0.009	12	13	5d ⁶	49329.20(1)	207261.88(2)	pa * 200, bl
32	116	633.407	157876.42	633.4040	0.0012	-0.71	0.003	14	18	5d ⁶	38723.84(6)	196600.97(5)	pa * Pt IV
10	193	634.042	157718.23	634.0391	0.0010	-0.74	0.003	12	25	5d ⁶	10826.80(1)	168545.78(2)	pa *
493	594	634.170	157686.40	634.1685	0.0009	-0.40	0.002	16	48	5d ⁶	34478.40(3)	192165.20(4)	pa
693	630	634.426	157622.72	634.4296	0.0008	0.83	-0.003	15	48	5d ⁶	40468.85(3)	198090.74(4)	pa
291	735	634.553	157591.22	634.5557	0.0015	0.65	-0.003	6	10	5d ⁶	10817.64(0)	168408.21(1)	pa
346	815	634.598	157580.17	634.5926	0.0012	-1.23	0.005	6	25	5d ⁶	10826.80(1)	168408.21(1)	pa
58	374	634.660	157564.70	634.6636	0.0009	0.92	-0.004	8	41	5d ⁶	7612.63(3)	165176.42(2)	pa
260	515	634.745	157543.51	634.7442	0.0008	-0.28	0.001	13	50	5d ⁶	32806.12(4)	190349.90(3)	pa
78	165	634.832	157522.07	634.8320	0.0010	0.08	0.000	7	48	5d ⁶	34478.40(3)	192000.38(2)	pa
167	402	635.290	157408.40	635.2894	0.0017	-0.17	0.001	9	13	5d ⁶	37754.26(0)	195162.83(1)	pa
114	402	635.290	157408.40	635.2936	0.0012	0.87	-0.004	16	29	5d ⁶	45490.83(2)	202898.36(3)	pa *
43	148	635.678	157312.38	635.6748	0.0007	-0.76	0.003	17	51	5d ⁶	24694.24(3)	182007.38(4)	pa
150	305	635.906	157255.92	635.9057	0.0008	-0.09	0.000	18	36	5d ⁶	25632.35(2)	182888.36(3)	pa
37	118	636.123	157202.18	636.1191	0.0011	-1.08	0.004	11	29	5d ⁶	31104.34(1)	188307.59(2)	pa
133	372	636.517	157104.90	636.5142	0.0009	-0.78	0.003	9	42	5d ⁶	22774.76(2)	179880.44(2)	pa
115	149	636.602	157083.89	636.6059	0.0009	0.83	-0.003	15	48	5d ⁶	34478.40(3)	191561.46(4)	pa
125	494	636.999	156986.02	636.9972	0.0008	-0.53	0.002	14	41	5d ⁶	7612.63(3)	164599.18(3)	pa
59	217	637.293	156913.60	637.2924	0.0008	-0.26	0.001	15	50	5d ⁶	32806.12(4)	189719.97(3)	pa
39	154	637.827	156782.35	637.8310	0.0012	1.02	-0.004	9	20	5d ⁶	62478.69(4)	219260.02(5)	pa *
219	466	637.867	156772.47	637.8644	0.0009	-0.66	0.003	9	51	5d ⁶	24694.24(3)	181467.37(2)	pa
163	654	637.936	156755.49	637.9464	0.0008	2.50	-0.010	13	40	5d ⁶	30610.18(4)	187363.17(5)	pa *
291	654	637.936	156755.49	637.9240	0.0008	-3.00	0.012	15	48	5d ⁶	34478.40(3)	191236.88(3)	pa * 300
240	501	638.652	156579.70	638.6488	0.0007	-0.88	0.004	18	48	5d ⁶	34478.40(3)	191058.98(4)	pa

26	94	639.057	156480.66	639.0524	0.0016	-1.02	0.004	9	21	5d ⁶	41251.20(1)	197732.88(1)	pa *
184	589	639.181	156450.16	639.1789	0.0010	-0.56	0.002	9	25	5d ⁶	10826.80(1)	167277.52(2)	pa
676	611	640.081	156230.20	640.0780	0.0010	-0.75	0.003	13	20	5d ⁶	62478.69(4)	218709.64(4)	pa
43	65	640.140	156215.85	640.1373	0.0015	-0.62	0.003	13	13	5d ⁶	49329.20(1)	205545.67(2)	pa *
281	226	640.284	156180.67	640.2840	0.0017	-0.03	0.000	9	9	5d ⁶	61476.65(2)	217657.35(1)	pa
218	541	640.531	156120.47	640.5435	0.0015	3.04	-0.012	7	13	5d ⁶	37754.26(0)	193871.68(1)	pa * 200, m
121	204	640.756	156065.67	640.7589	0.0011	0.73	-0.003	10	48	5d ⁶	40468.85(3)	196533.80(3)	pa
50	170	640.857	156041.00	640.8645	0.0009	1.77	-0.007	14	50	5d ⁶	32806.12(4)	188845.35(5)	pa *
56	147	641.262	155942.50	641.2587	0.0009	-0.80	0.003	17	46	5d ⁶	36613.63(3)	192556.93(2)	pa
163	189	641.786	155815.25	641.7839	0.0014	-0.43	0.002	13	21	5d ⁶	54076.95(2)	209892.63(2)	pa
55	114	642.357	155676.55	642.3553	0.0010	-0.53	0.002	11	38	5d ⁶	32630.51(2)	188307.59(2)	pa
107	216	642.468	155649.78	642.4673	0.0012	-0.17	0.001	7	48	5d ⁶	40468.85(3)	196118.80(2)	pa
609	721	642.620	155613.03	642.6167	0.0008	-0.73	0.003	16	48	5d ⁶	40468.85(3)	196082.61(3)	pa
116	206	642.875	155551.23	642.8736	0.0008	-0.34	0.001	16	46	5d ⁶	36613.63(3)	192165.20(4)	pa
588	716	643.019	155516.33	643.0183	0.0009	-0.25	0.001	14	30	5d ⁶	44274.55(4)	199791.13(5)	pa
324	538	643.095	155498.00	643.0940	0.0010	-0.26	0.001	14	33	5d ⁶	53919.76(4)	209418.01(3)	pa
239	84	643.310	155446.15	643.3071	0.0019	-0.60	0.002	6	8	5d ⁶	73730.00(2)	229176.75(3)	pa *
243	410	643.442	155414.19	643.4381	0.0008	-0.91	0.004	15	40	5d ⁶	30610.18(4)	186025.28(3)	pa
85	230	643.477	155405.78	643.4724	0.0009	-1.03	0.004	10	50	5d ⁶	32806.12(4)	188212.93(3)	pa
240	349	643.746	155340.75	643.7448	0.0011	-0.32	0.001	14	21	5d ⁶	54076.95(2)	209418.01(3)	pa
97	866	644.150	155243.44	644.1573	0.0009	1.86	-0.008	15	48	5d ⁶	34478.40(3)	189719.97(3)	pa * 200, O II
291	765	644.679	155116.08	644.6783	0.0008	-0.05	0.000	11	40	5d ⁶	16430.43(4)	171546.55(5)	pa
368	445	644.735	155102.58	644.7340	0.0020	-0.15	0.001	5	8	5d ⁶	73730.00(2)	228832.73(2)	pa Pt IV
98	102	644.864	155071.46	644.8660	0.0010	0.48	-0.002	13	33	5d ⁶	53919.76(4)	208990.74(3)	pa
142	143	645.131	155007.35	645.1274	0.0014	-0.80	0.003	10	17	5d ⁶	61895.15(3)	216903.30(2)	pa
154	521	646.029	154791.69	646.0263	0.0007	-0.76	0.003	17	51	5d ⁶	24694.24(3)	179486.69(4)	pa
26	177	646.231	154743.52	646.2322	0.0008	0.39	-0.002	11	42	5d ⁶	22774.76(2)	177517.90(2)	pa
635	683	646.531	154671.62	646.5309	0.0021	-0.03	0.000	5	8	5d ⁶	73730.00(2)	228401.66(3)	pa Pt IV
169	596	646.633	154647.13	646.6185	0.0010	-3.57	0.015	12	29	5d ⁶	31104.34(1)	185755.03(2)	pa * 300
338	596	646.633	154647.13	646.6388	0.0008	1.28	-0.005	16	48	5d ⁶	40468.85(3)	195114.70(4)	pa
118	461	647.006	154557.95	647.0103	0.0007	0.91	-0.004	13	50	5d ⁶	32806.12(4)	187363.17(5)	pa
25	144	647.116	154531.75	647.1135	0.0008	-0.65	0.003	17	40	5d ⁶	30610.18(4)	185142.58(5)	pa
168	545	647.247	154500.50	647.2483	0.0008	0.30	-0.001	15	40	5d ⁶	16430.43(4)	170930.63(4)	pa
96	186	647.474	154446.31	647.4782	0.0008	0.96	-0.004	18	46	5d ⁶	36613.63(3)	191058.98(4)	pa
23	176	647.635	154407.91	647.6346	0.0015	-0.15	0.001	8	10	5d ⁶	10817.64(0)	165225.70(1)	pa
137	643	647.675	154398.40	647.6730	0.0011	-0.50	0.002	8	25	5d ⁶	10826.80(1)	165225.70(1)	pa
66	90	647.953	154332.18	647.9555	0.0009	0.59	-0.002	11	48	5d ⁶	40468.85(3)	194800.44(2)	pa *
125	406	648.513	154198.82	648.5074	0.0017	-1.44	0.006	12	21	5d ⁶	41251.20(1)	195451.45(2)	pa * 200, Pt IV
211	810	649.203	154035.00	649.2031	0.0008	0.01	0.000	15	46	5d ⁶	36613.63(3)	190648.63(4)	pa
315	796	649.834	153885.57	649.8317	0.0008	-0.42	0.002	13	42	5d ⁶	21096.97(5)	174982.96(4)	pa
20	472	650.846	153646.18	650.8452	0.0010	-0.19	0.001	8	42	5d ⁶	6026.34(2)	159672.71(3)	pa * 150

156	472	650.846	153646.18	650.8374	0.0016	-2.02	0.009	9	11	5d ⁶	30098.45(0)	183746.65(1)	pa *
22	215	651.651	153456.33	651.6501	0.0014	-0.27	0.001	3	41	5d ⁶	7612.63(3)	161069.23(4)	pa
214	217	651.717	153440.74	651.7158	0.0010	-0.37	0.002	13	33	5d ⁶	53919.76(4)	207360.87(4)	pa
97	427	651.914	153394.56	651.9127	0.0008	-0.21	0.001	15	38	5d ⁶	32630.51(2)	186025.28(3)	pa
61	398	652.129	153343.89	652.1304	0.0011	0.34	-0.001	11	33	5d ⁶	53919.76(4)	207263.31(3)	pa
84	202	652.661	153218.88	652.6599	0.0008	-0.28	0.001	15	50	5d ⁶	32806.12(4)	186025.28(3)	pa
275	522	652.748	153198.57	652.7442	0.0009	-0.79	0.003	9	40	5d ⁶	33865.93(5)	187065.29(6)	pa
64	217	652.807	153184.54	652.8057	0.0014	-0.39	0.002	12	21	5d ⁶	54076.95(2)	207261.88(2)	pa
875	477	652.845	153175.79	652.8423	0.0011	-0.57	0.002	13	20	5d ⁶	62478.69(4)	215655.04(5)	pa
87	172	653.138	153106.95	653.1408	0.0009	0.61	-0.003	15	46	5d ⁶	36613.63(3)	189719.97(3)	pa
53	372	653.360	153054.91	653.3603	0.0009	0.01	0.000	10	42	5d ⁶	22774.76(2)	175829.67(3)	pa
116	622	655.126	152642.35	655.1243	0.0008	-0.45	0.002	15	40	5d ⁶	16430.43(4)	169073.23(3)	pa
98	622	655.126	152642.35	655.1263	0.0013	0.03	0.000	9	29	5d ⁶	31104.34(1)	183746.65(1)	pa
70	98	657.092	152185.62	657.0897	0.0010	-0.60	0.003	15	33	5d ⁶	53919.76(4)	206105.98(4)	pa *
116	192	657.519	152086.88	657.5137	0.0009	-1.20	0.005	17	48	5d ⁶	40468.85(3)	192556.93(2)	pa
11	168	657.638	152059.39	657.6348	0.0009	-0.69	0.003	8	41	5d ⁶	7612.63(3)	159672.71(3)	pa
172	604	658.435	151875.23	658.4299	0.0009	-1.22	0.005	13	40	5d ⁶	16430.43(4)	168306.88(3)	pa
56	200	658.456	151870.48	658.4505	0.0008	-1.22	0.005	14	51	5d ⁶	24694.24(3)	176565.95(3)	pa
190	284	658.673	151820.43	658.6704	0.0015	-0.57	0.002	9	17	5d ⁶	61895.15(3)	213716.14(2)	pa
152	159	659.168	151706.35	659.1674	0.0016	-0.19	0.001	11	20	5d ⁶	62478.69(4)	214185.23(3)	pa
52	113	659.209	151696.87	659.2116	0.0008	0.52	-0.002	16	48	5d ⁶	40468.85(3)	192165.20(4)	pa *
177	267	659.365	151661.05	659.3640	0.0009	-0.25	0.001	16	33	5d ⁶	53919.76(4)	205581.06(5)	pa
233	324	659.981	151519.42	659.9815	0.0014	0.03	0.000	12	13	5d ⁶	49329.20(1)	200848.59(2)	pa
134	115	660.204	151468.43	660.2023	0.0013	-0.30	0.001	13	21	5d ⁶	54076.95(2)	205545.67(2)	pa
179	144	660.498	151400.94	660.4964	0.0013	-0.35	0.002	13	20	5d ⁶	62478.69(4)	213879.98(4)	pa
11	186	660.693	151356.32	660.6934	0.0010	0.18	-0.001	8	42	5d ⁶	6026.34(2)	157382.47(2)	pa *
53	185	660.911	151306.28	660.9135	0.0012	0.55	-0.002	17	21	5d ⁶	41251.20(1)	192556.93(2)	pa
55	183	661.108	151261.22	661.1100	0.0009	0.45	-0.002	13	33	5d ⁶	53919.76(4)	205180.52(4)	pa
167	378	661.745	151115.63	661.7427	0.0012	-0.51	0.002	9	38	5d ⁶	32630.51(2)	183746.65(1)	pa
119	219	661.900	151080.22	661.8990	0.0013	-0.22	0.001	12	20	5d ⁶	62478.69(4)	213559.13(5)	pa
75	396	662.508	150941.62	662.5069	0.0009	-0.20	0.001	20	30	5d ⁶	44274.55(4)	195216.37(3)	pa
156	490	662.858	150861.96	662.8603	0.0009	0.61	-0.003	11	38	5d ⁶	32630.51(2)	183491.87(2)	pa
260	340	663.005	150828.40	663.0032	0.0010	-0.44	0.002	12	30	5d ⁶	44274.55(4)	195103.39(5)	pa
277	714	664.051	150590.80	664.0542	0.0008	0.67	-0.003	18	48	5d ⁶	40468.85(3)	191058.98(4)	pa Pt IV (400)
46	81	664.679	150448.49	664.6745	0.0009	-1.09	0.005	11	42	5d ⁶	21096.97(5)	171546.55(5)	pa *
166	437	665.384	150289.27	665.3859	0.0008	0.55	-0.002	13	51	5d ⁶	24694.24(3)	174982.96(4)	pa
202	569	667.310	149855.48	667.3094	0.0010	-0.05	0.000	11	28	5d ⁶	21691.03(6)	171546.55(5)	pa
303	584	667.409	149833.12	667.4068	0.0008	-0.55	0.002	15	42	5d ⁶	21096.97(5)	170930.63(4)	pa
18	124	667.697	149768.49	667.6912	0.0010	-1.35	0.006	8	41	5d ⁶	7612.63(3)	157382.47(2)	pa *
63	168	667.855	149733.08	667.8612	0.0008	1.37	-0.006	13	46	5d ⁶	36613.63(3)	186345.35(4)	pa
10	162	667.908	149721.29	667.9062	0.0009	-0.33	0.001	13	40	5d ⁶	30610.18(4)	180331.80(5)	pa *

93	137	668.295	149634.45	668.2968	0.0014	0.34	-0.002	14	17	5d ⁶	61895.15(3)	211529.26(4)	pa *
76	235	669.839	149289.54	669.8438	0.0008	1.01	-0.005	13	48	5d ⁶	34478.40(3)	183766.93(4)	pa
214	348	671.241	148977.68	671.2374	0.0012	-0.92	0.004	16	33	5d ⁶	53919.76(4)	202898.36(3)	pa Pt IV (100)
17	74	672.584	148680.38	672.5828	0.0015	-0.20	0.001	7	11	5d ⁶	30098.45(0)	178779.04(1)	pa
112	443	674.907	148168.63	674.9061	0.0009	-0.13	0.001	14	40	5d ⁶	16430.43(4)	164599.18(3)	pa
72	65	675.685	147997.96	675.6872	0.0016	0.48	-0.002	13	17	5d ⁶	61895.15(3)	209892.63(2)	pa *
74	337	675.837	147964.69	675.8421	0.0015	1.13	-0.005	7	13	5d ⁶	37754.26(0)	185717.82(1)	pa
178	166	675.944	147941.16	675.9435	0.0016	-0.20	0.001	14	9	5d ⁶	61476.65(2)	209418.01(3)	pa Pt IV
104	291	676.175	147890.69	676.1752	0.0010	0.03	0.000	16	30	5d ⁶	44274.55(4)	192165.20(4)	pa
194	132	677.227	147660.89	677.2281	0.0018	0.15	-0.001	6	8	5d ⁶	73730.00(2)	221390.74(2)	pa
982	446	677.979	147497.17	677.9800	0.0030	0.19	-0.001	2	8	5d ⁶	73730.00(2)	221226.99(3)	pa
377	293	678.597	147362.82	678.5996	0.0011	0.53	-0.002	15	20	5d ⁶	62478.69(4)	209840.99(5)	pa
56	246	679.117	147249.99	679.1175	0.0010	0.06	0.000	9	38	5d ⁶	32630.51(2)	179880.44(2)	pa
104	127	679.831	147095.47	679.8300	0.0014	-0.12	0.001	13	17	5d ⁶	61895.15(3)	208990.74(3)	pa
45	66	681.269	146784.81	681.2711	0.0009	0.38	-0.002	18	30	5d ⁶	44274.55(4)	191058.98(4)	pa *
75	289	681.439	146748.26	681.4394	0.0010	0.06	0.000	6	42	5d ⁶	21096.97(5)	167845.16(6)	pa Pt IV
14	23	681.751	146681.18	681.7536	0.0008	0.61	-0.003	17	50	5d ⁶	32806.12(4)	179486.69(4)	pa *
63	206	682.528	146514.20	682.5270	0.0009	-0.15	0.001	10	42	5d ⁶	21096.97(5)	167611.32(5)	pa
31	27	682.768	146462.68	682.7683	0.0019	0.11	0.000	8	13	5d ⁶	37754.26(0)	184216.83(1)	pa *
49	122	683.001	146412.78	682.9968	0.0011	-0.79	0.004	11	29	5d ⁶	31104.34(1)	177517.90(2)	pa
20	93	683.536	146298.03	683.5342	0.0009	-0.43	0.002	15	42	5d ⁶	22774.76(2)	169073.23(3)	pa *
122	482	684.207	146154.66	684.2092	0.0011	0.53	-0.002	6	28	5d ⁶	21691.03(6)	167845.16(6)	pa Pt IV (150)
28	292	684.238	146148.02	684.2354	0.0011	-0.51	0.002	7	38	5d ⁶	32630.51(2)	178779.04(1)	pa
31	42	685.712	145833.88	685.7129	0.0023	0.25	-0.001	9	13	5d ⁶	49329.20(1)	195162.83(1)	pa *
156	462	686.007	145771.17	686.0074	0.0009	0.16	-0.001	12	42	5d ⁶	22774.76(2)	168545.78(2)	pa
81	227	686.656	145633.42	686.6555	0.0013	-0.03	0.000	6	42	5d ⁶	22774.76(2)	168408.21(1)	pa
88	230	686.713	145621.18	686.7153	0.0008	0.42	-0.002	17	40	5d ⁶	33865.93(5)	179486.69(4)	pa
22	83	687.781	145395.14	687.7875	0.0009	1.39	-0.007	17	46	5d ⁶	36613.63(3)	182007.38(4)	pa *
60	150	687.864	145377.49	687.8595	0.0011	-1.03	0.005	13	29	5d ⁶	45490.83(2)	190869.34(2)	pa
38	34	688.816	145176.76	688.8143	0.0014	-0.26	0.001	14	33	5d ⁶	53919.76(4)	199096.78(3)	pa *
234	235	693.620	144171.20	693.6208	0.0010	0.22	-0.001	15	33	5d ⁶	53919.76(4)	198090.74(4)	pa
125	142	695.150	143853.91	695.1500	0.0014	0.07	0.000	10	20	5d ⁶	62478.69(4)	206332.53(5)	pa *
18	22	695.600	143760.70	695.6046	0.0009	0.87	-0.004	14	50	5d ⁶	32806.12(4)	176565.95(3)	pa *
35	56	696.109	143655.77	696.1077	0.0018	-0.16	0.001	9	21	5d ⁶	54076.95(2)	197732.88(1)	pa *
435	1181	696.942	143484.05	696.9404	0.0012	-0.24	0.001	4	33	5d ⁶	0.00(4)	143484.29(3)	pa
117	352	697.568	143355.14	697.5646	0.0014	-0.77	0.004	7	29	5d ⁶	31104.34(1)	174460.24(1)	pa
94	206	697.997	143267.13	697.9984	0.0010	0.32	-0.002	9	46	5d ⁶	36613.63(3)	179880.44(2)	pa
84	59	699.008	143059.96	699.0074	0.0017	-0.05	0.000	18	9	5d ⁶	61476.65(2)	204536.67(3)	pa *
248	287	700.864	142681.14	700.8631	0.0010	-0.07	0.000	14	33	5d ⁶	53919.76(4)	196600.97(5)	pa
34	65	701.055	142642.08	701.0582	0.0014	0.56	-0.003	18	17	5d ⁶	61895.15(3)	204536.67(3)	pa *
13	52	701.998	142450.47	701.9961	0.0012	-0.47	0.002	8	42	5d ⁶	22774.76(2)	165225.70(1)	pa *

38	246	702.152	142419.20	702.1510	0.0009	-0.30	0.001	18	48	5d ⁶	40468.85(3)	182888.36(3)	pa
117	711	703.795	142086.85	703.7914	0.0009	-0.70	0.003	14	48	5d ⁶	34478.40(3)	176565.95(3)	pa
247	300	704.418	141961.17	704.4173	0.0013	-0.15	0.001	12	20	5d ⁶	62478.69(4)	204440.00(4)	pa
183	334	707.455	141351.79	707.4574	0.0010	0.52	-0.003	10	48	5d ⁶	34478.40(3)	175829.67(3)	pa
74	41	707.672	141308.36	707.6713	0.0023	-0.18	0.001	9	8	5d ⁶	73730.00(2)	215038.55(2)	pa *
23	134	709.100	141023.85	709.0952	0.0016	-0.93	0.005	7	13	5d ⁶	37754.26(0)	178779.04(1)	pa
47	243	712.652	140320.96	712.6545	0.0009	0.51	-0.003	15	40	5d ⁶	30610.18(4)	170930.63(4)	pa
41	127	713.182	140216.58	713.1845	0.0014	0.41	-0.002	9	21	5d ⁶	41251.20(1)	181467.37(2)	pa
19	43	714.770	139905.16	714.7710	0.0010	0.22	-0.001	14	51	5d ⁶	24694.24(3)	164599.18(3)	pa *
28	132	716.621	139543.72	716.6195	0.0012	-0.36	0.002	8	36	5d ⁶	25632.35(2)	165176.42(2)	pa
24	162	719.337	139016.80	719.3321	0.0009	-1.03	0.005	17	48	5d ⁶	40468.85(3)	179486.69(4)	pa *
46	40	719.680	138950.59	719.6869	0.0013	1.27	-0.007	19	20	5d ⁶	62478.69(4)	201428.01(3)	pa *
14	66	721.424	138614.66	721.4288	0.0011	0.85	-0.004	18	30	5d ⁶	44274.55(4)	182888.36(3)	pa *
47	270	723.982	138125.00	723.9845	0.0009	0.49	-0.003	15	50	5d ⁶	32806.12(4)	170930.63(4)	pa
31	72	731.370	136729.64	731.3744	0.0011	0.77	-0.004	15	33	5d ⁶	53919.76(4)	190648.63(4)	pa *
76	365	732.861	136451.47	732.8572	0.0009	-0.77	0.004	15	48	5d ⁶	34478.40(3)	170930.63(4)	pa Pt IV
21	100	732.900	136444.30	732.9083	0.0010	1.59	-0.009	15	38	5d ⁶	32630.51(2)	169073.23(3)	pa *
86	209	734.985	136057.22	734.9847	0.0011	-0.03	0.000	13	30	5d ⁶	44274.55(4)	180331.80(5)	pa
85	769	735.986	135872.19	735.9887	0.0012	0.54	-0.003	4	41	5d ⁶	7612.63(3)	143484.29(3)	pa 300, Pt IV
21	68	737.051	135675.89	737.0480	0.0011	-0.47	0.003	13	38	5d ⁶	32630.51(2)	168306.88(3)	pa *
36	210	738.005	135500.47	738.0033	0.0010	-0.28	0.002	13	50	5d ⁶	32806.12(4)	168306.88(3)	pa
46	316	739.876	135157.69	739.8780	0.0012	0.27	-0.001	4	42	5d ⁶	6026.34(2)	141183.76(2)	pa
43	452	741.804	134806.52	741.8112	0.0011	1.32	-0.007	10	50	5d ⁶	32806.12(4)	167611.32(5)	pa * 200
41	165	743.412	134514.89	743.4164	0.0010	0.78	-0.004	13	48	5d ⁶	40468.85(3)	174982.96(4)	pa
115	383	746.382	133979.60	746.3843	0.0012	0.37	-0.002	6	40	5d ⁶	33865.93(5)	167845.16(6)	pa
12	148	747.688	133745.57	747.6893	0.0011	0.18	-0.001	10	40	5d ⁶	33865.93(5)	167611.32(5)	pa
36	275	748.665	133571.13	748.6648	0.0012	0.00	0.000	4	41	5d ⁶	7612.63(3)	141183.76(2)	pa
67	401	753.641	132689.08	753.6463	0.0012	0.85	-0.005	8	51	5d ⁶	24694.24(3)	157382.47(2)	pa
39	139	757.752	131969.25	757.7556	0.0012	0.57	-0.003	14	38	5d ⁶	32630.51(2)	164599.18(3)	pa
25	201	757.967	131931.80	757.9654	0.0011	-0.35	0.002	12	46	5d ⁶	36613.63(3)	168545.78(2)	pa
29	173	758.453	131847.34	758.4586	0.0011	0.98	-0.006	8	40	5d ⁶	33865.93(5)	165712.29(4)	pa
34	203	759.006	131751.30	759.0126	0.0014	1.17	-0.007	8	36	5d ⁶	25632.35(2)	157382.47(2)	pa *
99	373	762.058	131223.56	762.0626	0.0010	0.74	-0.004	17	33	5d ⁶	53919.76(4)	185142.58(5)	pa
15	84	774.813	129063.45	774.8182	0.0015	0.92	-0.006	8	40	5d ⁶	30610.18(4)	159672.71(3)	pa *
21	639	781.340	127985.22	781.3382	0.0013	-0.33	0.002	14	46	5d ⁶	36613.63(3)	164599.18(3)	pa * 100, m
95	48	897.578	111410.94	897.5706	0.0019	-0.90	0.007	10	16	5d ⁵ 6s	109044.24(6)	220456.09(5)	pa *
70	63	905.446	110442.85	905.4471	0.0030	0.17	-0.001	4	10	5d ⁵ 6s	112490.38(7)	222933.07(7)	pa *
64	58	916.680	109089.29	916.6824	0.0014	0.25	-0.002	14	14	5d ⁵ 6s	93403.66(6)	202492.70(5)	pa
234	36	920.402	108648.17	920.4011	0.0019	-0.12	0.001	10	20	5d ⁵ 6s	117739.95(6)	226388.24(5)	pa *
64	40	923.588	108273.35	923.5917	0.0019	0.40	-0.003	11	16	5d ⁵ 6s	109044.24(6)	217317.19(5)	pa *
20	37	935.728	106868.64	935.7221	0.0016	-0.70	0.006	15	12	5d ⁵ 6s	64061.29(3)	170930.63(4)	pb *

70	41	935.850	106854.74	935.8516	0.0022	0.19	-0.002	12	26	5d ⁵ 6s	109903.81(4)	216758.36(4)	pb *
53	260	939.962	106387.32	939.9604	0.0016	-0.14	0.001	14	14	5d ⁵ 6s	93403.66(6)	199791.13(5)	pb *
220	184	941.413	106223.35	941.4121	0.0019	-0.06	0.001	6	16	5d ⁵ 6s	119186.22(5)	225409.63(6)	pb
91	86	941.742	106186.22	941.7524	0.0019	1.20	-0.011	9	22	5d ⁵ 6s	113075.00(5)	219260.02(5)	pb *
73	95	942.477	106103.34	942.4749	0.0015	-0.28	0.002	16	25	5d ⁵ 6s	103914.20(5)	210017.82(4)	pb *
131	96	944.046	105927.05	944.0483	0.0013	0.27	-0.002	15	25	5d ⁵ 6s	103914.20(5)	209840.99(5)	pb
75	119	945.336	105782.45	945.3331	0.0015	-0.37	0.003	13	24	5d ⁵ 6s	99397.70(4)	205180.52(4)	pb
86	156	951.533	105093.58	951.5347	0.0018	0.20	-0.002	10	20	5d ⁵ 6s	83119.55(2)	188212.93(3)	pb
178	645	952.274	105011.80	952.2727	0.0015	-0.13	0.001	15	12	5d ⁵ 6s	64061.29(3)	169073.23(3)	pb
119	90	956.374	104561.62	956.3699	0.0025	-0.44	0.004	13	23	5d ⁵ 6s	109317.92(5)	213879.98(4)	pb *
311	659	959.269	104246.05	959.2732	0.0017	0.46	-0.004	13	12	5d ⁵ 6s	64061.29(3)	168306.88(3)	pb
93	93	962.171	103931.58	962.1647	0.0016	-0.74	0.007	16	26	5d ⁵ 6s	106085.51(4)	210017.82(4)	pb *
46	55	964.506	103680.01	964.5101	0.0017	0.43	-0.004	18	29	5d ⁵ 6s	100857.09(3)	204536.67(3)	pb *
185	240	965.378	103586.40	965.3758	0.0015	-0.20	0.002	15	18	5d ⁵ 6s	87062.03(3)	190648.63(4)	pb
132	320	966.184	103499.92	966.1774	0.0024	-0.74	0.007	16	24	5d ⁵ 6s	99397.70(4)	202898.36(3)	pb *
174	469	968.844	103215.75	968.8399	0.0018	-0.48	0.004	9	12	5d ⁵ 6s	64061.29(3)	167277.52(2)	pb
222	177	969.016	103197.48	969.0176	0.0017	0.18	-0.002	14	14	5d ⁵ 6s	93403.66(6)	196600.97(5)	pb
100	99	969.977	103095.19	969.9791	0.0015	0.18	-0.002	14	24	5d ⁵ 6s	99397.70(4)	202492.70(5)	pb
104	238	970.265	103064.58	970.2592	0.0019	-0.66	0.006	9	20	5d ⁵ 6s	116194.78(4)	219260.02(5)	pb
186	282	974.985	102565.67	974.9840	0.0016	-0.11	0.001	14	19	5d ⁵ 6s	94035.18(5)	196600.97(5)	pb
328	769	975.585	102502.59	975.5826	0.0015	-0.27	0.003	11	19	5d ⁵ 6s	94035.18(5)	196538.04(4)	pb
149	274	978.557	102191.24	978.5523	0.0017	-0.54	0.005	15	25	5d ⁵ 6s	103914.20(5)	206105.98(4)	pb
37	70	981.058	101930.80	981.0608	0.0018	0.32	-0.003	13	16	5d ⁵ 6s	88938.86(2)	190869.34(2)	pb
281	190	983.286	101699.77	983.2868	0.0017	0.05	0.000	12	14	5d ⁵ 6s	93403.66(6)	195103.39(5)	pb
26	111	983.762	101650.58	983.7582	0.0018	-0.42	0.004	8	12	5d ⁵ 6s	64061.29(3)	165712.29(4)	pb
120	155	984.086	101617.18	984.0794	0.0017	-0.64	0.006	20	18	5d ⁵ 6s	93598.55(2)	195216.37(3)	pb
145	132	986.088	101410.85	986.0859	0.0017	-0.19	0.002	13	16	5d ⁵ 6s	88938.86(2)	190349.90(3)	pb
140	163	988.878	101124.70	988.8775	0.0016	-0.06	0.001	16	22	5d ⁵ 6s	93989.94(3)	195114.70(4)	pb
66	502	988.968	101115.51	988.9717	0.0020	0.38	-0.004	8	12	5d ⁵ 6s	64061.29(3)	165176.42(2)	pb
127	115	989.141	101097.82	989.1463	0.0028	0.54	-0.005	8	20	5d ⁵ 6s	83119.55(2)	184216.83(1)	pb
35	44	989.320	101079.56	989.3201	0.0017	0.04	0.000	16	19	5d ⁵ 6s	94035.18(5)	195114.70(4)	pb *
131	210	991.239	100883.87	991.2467	0.0030	0.82	-0.008	12	19	5d ⁵ 6s	106378.82(2)	207261.88(2)	pb
199	104	992.059	100800.46	992.0603	0.0018	0.13	-0.001	15	22	5d ⁵ 6s	105305.65(3)	206105.98(4)	pb
298	181	992.376	100768.24	992.3756	0.0022	-0.06	0.001	10	18	5d ⁵ 6s	129515.50(5)	230283.80(4)	pb
328	660	994.649	100537.96	994.6499	0.0019	0.07	-0.001	14	12	5d ⁵ 6s	64061.29(3)	164599.18(3)	pb
177	199	994.790	100523.78	994.7966	0.0015	0.72	-0.007	15	23	5d ⁵ 6s	109317.92(5)	209840.99(5)	pb
203	114	996.031	100398.50	996.0337	0.0020	0.30	-0.003	8	14	5d ⁵ 6s	121973.40(4)	222371.61(4)	pb
29	32	996.596	100341.57	996.5881	0.0040	-0.78	0.008	9	7	5d ⁵ 6s	94820.48(1)	195162.83(1)	pb *
94	165	997.277	100273.00	997.2761	0.0024	-0.13	0.001	7	18	5d ⁵ 6s	93598.55(2)	193871.68(1)	pb
53	71	998.865	100113.63	998.8612	0.0017	-0.38	0.004	16	26	5d ⁵ 6s	109903.81(4)	210017.82(4)	pb *
136	71	1000.631	99936.95	1000.6286	0.0016	-0.23	0.002	15	26	5d ⁵ 6s	109903.81(4)	209840.99(5)	pb

56	75	1000.851	99914.99	1000.8493	0.0017	-0.15	0.001	16	18	5d ⁵ 6s	92250.06(4)	192165.20(4)	pb *
176	133	1002.240	99776.49	1002.2437	0.0019	0.35	-0.004	13	24	5d ⁵ 6s	99397.70(4)	199173.83(4)	pb
14	69	1002.321	99768.42	1002.3173	0.0016	-0.39	0.004	18	20	5d ⁵ 6s	83119.55(2)	182888.36(3)	pb *
126	81	1003.347	99666.40	1003.3455	0.0017	-0.17	0.002	16	24	5d ⁵ 6s	110351.25(3)	210017.82(4)	pb
75	51	1003.811	99620.36	1003.8128	0.0015	0.19	-0.002	15	25	5d ⁵ 6s	103914.20(5)	203534.37(5)	pb *
134	59	1004.186	99583.10	1004.1973	0.0030	1.08	-0.011	12	12	5d ⁵ 6s	123115.74(3)	222697.77(3)	pb *
40	42	1004.613	99540.79	1004.6074	0.0031	-0.59	0.006	13	24	5d ⁵ 6s	110351.25(3)	209892.63(2)	pb *
335	162	1004.795	99522.74	1004.7886	0.0018	-0.69	0.007	13	16	5d ⁵ 6s	119186.22(5)	218709.64(4)	pb
133	61	1005.583	99444.77	1005.5886	0.0031	0.52	-0.005	10	11	5d ⁵ 6s	125619.13(3)	225063.38(3)	pb *
322	182	1006.276	99376.32	1006.2781	0.0015	0.22	-0.002	16	19	5d ⁵ 6s	94035.18(5)	193411.29(5)	pb
58	56	1006.554	99348.86	1006.5443	0.0030	-0.97	0.010	12	11	5d ⁵ 6s	107912.05(1)	207261.88(2)	pb *
123	40	1008.790	99128.65	1008.7826	0.0030	-0.74	0.007	11	20	5d ⁵ 6s	116194.78(4)	215324.16(4)	pb *
270	158	1009.133	99094.96	1009.1325	0.0017	-0.06	0.001	13	26	5d ⁵ 6s	106085.51(4)	205180.52(4)	pb
162	173	1009.218	99086.58	1009.2148	0.0022	-0.35	0.004	13	26	5d ⁵ 6s	109903.81(4)	208990.74(3)	pb * 2d ord
579	586	1010.233	98987.11	1010.2355	0.0017	0.30	-0.003	15	18	5d ⁵ 6s	92250.06(4)	191236.88(3)	pb
168	345	1012.052	98809.18	1012.0544	0.0015	0.26	-0.003	18	18	5d ⁵ 6s	92250.06(4)	191058.98(4)	pb 2d ord
158	219	1012.306	98784.31	1012.3029	0.0022	-0.35	0.004	14	25	5d ⁵ 6s	112744.59(3)	211529.26(4)	pb * 2d ord
288	491	1013.788	98639.91	1013.7928	0.0022	0.43	-0.004	13	24	5d ⁵ 6s	110351.25(3)	208990.74(3)	pb
356	415	1013.985	98620.80	1013.9880	0.0017	0.30	-0.003	10	14	5d ⁵ 6s	93403.66(6)	192024.16(6)	pb
120	148	1014.536	98567.27	1014.5384	0.0018	0.28	-0.003	17	22	5d ⁵ 6s	93989.94(3)	192556.93(2)	pb
209	143	1016.168	98408.90	1016.1695	0.0030	0.11	-0.001	10	24	5d ⁵ 6s	110351.25(3)	208760.03(2)	pb
44	91	1016.277	98398.37	1016.2750	0.0018	-0.19	0.002	15	18	5d ⁵ 6s	92250.06(4)	190648.63(4)	pb *
118	131	1017.114	98317.41	1017.1207	0.0019	0.67	-0.007	13	29	5d ⁵ 6s	100857.09(3)	199173.83(4)	pb 2d ord
91	208	1017.928	98238.81	1017.9186	0.0031	-0.87	0.009	14	29	5d ⁵ 6s	100857.09(3)	199096.78(3)	pb *
211	601	1018.071	98225.00	1018.0632	0.0030	-0.73	0.008	13	15	5d ⁵ 6s	111666.90(2)	209892.63(2)	pb * 200
83	96	1018.280	98204.78	1018.2794	0.0040	-0.09	0.001	6	21	5d ⁵ 6s	103077.94(2)	201282.81(1)	pb *
118	100	1018.581	98175.80	1018.5865	0.0017	0.54	-0.006	16	22	5d ⁵ 6s	93989.94(3)	192165.20(4)	pb
258	326	1018.768	98157.80	1018.7673	0.0019	-0.04	0.000	18	19	5d ⁵ 6s	106378.82(2)	204536.67(3)	pb
130	184	1019.044	98131.21	1019.0462	0.0021	0.23	-0.002	11	16	5d ⁵ 6s	119186.22(5)	217317.19(5)	pb
122	76	1019.961	98042.97	1019.9612	0.0023	0.03	0.000	13	23	5d ⁵ 6s	109317.92(5)	207360.87(4)	pb *
571	493	1020.520	97989.25	1020.5230	0.0017	0.27	-0.003	10	19	5d ⁵ 6s	94035.18(5)	192024.16(6)	pb
647	341	1021.289	97915.49	1021.2930	0.0018	0.40	-0.004	13	20	5d ⁵ 6s	117739.95(6)	215655.04(5)	pb
134	323	1021.998	97847.54	1022.0015	0.0017	0.32	-0.003	15	20	5d ⁵ 6s	83119.55(2)	180966.77(3)	pb
171	154	1022.256	97822.85	1022.2580	0.0030	0.18	-0.002	3	19	5d ⁵ 6s	106378.82(2)	204201.48(2)	pb
81	173	1022.806	97770.23	1022.8018	0.0020	-0.42	0.004	12	21	5d ⁵ 6s	103077.94(2)	200848.59(2)	pb
225	74	1023.107	97741.44	1023.1078	0.0024	0.03	0.000	10	20	5d ⁵ 6s	122714.67(4)	220456.09(5)	pb *
165	110	1024.232	97634.14	1024.2373	0.0030	0.51	-0.005	13	11	5d ⁵ 6s	107912.05(1)	205545.67(2)	pb
121	171	1024.334	97624.42	1024.3269	0.0030	-0.67	0.007	7	18	5d ⁵ 6s	93598.55(2)	191223.64(1)	pb
298	396	1024.664	97592.97	1024.6668	0.0030	0.26	-0.003	16	22	5d ⁵ 6s	105305.65(3)	202898.36(3)	pb
625	396	1024.664	97592.97	1024.6606	0.0031	-0.32	0.003	6	10	5d ⁵ 6s	112490.38(7)	210083.67(6)	pb
267	126	1024.888	97571.60	1024.8892	0.0017	0.08	-0.001	15	22	5d ⁵ 6s	93989.94(3)	191561.46(4)	pb

137	200	1025.044	97556.83	1025.0406	0.0030	-0.28	0.003	6	19	5d ⁵ 6s	106378.82(2)	203935.93(1)	pb	2d ord
224	294	1025.363	97526.41	1025.3647	0.0017	0.13	-0.001	15	19	5d ⁵ 6s	94035.18(5)	191561.46(4)	pb	
120	228	1025.953	97470.38	1025.9577	0.0019	0.47	-0.005	15	18	5d ⁵ 6s	92250.06(4)	189719.97(3)	pb	
263	161	1026.179	97448.93	1026.1792	0.0015	0.07	-0.001	15	26	5d ⁵ 6s	106085.51(4)	203534.37(5)	pb	
94	96	1026.999	97371.12	1026.9946	0.0030	-0.38	0.004	10	14	5d ⁵ 6s	129016.74(4)	226388.24(5)	pb *	
477	331	1027.065	97364.78	1027.0680	0.0024	0.25	-0.003	5	14	5d ⁵ 6s	129016.74(4)	226381.28(4)	pb	
189	150	1027.485	97325.00	1027.4975	0.0030	1.16	-0.012	13	15	5d ⁵ 6s	111666.90(2)	208990.74(3)	pb *	
96	170	1028.056	97270.98	1028.0578	0.0018	0.18	-0.002	13	18	5d ⁵ 6s	93598.55(2)	190869.34(2)	pb	
329	325	1028.307	97247.21	1028.3100	0.0017	0.27	-0.003	15	22	5d ⁵ 6s	93989.94(3)	191236.88(3)	pb	
149	154	1028.444	97234.26	1028.4505	0.0017	0.60	-0.006	15	29	5d ⁵ 6s	100857.09(3)	198090.74(4)	pb	
944	504	1028.770	97203.47	1028.7720	0.0017	0.20	-0.002	14	24	5d ⁵ 6s	99397.70(4)	196600.97(5)	pb	
367	453	1029.022	97179.70	1029.0193	0.0031	-0.21	0.002	7	7	5d ⁵ 6s	94820.48(1)	192000.38(2)	pb	
129	86	1029.356	97148.15	1029.3569	0.0030	0.11	-0.001	13	25	5d ⁵ 6s	112744.59(3)	209892.63(2)	pb	
702	620	1029.442	97139.98	1029.4384	0.0016	-0.37	0.004	11	24	5d ⁵ 6s	99397.70(4)	196538.04(4)	pb	
359	426	1029.483	97136.11	1029.4834	0.0030	0.01	0.000	10	24	5d ⁵ 6s	99397.70(4)	196533.80(3)	pb	
122	159	1030.009	97086.53	1030.0102	0.0018	0.12	-0.001	15	16	5d ⁵ 6s	88938.86(2)	186025.28(3)	pb	
117	206	1030.092	97078.72	1030.0927	0.0030	0.08	-0.001	12	11	5d ⁵ 6s	125619.13(3)	222697.77(3)	pb *	
27	149	1030.677	97023.61	1030.6750	0.0016	-0.19	0.002	18	19	5d ⁵ 6s	94035.18(5)	191058.98(4)	pb *	
343	335	1030.719	97019.68	1030.7215	0.0018	0.26	-0.003	13	29	5d ⁵ 6s	100857.09(3)	197876.51(3)	pb	
2734	1342	1030.844	97007.93	1030.8435	0.0030	-0.01	0.000	3	12	5d ⁵ 6s	64061.29(3)	161069.23(4)	pb	
158	103	1031.533	96943.14	1031.5359	0.0018	0.32	-0.003	16	22	5d ⁵ 6s	113075.00(5)	210017.82(4)	pb	
309	421	1032.218	96878.72	1032.2111	0.0017	-0.68	0.007	13	22	5d ⁵ 6s	93989.94(3)	190869.34(2)	pb	
407	413	1032.284	96872.59	1032.2822	0.0023	-0.14	0.001	10	18	5d ⁵ 6s	129515.50(5)	226388.24(5)	pb	
245	398	1032.887	96815.98	1032.8853	0.0018	-0.19	0.002	12	16	5d ⁵ 6s	88938.86(2)	185755.03(2)	pb	
311	517	1033.171	96789.44	1033.1754	0.0021	0.45	-0.005	9	16	5d ⁵ 6s	109044.24(6)	205833.23(6)	pb *	200
358	408	1033.284	96778.85	1033.2825	0.0030	-0.11	0.001	7	16	5d ⁵ 6s	88938.86(2)	185717.82(1)	pb	
342	163	1033.424	96765.72	1033.4209	0.0015	-0.27	0.003	15	22	5d ⁵ 6s	113075.00(5)	209840.99(5)	pb	
26	83	1033.469	96761.50	1033.4754	0.0020	0.61	-0.007	9	20	5d ⁵ 6s	83119.55(2)	179880.44(2)	pb *	
379	323	1033.658	96743.79	1033.6530	0.0020	-0.48	0.005	7	25	5d ⁵ 6s	103914.20(5)	200658.47(6)	pb	
697	671	1034.071	96705.21	1034.0738	0.0016	0.30	-0.003	13	18	5d ⁵ 6s	87062.03(3)	183766.93(4)	pb	
541	566	1034.568	96658.69	1034.5681	0.0017	0.00	0.000	15	22	5d ⁵ 6s	93989.94(3)	190648.63(4)	pb	
24	147	1035.055	96613.24	1035.0526	0.0018	-0.20	0.002	15	19	5d ⁵ 6s	94035.18(5)	190648.63(4)	pb *	
1278	881	1035.244	96595.60	1035.2472	0.0019	0.32	-0.003	14	18	5d ⁵ 6s	92250.06(4)	188845.35(5)	pb	
167	211	1035.880	96536.30	1035.8742	0.0018	-0.52	0.006	16	16	5d ⁵ 6s	109044.24(6)	205581.06(5)	pb	
353	371	1036.059	96519.58	1036.0597	0.0030	0.05	0.000	16	19	5d ⁵ 6s	106378.82(2)	202898.36(3)	pb	
328	502	1036.114	96514.49	1036.1051	0.0020	-0.82	0.009	9	23	5d ⁵ 6s	109317.92(5)	205833.23(6)	pb *	200
389	183	1036.595	96469.65	1036.6043	0.0019	0.83	-0.009	13	16	5d ⁵ 6s	119186.22(5)	215655.04(5)	pb	
330	879	1037.024	96429.77	1037.0234	0.0017	-0.07	0.001	11	18	5d ⁵ 6s	87062.03(3)	183491.87(2)	pb	C II
84	90	1037.260	96407.87	1037.2669	0.0017	0.67	-0.007	14	26	5d ⁵ 6s	106085.51(4)	202492.70(5)	pb *	
330	339	1037.310	96403.19	1037.3103	0.0030	0.02	0.000	7	7	5d ⁵ 6s	94820.48(1)	191223.64(1)	pb	
271	342	1037.772	96360.26	1037.7754	0.0018	0.29	-0.003	13	22	5d ⁵ 6s	93989.94(3)	190349.90(3)	pb	

221	156	1038.537	96289.34	1038.5356	0.0031	-0.09	0.001	3	11	5d ⁵ 6s	107912.05(1)	204201.48(2)	pb
251	488	1038.817	96263.33	1038.8193	0.0017	0.19	-0.002	16	23	5d ⁵ 6s	109317.92(5)	205581.06(5)	pb
259	190	1039.004	96246.04	1039.0026	0.0024	-0.11	0.001	13	25	5d ⁵ 6s	112744.59(3)	208990.74(3)	pb
191	184	1039.041	96242.55	1039.0380	0.0030	-0.32	0.003	12	14	5d ⁵ 6s	126454.90(4)	222697.77(3)	pb
1821	444	1039.269	96221.50	1039.2679	0.0030	-0.08	0.001	5	5	5d ⁵ 6s	141924.39(5)	238145.96(5)	pb
122	104	1039.475	96202.43	1039.4776	0.0019	0.26	-0.003	15	26	5d ⁵ 6s	109903.81(4)	206105.98(4)	pb
661	675	1040.276	96128.30	1040.2812	0.0020	0.44	-0.005	6	14	5d ⁵ 6s	93403.66(6)	189531.52(6)	pb
166	455	1040.336	96122.81	1040.3407	0.0017	0.45	-0.005	19	22	5d ⁵ 6s	105305.65(3)	201428.01(3)	pb
347	455	1040.349	96121.63	1040.3508	0.0020	0.21	-0.002	15	18	5d ⁵ 6s	93598.55(2)	189719.97(3)	pb
791	301	1040.987	96062.66	1040.9819	0.0031	-0.49	0.005	5	10	5d ⁵ 6s	135507.68(5)	231570.84(4)	pb
391	293	1041.718	95995.24	1041.7212	0.0019	0.27	-0.003	13	20	5d ⁵ 6s	122714.67(4)	218709.64(4)	pb
230	100	1042.578	95916.12	1042.5712	0.0022	-0.59	0.006	8	14	5d ⁵ 6s	126454.90(4)	222371.61(4)	pb
669	317	1042.822	95893.61	1042.8168	0.0023	-0.52	0.006	6	18	5d ⁵ 6s	129515.50(5)	225409.63(6)	pb
119	115	1043.551	95826.63	1043.5545	0.0016	0.30	-0.003	18	18	5d ⁵ 6s	87062.03(3)	182888.36(3)	pb
46	84	1043.635	95818.92	1043.6379	0.0018	0.25	-0.003	20	24	5d ⁵ 6s	99397.70(4)	195216.37(3)	pb *
118	84	1043.635	95818.92	1043.6324	0.0030	-0.26	0.003	12	20	5d ⁵ 6s	117739.95(6)	213559.13(5)	pb *
101	80	1044.819	95710.40	1044.8151	0.0050	-0.31	0.003	5	15	5d ⁵ 6s	111666.90(2)	207377.62(1)	pb *
600	471	1044.870	95705.70	1044.8700	0.0018	0.01	0.000	12	24	5d ⁵ 6s	99397.70(4)	195103.39(5)	pb
295	270	1045.140	95680.93	1045.1401	0.0016	-0.03	0.000	11	29	5d ⁵ 6s	100857.09(3)	196538.04(4)	pb
126	138	1045.337	95662.91	1045.3414	0.0030	0.39	-0.004	8	20	5d ⁵ 6s	116194.78(4)	211857.30(3)	pb *
98	378	1045.904	95611.12	1045.9002	0.0022	-0.30	0.003	8	12	5d ⁵ 6s	64061.29(3)	159672.71(3)	pb
182	236	1046.063	95596.55	1046.0644	0.0030	0.13	-0.001	11	15	5d ⁵ 6s	111666.90(2)	207263.31(3)	pb
503	294	1046.092	95593.93	1046.0918	0.0022	0.03	0.000	13	12	5d ⁵ 6s	123115.74(3)	218709.64(4)	pb
167	65	1046.952	95515.38	1046.9546	0.0030	0.25	-0.003	8	14	5d ⁵ 6s	135601.93(4)	231117.06(3)	pb
2844	1146	1047.162	95496.23	1047.1606	0.0020	-0.11	0.001	6	19	5d ⁵ 6s	94035.18(5)	189531.52(6)	pb
293	149	1047.357	95478.41	1047.3519	0.0023	-0.49	0.005	14	20	5d ⁵ 6s	116050.36(3)	211529.26(4)	pb
137	179	1047.760	95441.68	1047.7602	0.0020	-0.01	0.000	14	14	5d ⁵ 6s	93403.66(6)	188845.35(5)	pb
843	414	1048.843	95343.11	1048.8360	0.0023	-0.68	0.007	11	14	5d ⁵ 6s	121973.40(4)	217317.19(5)	pb
404	151	1049.182	95312.37	1049.1817	0.0024	-0.01	0.000	10	11	5d ⁵ 6s	131075.86(6)	226388.24(5)	pb
186	97	1049.393	95293.19	1049.3950	0.0020	0.19	-0.002	13	26	5d ⁵ 6s	106085.51(4)	201378.51(4)	pb
240	544	1049.572	95276.92	1049.5606	0.0033	-1.05	0.012	8	16	5d ⁵ 6s	88938.86(2)	184216.83(1)	pb
516	544	1049.572	95276.92	1049.5744	0.0020	0.21	-0.002	13	26	5d ⁵ 6s	109903.81(4)	205180.52(4)	pb
313	266	1049.763	95259.57	1049.7626	0.0020	-0.06	0.001	13	25	5d ⁵ 6s	103914.20(5)	199173.83(4)	pb
535	511	1051.375	95113.54	1051.3799	0.0016	0.44	-0.005	13	18	5d ⁵ 6s	92250.06(4)	187363.17(5)	pb
74	63	1051.795	95075.56	1051.7922	0.0031	-0.26	0.003	12	20	5d ⁵ 6s	122714.67(4)	217790.49(3)	pb *
989	832	1053.234	94945.66	1053.2375	0.0017	0.31	-0.003	17	18	5d ⁵ 6s	87062.03(3)	182007.38(4)	pb
585	519	1054.369	94843.43	1054.3726	0.0033	0.30	-0.003	11	14	5d ⁵ 6s	120481.03(3)	215324.16(4)	pb
989	519	1054.369	94843.43	1054.3676	0.0030	-0.15	0.002	8	18	5d ⁵ 6s	129515.50(5)	224359.08(5)	pb
195	228	1054.534	94828.60	1054.5268	0.0019	-0.67	0.007	13	24	5d ⁵ 6s	110351.25(3)	205180.52(4)	pb
586	499	1054.737	94810.35	1054.7392	0.0020	0.18	-0.002	14	19	5d ⁵ 6s	94035.18(5)	188845.35(5)	pb
75	79	1054.867	94798.66	1054.8682	0.0021	0.09	-0.001	13	21	5d ⁵ 6s	103077.94(2)	197876.51(3)	pb *

409	216	1055.023	94784.67	1055.0198	0.0030	-0.28	0.003	12	14	5d ⁵ 6s	121973.40(4)	216758.36(4)	pb
73	143	1055.227	94766.30	1055.2354	0.0024	0.72	-0.008	13	22	5d ⁵ 6s	105305.65(3)	200071.24(2)	pb *
430	355	1055.861	94709.46	1055.8654	0.0024	0.42	-0.005	11	18	5d ⁵ 6s	93598.55(2)	188307.59(2)	pb
4120	1146	1056.046	94692.81	1056.0480	0.0030	0.14	-0.002	4	14	5d ⁵ 6s	93403.66(6)	188096.33(7)	pb
334	163	1056.166	94682.10	1056.1684	0.0021	0.24	-0.003	10	14	5d ⁵ 6s	135601.93(4)	230283.80(4)	pb
127	174	1056.249	94674.65	1056.2478	0.0030	-0.10	0.001	12	12	5d ⁵ 6s	123115.74(3)	217790.49(3)	pb
31	134	1056.470	94654.87	1056.4689	0.0032	-0.07	0.001	9	21	5d ⁵ 6s	103077.94(2)	197732.88(1)	pb * 2d ord
88	435	1056.714	94633.00	1056.7154	0.0020	0.15	-0.002	18	26	5d ⁵ 6s	109903.81(4)	204536.67(3)	pb 200
900	678	1056.921	94614.47	1056.9218	0.0022	0.09	-0.001	10	18	5d ⁵ 6s	93598.55(2)	188212.93(3)	pb
198	132	1057.052	94602.70	1057.0543	0.0023	0.18	-0.002	11	20	5d ⁵ 6s	122714.67(4)	217317.19(5)	pb
186	345	1057.605	94553.24	1057.6078	0.0020	0.24	-0.003	11	16	5d ⁵ 6s	88938.86(2)	183491.87(2)	pb
54	63	1057.997	94518.26	1057.9915	0.0030	-0.46	0.005	11	25	5d ⁵ 6s	112744.59(3)	207263.31(3)	pb *
157	129	1058.312	94490.07	1058.3116	0.0017	-0.06	0.001	15	16	5d ⁵ 6s	109044.24(6)	203534.37(5)	pb
53	229	1059.259	94405.59	1059.2621	0.0021	0.25	-0.003	9	18	5d ⁵ 6s	87062.03(3)	181467.37(2)	pb
51	151	1059.337	94398.63	1059.3406	0.0018	0.28	-0.003	11	20	5d ⁵ 6s	83119.55(2)	177517.90(2)	pb
657	368	1059.495	94384.61	1059.4937	0.0031	-0.10	0.001	7	20	5d ⁵ 6s	122714.67(4)	217099.38(3)	pb
673	459	1059.628	94372.73	1059.6261	0.0030	-0.18	0.002	12	16	5d ⁵ 6s	119186.22(5)	213559.13(5)	pb
1242	491	1060.063	94333.98	1060.0658	0.0024	0.22	-0.002	6	11	5d ⁵ 6s	131075.86(6)	225409.63(6)	pb
428	157	1060.634	94283.26	1060.6332	0.0040	-0.05	0.001	3	14	5d ⁵ 6s	126454.90(4)	220738.20(4)	pb
87	184	1060.922	94257.62	1060.9223	0.0018	0.01	0.000	16	29	5d ⁵ 6s	100857.09(3)	195114.70(4)	pb
144	165	1061.312	94222.96	1061.3120	0.0022	-0.03	0.000	10	22	5d ⁵ 6s	93989.94(3)	188212.93(3)	pb
192	234	1061.388	94216.24	1061.3858	0.0017	-0.20	0.002	15	23	5d ⁵ 6s	109317.92(5)	203534.37(5)	pb
438	409	1061.443	94211.34	1061.4444	0.0023	0.09	-0.001	7	16	5d ⁵ 6s	109044.24(6)	203255.48(6)	pb
469	459	1062.752	94095.34	1062.7526	0.0017	0.06	-0.001	13	18	5d ⁵ 6s	92250.06(4)	186345.35(4)	pb
64	124	1063.674	94013.79	1063.6760	0.0016	0.19	-0.002	16	24	5d ⁵ 6s	99397.70(4)	193411.29(5)	pb Pt IV
1035	350	1063.816	94001.20	1063.8163	0.0020	0.01	0.000	10	14	5d ⁵ 6s	126454.90(4)	220456.09(5)	pb
1022	278	1064.013	93983.78	1064.0114	0.0030	-0.18	0.002	5	5	5d ⁵ 6s	144162.01(4)	238145.96(5)	pb
654	349	1064.199	93967.36	1064.1982	0.0020	-0.10	0.001	16	20	5d ⁵ 6s	116050.36(3)	210017.82(4)	pb
75	177	1064.470	93943.46	1064.4713	0.0021	0.10	-0.001	11	29	5d ⁵ 6s	100857.09(3)	194800.44(2)	pb 2d ord
2360	911	1064.536	93937.68	1064.5369	0.0023	0.12	-0.001	7	23	5d ⁵ 6s	109317.92(5)	203255.48(6)	pb
486	510	1064.908	93904.81	1064.9089	0.0018	0.07	-0.001	15	18	5d ⁵ 6s	87062.03(3)	180966.77(3)	pb
355	197	1065.203	93878.81	1065.2035	0.0030	0.04	0.000	13	15	5d ⁵ 6s	111666.90(2)	205545.67(2)	pb
67	53	1065.321	93868.39	1065.3237	0.0022	0.21	-0.002	13	22	5d ⁵ 6s	105305.65(3)	199173.83(4)	pb *
266	221	1065.834	93823.22	1065.8362	0.0019	0.18	-0.002	16	20	5d ⁵ 6s	116194.78(4)	210017.82(4)	pb
487	364	1067.174	93705.41	1067.1718	0.0018	-0.21	0.002	14	26	5d ⁵ 6s	106085.51(4)	199791.13(5)	pb
198	109	1067.319	93692.74	1067.3222	0.0024	0.32	-0.004	13	19	5d ⁵ 6s	106378.82(2)	200071.24(2)	pb
603	559	1067.673	93661.61	1067.6731	0.0021	-0.02	0.000	9	14	5d ⁵ 6s	93403.66(6)	187065.29(6)	pb
408	200	1067.854	93645.74	1067.8489	0.0017	-0.47	0.005	15	20	5d ⁵ 6s	116194.78(4)	209840.99(5)	pb
449	321	1068.028	93630.50	1068.0274	0.0016	-0.05	0.001	15	26	5d ⁵ 6s	109903.81(4)	203534.37(5)	pb
568	184	1068.659	93575.19	1068.6636	0.0031	0.38	-0.004	6	14	5d ⁵ 6s	135601.93(4)	229176.75(3)	pb
422	770	1069.673	93486.51	1069.6661	0.0030	-0.60	0.007	11	7	5d ⁵ 6s	94820.48(1)	188307.59(2)	pb * 350, bl(Pt IV (300))

3009	864	1070.008	93457.27	1070.0082	0.0030	0.04	0.000	4	16	5d ⁵ 6s	119186.22(5)	212643.45(6)	pb	
81	94	1070.415	93421.73	1070.4191	0.0030	0.38	-0.004	9	19	5d ⁵ 6s	106378.82(2)	199800.17(2)	pb *	
468	211	1071.177	93355.21	1071.1814	0.0022	0.34	-0.004	8	14	5d ⁵ 6s	129016.74(4)	222371.61(4)	pb	
2338	881	1071.299	93344.64	1071.2983	0.0040	-0.05	0.001	3	10	5d ⁵ 6s	112490.38(7)	205835.07(7)	pb	
244	232	1071.490	93328.01	1071.4900	0.0017	0.03	0.000	13	19	5d ⁵ 6s	94035.18(5)	187363.17(5)	pb	
26	100	1071.577	93320.36	1071.5681	0.0030	-0.82	0.009	8	12	5d ⁵ 6s	64061.29(3)	157382.47(2)	pb *	
346	201	1072.302	93257.30	1072.2995	0.0023	-0.23	0.003	10	22	5d ⁵ 6s	113075.00(5)	206332.53(5)	pb	
768	343	1072.690	93223.54	1072.6939	0.0024	0.31	-0.004	14	20	5d ⁵ 6s	116194.78(4)	209418.01(3)	pb	
691	463	1073.251	93174.84	1073.2518	0.0018	0.06	-0.001	14	23	5d ⁵ 6s	109317.92(5)	202492.70(5)	pb	
222	184	1074.221	93090.74	1074.2233	0.0023	0.23	-0.003	13	11	5d ⁵ 6s	125619.13(3)	218709.64(4)	pb	
810	496	1074.910	93031.04	1074.9107	0.0021	0.06	-0.001	15	22	5d ⁵ 6s	113075.00(5)	206105.98(4)	pb	
279	338	1075.961	92940.15	1075.9586	0.0031	-0.23	0.003	13	20	5d ⁵ 6s	116050.36(3)	208990.74(3)	pb	
491	338	1075.961	92940.15	1075.9587	0.0022	-0.23	0.003	13	20	5d ⁵ 6s	122714.67(4)	215655.04(5)	pb	
680	731	1076.515	92892.35	1076.5130	0.0016	-0.16	0.002	17	18	5d ⁵ 6s	92250.06(4)	185142.58(5)	pb	O II 2d ord
264	135	1076.780	92869.46	1076.7767	0.0022	-0.31	0.004	18	15	5d ⁵ 6s	111666.90(2)	204536.67(3)	pb	
930	221	1077.029	92847.99	1077.0291	0.0030	-0.02	0.000	5	7	5d ⁵ 6s	138722.83(3)	231570.84(4)	pb	
833	282	1077.523	92805.43	1077.5267	0.0024	0.30	-0.004	9	14	5d ⁵ 6s	126454.90(4)	219260.02(5)	pb	
489	235	1077.759	92785.09	1077.7594	0.0018	0.00	0.000	15	22	5d ⁵ 6s	105305.65(3)	198090.74(4)	pb	
331	205	1078.067	92758.65	1078.0714	0.0020	0.42	-0.005	9	22	5d ⁵ 6s	113075.00(5)	205833.23(6)	pb	
332	223	1078.544	92717.58	1078.5397	0.0031	-0.38	0.004	14	19	5d ⁵ 6s	106378.82(2)	199096.78(3)	pb	
188	246	1078.630	92710.21	1078.6310	0.0019	0.10	-0.001	10	20	5d ⁵ 6s	83119.55(2)	175829.67(3)	pb	
424	234	1078.902	92686.81	1078.9027	0.0019	0.04	0.000	14	25	5d ⁵ 6s	103914.20(5)	196600.97(5)	pb	
371	319	1079.137	92666.66	1079.1409	0.0030	0.35	-0.004	8	12	5d ⁵ 6s	123115.74(3)	215782.05(3)	pb	
650	162	1079.527	92633.20	1079.5273	0.0030	0.06	-0.001	5	10	5d ⁵ 6s	133748.14(3)	226381.28(4)	pb	
79	126	1079.638	92623.63	1079.6356	0.0018	-0.21	0.002	11	25	5d ⁵ 6s	103914.20(5)	196538.04(4)	pb	
322	151	1079.804	92609.42	1079.8030	0.0032	-0.07	0.001	11	20	5d ⁵ 6s	122714.67(4)	215324.16(4)	pb	
405	475	1080.248	92571.29	1080.2479	0.0040	-0.05	0.001	3	14	5d ⁵ 6s	120481.03(3)	213052.38(3)	pb	
4841	1045	1080.327	92564.57	1080.3269	0.0060	0.00	0.000	1	10	5d ⁵ 6s	112490.38(7)	205054.96(8)	pb	
505	1045	1080.327	92564.57	1080.3306	0.0042	0.31	-0.004	6	14	5d ⁵ 6s	120481.03(3)	213045.29(4)	pb	400
85	84	1080.539	92546.40	1080.5309	0.0030	-0.70	0.008	16	24	5d ⁵ 6s	110351.25(3)	202898.36(3)	pb *	
3334	932	1080.770	92526.64	1080.7733	0.0030	0.30	-0.003	4	16	5d ⁵ 6s	109044.24(6)	201570.58(7)	pb	
345	487	1081.005	92506.50	1081.0103	0.0018	0.44	-0.005	16	22	5d ⁵ 6s	113075.00(5)	205581.06(5)	pb	2d ord
1138	288	1081.582	92457.13	1081.5845	0.0040	0.19	-0.002	5	5	5d ⁵ 6s	144162.01(4)	236618.95(4)	pb	
420	348	1081.829	92436.01	1081.8304	0.0020	0.08	-0.001	13	25	5d ⁵ 6s	112744.59(3)	205180.52(4)	pb	
276	347	1081.963	92424.61	1081.9623	0.0016	-0.05	0.001	17	18	5d ⁵ 6s	87062.03(3)	179486.69(4)	pb	
325	73	1082.324	92393.81	1082.3187	0.0033	-0.42	0.005	8	7	5d ⁵ 6s	138722.83(3)	231117.06(3)	pb	
1966	609	1082.910	92343.75	1082.9106	0.0031	0.03	0.000	6	20	5d ⁵ 6s	117739.95(6)	210083.67(6)	pb	
339	309	1083.303	92310.27	1083.3044	0.0017	0.11	-0.001	13	19	5d ⁵ 6s	94035.18(5)	186345.35(4)	pb	
243	106	1083.950	92255.18	1083.9551	0.0021	0.43	-0.005	13	14	5d ⁵ 6s	126454.90(4)	218709.64(4)	pb	
309	280	1084.941	92170.94	1084.9357	0.0033	-0.42	0.005	12	11	5d ⁵ 6s	125619.13(3)	217790.49(3)	pb	
203	114	1085.321	92138.63	1085.3234	0.0019	0.20	-0.002	20	21	5d ⁵ 6s	103077.94(2)	195216.37(3)	pb	

246	149	1085.766	92100.89	1085.7641	0.0017	-0.14	0.002	15	20	5d ⁵ 6s	117739.95(6)	209840.99(5)	pb	
166	207	1086.541	92035.15	1086.5392	0.0017	-0.19	0.002	15	22	5d ⁵ 6s	93989.94(3)	186025.28(3)	pb	2d ord
193	160	1086.625	92028.09	1086.6269	0.0020	0.18	-0.002	15	16	5d ⁵ 6s	88938.86(2)	180966.77(3)	pb	
157	82	1086.894	92005.25	1086.8946	0.0018	0.01	0.000	15	26	5d ⁵ 6s	106085.51(4)	198090.74(4)	pb	
446	572	1087.872	91922.54	1087.8693	0.0030	-0.27	0.003	9	12	5d ⁵ 6s	123115.74(3)	215038.55(2)	pb	
316	528	1088.280	91888.11	1088.2806	0.0023	0.04	0.000	5	14	5d ⁵ 6s	93403.66(6)	185291.73(7)	pb	
201	528	1088.280	91888.11	1088.2799	0.0031	-0.01	0.000	9	11	5d ⁵ 6s	107912.05(1)	199800.17(2)	pb	
3141	901	1088.330	91883.86	1088.3304	0.0040	0.00	0.000	1	5	5d ⁵ 6s	141924.39(5)	233808.24(6)	pb	
3968	644	1088.644	91857.38	1088.6463	0.0040	0.17	-0.002	4	11	5d ⁵ 6s	131075.86(6)	222933.07(7)	pb	
174	413	1090.242	91722.76	1090.2450	0.0023	0.26	-0.003	11	21	5d ⁵ 6s	103077.94(2)	194800.44(2)	pb	
131	521	1090.511	91700.15	1090.5144	0.0020	0.31	-0.004	17	29	5d ⁵ 6s	100857.09(3)	192556.93(2)	pb	200
290	300	1091.287	91634.88	1091.2848	0.0031	-0.23	0.003	6	10	5d ⁵ 6s	133748.14(3)	225383.25(2)	pb	
1303	648	1091.530	91614.55	1091.5335	0.0023	0.32	-0.004	7	16	5d ⁵ 6s	109044.24(6)	200658.47(6)	pb	
1369	482	1091.870	91585.99	1091.8732	0.0030	0.26	-0.003	12	14	5d ⁵ 6s	121973.40(4)	213559.13(5)	pb	
863	433	1092.171	91560.77	1092.1685	0.0030	-0.20	0.002	10	7	5d ⁵ 6s	138722.83(3)	230283.80(4)	pb	
298	293	1092.694	91516.96	1092.6948	0.0017	0.09	-0.001	13	18	5d ⁵ 6s	92250.06(4)	183766.93(4)	pb	
212	184	1092.930	91497.15	1092.9237	0.0022	-0.54	0.006	13	19	5d ⁵ 6s	106378.82(2)	197876.51(3)	pb	
2342	566	1093.299	91466.26	1093.3033	0.0031	0.33	-0.004	5	18	5d ⁵ 6s	129515.50(5)	220981.43(6)	pb	
479	161	1093.620	91439.43	1093.6212	0.0030	0.09	-0.001	10	14	5d ⁵ 6s	129016.74(4)	220456.09(5)	pb	
161	118	1094.645	91353.84	1094.6421	0.0031	-0.22	0.003	9	19	5d ⁵ 6s	106378.82(2)	197732.88(1)	pb	
34	70	1094.799	91340.98	1094.8024	0.0031	0.30	-0.004	7	20	5d ⁵ 6s	83119.55(2)	174460.24(1)	pb *	
484	288	1095.109	91315.14	1095.1075	0.0030	-0.10	0.001	10	10	5d ⁵ 6s	133748.14(3)	225063.38(3)	pb	
550	229	1095.163	91310.58	1095.1642	0.0025	0.08	-0.001	13	20	5d ⁵ 6s	116050.36(3)	207360.87(4)	pb	
210	408	1095.487	91283.62	1095.4802	0.0040	-0.55	0.007	10	11	5d ⁵ 6s	125619.13(3)	216903.30(2)	pb *	200, 2d ord
458	431	1096.096	91232.92	1096.1020	0.0018	0.53	-0.006	11	22	5d ⁵ 6s	105305.65(3)	196538.04(4)	pb	
314	209	1096.338	91212.76	1096.3355	0.0030	-0.20	0.002	11	20	5d ⁵ 6s	116050.36(3)	207263.31(3)	pb	
1060	516	1096.617	91189.54	1096.6212	0.0019	0.35	-0.004	12	25	5d ⁵ 6s	103914.20(5)	195103.39(5)	pb	
294	233	1096.903	91165.75	1096.8991	0.0032	-0.34	0.004	13	20	5d ⁵ 6s	116194.78(4)	207360.87(4)	pb	
392	233	1096.903	91165.75	1096.9085	0.0030	0.44	-0.005	13	20	5d ⁵ 6s	122714.67(4)	213879.98(4)	pb	
371	437	1097.215	91139.87	1097.2224	0.0040	0.64	-0.008	12	11	5d ⁵ 6s	125619.13(3)	216758.36(4)	pb *	200, 2d ord
130	151	1097.602	91107.70	1097.6058	0.0016	0.30	-0.004	17	19	5d ⁵ 6s	94035.18(5)	185142.58(5)	pb	
193	152	1098.024	91072.72	1098.0337	0.0042	0.84	-0.010	6	14	5d ⁵ 6s	121973.40(4)	213045.29(4)	pb *	
395	297	1098.323	91047.89	1098.3190	0.0032	-0.34	0.004	14	14	5d ⁵ 6s	120481.03(3)	211529.26(4)	pb	
93	79	1099.695	90934.30	1099.6919	0.0024	-0.25	0.003	12	7	5d ⁵ 6s	94820.48(1)	185755.03(2)	pb	
1378	433	1100.344	90880.68	1100.3454	0.0031	0.12	-0.002	10	10	5d ⁵ 6s	135507.68(5)	226388.24(5)	pb	
241	215	1101.400	90793.53	1101.3974	0.0030	-0.22	0.003	7	21	5d ⁵ 6s	103077.94(2)	193871.68(1)	pb	
515	180	1101.575	90779.11	1101.5721	0.0030	-0.24	0.003	5	14	5d ⁵ 6s	135601.93(4)	226381.28(4)	pb	
45	150	1101.602	90776.87	1101.6011	0.0019	-0.09	0.001	16	22	5d ⁵ 6s	105305.65(3)	196082.61(3)	pb	
763	260	1101.760	90763.86	1101.7555	0.0030	-0.38	0.005	13	12	5d ⁵ 6s	123115.74(3)	213879.98(4)	pb	
205	200	1102.486	90704.10	1102.4827	0.0019	-0.27	0.003	15	29	5d ⁵ 6s	100857.09(3)	191561.46(4)	pb	
517	494	1104.785	90515.37	1104.7836	0.0019	-0.09	0.001	14	26	5d ⁵ 6s	106085.51(4)	196600.97(5)	pb	

72	34	1105.008	90497.11	1105.0049	0.0022	-0.23	0.003	12	24	5d ⁵ 6s	110351.25(3)	200848.59(2)	pb
174	135	1105.297	90473.39	1105.2996	0.0020	0.18	-0.002	14	23	5d ⁵ 6s	109317.92(5)	199791.13(5)	pb 2d ord
386	468	1105.466	90459.57	1105.4687	0.0018	0.20	-0.002	15	22	5d ⁵ 6s	113075.00(5)	203534.37(5)	pb 250, 2d ord
32	295	1105.512	90455.82	1105.5114	0.0019	-0.06	0.001	11	18	5d ⁵ 6s	87062.03(3)	177517.90(2)	pb
234	217	1106.450	90379.13	1106.4420	0.0019	-0.66	0.008	15	29	5d ⁵ 6s	100857.09(3)	191236.88(3)	pb
1235	535	1108.115	90243.37	1108.1158	0.0020	0.09	-0.001	9	14	5d ⁵ 6s	129016.74(4)	219260.02(5)	pb
411	297	1108.629	90201.51	1108.6242	0.0016	-0.38	0.005	18	29	5d ⁵ 6s	100857.09(3)	191058.98(4)	pb
384	208	1108.890	90180.28	1108.8873	0.0024	-0.21	0.003	7	22	5d ⁵ 6s	113075.00(5)	203255.48(6)	pb
174	152	1111.142	89997.51	1111.1468	0.0019	0.41	-0.005	16	26	5d ⁵ 6s	106085.51(4)	196082.61(3)	pb
44	56	1112.210	89911.09	1112.2145	0.0021	0.37	-0.005	20	22	5d ⁵ 6s	105305.65(3)	195216.37(3)	pb *
844	232	1112.282	89905.29	1112.2782	0.0031	-0.28	0.003	5	11	5d ⁵ 6s	131075.86(6)	220981.43(6)	pb
1303	363	1112.320	89902.20	1112.3230	0.0030	0.26	-0.003	6	10	5d ⁵ 6s	135507.68(5)	225409.63(6)	pb
947	459	1112.504	89887.32	1112.5040	0.0020	0.01	0.000	14	26	5d ⁵ 6s	109903.81(4)	199791.13(5)	pb
160	151	1113.689	89791.67	1113.6907	0.0019	0.14	-0.002	15	29	5d ⁵ 6s	100857.09(3)	190648.63(4)	pb
63	89	1113.875	89776.70	1113.8712	0.0018	-0.29	0.004	13	22	5d ⁵ 6s	93989.94(3)	183766.93(4)	pb
100	73	1117.407	89492.91	1117.4081	0.0022	0.09	-0.001	13	29	5d ⁵ 6s	100857.09(3)	190349.90(3)	pb *
62	99	1117.965	89448.27	1117.9565	0.0030	-0.65	0.008	9	24	5d ⁵ 6s	110351.25(3)	199800.17(2)	pb *
546	333	1118.746	89385.81	1118.7399	0.0020	-0.47	0.006	16	20	5d ⁵ 6s	116194.78(4)	205581.06(5)	pb
58	93	1119.948	89289.88	1119.9487	0.0019	0.07	-0.001	18	18	5d ⁵ 6s	93598.55(2)	182888.36(3)	pb
93	177	1121.149	89194.18	1121.1499	0.0024	0.04	0.000	13	18	5d ⁵ 6s	129515.50(5)	218709.64(4)	pb *
107	63	1121.947	89130.80	1121.9458	0.0020	-0.06	0.001	20	26	5d ⁵ 6s	106085.51(4)	195216.37(3)	pb
363	226	1123.228	89029.15	1123.2270	0.0020	-0.04	0.001	16	26	5d ⁵ 6s	106085.51(4)	195114.70(4)	pb
381	164	1124.232	88949.65	1124.2318	0.0030	0.02	0.000	12	10	5d ⁵ 6s	133748.14(3)	222697.77(3)	pb Pt IV
173	67	1124.390	88937.12	1124.3916	0.0030	0.14	-0.002	14	14	5d ⁵ 6s	120481.03(3)	209418.01(3)	pb
31	88	1124.873	88898.96	1124.8794	0.0018	0.54	-0.007	18	22	5d ⁵ 6s	93989.94(3)	182888.36(3)	pb *
168	35	1125.252	88868.97	1125.2484	0.0031	-0.29	0.004	11	14	5d ⁵ 6s	126454.90(4)	215324.16(4)	pb *
694	316	1125.841	88822.46	1125.8398	0.0023	-0.12	0.001	13	24	5d ⁵ 6s	110351.25(3)	199173.83(4)	pb
75	85	1126.543	88767.12	1126.5367	0.0020	-0.51	0.007	10	18	5d ⁵ 6s	87062.03(3)	175829.67(3)	pb
551	161	1126.672	88756.97	1126.6698	0.0030	-0.18	0.002	8	14	5d ⁵ 6s	135601.93(4)	224359.08(5)	pb
165	200	1127.191	88716.14	1127.1834	0.0020	-0.56	0.007	15	18	5d ⁵ 6s	92250.06(4)	180966.77(3)	pb
185	264	1127.611	88683.05	1127.6065	0.0020	-0.37	0.005	19	25	5d ⁵ 6s	112744.59(3)	201428.01(3)	pb 2d ord
305	106	1128.761	88592.68	1128.7627	0.0030	0.10	-0.001	10	20	5d ⁵ 6s	117739.95(6)	206332.53(5)	pb
66	81	1130.122	88486.01	1130.1184	0.0030	-0.29	0.004	18	20	5d ⁵ 6s	116050.36(3)	204536.67(3)	pb *
91	157	1131.045	88413.80	1131.0487	0.0031	0.28	-0.004	14	12	5d ⁵ 6s	123115.74(3)	211529.26(4)	pb * C III 2d ord
229	152	1133.130	88251.10	1133.1316	0.0020	0.10	-0.001	16	25	5d ⁵ 6s	103914.20(5)	192165.20(4)	pb
310	131	1133.211	88244.80	1133.2058	0.0030	-0.43	0.006	12	20	5d ⁵ 6s	116194.78(4)	204440.00(4)	pb
303	138	1133.959	88186.61	1133.9548	0.0020	-0.32	0.004	15	26	5d ⁵ 6s	109903.81(4)	198090.74(4)	pb
708	480	1134.946	88109.91	1134.9455	0.0019	-0.05	0.001	10	25	5d ⁵ 6s	103914.20(5)	192024.16(6)	pb
297	124	1135.015	88104.56	1135.0223	0.0024	0.57	-0.007	12	25	5d ⁵ 6s	112744.59(3)	200848.59(2)	pb
271	637	1135.162	88093.18	1135.1604	0.0022	-0.10	0.001	9	20	5d ⁵ 6s	117739.95(6)	205833.23(6)	pb 200, 2d ord
182	189	1136.142	88017.17	1136.1385	0.0019	-0.27	0.004	17	22	5d ⁵ 6s	93989.94(3)	182007.38(4)	pb

97	119	1136.727	87971.84	1136.7228	0.0020	-0.36	0.005	17	19	5d ⁵ 6s	94035.18(5)	182007.38(4)	pb
752	592	1136.811	87965.38	1136.8097	0.0018	-0.09	0.001	13	24	5d ⁵ 6s	99397.70(4)	187363.17(5)	pb Pt IV (200)
65	611	1138.064	87868.56	1138.0601	0.0024	-0.26	0.003	9	18	5d ⁵ 6s	93598.55(2)	181467.37(2)	pb 200, 2d ord
51	31	1138.416	87841.35	1138.4192	0.0021	0.25	-0.003	16	20	5d ⁵ 6s	117739.95(6)	205581.06(5)	pb *
220	158	1139.064	87791.38	1139.0636	0.0021	-0.03	0.000	13	21	5d ⁵ 6s	103077.94(2)	190869.34(2)	pb
111	85	1140.934	87647.50	1140.9370	0.0021	0.24	-0.003	15	25	5d ⁵ 6s	103914.20(5)	191561.46(4)	pb *
132	88	1140.997	87642.65	1140.9977	0.0031	0.05	-0.001	6	10	5d ⁵ 6s	133748.14(3)	221390.74(2)	pb
95	917	1141.211	87626.24	1141.1997	0.0022	-0.85	0.011	14	16	5d ⁵ 6s	88938.86(2)	176565.95(3)	pb * Pt IV
638	340	1141.769	87583.36	1141.7680	0.0024	-0.11	0.001	7	22	5d ⁵ 6s	113075.00(5)	200658.47(6)	pb
61	22	1142.340	87539.62	1142.3428	0.0050	0.22	-0.003	12	11	5d ⁵ 6s	107912.05(1)	195451.45(2)	pb *
87	130	1142.522	87525.71	1142.5273	0.0023	0.45	-0.006	13	24	5d ⁵ 6s	110351.25(3)	197876.51(3)	pb
115	106	1143.152	87477.43	1143.1473	0.0021	-0.36	0.005	8	14	5d ⁵ 6s	93403.66(6)	180881.45(6)	pb
37	78	1144.590	87367.52	1144.5810	0.0022	-0.70	0.009	15	18	5d ⁵ 6s	93598.55(2)	180966.77(3)	pb *
92	52	1144.947	87340.30	1144.9561	0.0021	0.71	-0.009	15	20	5d ⁵ 6s	116194.78(4)	203534.37(5)	pb *
156	195	1145.129	87326.41	1145.1372	0.0019	0.63	-0.008	16	26	5d ⁵ 6s	106085.51(4)	193411.29(5)	pb *
236	195	1145.129	87326.41	1145.1259	0.0030	-0.23	0.003	13	25	5d ⁵ 6s	112744.59(3)	200071.24(2)	pb
262	234	1145.845	87271.85	1145.8433	0.0022	-0.11	0.001	13	21	5d ⁵ 6s	103077.94(2)	190349.90(3)	pb
102	91	1147.520	87144.42	1147.5157	0.0018	-0.36	0.005	18	25	5d ⁵ 6s	103914.20(5)	191058.98(4)	pb
566	239	1147.761	87126.12	1147.7589	0.0020	-0.19	0.003	15	20	5d ⁵ 6s	122714.67(4)	209840.99(5)	pb Pt IV (100)
26	92	1149.730	86976.95	1149.7315	0.0021	0.12	-0.002	15	22	5d ⁵ 6s	93989.94(3)	180966.77(3)	pb * Pt IV
77	86	1150.123	86947.19	1150.1174	0.0019	-0.46	0.006	13	24	5d ⁵ 6s	99397.70(4)	186345.35(4)	pb
309	91	1151.228	86863.79	1151.2259	0.0030	-0.14	0.002	8	10	5d ⁵ 6s	135507.68(5)	222371.61(4)	pb
227	178	1152.538	86765.03	1152.5344	0.0031	-0.27	0.004	8	14	5d ⁵ 6s	129016.74(4)	215782.05(3)	pb 2d ord
125	87	1154.279	86634.17	1154.2781	0.0020	-0.06	0.001	11	26	5d ⁵ 6s	109903.81(4)	196538.04(4)	pb
180	107	1157.028	86428.36	1157.0158	0.0031	-0.88	0.012	13	25	5d ⁵ 6s	112744.59(3)	199173.83(4)	pb * Pt IV
376	122	1157.472	86395.19	1157.4765	0.0021	0.35	-0.005	16	16	5d ⁵ 6s	119186.22(5)	205581.06(5)	pb
52	33	1158.773	86298.19	1158.7764	0.0024	0.27	-0.004	14	20	5d ⁵ 6s	116194.78(4)	202492.70(5)	pb *
329	94	1160.906	86139.63	1160.9071	0.0024	0.09	-0.001	13	18	5d ⁵ 6s	129515.50(5)	215655.04(5)	pb
232	234	1161.145	86121.90	1161.1463	0.0041	0.11	-0.002	10	5	5d ⁵ 6s	144162.01(4)	230283.80(4)	pb *
141	119	1161.992	86059.13	1161.9915	0.0022	-0.02	0.000	12	16	5d ⁵ 6s	109044.24(6)	195103.39(5)	pb
217	362	1163.420	85953.50	1163.4175	0.0019	-0.17	0.002	15	20	5d ⁵ 6s	83119.55(2)	169073.23(3)	pb 2d ord
357	190	1163.718	85931.50	1163.7213	0.0021	0.27	-0.004	15	22	5d ⁵ 6s	105305.65(3)	191236.88(3)	pb
238	66	1164.004	85910.39	1164.0071	0.0030	0.26	-0.004	14	11	5d ⁵ 6s	125619.13(3)	211529.26(4)	pb
52	390	1165.544	85796.86	1165.5450	0.0024	0.09	-0.001	16	23	5d ⁵ 6s	109317.92(5)	195114.70(4)	pc * 200, Pt IV
115	158	1165.572	85794.79	1165.5770	0.0020	0.38	-0.005	15	20	5d ⁵ 6s	117739.95(6)	203534.37(5)	pc
223	810	1166.249	85744.98	1166.2504	0.0018	0.10	-0.001	17	24	5d ⁵ 6s	99397.70(4)	185142.58(5)	pc 2d ord
146	180	1166.445	85730.60	1166.4344	0.0022	-0.75	0.010	16	24	5d ⁵ 6s	110351.25(3)	196082.61(3)	pc Pt IV
77	64	1167.892	85624.38	1167.8839	0.0030	-0.56	0.008	15	14	5d ⁵ 6s	120481.03(3)	206105.98(4)	pc *
41	253	1169.297	85521.46	1169.2983	0.0030	0.08	-0.001	7	16	5d ⁵ 6s	88938.86(2)	174460.24(1)	pc
77	605	1169.759	85487.72	1169.7513	0.0020	-0.54	0.007	13	29	5d ⁵ 6s	100857.09(3)	186345.35(4)	pc
127	303	1169.920	85475.95	1169.9197	0.0022	0.00	0.000	15	26	5d ⁵ 6s	106085.51(4)	191561.46(4)	pc

44	209	1170.595	85426.63	1170.6007	0.0021	0.40	-0.006	12	20	5d ⁵ 6s	83119.55(2)	168545.78(2)	pc
105	347	1171.261	85378.10	1171.2667	0.0023	0.45	-0.006	19	20	5d ⁵ 6s	116050.36(3)	201428.01(3)	pc
55	55	1171.688	85346.92	1171.6990	0.0025	0.77	-0.011	15	25	5d ⁵ 6s	112744.59(3)	198090.74(4)	pc *
444	1258	1171.748	85342.57	1171.7426	0.0022	-0.40	0.005	15	22	5d ⁵ 6s	105305.65(3)	190648.63(4)	pc
161	220	1171.953	85327.66	1171.9462	0.0030	-0.49	0.007	13	20	5d ⁵ 6s	116050.36(3)	201378.51(4)	pc
65	111	1172.153	85313.08	1172.1603	0.0024	0.52	-0.007	20	26	5d ⁵ 6s	109903.81(4)	195216.37(3)	pc *
239	1731	1172.495	85288.24	1172.4889	0.0030	-0.42	0.006	6	20	5d ⁵ 6s	83119.55(2)	168408.21(1)	pc Pt IV (700)
76	205	1173.263	85232.41	1173.2513	0.0023	-0.82	0.011	19	20	5d ⁵ 6s	116194.78(4)	201428.01(3)	pc *
80	177	1173.560	85210.84	1173.5589	0.0022	-0.05	0.001	16	26	5d ⁵ 6s	109903.81(4)	195114.70(4)	pc
88	130	1173.722	85199.07	1173.7147	0.0022	-0.51	0.007	12	26	5d ⁵ 6s	109903.81(4)	195103.39(5)	pc
151	810	1173.888	85187.03	1173.8836	0.0022	-0.29	0.004	13	20	5d ⁵ 6s	83119.55(2)	168306.88(3)	pc
57	135	1174.656	85131.28	1174.6475	0.0030	-0.64	0.009	13	25	5d ⁵ 6s	112744.59(3)	197876.51(3)	pc *
46	156	1175.844	85045.26	1175.8584	0.0021	1.01	-0.014	13	22	5d ⁵ 6s	105305.65(3)	190349.90(3)	pc *
150	210	1177.007	84961.30	1177.0036	0.0030	-0.21	0.003	13	10	5d ⁵ 6s	133748.14(3)	218709.64(4)	pc
75	301	1177.431	84930.63	1177.4243	0.0020	-0.52	0.007	14	25	5d ⁵ 6s	103914.20(5)	188845.35(5)	pc
18	77	1178.446	84857.48	1178.4384	0.0031	-0.58	0.008	15	19	5d ⁵ 6s	106378.82(2)	191236.88(3)	pc *
495	373	1178.497	84853.85	1178.4927	0.0030	-0.31	0.004	10	14	5d ⁵ 6s	135601.93(4)	220456.09(5)	pc
97	326	1179.270	84798.23	1179.2699	0.0030	0.00	0.000	12	20	5d ⁵ 6s	116050.36(3)	200848.59(2)	pc
43	131	1179.761	84762.93	1179.7538	0.0023	-0.52	0.007	16	24	5d ⁵ 6s	110351.25(3)	195114.70(4)	pc *
299	815	1179.906	84752.53	1179.9027	0.0022	-0.22	0.003	14	20	5d ⁵ 6s	117739.95(6)	202492.70(5)	pc
23	106	1181.407	84644.83	1181.4064	0.0030	-0.05	0.001	17	11	5d ⁵ 6s	107912.05(1)	192556.93(2)	pc
204	165	1182.323	84579.26	1182.3241	0.0030	0.08	-0.001	13	11	5d ⁵ 6s	131075.86(6)	215655.04(5)	pc
96	220	1182.552	84562.84	1182.5486	0.0022	-0.28	0.004	15	26	5d ⁵ 6s	106085.51(4)	190648.63(4)	pc
24	75	1183.571	84490.07	1183.5647	0.0030	-0.45	0.006	13	19	5d ⁵ 6s	106378.82(2)	190869.34(2)	pc *
65	895	1184.637	84414.01	1184.6331	0.0020	-0.31	0.004	15	22	5d ⁵ 6s	105305.65(3)	189719.97(3)	pc
72	149	1185.264	84369.38	1185.2662	0.0020	0.14	-0.002	13	24	5d ⁵ 6s	99397.70(4)	183766.93(4)	pc
104	84	1185.336	84364.25	1185.3330	0.0041	-0.23	0.003	13	18	5d ⁵ 6s	129515.50(5)	213879.98(4)	pc *
290	2147	1188.246	84157.66	1188.2417	0.0024	-0.31	0.004	9	20	5d ⁵ 6s	83119.55(2)	167277.52(2)	pc
51	97	1189.229	84088.09	1189.2257	0.0030	-0.24	0.003	7	11	5d ⁵ 6s	107912.05(1)	192000.38(2)	pc
72	104	1189.857	84043.71	1189.8582	0.0032	0.08	-0.001	12	18	5d ⁵ 6s	129515.50(5)	213559.13(5)	pc *
14	105	1191.633	83918.48	1191.6203	0.0031	-0.87	0.012	11	18	5d ⁵ 6s	93598.55(2)	177517.90(2)	pc *
105	677	1192.346	83868.27	1192.3413	0.0020	-0.33	0.005	15	18	5d ⁵ 6s	87062.03(3)	170930.63(4)	pc
565	1424	1192.889	83830.12	1192.8814	0.0040	-0.51	0.007	4	20	5d ⁵ 6s	117739.95(6)	201570.58(7)	pc
106	225	1193.407	83793.72	1193.4107	0.0023	0.27	-0.004	11	25	5d ⁵ 6s	112744.59(3)	196538.04(4)	pc
301	859	1193.472	83789.18	1193.4711	0.0030	-0.03	0.000	10	25	5d ⁵ 6s	112744.59(3)	196533.80(3)	pc
184	1121	1195.689	83633.80	1195.6793	0.0020	-0.67	0.010	15	26	5d ⁵ 6s	106085.51(4)	189719.97(3)	pc Pt IV (200)
264	393	1196.062	83607.73	1196.0627	0.0030	0.08	-0.001	16	14	5d ⁵ 6s	121973.40(4)	205581.06(5)	pc
25	107	1196.901	83549.13	1196.8957	0.0030	-0.34	0.005	20	15	5d ⁵ 6s	111666.90(2)	195216.37(3)	pc *
155	561	1197.230	83526.11	1197.2325	0.0024	0.14	-0.002	14	22	5d ⁵ 6s	113075.00(5)	196600.97(5)	pc Pt IV
54	97	1197.661	83496.08	1197.6632	0.0060	0.15	-0.002	9	15	5d ⁵ 6s	111666.90(2)	195162.83(1)	pc *
161	590	1199.232	83386.69	1199.2408	0.0020	0.60	-0.009	15	14	5d ⁵ 6s	126454.90(4)	209840.99(5)	pc

38	94	1199.403	83374.80	1199.4118	0.0041	0.60	-0.009	7	25	5d ⁵ 6s	112744.59(3)	196118.80(2)	pc *
11	79	1199.877	83341.85	1199.8874	0.0030	0.70	-0.010	15	19	5d ⁵ 6s	106378.82(2)	189719.97(3)	pc *
105	165	1200.387	83306.45	1200.3867	0.0024	-0.03	0.000	14	16	5d ⁵ 6s	119186.22(5)	202492.70(5)	pc
188	471	1202.571	83155.15	1202.5712	0.0040	-0.01	0.000	10	10	5d ⁵ 6s	133748.14(3)	216903.30(2)	pc
426	2535	1202.630	83151.13	1202.6300	0.0030	0.04	-0.001	9	25	5d ⁵ 6s	103914.20(5)	187065.29(6)	pc Pt IV (1100)
36	215	1208.713	82732.62	1208.7090	0.0022	-0.28	0.004	13	18	5d ⁵ 6s	92250.06(4)	174982.96(4)	pc
236	747	1209.100	82706.13	1209.0987	0.0025	-0.11	0.002	10	23	5d ⁵ 6s	109317.92(5)	192024.16(6)	pc
12	32	1209.524	82677.12	1209.5248	0.0030	0.03	0.000	12	21	5d ⁵ 6s	103077.94(2)	185755.03(2)	pc *
27	100	1210.147	82634.59	1210.1442	0.0023	-0.19	0.003	11	29	5d ⁵ 6s	100857.09(3)	183491.87(2)	pc
41	135	1210.501	82610.42	1210.5119	0.0023	0.74	-0.011	17	24	5d ⁵ 6s	99397.70(4)	182007.38(4)	pc *
51	332	1211.006	82575.96	1211.0055	0.0021	-0.05	0.001	14	22	5d ⁵ 6s	93989.94(3)	176565.95(3)	pc
35	60	1211.940	82512.34	1211.9374	0.0030	-0.17	0.003	14	14	5d ⁵ 6s	129016.74(4)	211529.26(4)	pc *
121	164	1212.622	82465.91	1212.6232	0.0030	0.06	-0.001	13	20	5d ⁵ 6s	122714.67(4)	205180.52(4)	pc
138	603	1213.130	82431.39	1213.1337	0.0021	0.25	-0.004	13	25	5d ⁵ 6s	103914.20(5)	186345.35(4)	pc
169	569	1216.462	82205.59	1216.4610	0.0030	-0.09	0.001	17	24	5d ⁵ 6s	110351.25(3)	192556.93(2)	pc
39	95	1216.668	82191.70	1216.6591	0.0030	-0.59	0.009	13	16	5d ⁵ 6s	119186.22(5)	201378.51(4)	pc *
160	2117	1217.934	82106.22	1217.9356	0.0030	0.07	-0.001	8	20	5d ⁵ 6s	83119.55(2)	165225.70(1)	pc
259	4602	1218.673	82056.43	1218.6671	0.0030	-0.43	0.006	8	20	5d ⁵ 6s	83119.55(2)	165176.42(2)	pc
88	287	1218.752	82051.15	1218.7516	0.0021	-0.02	0.000	14	20	5d ⁵ 6s	117739.95(6)	199791.13(5)	pc
80	416	1218.918	82039.94	1218.9220	0.0024	0.24	-0.004	16	22	5d ⁵ 6s	113075.00(5)	195114.70(4)	pc
63	315	1219.049	82031.14	1219.0473	0.0021	-0.12	0.002	18	29	5d ⁵ 6s	100857.09(3)	182888.36(3)	pc
148	682	1219.090	82028.40	1219.0901	0.0024	0.01	0.000	12	22	5d ⁵ 6s	113075.00(5)	195103.39(5)	pc Pt IV
71	493	1219.346	82011.16	1219.3457	0.0020	-0.03	0.001	15	18	5d ⁵ 6s	87062.03(3)	169073.23(3)	pc
94	173	1223.774	81714.45	1223.7616	0.0040	-0.81	0.012	11	14	5d ⁵ 6s	135601.93(4)	217317.19(5)	pc *
43	148	1226.079	81560.81	1226.0767	0.0030	-0.15	0.002	15	14	5d ⁵ 6s	121973.40(4)	203534.37(5)	pc
50	432	1227.240	81483.64	1227.2385	0.0023	-0.11	0.002	12	18	5d ⁵ 6s	87062.03(3)	168545.78(2)	pc
137	1815	1227.294	81480.07	1227.3006	0.0030	0.44	-0.007	14	20	5d ⁵ 6s	83119.55(2)	164599.18(3)	pc
170	451	1227.405	81472.67	1227.4118	0.0030	0.43	-0.006	7	16	5d ⁵ 6s	119186.22(5)	200658.47(6)	pc
30	143	1228.178	81421.43	1228.1855	0.0030	0.50	-0.008	18	12	5d ⁵ 6s	123115.74(3)	204536.67(3)	pc *
72	399	1229.542	81331.11	1229.5479	0.0030	0.41	-0.006	15	23	5d ⁵ 6s	109317.92(5)	190648.63(4)	pc
352	1540	1230.349	81277.77	1230.3504	0.0021	0.11	-0.002	13	26	5d ⁵ 6s	106085.51(4)	187363.17(5)	pc
30	243	1230.845	81245.02	1230.8473	0.0024	0.18	-0.003	13	18	5d ⁵ 6s	87062.03(3)	168306.88(3)	pc
109	486	1231.096	81228.45	1231.0969	0.0019	0.08	-0.001	17	25	5d ⁵ 6s	103914.20(5)	185142.58(5)	pc
56	341	1232.203	81155.45	1232.2074	0.0021	0.28	-0.004	18	26	5d ⁵ 6s	109903.81(4)	191058.98(4)	pc
160	2482	1232.272	81150.91	1232.2815	0.0023	0.63	-0.010	17	29	5d ⁵ 6s	100857.09(3)	182007.38(4)	pc * 1000, Pt IV(1000)
82	400	1232.443	81139.63	1232.4546	0.0040	0.74	-0.011	8	21	5d ⁵ 6s	103077.94(2)	184216.83(1)	pc
119	360	1234.556	81000.78	1234.5515	0.0030	-0.29	0.004	16	14	5d ⁵ 6s	129016.74(4)	210017.82(4)	pc
325	2435	1234.673	80993.08	1234.6742	0.0022	0.05	-0.001	13	22	5d ⁵ 6s	93989.94(3)	174982.96(4)	pc
16	418	1235.563	80934.79	1235.5732	0.0023	0.69	-0.011	13	24	5d ⁵ 6s	99397.70(4)	180331.80(5)	pc * 200
96	103	1235.994	80906.55	1236.0027	0.0041	0.58	-0.009	13	14	5d ⁵ 6s	126454.90(4)	207360.87(4)	pc *
39	264	1236.308	80885.97	1236.3136	0.0030	0.34	-0.005	15	24	5d ⁵ 6s	110351.25(3)	191236.88(3)	pc

89	465	1236.672	80862.19	1236.6796	0.0040	0.50	-0.008	7	18	5d ⁵ 6s	93598.55(2)	174460.24(1)	pc	
72	160	1237.322	80819.71	1237.3221	0.0020	0.02	0.000	15	20	5d ⁵ 6s	122714.67(4)	203534.37(5)	pc	
37	110	1238.466	80745.06	1238.4696	0.0030	0.24	-0.004	15	26	5d ⁵ 6s	109903.81(4)	190648.63(4)	pc *	
111	169	1238.714	80728.87	1238.7169	0.0040	0.17	-0.003	9	11	5d ⁵ 6s	125619.13(3)	206347.83(3)	pc	
122	954	1238.866	80718.98	1238.8561	0.0023	-0.64	0.010	15	22	5d ⁵ 6s	105305.65(3)	186025.28(3)	pc	
49	239	1239.634	80668.99	1239.6380	0.0040	0.28	-0.004	9	21	5d ⁵ 6s	103077.94(2)	183746.65(1)	pc	
37	398	1241.948	80518.64	1241.9569	0.0030	0.55	-0.008	13	24	5d ⁵ 6s	110351.25(3)	190869.34(2)	pc	Pt IV
62	676	1243.017	80449.46	1243.0177	0.0030	0.08	-0.001	12	22	5d ⁵ 6s	105305.65(3)	185755.03(2)	pc	
77	63	1243.216	80436.57	1243.2076	0.0060	-0.52	0.008	11	10	5d ⁵ 6s	133748.14(3)	214185.23(3)	pc *	
38	160	1243.561	80414.20	1243.5656	0.0030	0.27	-0.004	11	21	5d ⁵ 6s	103077.94(2)	183491.87(2)	pc	
59	111	1243.699	80405.31	1243.6853	0.0030	-0.88	0.014	14	20	5d ⁵ 6s	116194.78(4)	196600.97(5)	pc *	
72	179	1243.750	80401.98	1243.7615	0.0030	0.71	-0.011	14	14	5d ⁵ 6s	129016.74(4)	209418.01(3)	pc *	
91	815	1244.769	80336.16	1244.7674	0.0022	-0.13	0.002	16	22	5d ⁵ 6s	113075.00(5)	193411.29(5)	pc	
22	215	1246.634	80215.99	1246.6420	0.0030	0.50	-0.008	9	18	5d ⁵ 6s	87062.03(3)	167277.52(2)	pc	
68	286	1246.666	80213.95	1246.6714	0.0030	0.35	-0.005	6	23	5d ⁵ 6s	109317.92(5)	189531.52(6)	pc	
92	178	1246.932	80196.87	1246.9283	0.0040	-0.21	0.003	8	5	5d ⁵ 6s	144162.01(4)	224359.08(5)	pc	
34	636	1248.606	80089.33	1248.6110	0.0021	0.34	-0.005	17	24	5d ⁵ 6s	99397.70(4)	179486.69(4)	pc	
88	197	1248.930	80068.54	1248.9316	0.0040	0.10	-0.002	7	20	5d ⁵ 6s	116050.36(3)	196118.80(2)	pc	
120	174	1249.171	80053.10	1249.1707	0.0031	-0.02	0.000	13	14	5d ⁵ 6s	135601.93(4)	215655.04(5)	pc	
26	56	1249.490	80032.65	1249.4963	0.0030	0.40	-0.006	16	20	5d ⁵ 6s	116050.36(3)	196082.61(3)	pc *	
34	121	1250.025	79998.40	1250.0211	0.0030	-0.25	0.004	13	24	5d ⁵ 6s	110351.25(3)	190349.90(3)	pc *	
46	168	1251.748	79888.26	1251.7550	0.0030	0.42	-0.007	16	20	5d ⁵ 6s	116194.78(4)	196082.61(3)	pc	
21	54	1252.306	79852.70	1252.3054	0.0023	-0.03	0.000	13	25	5d ⁵ 6s	103914.20(5)	183766.93(4)	pc	
22	228	1252.872	79816.63	1252.8791	0.0030	0.46	-0.007	15	26	5d ⁵ 6s	109903.81(4)	189719.97(3)	pc *	
135	647	1252.965	79810.69	1252.9692	0.0023	0.27	-0.004	18	21	5d ⁵ 6s	103077.94(2)	182888.36(3)	pc	
61	450	1253.115	79801.12	1253.1154	0.0030	0.00	0.000	14	16	5d ⁵ 6s	109044.24(6)	188845.35(5)	pc	
84	98	1255.487	79650.34	1255.4757	0.0031	-0.74	0.012	15	14	5d ⁵ 6s	126454.90(4)	206105.98(4)	pc *	
75	710	1256.167	79607.25	1256.1723	0.0020	0.33	-0.005	12	16	5d ⁵ 6s	88938.86(2)	168545.78(2)	pc	
364	1395	1257.329	79533.66	1257.3275	0.0030	-0.12	0.002	10	10	5d ⁵ 6s	112490.38(7)	192024.16(6)	pc	
46	140	1257.416	79528.17	1257.4278	0.0031	0.74	-0.012	14	23	5d ⁵ 6s	109317.92(5)	188845.35(5)	pc *	
45	72	1258.573	79455.08	1258.5803	0.0031	0.48	-0.008	19	14	5d ⁵ 6s	121973.40(4)	201428.01(3)	pc *	
748	4715	1259.086	79422.72	1259.0812	0.0031	-0.27	0.004	4	12	5d ⁵ 6s	64061.29(3)	143484.29(3)	pc	
55	228	1259.369	79404.85	1259.3649	0.0030	-0.26	0.004	13	14	5d ⁵ 6s	121973.40(4)	201378.51(4)	pc *	
39	299	1259.439	79400.43	1259.4286	0.0060	-0.66	0.011	12	20	5d ⁵ 6s	116050.36(3)	195451.45(2)	pc *	
383	2857	1259.951	79368.17	1259.9534	0.0030	0.16	-0.003	13	16	5d ⁵ 6s	88938.86(2)	168306.88(3)	pc	
128	2069	1260.414	79339.00	1260.4141	0.0040	0.00	0.000	7	19	5d ⁵ 6s	106378.82(2)	185717.82(1)	pc	Si II
89	316	1260.728	79319.24	1260.7297	0.0040	0.10	-0.002	9	14	5d ⁵ 6s	120481.03(3)	199800.17(2)	pc	
167	1550	1261.086	79296.73	1261.0899	0.0024	0.24	-0.004	11	18	5d ⁵ 6s	92250.06(4)	171546.55(5)	pc	
129	629	1264.381	79090.06	1264.3791	0.0030	-0.14	0.002	16	22	5d ⁵ 6s	113075.00(5)	192165.20(4)	pc	
47	322	1264.912	79056.90	1264.9090	0.0020	-0.17	0.003	17	26	5d ⁵ 6s	106085.51(4)	185142.58(5)	pc	
60	534	1265.444	79023.68	1265.4487	0.0030	0.32	-0.005	9	29	5d ⁵ 6s	100857.09(3)	179880.44(2)	pc	

127	198	1265.697	79007.88	1265.6976	0.0040	0.06	-0.001	6	11	5d ⁵ 6s	131075.86(6)	210083.67(6)	pc
432	1843	1266.637	78949.24	1266.6379	0.0030	0.08	-0.001	10	22	5d ⁵ 6s	113075.00(5)	192024.16(6)	pc
19	81	1267.291	78908.47	1267.2888	0.0031	-0.14	0.002	12	20	5d ⁵ 6s	116194.78(4)	195103.39(5)	pc *
230	552	1267.363	78904.01	1267.3544	0.0030	-0.52	0.008	15	16	5d ⁵ 6s	119186.22(5)	198090.74(4)	pc
180	304	1269.597	78765.18	1269.5974	0.0031	0.06	-0.001	15	11	5d ⁵ 6s	131075.86(6)	209840.99(5)	pc
46	115	1269.833	78750.51	1269.8399	0.0030	0.43	-0.007	11	20	5d ⁵ 6s	116050.36(3)	194800.44(2)	pc *
84	140	1270.429	78713.55	1270.4327	0.0030	0.21	-0.003	19	20	5d ⁵ 6s	122714.67(4)	201428.01(3)	pc
115	462	1270.927	78682.74	1270.9225	0.0030	-0.26	0.004	13	15	5d ⁵ 6s	111666.90(2)	190349.90(3)	pc
149	1862	1271.448	78650.45	1271.4515	0.0030	0.19	-0.003	8	18	5d ⁵ 6s	87062.03(3)	165712.29(4)	pc
66	729	1271.790	78629.32	1271.7857	0.0021	-0.29	0.005	17	29	5d ⁵ 6s	100857.09(3)	179486.69(4)	pc
24	194	1274.010	78492.29	1274.0105	0.0030	0.01	0.000	15	25	5d ⁵ 6s	112744.59(3)	191236.88(3)	pc *
154	740	1274.105	78486.49	1274.1051	0.0030	0.03	-0.001	15	22	5d ⁵ 6s	113075.00(5)	191561.46(4)	pc
91	517	1275.679	78389.63	1275.6821	0.0030	0.19	-0.003	9	21	5d ⁵ 6s	103077.94(2)	181467.37(2)	pc
102	1332	1276.510	78338.60	1276.5090	0.0030	-0.05	0.001	9	16	5d ⁵ 6s	88938.86(2)	167277.52(2)	pc
34	315	1276.831	78318.93	1276.8306	0.0030	0.01	0.000	13	16	5d ⁵ 6s	109044.24(6)	187363.17(5)	pc
62	189	1277.497	78278.05	1277.4973	0.0053	0.00	0.000	13	14	5d ⁵ 6s	135601.93(4)	213879.98(4)	pc *
73	207	1277.754	78262.32	1277.7467	0.0041	-0.45	0.007	13	12	5d ⁵ 6s	123115.74(3)	201378.51(4)	pc *
740	3979	1279.711	78142.64	1279.7070	0.0030	-0.25	0.004	11	14	5d ⁵ 6s	93403.66(6)	171546.55(5)	pc
35	197	1280.008	78124.52	1280.0041	0.0030	-0.23	0.004	13	25	5d ⁵ 6s	112744.59(3)	190869.34(2)	pc
75	185	1280.712	78081.55	1280.7087	0.0030	-0.22	0.004	18	14	5d ⁵ 6s	126454.90(4)	204536.67(3)	pc
31	222	1281.691	78021.91	1281.7053	0.0030	0.85	-0.014	9	16	5d ⁵ 6s	109044.24(6)	187065.29(6)	pc *
86	353	1283.629	77904.15	1283.6306	0.0031	0.11	-0.002	15	25	5d ⁵ 6s	112744.59(3)	190648.63(4)	pc
101	495	1283.879	77888.94	1283.8811	0.0030	0.10	-0.002	15	21	5d ⁵ 6s	103077.94(2)	180966.77(3)	pc
201	518	1284.593	77845.69	1284.5980	0.0032	0.33	-0.005	13	18	5d ⁵ 6s	129515.50(5)	207360.87(4)	pc
44	327	1284.716	77838.21	1284.7194	0.0047	0.20	-0.003	8	19	5d ⁵ 6s	106378.82(2)	184216.83(1)	pc
21	132	1286.210	77747.80	1286.2171	0.0030	0.43	-0.007	9	23	5d ⁵ 6s	109317.92(5)	187065.29(6)	pc *
36	102	1287.309	77681.46	1287.3091	0.0024	0.03	-0.001	13	26	5d ⁵ 6s	106085.51(4)	183766.93(4)	pc
66	272	1288.568	77605.52	1288.5716	0.0030	0.20	-0.003	13	25	5d ⁵ 6s	112744.59(3)	190349.90(3)	pc
183	1835	1290.135	77511.30	1290.1333	0.0030	-0.07	0.001	11	19	5d ⁵ 6s	94035.18(5)	171546.55(5)	pc
119	593	1291.000	77459.35	1290.9996	0.0024	-0.01	0.000	13	26	5d ⁵ 6s	109903.81(4)	187363.17(5)	pc
84	400	1292.070	77395.21	1292.0651	0.0031	-0.27	0.005	13	14	5d ⁵ 6s	120481.03(3)	197876.51(3)	pc
100	331	1293.064	77335.72	1293.0650	0.0040	0.08	-0.001	9	5	5d ⁵ 6s	141924.39(5)	219260.02(5)	pc
123	481	1295.056	77216.71	1295.0598	0.0030	0.20	-0.003	16	20	5d ⁵ 6s	116194.78(4)	193411.29(5)	pc
238	647	1296.414	77135.85	1296.4155	0.0040	0.09	-0.001	4	10	5d ⁵ 6s	135507.68(5)	212643.45(6)	pc
659	4898	1296.629	77123.07	1296.6390	0.0030	0.60	-0.010	4	12	5d ⁵ 6s	64061.29(3)	141183.76(2)	pc
122	928	1296.803	77112.72	1296.7974	0.0031	-0.33	0.006	11	19	5d ⁵ 6s	106378.82(2)	183491.87(2)	pc
33	181	1297.422	77075.94	1297.4131	0.0030	-0.52	0.009	14	20	5d ⁵ 6s	122714.67(4)	199791.13(5)	pc *
70	361	1298.009	77041.07	1298.0079	0.0031	-0.06	0.001	6	10	5d ⁵ 6s	112490.38(7)	189531.52(6)	pc
77	985	1298.244	77027.14	1298.2390	0.0030	-0.28	0.005	13	23	5d ⁵ 6s	109317.92(5)	186345.35(4)	pc Pt IV (300), Pt VI
20	124	1299.108	76975.91	1299.1167	0.0031	0.53	-0.009	15	25	5d ⁵ 6s	112744.59(3)	189719.97(3)	pc *
392	2762	1299.252	76967.34	1299.2539	0.0020	0.09	-0.001	8	25	5d ⁵ 6s	103914.20(5)	180881.45(6)	pc

48	524	1299.702	76940.69	1299.7024	0.0023	0.00	0.000	15	22	5d ⁵ 6s	93989.94(3)	170930.63(4)	pc
565	3726	1300.468	76895.41	1300.4671	0.0023	-0.04	0.001	15	19	5d ⁵ 6s	94035.18(5)	170930.63(4)	pc
25	277	1301.691	76823.16	1301.6908	0.0024	0.00	0.000	15	18	5d ⁵ 6s	92250.06(4)	169073.23(3)	pc
73	105	1301.785	76817.62	1301.7948	0.0041	0.60	-0.010	10	18	5d ⁵ 6s	129515.50(5)	206332.53(5)	pc *
122	619	1302.036	76802.82	1302.0349	0.0023	-0.04	0.001	18	26	5d ⁵ 6s	106085.51(4)	182888.36(3)	pc
28	186	1303.744	76702.16	1303.7516	0.0030	0.43	-0.007	17	22	5d ⁵ 6s	105305.65(3)	182007.38(4)	pc *
182	1268	1304.448	76660.76	1304.4474	0.0031	-0.05	0.001	11	29	5d ⁵ 6s	100857.09(3)	177517.90(2)	pc
26	238	1304.793	76640.53	1304.7899	0.0040	-0.16	0.003	11	15	5d ⁵ 6s	111666.90(2)	188307.59(2)	pc
121	2420	1306.278	76553.38	1306.2819	0.0030	0.23	-0.004	8	20	5d ⁵ 6s	83119.55(2)	159672.71(3)	pc
70	270	1307.020	76509.92	1307.0266	0.0030	0.38	-0.007	18	19	5d ⁵ 6s	106378.82(2)	182888.36(3)	pc
17	130	1307.089	76505.90	1307.0773	0.0030	-0.67	0.012	17	20	5d ⁵ 6s	116050.36(3)	192556.93(2)	pc *
530	2908	1308.355	76431.87	1308.3531	0.0031	-0.10	0.002	10	24	5d ⁵ 6s	99397.70(4)	175829.67(3)	pc
72	888	1308.600	76417.55	1308.5991	0.0024	-0.04	0.001	13	25	5d ⁵ 6s	103914.20(5)	180331.80(5)	pc
48	105	1309.198	76382.66	1309.2072	0.0050	0.56	-0.010	14	20	5d ⁵ 6s	122714.67(4)	199096.78(3)	pc *
176	422	1310.316	76317.49	1310.3116	0.0030	-0.24	0.004	9	18	5d ⁵ 6s	129515.50(5)	205833.23(6)	pc
120	187	1311.131	76270.04	1311.1370	0.0030	0.36	-0.006	16	10	5d ⁵ 6s	133748.14(3)	210017.82(4)	pc
312	2449	1311.518	76247.50	1311.5185	0.0030	0.01	0.000	5	16	5d ⁵ 6s	109044.24(6)	185291.73(7)	pc
169	1074	1313.695	76121.19	1313.6899	0.0032	-0.28	0.005	15	26	5d ⁵ 6s	109903.81(4)	186025.28(3)	pc
123	675	1313.804	76114.87	1313.8042	0.0030	0.03	-0.001	16	20	5d ⁵ 6s	116050.36(3)	192165.20(4)	pc
174	1206	1314.090	76098.27	1314.0891	0.0024	-0.07	0.001	17	16	5d ⁵ 6s	109044.24(6)	185142.58(5)	pc
112	1294	1314.809	76056.66	1314.8066	0.0030	-0.15	0.003	13	18	5d ⁵ 6s	92250.06(4)	168306.88(3)	pc
35	47	1315.409	76022.01	1315.4161	0.0041	0.44	-0.008	14	10	5d ⁵ 6s	135507.68(5)	211529.26(4)	pc *
92	357	1315.889	75994.27	1315.8918	0.0030	0.18	-0.003	13	24	5d ⁵ 6s	110351.25(3)	186345.35(4)	pc
49	419	1317.137	75922.22	1317.1435	0.0030	0.34	-0.006	17	26	5d ⁵ 6s	106085.51(4)	182007.38(4)	pc
93	1048	1318.667	75834.16	1318.6593	0.0050	-0.44	0.008	9	11	5d ⁵ 6s	107912.05(1)	183746.65(1)	pc * 400, Pt IV(400)
89	559	1318.836	75824.45	1318.8323	0.0023	-0.21	0.004	17	23	5d ⁵ 6s	109317.92(5)	185142.58(5)	pc
63	1625	1319.781	75770.17	1319.7774	0.0030	-0.18	0.003	14	22	5d ⁵ 6s	113075.00(5)	188845.35(5)	pc * 300, Pt III
149	1790	1320.846	75709.05	1320.8494	0.0020	0.19	-0.003	14	29	5d ⁵ 6s	100857.09(3)	176565.95(3)	pc
23	374	1320.982	75701.27	1320.9847	0.0040	0.17	-0.003	7	21	5d ⁵ 6s	103077.94(2)	178779.04(1)	pc
51	209	1321.507	75671.19	1321.5043	0.0031	-0.15	0.003	16	20	5d ⁵ 6s	117739.95(6)	193411.29(5)	pc
25	243	1321.696	75660.39	1321.6967	0.0031	0.07	-0.001	14	16	5d ⁵ 6s	88938.86(2)	164599.18(3)	pc
41	640	1322.634	75606.71	1322.6473	0.0050	0.76	-0.013	4	10	5d ⁵ 6s	112490.38(7)	188096.33(7)	pc * 300, Pt IV
51	97	1322.724	75601.59	1322.7237	0.0033	0.01	0.000	16	14	5d ⁵ 6s	120481.03(3)	196082.61(3)	pc
302	3384	1323.010	75585.20	1323.0092	0.0030	-0.07	0.001	13	24	5d ⁵ 6s	99397.70(4)	174982.96(4)	pc
103	1453	1323.230	75572.65	1323.2328	0.0022	0.16	-0.003	17	25	5d ⁵ 6s	103914.20(5)	179486.69(4)	pc
174	2217	1324.945	75474.85	1324.9478	0.0030	0.17	-0.003	15	18	5d ⁵ 6s	93598.55(2)	169073.23(3)	pc C II
56	397	1326.191	75403.92	1326.1935	0.0030	0.14	-0.002	12	24	5d ⁵ 6s	110351.25(3)	185755.03(2)	pc
204	330	1326.377	75393.36	1326.3865	0.0050	0.56	-0.010	11	5	5d ⁵ 6s	141924.39(5)	217317.19(5)	pc * 150, Pt III
132	1850	1326.941	75361.32	1326.9418	0.0030	0.07	-0.001	10	18	5d ⁵ 6s	92250.06(4)	167611.32(5)	pc
411	851	1328.788	75256.55	1328.7859	0.0040	-0.11	0.002	10	11	5d ⁵ 6s	131075.86(6)	206332.53(5)	pc
31	561	1329.107	75238.47	1329.1020	0.0023	-0.30	0.005	17	26	5d ⁵ 6s	109903.81(4)	185142.58(5)	pc

224	3124	1331.852	75083.43	1331.8543	0.0023	0.15	-0.003	15	22	5d ⁵ 6s	93989.94(3)	169073.23(3)	pc	Pt IV (400)
52	468	1333.177	75008.82	1333.1801	0.0030	0.20	-0.004	18	20	5d ⁵ 6s	116050.36(3)	191058.98(4)	pc	
232	418	1333.447	74993.60	1333.4522	0.0050	0.28	-0.005	9	7	5d ⁵ 6s	138722.83(3)	213716.14(2)	pc	
117	344	1333.810	74973.17	1333.8115	0.0030	0.05	-0.001	19	14	5d ⁵ 6s	126454.90(4)	201428.01(3)	pc	
28	56	1333.870	74969.80	1333.8594	0.0072	-0.62	0.011	12	14	5d ⁵ 6s	120481.03(3)	195451.45(2)	pc *	
242	1493	1334.673	74924.70	1334.6769	0.0040	0.20	-0.004	12	18	5d ⁵ 6s	129515.50(5)	204440.00(4)	pc	
30	228	1335.454	74880.90	1335.4475	0.0030	-0.36	0.006	15	26	5d ⁵ 6s	106085.51(4)	180966.77(3)	pc *	
421	510	1336.292	74833.95	1336.2915	0.0050	-0.02	0.000	12	5	5d ⁵ 6s	141924.39(5)	216758.36(4)	pc	
64	746	1336.719	74810.01	1336.7258	0.0040	0.35	-0.006	6	18	5d ⁵ 6s	93598.55(2)	168408.21(1)	pc	
284	870	1337.662	74757.28	1337.6608	0.0030	-0.09	0.002	9	11	5d ⁵ 6s	131075.86(6)	205833.23(6)	pc	
18	69	1338.055	74735.33	1338.0551	0.0041	-0.01	0.000	20	14	5d ⁵ 6s	120481.03(3)	195216.37(3)	pc *	
22	118	1338.539	74708.31	1338.5389	0.0030	-0.01	0.000	13	18	5d ⁵ 6s	93598.55(2)	168306.88(3)	pc *	
774	3962	1340.936	74574.77	1340.9336	0.0040	-0.14	0.003	9	10	5d ⁵ 6s	112490.38(7)	187065.29(6)	pc	
252	3031	1341.278	74555.75	1341.2765	0.0030	-0.09	0.002	12	22	5d ⁵ 6s	93989.94(3)	168545.78(2)	pc	
50	66	1342.191	74505.02	1342.1883	0.0041	-0.17	0.003	16	11	5d ⁵ 6s	131075.86(6)	205581.06(5)	pc *	
343	2376	1343.202	74448.96	1343.2013	0.0031	-0.05	0.001	13	23	5d ⁵ 6s	109317.92(5)	183766.93(4)	pc	
839	5642	1343.341	74441.25	1343.3367	0.0031	-0.25	0.005	6	14	5d ⁵ 6s	93403.66(6)	167845.16(6)	pc	
149	973	1344.835	74358.59	1344.8384	0.0031	0.21	-0.004	15	15	5d ⁵ 6s	111666.90(2)	186025.28(3)	pc	
77	213	1345.546	74319.26	1345.5435	0.0040	-0.16	0.003	11	14	5d ⁵ 6s	120481.03(3)	194800.44(2)	pc	
144	446	1346.181	74284.21	1346.1811	0.0030	0.00	0.000	10	20	5d ⁵ 6s	117739.95(6)	192024.16(6)	pc	
68	1322	1346.569	74262.79	1346.5671	0.0030	-0.12	0.002	8	20	5d ⁵ 6s	83119.55(2)	157382.47(2)	pc	
38	280	1346.875	74245.96	1346.8686	0.0020	-0.33	0.006	13	26	5d ⁵ 6s	106085.51(4)	180331.80(5)	pc	
297	1298	1347.259	74224.77	1347.2537	0.0030	-0.30	0.005	16	16	5d ⁵ 6s	119186.22(5)	193411.29(5)	pc	
412	4366	1347.573	74207.48	1347.5699	0.0030	-0.17	0.003	10	14	5d ⁵ 6s	93403.66(6)	167611.32(5)	pc	
30	159	1348.054	74181.03	1348.0534	0.0024	-0.01	0.000	17	22	5d ⁵ 6s	105305.65(3)	179486.69(4)	pc	
19	112	1349.067	74125.31	1349.0566	0.0030	-0.57	0.010	13	29	5d ⁵ 6s	100857.09(3)	174982.96(4)	pc *	
268	1058	1349.359	74109.26	1349.3600	0.0030	0.05	-0.001	16	14	5d ⁵ 6s	121973.40(4)	196082.61(3)	pc	
39	226	1349.740	74088.36	1349.7438	0.0030	0.23	-0.004	12	15	5d ⁵ 6s	111666.90(2)	185755.03(2)	pc	
168	404	1351.007	74018.86	1351.0070	0.0030	-0.01	0.000	15	18	5d ⁵ 6s	129515.50(5)	203534.37(5)	pc	
29	151	1353.429	73886.40	1353.4310	0.0030	0.10	-0.002	14	20	5d ⁵ 6s	122714.67(4)	196600.97(5)	pc *	
74	162	1353.524	73881.20	1353.5168	0.0051	-0.42	0.008	16	14	5d ⁵ 6s	129016.74(4)	202898.36(3)	pc *	
38	75	1354.718	73816.12	1354.7183	0.0040	0.03	-0.001	14	14	5d ⁵ 6s	135601.93(4)	209418.01(3)	pc *	
275	3604	1354.831	73809.93	1354.8303	0.0030	-0.05	0.001	6	19	5d ⁵ 6s	94035.18(5)	167845.16(6)	pc	
101	1145	1357.240	73678.94	1357.2395	0.0030	-0.02	0.000	9	18	5d ⁵ 6s	93598.55(2)	167277.52(2)	pc	
74	552	1357.410	73669.70	1357.4118	0.0030	0.09	-0.002	15	20	5d ⁵ 6s	116050.36(3)	189719.97(3)	pc	2d ord
47	181	1358.680	73600.83	1358.6818	0.0030	0.08	-0.001	13	25	5d ⁵ 6s	112744.59(3)	186345.35(4)	pc	
598	5269	1359.136	73576.14	1359.1363	0.0031	0.01	0.000	10	19	5d ⁵ 6s	94035.18(5)	167611.32(5)	pc	
61	333	1360.513	73501.71	1360.5142	0.0031	0.09	-0.002	9	19	5d ⁵ 6s	106378.82(2)	179880.44(2)	pc	
49	153	1360.989	73475.99	1360.9894	0.0030	0.03	0.000	14	14	5d ⁵ 6s	129016.74(4)	202492.70(5)	pc	
588	4429	1361.247	73462.06	1361.2438	0.0030	-0.16	0.003	8	18	5d ⁵ 6s	92250.06(4)	165712.29(4)	pc	
34	137	1363.003	73367.41	1362.9932	0.0030	-0.52	0.010	16	20	5d ⁵ 6s	122714.67(4)	196082.61(3)	pc *	

49	156	1365.318	73243.03	1365.3188	0.0030	0.06	-0.001	20	14	5d ⁵ 6s	121973.40(4)	195216.37(3)	pc
285	101	1366.954	73155.34	1366.9571	0.0050	0.15	-0.003	11	5	5d ⁵ 6s	144162.01(4)	217317.19(5)	pc
28	169	1367.227	73140.76	1367.2294	0.0031	0.14	-0.003	11	24	5d ⁵ 6s	110351.25(3)	183491.87(2)	pc
173	352	1367.345	73134.42	1367.3443	0.0050	-0.06	0.001	8	7	5d ⁵ 6s	138722.83(3)	211857.30(3)	pc
201	1115	1370.155	72984.44	1370.1530	0.0030	-0.11	0.002	18	26	5d ⁵ 6s	109903.81(4)	182888.36(3)	pc
89	160	1370.738	72953.40	1370.7434	0.0050	0.29	-0.005	11	7	5d ⁵ 6s	138722.83(3)	211675.95(2)	pc
700	4013	1373.602	72801.30	1373.6009	0.0040	-0.05	0.001	5	10	5d ⁵ 6s	112490.38(7)	185291.73(7)	pc
31	111	1374.548	72751.21	1374.5378	0.0030	-0.52	0.010	10	21	5d ⁵ 6s	103077.94(2)	175829.67(3)	pc *
20	116	1375.702	72690.13	1375.7154	0.0030	0.68	-0.013	17	23	5d ⁵ 6s	109317.92(5)	182007.38(4)	pc *
249	2389	1376.445	72650.90	1376.4516	0.0040	0.33	-0.006	14	20	5d ⁵ 6s	116194.78(4)	188845.35(5)	pc * 700, Pt III
410	4779	1377.211	72610.53	1377.2079	0.0030	-0.15	0.003	8	18	5d ⁵ 6s	87062.03(3)	159672.71(3)	pc
22	124	1378.364	72549.77	1378.3611	0.0059	-0.17	0.003	8	15	5d ⁵ 6s	111666.90(2)	184216.83(1)	pc *
96	397	1378.610	72536.81	1378.6048	0.0031	-0.29	0.006	18	24	5d ⁵ 6s	110351.25(3)	182888.36(3)	pc
16	32	1379.281	72501.56	1379.2780	0.0030	-0.13	0.003	20	20	5d ⁵ 6s	122714.67(4)	195216.37(3)	pc *
64	1476	1380.122	72457.37	1380.1281	0.0040	0.32	-0.006	9	7	5d ⁵ 6s	94820.48(1)	167277.52(2)	pc
118	187	1381.007	72410.94	1381.0006	0.0031	-0.33	0.006	19	14	5d ⁵ 6s	129016.74(4)	201428.01(3)	pc
134	408	1381.690	72375.15	1381.6880	0.0030	-0.10	0.002	15	16	5d ⁵ 6s	119186.22(5)	191561.46(4)	pc
194	467	1381.944	72361.83	1381.9453	0.0040	0.06	-0.001	13	14	5d ⁵ 6s	129016.74(4)	201378.51(4)	pc
273	3774	1382.194	72348.73	1382.1868	0.0030	-0.39	0.008	14	18	5d ⁵ 6s	92250.06(4)	164599.18(3)	pc
171	1114	1384.811	72212.03	1384.8066	0.0030	-0.22	0.004	11	22	5d ⁵ 6s	105305.65(3)	177517.90(2)	pc
69	315	1385.432	72179.63	1385.4326	0.0050	0.01	0.000	7	11	5d ⁵ 6s	131075.86(6)	203255.48(6)	pc *
46	186	1386.025	72148.78	1386.0234	0.0030	-0.08	0.001	11	24	5d ⁵ 6s	99397.70(4)	171546.55(5)	pc
62	777	1386.886	72103.98	1386.8939	0.0030	0.41	-0.008	17	26	5d ⁵ 6s	109903.81(4)	182007.38(4)	pc
94	216	1386.947	72100.79	1386.9504	0.0040	0.16	-0.003	20	12	5d ⁵ 6s	123115.74(3)	195216.37(3)	pc
100	397	1387.355	72079.60	1387.3522	0.0041	-0.15	0.003	9	15	5d ⁵ 6s	111666.90(2)	183746.65(1)	pc
23	77	1387.437	72075.35	1387.4263	0.0041	-0.56	0.011	17	14	5d ⁵ 6s	120481.03(3)	192556.93(2)	pc *
240	1577	1387.595	72067.13	1387.5865	0.0024	-0.45	0.009	17	22	5d ⁵ 6s	113075.00(5)	185142.58(5)	pc
141	1146	1389.507	71967.97	1389.4989	0.0040	-0.43	0.008	9	11	5d ⁵ 6s	107912.05(1)	179880.44(2)	pc
93	334	1391.347	71872.78	1391.3477	0.0030	0.02	0.000	18	16	5d ⁵ 6s	119186.22(5)	191058.98(4)	pc
143	379	1391.536	71863.02	1391.5366	0.0040	0.01	0.000	13	18	5d ⁵ 6s	129515.50(5)	201378.51(4)	pc
546	3702	1392.038	71837.11	1392.0362	0.0030	-0.10	0.002	8	16	5d ⁵ 6s	109044.24(6)	180881.45(6)	pc
32	78	1392.928	71791.21	1392.9212	0.0030	-0.36	0.007	6	20	5d ⁵ 6s	117739.95(6)	189531.52(6)	pc
122	1430	1394.266	71722.33	1394.2654	0.0030	-0.03	0.001	8	22	5d ⁵ 6s	93989.94(3)	165712.29(4)	pc
91	2091	1395.150	71676.91	1395.1456	0.0030	-0.20	0.004	8	19	5d ⁵ 6s	94035.18(5)	165712.29(4)	pc 1500, Pt IV (700)
64	1601	1395.555	71656.07	1395.5541	0.0030	-0.05	0.001	17	24	5d ⁵ 6s	110351.25(3)	182007.38(4)	pc 600, Pt III
116	1388	1396.122	71626.99	1396.1187	0.0040	-0.16	0.003	8	18	5d ⁵ 6s	93598.55(2)	165225.70(1)	pc
185	2799	1397.083	71577.69	1397.0799	0.0040	-0.18	0.004	8	18	5d ⁵ 6s	93598.55(2)	165176.42(2)	pc
242	1939	1397.363	71563.36	1397.3598	0.0030	-0.17	0.003	8	23	5d ⁵ 6s	109317.92(5)	180881.45(6)	pc
168	1647	1397.959	71532.86	1397.9575	0.0030	-0.08	0.002	15	24	5d ⁵ 6s	99397.70(4)	170930.63(4)	pc
443	6041	1402.771	71287.49	1402.7694	0.0031	-0.06	0.001	13	16	5d ⁵ 6s	109044.24(6)	180331.80(5)	pc Si IV
93	2354	1403.308	71260.21	1403.3060	0.0030	-0.09	0.002	14	22	5d ⁵ 6s	105305.65(3)	176565.95(3)	pc 1300, Pt III

39	652	1404.757	71186.68	1404.7611	0.0030	0.20	-0.004	8	22	5d ⁵ 6s	93989.94(3)	165176.42(2)	pc
134	1324	1407.201	71063.05	1407.2029	0.0030	0.09	-0.002	15	26	5d ⁵ 6s	109903.81(4)	180966.77(3)	pc
349	2631	1408.182	71013.56	1408.1756	0.0031	-0.31	0.006	13	23	5d ⁵ 6s	109317.92(5)	180331.80(5)	pc
24	72	1411.089	70867.26	1411.0942	0.0040	0.27	-0.005	7	11	5d ⁵ 6s	107912.05(1)	178779.04(1)	pc
93	79	1411.943	70824.38	1411.9339	0.0050	-0.46	0.009	10	10	5d ⁵ 6s	135507.68(5)	206332.53(5)	pc *
30	43	1412.652	70788.83	1412.6583	0.0050	0.31	-0.006	18	10	5d ⁵ 6s	133748.14(3)	204536.67(3)	pc *
241	3906	1413.748	70733.94	1413.7504	0.0040	0.10	-0.002	8	16	5d ⁵ 6s	88938.86(2)	159672.71(3)	pc
383	1163	1414.496	70696.57	1414.4948	0.0030	-0.05	0.001	16	20	5d ⁵ 6s	122714.67(4)	193411.29(5)	pc
70	307	1414.594	70691.68	1414.5886	0.0030	-0.25	0.005	13	22	5d ⁵ 6s	113075.00(5)	183766.93(4)	pc
28	59	1416.118	70615.58	1416.1194	0.0030	0.07	-0.001	15	24	5d ⁵ 6s	110351.25(3)	180966.77(3)	pc *
134	1885	1416.244	70609.32	1416.2451	0.0030	0.07	-0.001	14	22	5d ⁵ 6s	93989.94(3)	164599.18(3)	pc
51	362	1418.831	70480.56	1418.8333	0.0031	0.12	-0.002	14	26	5d ⁵ 6s	106085.51(4)	176565.95(3)	pc
45	65	1419.171	70463.69	1419.1748	0.0040	0.21	-0.004	16	11	5d ⁵ 6s	125619.13(3)	196082.61(3)	pc *
91	1323	1420.349	70405.23	1420.3491	0.0040	0.00	0.000	8	7	5d ⁵ 6s	94820.48(1)	165225.70(1)	pc
118	979	1421.339	70356.20	1421.3352	0.0051	-0.18	0.004	4	20	5d ⁵ 6s	117739.95(6)	188096.33(7)	pc
492	1947	1421.958	70325.59	1421.9583	0.0041	0.04	-0.001	9	10	5d ⁵ 6s	135507.68(5)	205833.23(6)	pc bl(2d ord)
269	4200	1422.065	70320.25	1422.0615	0.0040	-0.20	0.004	8	18	5d ⁵ 6s	87062.03(3)	157382.47(2)	pc
82	151	1422.968	70275.63	1422.9685	0.0030	0.01	0.000	14	18	5d ⁵ 6s	129515.50(5)	199791.13(5)	pc
133	239	1424.671	70191.66	1424.6679	0.0030	-0.14	0.003	16	14	5d ⁵ 6s	121973.40(4)	192165.20(4)	pc
190	1822	1424.762	70187.15	1424.7627	0.0030	0.02	0.000	14	19	5d ⁵ 6s	106378.82(2)	176565.95(3)	pc
62	921	1425.136	70168.72	1425.1355	0.0030	-0.04	0.001	17	23	5d ⁵ 6s	109317.92(5)	179486.69(4)	pc
29	43	1427.074	70073.46	1427.0755	0.0040	0.09	-0.002	16	10	5d ⁵ 6s	135507.68(5)	205581.06(5)	pc *
34	94	1428.999	69979.06	1428.9975	0.0040	-0.07	0.001	16	14	5d ⁵ 6s	135601.93(4)	205581.06(5)	pc *
94	179	1429.077	69975.26	1429.0836	0.0030	0.34	-0.007	15	20	5d ⁵ 6s	116050.36(3)	186025.28(3)	pc
35	55	1431.259	69868.55	1431.2525	0.0043	-0.33	0.007	13	14	5d ⁵ 6s	120481.03(3)	190349.90(3)	pc *
113	228	1434.624	69704.66	1434.6241	0.0031	-0.01	0.000	12	20	5d ⁵ 6s	116050.36(3)	185755.03(2)	pc
71	534	1435.185	69677.45	1435.1874	0.0031	0.14	-0.003	13	22	5d ⁵ 6s	105305.65(3)	174982.96(4)	pc
51	329	1435.219	69675.78	1435.2242	0.0031	0.26	-0.005	15	24	5d ⁵ 6s	99397.70(4)	169073.23(3)	pc
57	179	1435.549	69659.74	1435.5619	0.0040	0.60	-0.012	14	16	5d ⁵ 6s	119186.22(5)	188845.35(5)	pc *
43	100	1435.578	69658.37	1435.5785	0.0040	0.04	-0.001	13	18	5d ⁵ 6s	129515.50(5)	199173.83(4)	pc *
33	309	1436.659	69605.92	1436.6608	0.0040	0.07	-0.001	11	11	5d ⁵ 6s	107912.05(1)	177517.90(2)	pc Pt III
118	3417	1437.126	69583.34	1437.1351	0.0031	0.46	-0.010	17	26	5d ⁵ 6s	109903.81(4)	179486.69(4)	pc * 1500, m(O II 2d ord)
185	563	1442.470	69325.51	1442.4740	0.0040	0.17	-0.003	9	20	5d ⁵ 6s	117739.95(6)	187065.29(6)	pc
73	63	1443.785	69262.40	1443.7767	0.0031	-0.39	0.008	17	25	5d ⁵ 6s	112744.59(3)	182007.38(4)	pc *
78	327	1446.433	69135.60	1446.4362	0.0030	0.16	-0.003	17	24	5d ⁵ 6s	110351.25(3)	179486.69(4)	pc
83	169	1447.474	69085.86	1447.4801	0.0030	0.28	-0.006	18	14	5d ⁵ 6s	121973.40(4)	191058.98(4)	pc
55	72	1448.232	69049.73	1448.2372	0.0042	0.27	-0.006	16	12	5d ⁵ 6s	123115.74(3)	192165.20(4)	pc *
136	269	1450.370	68947.95	1450.3726	0.0031	0.14	-0.003	17	20	5d ⁵ 6s	116194.78(4)	185142.58(5)	pc
136	822	1451.431	68897.55	1451.4323	0.0031	0.09	-0.002	13	26	5d ⁵ 6s	106085.51(4)	174982.96(4)	pc
61	70	1451.700	68884.76	1451.7024	0.0040	0.12	-0.003	7	12	5d ⁵ 6s	123115.74(3)	192000.38(2)	pc
45	46	1452.494	68847.10	1452.5006	0.0040	0.31	-0.007	15	20	5d ⁵ 6s	122714.67(4)	191561.46(4)	pc *

87	64	1452.683	68838.15	1452.6845	0.0050	0.08	-0.002	12	14	5d ⁵ 6s	135601.93(4)	204440.00(4)	pc *
64	89	1454.294	68761.89	1454.3027	0.0040	0.41	-0.009	20	14	5d ⁵ 6s	126454.90(4)	195216.37(3)	pc *
153	749	1456.459	68659.67	1456.4562	0.0040	-0.13	0.003	16	14	5d ⁵ 6s	126454.90(4)	195114.70(4)	pc Pt III
104	1382	1461.056	68443.62	1461.0568	0.0041	0.01	0.000	8	16	5d ⁵ 6s	88938.86(2)	157382.47(2)	pc
46	131	1462.170	68391.49	1462.1792	0.0040	0.42	-0.009	8	10	5d ⁵ 6s	112490.38(7)	180881.45(6)	pc
34	97	1465.927	68216.21	1465.9288	0.0030	0.08	-0.002	15	29	5d ⁵ 6s	100857.09(3)	169073.23(3)	pc
43	316	1465.981	68213.71	1465.9829	0.0040	0.09	-0.002	10	24	5d ⁵ 6s	99397.70(4)	167611.32(5)	pc *
82	316	1465.981	68213.71	1465.9845	0.0040	0.17	-0.004	9	15	5d ⁵ 6s	111666.90(2)	179880.44(2)	pc
117	150	1466.774	68176.82	1466.7714	0.0031	-0.12	0.003	13	16	5d ⁵ 6s	119186.22(5)	187363.17(5)	pc
356	934	1474.784	67806.54	1474.7858	0.0030	0.09	-0.002	8	22	5d ⁵ 6s	113075.00(5)	180881.45(6)	pc
60	65	1476.074	67747.26	1476.0895	0.0040	0.69	-0.015	15	14	5d ⁵ 6s	121973.40(4)	189719.97(3)	pc *
14	62	1477.346	67688.95	1477.3517	0.0030	0.26	-0.006	12	29	5d ⁵ 6s	100857.09(3)	168545.78(2)	pc *
199	390	1478.581	67632.41	1478.5823	0.0031	0.06	-0.001	11	25	5d ⁵ 6s	103914.20(5)	171546.55(5)	pc
679	2000	1480.348	67551.67	1480.3458	0.0040	-0.11	0.002	5	20	5d ⁵ 6s	117739.95(6)	185291.73(7)	pc
95	280	1482.586	67449.71	1482.5844	0.0031	-0.08	0.002	13	29	5d ⁵ 6s	100857.09(3)	168306.88(3)	pc
19	246	1483.619	67402.75	1483.6217	0.0030	0.12	-0.003	17	20	5d ⁵ 6s	117739.95(6)	185142.58(5)	pc
11	243	1486.829	67257.23	1486.8385	0.0030	0.43	-0.010	13	22	5d ⁵ 6s	113075.00(5)	180331.80(5)	pc *
62	150	1492.165	67016.70	1492.1714	0.0031	0.27	-0.006	15	25	5d ⁵ 6s	103914.20(5)	170930.63(4)	pc
243	271	1494.976	66890.70	1494.9745	0.0040	-0.08	0.002	14	14	5d ⁵ 6s	135601.93(4)	202492.70(5)	pc
27	79	1496.487	66823.18	1496.4942	0.0070	0.33	-0.008	13	7	5d ⁵ 6s	138722.83(3)	205545.67(2)	pc *
180	1177	1498.319	66741.46	1498.3047	0.0031	-0.64	0.014	17	25	5d ⁵ 6s	112744.59(3)	179486.69(4)	pc 2d ord
32	143	1500.101	66662.19	1500.1019	0.0032	0.05	-0.001	14	26	5d ⁵ 6s	109903.81(4)	176565.95(3)	pc
71	249	1502.730	66545.54	1502.7183	0.0050	-0.54	0.012	16	11	5d ⁵ 6s	125619.13(3)	192165.20(4)	pc *
69	313	1515.272	65994.77	1515.2597	0.0030	-0.52	0.012	15	21	5d ⁵ 6s	103077.94(2)	169073.23(3)	pc
21	162	1523.812	65624.89	1523.8101	0.0030	-0.09	0.002	15	22	5d ⁵ 6s	105305.65(3)	170930.63(4)	pc
61	244	1527.472	65467.65	1527.4675	0.0030	-0.19	0.005	12	21	5d ⁵ 6s	103077.94(2)	168545.78(2)	pc
99	215	1528.124	65439.71	1528.1208	0.0040	-0.14	0.003	18	11	5d ⁵ 6s	125619.13(3)	191058.98(4)	pc
23	99	1533.699	65201.84	1533.7074	0.0040	0.35	-0.008	14	24	5d ⁵ 6s	99397.70(4)	164599.18(3)	pc *
83	101	1534.898	65150.89	1534.9009	0.0060	0.11	-0.003	7	10	5d ⁵ 6s	135507.68(5)	200658.47(6)	pc *
93	507	1541.895	64855.28	1541.8964	0.0031	0.07	-0.002	8	29	5d ⁵ 6s	100857.09(3)	165712.29(4)	pc
77	196	1542.135	64845.15	1542.1360	0.0030	0.03	-0.001	15	26	5d ⁵ 6s	106085.51(4)	170930.63(4)	pc
29	243	1546.832	64648.27	1546.8264	0.0040	-0.23	0.005	13	20	5d ⁵ 6s	122714.67(4)	187363.17(5)	pc
124	377	1547.232	64631.55	1547.2281	0.0030	-0.16	0.004	13	24	5d ⁵ 6s	110351.25(3)	174982.96(4)	pc
70	116	1552.925	64394.63	1552.9266	0.0040	0.08	-0.002	16	14	5d ⁵ 6s	129016.74(4)	193411.29(5)	pc
15	207	1554.742	64319.34	1554.7426	0.0040	0.01	0.000	8	29	5d ⁵ 6s	100857.09(3)	165176.42(2)	pc *
79	194	1557.886	64189.56	1557.8945	0.0050	0.36	-0.009	14	14	5d ⁵ 6s	135601.93(4)	199791.13(5)	pc * Pt III
138	343	1559.159	64137.13	1559.1619	0.0030	0.11	-0.003	13	20	5d ⁵ 6s	116194.78(4)	180331.80(5)	pc
334	2913	1564.187	63930.97	1564.1873	0.0040	0.00	0.000	6	25	5d ⁵ 6s	103914.20(5)	167845.16(6)	pc
14	80	1565.055	63895.53	1565.0485	0.0040	-0.26	0.006	16	18	5d ⁵ 6s	129515.50(5)	193411.29(5)	pc *
25	132	1566.868	63821.60	1566.8737	0.0041	0.25	-0.006	14	25	5d ⁵ 6s	112744.59(3)	176565.95(3)	pc *
19	145	1568.812	63742.52	1568.8220	0.0040	0.43	-0.010	14	29	5d ⁵ 6s	100857.09(3)	164599.18(3)	pc * Pt IV

21	87	1569.940	63696.69	1569.9297	0.0040	-0.43	0.011	10	25	5d ⁵ 6s	103914.20(5)	167611.32(5)	pc *
15	61	1576.373	63436.75	1576.3838	0.0040	0.42	-0.010	17	20	5d ⁵ 6s	116050.36(3)	179486.69(4)	pc *
37	195	1579.971	63292.29	1579.9806	0.0030	0.37	-0.009	17	20	5d ⁵ 6s	116194.78(4)	179486.69(4)	pc
34	240	1581.276	63240.05	1581.2745	0.0040	-0.07	0.002	12	22	5d ⁵ 6s	105305.65(3)	168545.78(2)	pc
54	170	1585.152	63085.45	1585.1610	0.0040	0.38	-0.009	10	25	5d ⁵ 6s	112744.59(3)	175829.67(3)	pc
44	183	1597.645	62592.14	1597.6522	0.0031	0.30	-0.008	13	20	5d ⁵ 6s	117739.95(6)	180331.80(5)	pc Pt IV
27	107	1606.724	62238.46	1606.7258	0.0040	0.09	-0.002	13	25	5d ⁵ 6s	112744.59(3)	174982.96(4)	pc *
14	84	1606.978	62228.61	1606.9774	0.0040	-0.02	0.000	11	23	5d ⁵ 6s	109317.92(5)	171546.55(5)	pc *
14	74	1609.078	62147.38	1609.0683	0.0060	-0.38	0.010	8	21	5d ⁵ 6s	103077.94(2)	165225.70(1)	pc *
42	111	1622.249	61642.81	1622.2510	0.0041	0.07	-0.002	11	26	5d ⁵ 6s	109903.81(4)	171546.55(5)	pc
115	1007	1625.332	61525.88	1625.3340	0.0040	0.07	-0.002	10	26	5d ⁵ 6s	106085.51(4)	167611.32(5)	pc
140	2531	1656.596	60364.75	1656.5965	0.0050	0.02	-0.001	4	20	5d ⁵ 6s	83119.55(2)	143484.29(3)	pc
40	1229	1722.239	58063.96	1722.2315	0.0050	-0.24	0.007	4	20	5d ⁵ 6s	83119.55(2)	141183.76(2)	pc

Table 2Experimental and calculated energy levels (cm⁻¹) in the 5d⁶ and 5d⁵6s configurations of Pt V.

E _{obs}	E _{calc}	Δ	N	N _{opt}	rwmv ₁	rwmv ₂	Unc	Composition
J = 0								
-	156818.52	-						79% 2 ⁽² P) ³ P + 17% 2 ⁽² S) ¹ S + 1% 2 ⁽⁴ P) ³ P
-	135186.53	-						62% 2 ⁽² S) ¹ S + 18% 2 ⁽² P) ³ P + 14% 2 ⁽⁴ P) ³ P
-	114950.17	-						74% 2 ⁽⁴ P) ³ P + 12% 2 ⁽² S) ¹ S + 10% 2 ⁽⁴ D) ⁵ D
-	100721.06	-						88% 2 ⁽⁴ D) ⁵ D + 9% 2 ⁽⁴ P) ³ P + 1% 2 ⁽² P) ³ P
-	95355.17	-						80% 1 ¹ S1 + 9% 1 ¹ S2 + 6% 1 ³ P1
-	60549.19	-						43% 1 ³ P1 + 33% 1 ¹ S2 + 16% 1 ³ P2
37754.26	37768.28	-14.02	13	10	0.25	0.29	0.40	72% 1 ³ P2 + 24% 1 ³ P1 + 3% 1 ¹ S1
30098.45	30097.01	1.44	11	10	0.28	0.17	0.30	47% 1 ¹ S2 + 21% 1 ⁵ D + 13% 1 ¹ S1
10817.64	10832.61	-14.97	10	7	0.32	0.25	0.40	72% 1 ⁵ D + 17% 1 ³ P1 + 5% 1 ¹ S2
J = 1								
-	167330.21	-						51% 2 ⁽² D1) ³ D + 31% 2 ⁽² P) ¹ P + 9% 2 ⁽² D3) ³ D
-	159071.33	-						51% 2 ⁽² P) ¹ P + 24% 2 ⁽² P) ³ P + 12% 2 ⁽² D1) ³ D
-	152420.00	-						63% 2 ⁽² P) ³ P + 14% 2 ⁽² P) ¹ P + 12% 2 ⁽² D1) ³ D
-	135549.16	-						71% 2 ⁽² D2) ³ D + 11% 2 ⁽⁴ D) ³ D + 6% 2 ⁽² D1) ³ D
-	128089.67	-						67% 2 ⁽² S) ³ S + 13% 2 ⁽⁴ P) ³ P + 6% 2 ⁽² P) ³ P
-	125110.03	-						37% 2 ⁽² D3) ³ D + 17% 2 ⁽⁴ P) ³ P + 12% 2 ⁽² S) ³ S
-	117719.66	-						34% 2 ⁽⁴ D) ³ D + 24% 2 ⁽² D3) ³ D + 17% 2 ⁽⁴ P) ³ P
-	113106.72	-						30% 2 ⁽⁴ F) ⁵ F + 29% 2 ⁽⁴ D) ³ D + 29% 2 ⁽⁴ P) ³ P
107912.05	107900.35	11.70	11	8	0.12	0.10	0.17	30% 2 ⁽⁴ D) ⁵ D + 25% 2 ⁽⁴ F) ⁵ F + 16% 2 ⁽² D3) ³ D
-	102600.00	-						39% 2 ⁽⁴ P) ⁵ P + 17% 2 ⁽⁴ D) ⁵ D + 12% 2 ⁽⁴ P) ³ P
94820.48	94803.35	17.13	7	5	0.15	0.10	0.20	45% 2 ⁽⁴ D) ⁵ D + 43% 2 ⁽⁴ P) ⁵ P + 4% 2 ⁽⁴ F) ⁵ F
49329.20	49301.32	27.88	13	9	0.27	0.15	0.30	81% 1 ³ P1 + 8% 1 ³ P2 + 7% 1 ⁵ D
41251.20	41253.17	-1.97	21	15	0.22	0.14	0.30	66% 1 ³ P2 + 20% 1 ³ D + 7% 1 ³ P1
31104.34	31108.20	-3.86	29	23	0.17	0.18	0.30	71% 1 ³ D + 18% 1 ³ P2 + 8% 1 ⁵ D
10826.80	10823.08	3.72	25	19	0.21	0.21	0.30	79% 1 ⁵ D + 10% 1 ³ P1 + 6% 1 ³ P2
J = 2								
-	171225.28	-						72% 2 ⁽² D1) ¹ D + 13% 2 ⁽² D3) ¹ D + 5% 2 ⁽² P) ³ P
-	165329.69	-						64% 2 ⁽² D1) ³ D + 11% 2 ⁽² D3) ³ D + 9% 2 ⁽² D2) ¹ D
-	150559.83	-						84% 2 ⁽² P) ³ P + 5% 2 ⁽² D2) ¹ D + 4% 2 ⁽² D1) ³ D
-	145964.09	-						44% 2 ⁽² D2) ¹ D + 11% 2 ⁽⁴ D) ³ D + 10% 2 ⁽² F2) ³ F
-	141714.39	-						32% 2 ⁽² D3) ¹ D + 20% 2 ⁽² F1) ³ F + 16% 2 ⁽² D2) ¹ D
-	136623.74	-						68% 2 ⁽² D2) ³ D + 7% 2 ⁽⁴ D) ⁵ D + 6% 2 ⁽² F2) ³ F
-	129675.22	-						59% 2 ⁽⁴ F) ³ F + 20% 2 ⁽² D3) ³ D + 5% 2 ⁽² D2) ¹ D
-	127136.36	-						27% 2 ⁽⁴ P) ³ P + 21% 2 ⁽² F2) ³ F + 20% 2 ⁽² F1) ³ F
-	122689.51	-						20% 2 ⁽² D3) ¹ D + 20% 2 ⁽⁴ F) ⁵ F + 14% 2 ⁽² D3) ³ D
-	118343.52	-						45% 2 ⁽² F2) ³ F + 10% 2 ⁽² F1) ³ F + 10% 2 ⁽⁴ P) ³ P
-	114018.34	-						36% 2 ⁽⁴ D) ³ D + 16% 2 ⁽⁴ P) ⁵ P + 12% 2 ⁽² D3) ³ D
111666.90	111679.13	-12.23	15	9	0.11	0.07	0.16	56% 2 ⁽⁴ F) ⁵ F + 8% 2 ⁽² D3) ¹ D + 8% 2 ⁽⁴ D) ⁵ D
106378.82	106391.88	-13.06	19	15	0.09	0.09	0.14	25% 2 ⁽⁴ D) ⁵ D + 19% 2 ⁽⁴ P) ⁵ P + 17% 2 ⁽² D3) ³ D
103077.94	103061.04	16.90	21	15	0.09	0.08	0.13	23% 2 ⁽⁴ D) ³ D + 20% 2 ⁽⁴ P) ⁵ P + 13% 2 ⁽⁴ P) ³ P
93598.55	93594.96	3.60	18	15	0.09	0.08	0.13	42% 2 ⁽⁴ D) ⁵ D + 29% 2 ⁽⁴ P) ⁵ P + 9% 2 ⁽⁴ G) ⁵ G
88938.86	88962.41	-23.55	16	15	0.09	0.08	0.14	51% 2 ⁽⁴ G) ⁵ G + 20% 2 ⁽⁶ S) ⁵ S + 18% 2 ⁽² F1) ³ F
83119.55	83119.18	0.37	20	17	0.08	0.07	0.13	52% 2 ⁽⁶ S) ⁵ S + 14% 2 ⁽⁴ P) ³ P + 9% 2 ⁽⁴ P) ⁵ P
73730.00	73718.43	11.57	8	6	0.29	0.08	0.40	78% 1 ¹ D1 + 15% 1 ¹ D2 + 2% 2 ⁽² D2) ¹ D
61476.65	61501.43	-24.78	9	8	0.28	0.15	0.30	46% 1 ³ P1 + 24% 1 ³ P2 + 12% 1 ¹ D2
54076.95	54080.69	-3.74	21	18	0.19	0.19	0.30	82% 1 ³ F1 + 6% 1 ³ D + 6% 1 ³ F2
45490.83	45490.18	0.65	29	24	0.18	0.16	0.24	50% 1 ¹ D2 + 18% 1 ³ F2 + 14% 1 ³ P2

32630.51	32640.31	-9.80	38	31	0.14	0.13	0.20	62% 1 ³ D	+	16% 1 ³ P1	+	8% 1 ³ F1
25632.35	25600.04	32.31	36	30	0.16	0.14	0.21	63% 1 ³ F2	+	16% 1 ³ P2	+	10% 1 ¹ D2
22774.76	22774.79	-0.03	42	36	0.14	0.11	0.18	42% 1 ⁵ D	+	20% 1 ³ P2	+	9% 1 ³ D
6026.34	6027.62	-1.28	42	36	0.15	0.15	0.23	55% 1 ⁵ D	+	16% 1 ³ P2	+	14% 1 ³ P1

J = 3

-	163562.07	-						76% 2 ⁽² D1) ³ D	+	10% 2 ⁽² D3) ³ D	+	6% 2 ⁽² D2) ³ D
-	145935.20	-						57% 2 ⁽² G1) ³ G	+	23% 2 ⁽² F2) ¹ F	+	7% 2 ⁽⁴ F) ³ F
-	142989.65	-						15% 2 ⁽² D3) ³ D	+	15% 2 ⁽² F1) ¹ F	+	15% 2 ⁽² D2) ³ D
138722.83	138729.28	-6.45	7	6	0.14	0.11	0.21	43% 2 ⁽² D2) ³ D	+	18% 2 ⁽² F1) ¹ F	+	13% 2 ⁽² D3) ³ D
133748.14	133754.71	-6.57	10	8	0.12	0.06	0.19	43% 2 ⁽⁴ F) ³ F	+	10% 2 ⁽² G1) ³ G	+	8% 2 ⁽² F1) ³ F
-	129515.10	-						29% 2 ⁽² F1) ¹ F	+	25% 2 ⁽² F1) ³ F	+	11% 2 ⁽² G1) ³ G
125619.13	125646.97	-27.84	11	5	0.14	0.13	0.19	39% 2 ⁽² F2) ¹ F	+	18% 2 ⁽² G2) ³ G	+	9% 2 ⁽⁴ D) ³ D
123115.74	123118.00	-2.26	12	7	0.12	0.10	0.18	49% 2 ⁽² F2) ³ F	+	13% 2 ⁽⁴ F) ⁵ F	+	8% 2 ⁽² D2) ³ D
120481.03	120477.10	3.94	14	9	0.11	0.08	0.17	27% 2 ⁽² G2) ³ G	+	17% 2 ⁽⁴ F) ⁵ F	+	13% 2 ⁽⁴ G) ³ G
116050.36	116031.64	18.72	20	14	0.09	0.07	0.13	18% 2 ⁽² G2) ³ G	+	15% 2 ⁽⁴ G) ³ G	+	9% 2 ⁽⁴ F) ³ F
112744.59	112734.78	9.81	25	14	0.09	0.09	0.14	42% 2 ⁽⁴ D) ³ D	+	19% 2 ⁽² F1) ³ F	+	9% 2 ⁽² G2) ³ G
110351.25	110309.63	41.62	24	18	0.08	0.08	0.12	28% 2 ⁽⁴ F) ⁵ F	+	17% 2 ⁽⁴ D) ³ D	+	11% 2 ⁽² G2) ³ G
105305.65	105304.03	1.62	22	17	0.08	0.07	0.11	35% 2 ⁽⁴ G) ³ G	+	25% 2 ⁽⁴ P) ⁵ P	+	8% 2 ⁽² F1) ¹ F
100857.09	100877.37	-20.28	29	21	0.07	0.07	0.11	33% 2 ⁽⁴ D) ⁵ D	+	18% 2 ⁽⁴ G) ³ G	+	13% 2 ⁽² D3) ³ D
93989.94	93989.41	0.53	22	20	0.08	0.06	0.11	59% 2 ⁽⁴ G) ⁵ G	+	13% 2 ⁽⁴ D) ⁵ D	+	13% 2 ⁽⁴ P) ⁵ P
87062.03	87064.45	-2.42	18	18	0.08	0.06	0.12	22% 2 ⁽⁴ D) ⁵ D	+	20% 2 ⁽⁴ G) ⁵ G	+	13% 2 ⁽⁴ P) ⁵ P
64061.29	64070.39	-9.10	12	10	0.13	0.12	0.17	85% 2 ⁽⁶ S) ⁷ S	+	13% 2 ⁽⁴ P) ⁵ P	+	1% 2 ⁽⁴ D) ⁵ D
61895.15	61902.39	-7.24	17	14	0.21	0.24	0.30	52% 1 ³ F1	+	26% 1 ¹ F	+	9% 1 ³ D
40468.85	40454.37	14.49	48	40	0.13	0.14	0.19	61% 1 ¹ F	+	28% 1 ³ F1	+	5% 1 ³ F2
36613.63	36632.40	-18.77	46	37	0.14	0.13	0.19	52% 1 ³ G	+	33% 1 ³ F2	+	6% 1 ¹ F
34478.40	34470.25	8.15	48	42	0.13	0.11	0.18	69% 1 ³ D	+	18% 1 ³ F2	+	6% 1 ⁵ D
24694.24	24704.21	-9.97	51	42	0.13	0.12	0.19	35% 1 ³ G	+	33% 1 ³ F2	+	13% 1 ³ F1
7612.63	7592.12	20.51	41	38	0.14	0.11	0.18	90% 1 ⁵ D	+	5% 1 ³ F2	+	3% 1 ³ D

J = 4

-	149732.32	-						84% 2 ⁽² G1) ¹ G	+	5% 2 ⁽² F2) ³ F	+	4% 2 ⁽² G2) ³ G
144162.01	144181.12	-19.11	5	4	0.17	0.10	0.30	63% 2 ⁽² G1) ³ G	+	16% 2 ⁽² G2) ¹ G	+	6% 2 ⁽⁴ F) ³ F
135601.93	135600.13	1.80	14	8	0.12	0.09	0.17	43% 2 ⁽⁴ F) ³ F	+	21% 2 ⁽² G1) ³ G	+	16% 2 ⁽² G2) ¹ G
129016.74	129026.55	-9.81	14	10	0.10	0.07	0.14	24% 2 ⁽² F2) ³ F	+	19% 2 ⁽² G2) ¹ G	+	16% 2 ⁽⁴ F) ⁵ F
126454.90	126474.57	-19.67	14	10	0.11	0.11	0.15	41% 2 ⁽² F1) ³ F	+	18% 2 ⁽² G2) ³ G	+	7% 2 ⁽² G2) ¹ G
122714.67	122708.85	5.82	20	12	0.10	0.06	0.14	42% 2 ⁽² H) ³ H	+	21% 2 ⁽⁴ F) ³ F	+	19% 2 ⁽² F2) ³ F
121973.40	121947.18	26.22	14	10	0.11	0.09	0.14	26% 2 ⁽² G2) ³ G	+	19% 2 ⁽² G2) ¹ G	+	16% 2 ⁽² F1) ³ F
116194.78	116219.37	-24.59	20	12	0.09	0.11	0.14	26% 2 ⁽² G2) ³ G	+	19% 2 ⁽² H) ³ H	+	18% 2 ⁽⁴ G) ³ G
109903.81	109877.37	26.44	26	19	0.08	0.05	0.11	25% 2 ⁽⁴ F) ⁵ F	+	24% 2 ⁽⁴ G) ³ G	+	17% 2 ⁽² F2) ³ F
106085.51	106087.53	-2.02	26	22	0.07	0.04	0.00	38% 2 ⁽⁴ G) ³ G	+	15% 2 ⁽² G2) ³ G	+	14% 2 ⁽² F1) ³ F
99397.70	99385.79	11.91	24	18	0.08	0.06	0.12	59% 2 ⁽⁴ D) ⁵ D	+	27% 2 ⁽⁴ G) ⁵ G	+	5% 2 ⁽⁴ F) ⁵ F
92250.06	92252.13	-2.07	18	16	0.09	0.08	0.12	61% 2 ⁽⁴ G) ⁵ G	+	16% 2 ⁽⁴ D) ⁵ D	+	12% 2 ⁽⁴ F) ⁵ F
62478.69	62473.12	5.58	20	14	0.20	0.19	0.30	65% 1 ¹ G1	+	16% 1 ¹ G2	+	10% 1 ³ F2
53919.76	53930.96	-11.20	33	27	0.14	0.12	0.19	72% 1 ³ F1	+	9% 1 ³ G	+	7% 1 ³ F2
44274.55	44270.13	4.42	30	26	0.16	0.14	0.20	63% 1 ¹ G2	+	21% 1 ³ F2	+	12% 1 ³ H
32806.12	32818.76	-12.64	50	39	0.13	0.13	0.18	55% 1 ³ G	+	22% 1 ³ F2	+	17% 1 ¹ G1
30610.18	30600.33	9.85	40	34	0.15	0.14	0.20	55% 1 ³ H	+	19% 1 ³ F2	+	10% 1 ³ F1
16430.43	16447.51	-17.08	40	35	0.15	0.13	0.20	25% 1 ³ H	+	23% 1 ³ G	+	15% 1 ¹ G2
0.00	-0.86	0.86	33	31	0.17	0.14	0.19	78% 1 ⁵ D	+	11% 1 ³ F2	+	7% 1 ³ F1

J = 5

141924.39	141923.00	1.40	5	3	0.20	0.05	0.30	83% 2 ⁽² G1) ³ G	+	10% 2 ⁽² G2) ³ G	+	4% 2 ⁽² H) ¹ H
135507.68	135498.40	9.28	10	6	0.13	0.10	0.19	65% 2 ⁽² H) ¹ H	+	12% 2 ⁽² I) ³ I	+	10% 2 ⁽⁴ G) ³ G
129515.50	129502.95	12.55	18	12	0.10	0.07	0.14	44% 2 ⁽² H) ³ H	+	29% 2 ⁽² G2) ³ G	+	9% 2 ⁽² G1) ³ G
119186.22	119214.03	-27.81	16	14	0.09	0.10	0.13	36% 2 ⁽⁴ F) ⁵ F	+	28% 2 ⁽² H) ³ H	+	18% 2 ⁽² G2) ³ G

113075.00	113086.47	-11.47	22	19	0.08	0.06	0.12	51% 2 (⁴ G) ³ G + 33% 2 (² I) ³ I + 9% 2 (² G2) ³ G
109317.92	109307.20	10.72	23	15	0.09	0.07	0.12	32% 2 (⁴ F) ⁵ F + 28% 2 (² G2) ³ G + 18% 2 (² I) ³ I
103914.20	103913.27	0.93	25	21	0.07	0.05	0.11	35% 2 (⁴ G) ³ G + 31% 2 (² I) ³ I + 15% 2 (² H) ¹ H
94035.18	94037.20	-2.02	19	16	0.09	0.05	0.12	82% 2 (⁴ G) ⁵ G + 8% 2 (⁴ F) ⁵ F + 7% 2 (² H) ³ H
33865.93	33849.08	16.85	40	34	0.14	0.12	0.19	53% 1 ³ H + 47% 1 ³ G
21096.97	21099.50	-2.53	42	35	0.15	0.12	0.19	52% 1 ³ G + 47% 1 ³ H

J = 6

131075.86	131056.78	19.08	11	9	0.12	0.05	0.17	62% 2 (² H) ³ H + 23% 2 (² I) ¹ I + 10% 2 (² I) ³ I
117739.95	117728.17	11.78	20	17	0.08	0.06	0.12	69% 2 (² I) ¹ I + 21% 2 (² I) ³ I + 8% 2 (² H) ³ H
109044.24	109057.43	-13.19	16	12	0.10	0.06	0.14	67% 2 (² I) ³ I + 15% 2 (² H) ³ H + 11% 2 (⁴ G) ⁵ G
93403.66	93410.98	-7.32	14	13	0.10	0.07	0.14	82% 2 (⁴ G) ⁵ G + 15% 2 (² H) ³ H + 2% 2 (² I) ³ I
38723.84	38713.45	10.39	18	14	0.26	0.12	0.30	82% 1 ¹ I + 18% 1 ³ H
21691.03	21706.04	-15.01	28	26	0.18	0.15	0.22	82% 1 ³ H + 18% 1 ¹ I

J = 7

112490.38	112491.19	-0.81	10	7	0.13	0.09	0.18	100% 2 (² I) ³ I
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Table 3Experimental and calculated energy levels (cm⁻¹) in the 5d⁵6p and 5d⁴6s6p configurations of Pt V.

E _{obs}	E _{calc}	Δ	N	N _{opt}	rwmv ₁	rwmv ₂	Unc	Composition
J = 0								
-	264276.63	-						54% 1 (² D1) ³ P + 15% 1 (² P) ³ P + 12% 1 (² D3) ³ P
-	257740.76	-						29% 2 (³ P ² ⁴ P) ⁵ D + 21% 2 (⁵ D ⁴ D) ³ P + 15% 2 (³ P ¹ ⁴ P) ⁵ D
-	246685.12	-						22% 2 (⁵ D ⁶ D) ⁷ F + 22% 2 (⁵ D ⁴ D) ³ P + 9% 2 (³ P ² ² P) ³ P
-	238600.28	-						60% 1 (² P) ¹ S + 14% 1 (² P) ³ P + 11% 1 (² D2) ³ P
-	228173.62	-						56% 1 (² D2) ³ P + 13% 1 (² D1) ³ P + 6% 1 (⁴ F) ⁵ D
-	227213.04	-						58% 2 (⁵ D ⁶ D) ⁷ F + 13% 2 (³ P ¹ ⁴ P) ⁵ D + 9% 2 (³ P ² ⁴ P) ⁵ D
-	226025.20	-						44% 1 (² P) ³ P + 23% 1 (² P) ¹ S + 8% 1 (² D2) ³ P
218676.65	218652.35	24.30	1	1	0.94	0.94	1.00	51% 1 (² D3) ³ P + 17% 1 (⁴ F) ⁵ D + 12% 1 (⁴ P) ³ P
-	207502.20	-						60% 1 (⁴ F) ⁵ D + 24% 1 (⁴ P) ³ P + 5% 1 (² D1) ³ P
202058.74	202036.48	22.26	1	1	0.88	0.88	0.90	42% 1 (⁴ D) ³ P + 18% 1 (⁴ D) ⁵ D + 14% 1 (² S) ³ P
-	197367.22	-						26% 1 (² S) ³ P + 23% 1 (² D3) ³ P + 17% 1 (⁴ P) ³ P
-	193280.38	-						24% 1 (² S) ³ P + 23% 1 (⁴ D) ³ P + 19% 1 (⁴ P) ⁵ D
183396.51	183348.20	48.31	1	1	0.89	0.89	0.90	41% 1 (⁴ D) ⁵ D + 19% 1 (⁴ P) ³ P + 19% 1 (⁴ D) ³ P
-	168406.88	-						56% 1 (⁴ P) ⁵ D + 21% 1 (⁴ D) ⁵ D + 10% 1 (² S) ³ P
J = 1								
-	266387.91	-						37% 1 (² D1) ¹ P + 21% 1 (² P) ¹ P + 14% 1 (² D1) ³ D
-	264342.76	-						19% 2 (⁵ D ⁶ D) ⁷ D + 12% 2 (⁵ D ⁶ D) ⁵ P + 11% 2 (⁵ D ⁴ D) ⁵ D
-	259696.00	-						35% 1 (² D1) ³ P + 10% 1 (² D1) ¹ P + 8% 1 (² P) ³ P
-	259329.01	-						17% 1 (² D1) ³ P + 14% 2 (³ P ² ⁴ P) ⁵ D + 12% 2 (⁵ D ⁶ D) ⁷ F
-	256134.82	-						27% 2 (⁵ D ⁴ D) ³ P + 16% 2 (⁵ D ⁶ D) ⁷ D + 13% 2 (⁵ D ⁴ D) ⁵ D
-	250314.68	-						34% 2 (⁵ D ⁴ D) ⁵ F + 11% 2 (⁵ D ⁶ D) ⁵ F + 9% 2 (³ P ¹ ² P) ³ D
-	250219.89	-						41% 1 (² P) ³ S + 24% 1 (² P) ³ P + 7% 1 (² D1) ³ D
-	246402.73	-						40% 1 (² P) ¹ P + 20% 1 (² D1) ³ D + 11% 1 (² P) ³ S
-	244181.78	-						21% 1 (² D1) ³ D + 17% 1 (² D2) ¹ P + 16% 1 (² D1) ¹ P
-	238169.89	-						20% 1 (² D2) ¹ P + 17% 1 (² F2) ³ D + 13% 1 (² D1) ³ P
-	235626.45	-						42% 2 (⁵ D ⁶ D) ⁷ D + 19% 2 (⁵ D ⁶ D) ⁵ P + 9% 2 (³ P ¹ ⁴ P) ⁵ P
-	234167.80	-						22% 1 (² D3) ¹ P + 19% 1 (² F1) ³ D + 10% 1 (² P) ³ D
-	230508.03	-						67% 2 (⁵ D ⁶ D) ⁷ F + 11% 2 (³ P ¹ ⁴ P) ⁵ D + 7% 2 (³ P ² ⁴ P) ⁵ D
-	229853.77	-						30% 1 (² P) ³ D + 18% 1 (² D2) ³ P + 13% 1 (² S) ¹ P
228604.89	228599.30	5.59	1	1	1.01	1.01	1.00	35% 1 (² D2) ³ D + 16% 1 (² D2) ³ P + 11% 1 (² D2) ¹ P
223963.44	223917.49	45.95	6	6	0.42	0.50	0.60	18% 1 (² S) ¹ P + 13% 1 (² P) ³ S + 12% 1 (² P) ³ D
-	221012.77	-						18% 1 (² S) ¹ P + 17% 1 (² P) ³ P + 7% 1 (⁴ F) ³ D
217657.35	217639.06	18.29	9	9	0.31	0.16	0.30	16% 1 (² D3) ³ P + 16% 1 (² P) ³ P + 11% 1 (⁴ P) ³ S
217171.25	217181.05	-9.80	5	4	0.48	0.23	0.50	22% 1 (² F2) ³ D + 15% 1 (⁴ F) ⁵ D + 9% 1 (² S) ³ P
215933.35	215940.62	-7.27	3	3	0.56	0.26	0.60	24% 1 (² F1) ³ D + 15% 1 (² F2) ³ D + 10% 1 (⁴ F) ⁵ F
212478.78	212475.02	3.76	6	5	0.38	0.30	0.50	30% 1 (⁴ F) ³ D + 16% 1 (² F2) ³ D + 11% 1 (⁴ P) ³ P
208919.64	208882.83	36.82	7	7	0.36	0.31	0.50	29% 1 (² D2) ³ D + 29% 1 (⁴ F) ⁵ D + 8% 1 (² D2) ¹ P
207377.62	207401.19	-23.57	5	4	0.46	0.44	0.60	21% 1 (⁴ D) ³ D + 20% 1 (⁴ P) ³ D + 15% 1 (⁴ F) ⁵ D
205472.23	205482.02	-9.79	1	1	0.90	0.90	0.90	11% 1 (⁴ F) ⁵ F + 10% 1 (² S) ³ P + 8% 1 (² D2) ³ P
203935.93	203934.81	1.12	6	5	0.29	0.27	0.40	14% 1 (⁴ P) ³ P + 9% 1 (⁴ D) ⁵ P + 9% 1 (⁴ P) ³ S
201282.81	201302.53	-19.72	6	5	0.39	0.42	0.50	24% 1 (² S) ³ P + 14% 1 (² S) ¹ P + 9% 1 (⁴ D) ³ D
200139.14	200150.17	-11.03	4	3	0.52	0.14	0.50	31% 1 (⁴ D) ⁵ D + 16% 1 (⁴ D) ³ P + 11% 1 (² D3) ¹ P
197732.88	197762.04	-29.16	9	5	0.26	0.40	0.40	25% 1 (² D3) ³ P + 14% 1 (⁴ G) ⁵ F + 10% 1 (⁴ P) ³ P
195162.83	195158.19	4.64	9	5	0.37	0.39	0.50	39% 1 (⁴ P) ³ D + 12% 1 (⁴ D) ⁵ P + 8% 1 (⁴ F) ³ D
193871.68	193845.23	26.45	7	5	0.23	0.24	0.30	20% 1 (⁴ D) ³ P + 14% 1 (⁴ G) ⁵ F + 11% 1 (² S) ³ P
191223.64	191231.12	-7.48	7	7	0.22	0.26	0.30	33% 1 (⁴ D) ⁵ P + 13% 1 (⁴ P) ⁵ P + 10% 1 (⁴ P) ³ P
185717.82	185737.62	-19.80	7	7	0.22	0.20	0.30	22% 1 (⁴ G) ⁵ F + 11% 1 (² F1) ³ D + 10% 1 (⁴ D) ⁵ D
184216.83	184201.48	15.35	8	5	0.19	0.41	0.30	18% 1 (⁴ G) ⁵ F + 16% 1 (⁴ P) ⁵ P + 14% 1 (² F1) ³ D
183746.65	183720.13	26.52	9	5	0.21	0.15	0.20	18% 1 (⁴ F) ⁵ F + 14% 1 (⁴ D) ³ D + 12% 1 (⁴ F) ³ D

178779.04	178783.82	-4.78	7	7	0.18	0.18	0.24	42% 1	(⁴ D)	⁵ F	+ 27% 1	(⁴ P)	⁵ D	+ 10% 1	(⁴ F)	⁵ F
174460.24	174422.53	37.71	7	6	0.23	0.30	0.30	16% 1	(⁶ S)	⁵ P	+ 13% 1	(⁴ D)	⁵ F	+ 12% 1	(⁴ D)	³ P
168408.21	168420.09	-11.88	6	5	0.22	0.28	0.30	47% 1	(⁶ S)	⁵ P	+ 14% 1	(⁴ P)	³ P	+ 9% 1	(⁴ D)	⁵ F
165225.70	165193.23	32.47	8	6	0.17	0.15	0.21	26% 1	(⁴ P)	⁵ D	+ 18% 1	(⁴ D)	⁵ D	+ 14% 1	(⁴ D)	⁵ F

J = 2

-	259813.14	-						36% 1	(² D1)	¹ D	+ 18% 1	(² D1)	³ P	+ 6% 1	(² P)	¹ D
-	258131.17	-						46% 1	(² D1)	³ D	+ 12% 1	(² D1)	³ F	+ 9% 1	(² D3)	³ D
-	255100.01	-						26% 2	(⁵ D ⁴ D)	⁵ F	+ 9% 2	(⁵ D ⁶ D)	⁵ F	+ 9% 2	(³ F ² ⁴ F)	⁵ G
-	251925.45	-						54% 2	(⁵ D ⁶ D)	⁷ P	+ 11% 2	(⁵ D ⁶ D)	⁷ D	+ 5% 2	(³ P ¹ ⁴ P)	⁵ P
-	250201.39	-						50% 1	(² P)	¹ D	+ 10% 1	(² D1)	³ P	+ 8% 1	(² P)	³ D
-	247564.17	-						36% 1	(² P)	³ P	+ 16% 1	(² P)	³ D	+ 14% 1	(² D1)	¹ D
-	245682.12	-						27% 1	(² G1)	³ F	+ 17% 1	(² P)	³ D	+ 9% 1	(² D1)	³ F
-	242365.49	-						48% 2	(⁵ D ⁶ D)	⁷ D	+ 17% 2	(⁵ D ⁶ D)	⁵ P	+ 16% 2	(⁵ D ⁶ D)	⁷ P
-	237394.49	-						19% 1	(² G1)	³ F	+ 13% 1	(² D2)	¹ D	+ 8% 1	(² D1)	³ P
235726.34	235766.91	-40.57	7	6	0.40	0.30	0.50	17% 1	(² D2)	¹ D	+ 16% 1	(² D1)	³ F	+ 11% 1	(² D2)	³ F
-	235453.62	-						79% 2	(⁵ D ⁶ D)	⁷ F	+ 6% 2	(³ P ¹ ⁴ P)	⁵ D	+ 3% 2	(⁵ D ⁶ D)	⁵ D
233830.67	233827.37	3.30	5	5	0.41	0.15	0.40	27% 1	(² D1)	³ P	+ 19% 1	(² P)	³ P	+ 11% 1	(² D1)	³ D
-	232888.38	-						24% 1	(² D2)	³ P	+ 19% 1	(² D2)	³ D	+ 6% 1	(² D3)	¹ D
228832.73	228829.54	3.19	5	5	0.42	0.27	0.50	15% 1	(² D2)	¹ D	+ 14% 1	(² D1)	³ F	+ 8% 1	(² D2)	³ D
225383.25	225438.92	-55.67	6	5	0.27	0.34	0.30	13% 1	(⁴ F)	³ D	+ 13% 1	(² P)	³ P	+ 9% 1	(² F2)	¹ D
223470.25	223512.42	-42.17	1	1	0.95	0.95	1.00	34% 1	(² S)	³ P	+ 13% 1	(² P)	³ D	+ 8% 1	(² F2)	³ D
221390.74	221375.62	15.12	6	6	0.23	0.15	0.30	21% 1	(⁴ F)	³ F	+ 8% 1	(² P)	¹ D	+ 8% 1	(² F2)	¹ D
-	220024.97	-						14% 1	(² F1)	³ D	+ 13% 1	(² G2)	³ F	+ 12% 1	(⁴ F)	³ F
219119.79	219146.85	-27.06	7	6	0.38	0.45	0.60	17% 1	(² S)	³ P	+ 11% 1	(² F1)	¹ D	+ 7% 1	(⁴ F)	³ F
216903.30	216910.23	-6.93	10	7	0.27	0.26	0.30	12% 1	(² G2)	³ F	+ 12% 1	(² D2)	³ D	+ 10% 1	(² D3)	¹ D
215953.64	215914.05	39.60	7	7	0.37	0.16	0.40	15% 1	(⁴ F)	⁵ D	+ 11% 1	(² D3)	³ D	+ 10% 1	(⁴ F)	⁵ F
215038.55	215011.25	27.30	9	8	0.25	0.27	0.30	28% 1	(² F2)	³ D	+ 16% 1	(² G2)	³ F	+ 9% 1	(² P)	³ D
213716.14	213737.94	-21.80	9	8	0.23	0.26	0.30	15% 1	(² F1)	¹ D	+ 14% 1	(² D3)	³ P	+ 9% 1	(² D3)	³ D
211675.95	211655.74	20.21	11	11	0.22	0.25	0.30	17% 1	(² F2)	³ F	+ 16% 1	(² D2)	³ P	+ 14% 1	(² D2)	³ D
209892.63	209870.43	22.21	13	8	0.24	0.24	0.30	9% 1	(⁴ D)	³ P	+ 8% 1	(² F2)	¹ D	+ 8% 1	(⁴ P)	³ D
208760.03	208760.06	-0.03	10	10	0.24	0.25	0.30	17% 1	(² D2)	³ F	+ 11% 1	(⁴ F)	³ D	+ 9% 1	(⁴ D)	³ F
207261.88	207269.27	-7.39	12	8	0.25	0.34	0.40	23% 1	(⁴ D)	³ F	+ 11% 1	(⁴ D)	³ D	+ 9% 1	(⁴ F)	³ D
205545.67	205539.98	5.69	13	8	0.21	0.21	0.30	23% 1	(² D3)	³ D	+ 12% 1	(⁴ F)	⁵ F	+ 10% 1	(² D1)	³ D
204201.48	204225.95	-24.47	3	3	0.26	0.16	0.30	14% 1	(⁴ D)	⁵ P	+ 13% 1	(⁴ P)	³ D	+ 10% 1	(⁴ P)	⁵ S
200848.59	200834.79	13.80	12	7	0.17	0.17	0.30	35% 1	(⁴ D)	³ P	+ 8% 1	(² F2)	³ F	+ 8% 1	(⁴ P)	⁵ S
200071.24	200040.95	30.30	13	10	0.19	0.16	0.24	11% 1	(⁴ P)	³ P	+ 10% 1	(⁴ F)	⁵ D	+ 9% 1	(² F2)	³ D
199800.17	199825.12	-24.95	9	7	0.21	0.13	0.30	10% 1	(⁴ D)	⁵ F	+ 9% 1	(⁴ P)	³ D	+ 9% 1	(⁴ P)	⁵ P
196118.80	196166.30	-47.50	7	6	0.27	0.26	0.30	28% 1	(² D3)	³ F	+ 10% 1	(⁴ G)	³ F	+ 9% 1	(⁴ F)	⁵ G
195451.45	195493.57	-42.12	12	7	0.34	0.25	0.40	15% 1	(⁴ F)	⁵ G	+ 14% 1	(⁴ G)	³ F	+ 10% 1	(⁴ P)	³ D
194800.44	194821.63	-21.19	11	9	0.17	0.13	0.20	10% 1	(⁴ D)	⁵ P	+ 9% 1	(⁴ D)	³ D	+ 8% 1	(² F1)	³ F
192556.93	192577.33	-20.40	17	15	0.15	0.16	0.20	13% 1	(⁴ F)	⁵ F	+ 13% 1	(⁴ F)	⁵ D	+ 10% 1	(⁴ G)	³ F
192000.38	191995.14	5.24	7	6	0.18	0.10	0.22	17% 1	(⁴ P)	⁵ P	+ 10% 1	(⁴ P)	⁵ D	+ 8% 1	(² F2)	³ F
190869.34	190874.98	-5.64	13	10	0.14	0.17	0.20	22% 1	(⁴ G)	⁵ F	+ 12% 1	(⁴ P)	⁵ S	+ 7% 1	(² F1)	³ D
188307.59	188283.22	24.37	11	10	0.19	0.23	0.30	23% 1	(⁴ D)	⁵ P	+ 14% 1	(⁴ P)	³ D	+ 11% 1	(⁴ P)	⁵ P
185755.03	185722.83	32.20	12	9	0.13	0.10	0.16	20% 1	(⁴ G)	⁵ G	+ 12% 1	(⁴ D)	⁵ D	+ 8% 1	(² D3)	³ F
183491.87	183508.35	-16.48	11	11	0.14	0.10	0.16	19% 1	(⁴ G)	⁵ F	+ 8% 1	(⁶ S)	⁵ P	+ 8% 1	(⁴ F)	⁵ G
181467.37	181477.90	-10.53	9	9	0.17	0.13	0.21	19% 1	(⁴ P)	⁵ D	+ 19% 1	(⁴ F)	⁵ G	+ 8% 1	(⁴ G)	³ F
179880.44	179929.86	-49.42	9	8	0.14	0.12	0.19	16% 1	(⁴ D)	⁵ F	+ 12% 1	(² D3)	³ F	+ 8% 1	(² D1)	³ F
177517.90	177563.50	-45.60	11	10	0.13	0.10	0.16	8% 1	(² D3)	³ P	+ 8% 1	(⁴ F)	⁵ F	+ 7% 1	(⁴ P)	⁵ D
168545.78	168542.43	3.35	12	10	0.12	0.11	0.15	23% 1	(⁴ G)	⁵ G	+ 11% 1	(⁴ P)	⁵ S	+ 9% 1	(⁴ G)	³ F
167277.52	167282.95	-5.43	9	9	0.14	0.12	0.18	42% 1	(⁶ S)	⁵ P	+ 16% 1	(⁴ P)	³ P	+ 10% 1	(⁴ D)	⁵ F
165176.42	165207.80	-31.38	8	7	0.16	0.15	0.20	23% 1	(⁴ D)	⁵ F	+ 18% 1	(⁴ P)	⁵ D	+ 11% 1	(⁶ S)	⁵ P
157382.47	157396.55	-14.08	8	4	0.16	0.17	0.20	13% 1	(⁴ G)	⁵ G	+ 12% 1	(² F1)	³ F	+ 10% 1	(⁴ G)	³ F
141183.76	141150.69	33.08	4	4	0.16	0.23	0.30	68% 1	(⁶ S)	⁷ P	+ 10% 1	(⁶ S)	⁵ P	+ 8% 1	(⁴ P)	⁵ P

J = 3

-	262262.95	-							41% 1 (² D1) ¹ F + 21% 1 (² D1) ³ F + 11% 1 (² P) ³ D
-	261034.28	-							43% 1 (² D1) ³ D + 7% 1 (² D3) ³ D + 6% 1 (² D1) ¹ F
-	260862.10	-							15% 2 (³ H ⁴ H) ⁵ H + 10% 1 (² D1) ³ D + 8% 2 (² D ⁶ D) ⁷ D
-	257337.08	-							37% 2 (⁵ D ⁶ D) ⁷ D + 25% 2 (⁵ D ⁶ D) ⁷ P + 5% 2 (³ H ⁴ H) ⁵ H
-	255231.52	-							24% 2 (³ G ⁴ G) ⁵ H + 13% 2 (³ H ⁴ H) ⁵ H + 7% 2 (³ G ⁴ G) ⁵ G
-	246388.03	-							43% 2 (⁵ D ⁶ D) ⁷ P + 26% 2 (⁵ D ⁶ D) ⁷ D + 8% 2 (⁵ D ⁶ D) ⁵ P
-	244373.12	-							35% 1 (² P) ³ D + 19% 1 (² G1) ¹ F + 6% 1 (² D1) ¹ F
-	243675.97	-							30% 1 (² P) ³ D + 25% 1 (² D1) ³ F + 16% 1 (² G1) ³ F
-	241226.32	-							19% 1 (² G1) ³ G + 13% 1 (² G1) ³ F + 10% 1 (² G1) ¹ F
-	240100.14	-							73% 2 (⁵ D ⁶ D) ⁷ F + 7% 2 (⁵ D ⁶ D) ⁷ D + 4% 2 (⁵ D ⁶ D) ⁵ F
235194.91	235210.21	-15.30	1	1	0.89	0.89	0.90		24% 1 (² G1) ¹ F + 16% 1 (² G1) ³ F + 10% 1 (² D2) ¹ F
-	233904.33	-							16% 1 (² D2) ¹ F + 11% 1 (² G1) ³ G + 9% 1 (² D1) ³ D
231117.06	231136.44	-19.38	8	8	0.21	0.16	0.30		14% 1 (² G2) ¹ F + 12% 1 (² D2) ³ D + 10% 1 (² D2) ¹ F
229176.75	229186.63	-9.88	6	5	0.28	0.34	0.40		19% 1 (² D2) ³ D + 15% 1 (⁴ F) ³ D + 13% 1 (² G2) ¹ F
228401.66	228414.69	-13.03	5	4	0.45	0.47	0.60		28% 1 (² D2) ³ F + 11% 1 (² G2) ³ F + 8% 1 (² D2) ¹ F
225063.38	225028.21	35.17	10	8	0.24	0.32	0.30		15% 1 (² F1) ¹ F + 10% 1 (⁴ F) ³ F + 9% 1 (² F1) ³ D
222697.77	222701.97	-4.20	12	8	0.20	0.17	0.24		25% 1 (² G1) ³ G + 9% 1 (⁴ F) ³ F + 9% 1 (² F2) ³ D
221226.99	221234.80	-7.81	2	2	0.54	0.28	0.60		20% 1 (² F2) ¹ F + 14% 1 (² G1) ³ F + 13% 1 (² G1) ¹ F
219285.02	219319.59	-34.57	3	3	0.55	0.42	0.60		23% 1 (⁴ F) ³ G + 10% 1 (² D3) ³ D + 10% 1 (² D3) ³ F
217790.49	217771.75	18.74	12	11	0.19	0.20	0.30		14% 1 (² F2) ¹ F + 14% 1 (² F2) ³ F + 10% 1 (⁴ D) ³ F
217099.38	217081.61	17.77	7	7	0.26	0.32	0.30		27% 1 (² H) ³ G + 13% 1 (⁴ F) ³ D + 9% 1 (² G1) ³ G
215782.05	215785.55	-3.50	8	8	0.19	0.24	0.30		12% 1 (² G2) ³ G + 11% 1 (⁴ F) ³ D + 10% 1 (² H) ³ G
214185.23	214172.79	12.44	11	8	0.32	0.31	0.40		14% 1 (² D3) ³ F + 12% 1 (² D2) ³ D + 10% 1 (² G2) ³ G
213052.38	213074.04	-21.66	3	3	0.30	0.35	0.30		10% 1 (⁴ F) ⁵ D + 10% 1 (² F1) ³ G + 10% 1 (² F1) ³ F
211857.30	211843.09	14.21	8	5	0.26	0.17	0.30		11% 1 (² D3) ³ F + 10% 1 (² D2) ³ F + 10% 1 (² F1) ³ G
209418.01	209396.55	21.46	14	11	0.18	0.13	0.21		22% 1 (² G2) ³ F + 17% 1 (⁴ F) ³ D + 10% 1 (² H) ³ G
208990.74	208882.15	108.59	13	9	0.18	0.15	0.24		26% 1 (⁴ F) ³ F + 8% 1 (² F2) ¹ F + 7% 1 (² G2) ³ G
207263.31	207260.62	2.69	11	8	0.20	0.21	0.24		12% 1 (⁴ F) ³ G + 9% 1 (² F1) ³ D + 6% 1 (² D2) ³ D
206347.83	206332.32	15.51	9	8	0.26	0.23	0.30		11% 1 (² D3) ³ D + 10% 1 (⁴ F) ³ G + 8% 1 (⁴ P) ⁵ P
204536.67	204555.05	-18.38	18	12	0.16	0.11	0.19		12% 1 (² F2) ³ F + 12% 1 (⁴ P) ⁵ D + 10% 1 (⁴ P) ³ D
202898.36	202899.61	-1.25	16	9	0.20	0.22	0.30		21% 1 (⁴ F) ⁵ F + 9% 1 (⁴ D) ⁵ P + 8% 1 (² F1) ³ D
201428.01	201458.08	-30.07	19	16	0.13	0.12	0.17		18% 1 (⁴ D) ³ D + 14% 1 (² F1) ³ D + 10% 1 (⁴ G) ³ G
199096.78	199054.00	42.78	14	8	0.24	0.24	0.30		8% 1 (² F2) ³ D + 7% 1 (² D3) ³ F + 6% 1 (⁴ D) ⁵ D
197876.51	197845.65	30.86	13	11	0.15	0.15	0.23		13% 1 (⁴ D) ⁵ D + 9% 1 (⁴ F) ⁵ G + 9% 1 (⁴ G) ³ G
196533.80	196514.04	19.76	10	8	0.22	0.15	0.24		14% 1 (⁴ G) ⁵ F + 12% 1 (⁴ D) ⁵ P + 11% 1 (⁴ D) ³ D
196082.61	196104.08	-21.47	16	13	0.13	0.13	0.18		29% 1 (² G2) ³ G + 15% 1 (² F2) ³ D + 12% 1 (² G2) ¹ F
195216.37	195206.90	9.47	20	13	0.13	0.11	0.17		15% 1 (⁴ P) ⁵ D + 10% 1 (² F2) ³ G + 8% 1 (² G2) ³ F
191236.88	191229.84	7.04	15	12	0.14	0.15	0.21		26% 1 (⁴ G) ⁵ F + 16% 1 (⁴ G) ³ G + 11% 1 (² F1) ¹ F
190349.90	190359.08	-9.18	13	9	0.15	0.08	0.18		19% 1 (⁴ D) ³ F + 12% 1 (⁴ F) ⁵ G + 11% 1 (⁴ P) ⁵ D
189719.97	189691.15	28.82	15	10	0.15	0.16	0.21		10% 1 (⁴ D) ⁵ F + 9% 1 (⁴ G) ³ F + 8% 1 (⁴ P) ⁵ P
188212.93	188257.88	-44.95	10	10	0.18	0.17	0.22		12% 1 (⁴ P) ⁵ D + 11% 1 (⁴ P) ⁵ P + 11% 1 (² F2) ³ G
186025.28	186003.50	21.78	15	15	0.12	0.13	0.17		15% 1 (⁴ F) ⁵ G + 10% 1 (⁴ G) ³ F + 9% 1 (² F2) ³ G
182888.36	182830.11	58.25	18	15	0.11	0.07	0.14		18% 1 (⁴ D) ⁵ D + 8% 1 (⁴ F) ⁵ D + 7% 1 (² F2) ³ D
180966.77	181004.65	-37.88	15	11	0.13	0.11	0.17		14% 1 (⁴ G) ⁵ F + 10% 1 (⁴ F) ⁵ F + 8% 1 (⁴ D) ⁵ P
176565.95	176561.36	4.59	14	11	0.12	0.09	0.14		11% 1 (⁴ G) ⁵ H + 8% 1 (² D3) ³ F + 8% 1 (² D3) ³ D
175829.67	175892.26	-62.59	10	9	0.14	0.16	0.22		30% 1 (⁴ D) ⁵ P + 14% 1 (⁴ G) ⁵ G + 13% 1 (⁴ D) ³ D
169073.23	169081.61	-8.38	15	13	0.10	0.10	0.14		24% 1 (⁶ S) ⁵ P + 17% 1 (⁴ G) ⁵ H + 16% 1 (⁴ D) ⁵ F
168306.88	168291.79	15.09	13	11	0.13	0.13	0.16		18% 1 (⁶ S) ⁵ P + 13% 1 (⁶ S) ⁷ P + 12% 1 (⁴ G) ⁵ H
164599.18	164614.54	-15.36	14	10	0.14	0.12	0.17		18% 1 (⁴ G) ⁵ G + 15% 1 (⁶ S) ⁷ P + 10% 1 (⁴ G) ³ F
159672.71	159665.71	7.00	8	6	0.16	0.15	0.19		20% 1 (⁴ G) ⁵ H + 14% 1 (² F1) ³ G + 12% 1 (⁶ S) ⁷ P
143484.29	143473.78	10.51	4	4	0.17	0.15	0.21		47% 1 (⁶ S) ⁷ P + 25% 1 (⁶ S) ⁵ P + 7% 1 (⁴ P) ⁵ D

J = 4

-	256484.85	-							71% 1 (² D1) ³ F + 11% 1 (² D3) ³ F + 5% 1 (² G1) ³ F
-	254186.04	-							31% 2 (³ H ⁴ H) ⁵ I + 14% 2 (³ G ⁴ G) ⁵ H + 9% 2 (³ H ⁴ H) ⁵ H

-	248388.46	-							54% 2 (⁵ D ⁶ D)	⁷ P	+ 10% 2 (⁵ D ⁶ D)	⁷ F	+ 8% 2 (³ F ² ⁴ F)	⁵ D
-	244323.81	-							51% 2 (⁵ D ⁶ D)	⁷ F	+ 13% 2 (⁵ D ⁶ D)	⁷ D	+ 7% 2 (⁵ D ⁶ D)	⁵ F
238932.39	238941.90	-9.51	1	1	0.93	0.93	1.00		54% 1 (² G1)	¹ G	+ 8% 1 (² G1)	³ H	+ 4% 1 (² G1)	³ F
236618.95	236564.60	54.35	5	4	0.30	0.30	0.40		52% 1 (² G1)	³ G	+ 13% 1 (² G1)	³ F	+ 9% 1 (² G1)	³ H
-	234276.31	-							38% 1 (² D2)	³ F	+ 9% 1 (² F2)	¹ G	+ 8% 1 (² G1)	¹ G
231570.84	231529.37	41.47	5	5	0.23	0.29	0.30		17% 1 (² H)	¹ G	+ 12% 1 (² D3)	³ F	+ 11% 1 (² H)	³ G
230283.80	230324.43	-40.63	10	9	0.19	0.20	0.22		13% 1 (² D2)	³ F	+ 11% 1 (² H)	³ G	+ 11% 1 (² D3)	³ F
226381.28	226380.17	1.12	5	4	0.20	0.12	0.23		11% 1 (⁴ F)	³ G	+ 10% 1 (⁴ F)	³ F	+ 10% 1 (² F2)	³ F
222371.61	222389.45	-17.84	8	8	0.16	0.20	0.24		11% 1 (⁴ F)	⁵ D	+ 10% 1 (⁴ F)	⁵ F	+ 9% 1 (² H)	¹ G
220738.20	220735.42	2.78	3	3	0.32	0.08	0.30		17% 1 (² F1)	³ F	+ 14% 1 (² G1)	³ H	+ 10% 1 (² G2)	³ H
218709.64	218713.32	-3.68	13	12	0.14	0.13	0.19		17% 1 (² H)	³ G	+ 12% 1 (⁴ F)	³ F	+ 8% 1 (² H)	³ H
216758.36	216819.17	-60.81	12	8	0.21	0.20	0.30		25% 1 (² G1)	³ F	+ 8% 1 (² F2)	¹ G	+ 8% 1 (² G1)	³ G
215324.16	215343.86	-19.70	11	8	0.21	0.22	0.30		20% 1 (² G1)	³ H	+ 14% 1 (² H)	³ H	+ 10% 1 (² F1)	³ F
213879.98	213847.78	32.20	13	6	0.20	0.21	0.30		22% 1 (² F2)	³ G	+ 17% 1 (⁴ F)	³ F	+ 6% 1 (² H)	³ G
213045.29	213060.36	-15.07	6	5	0.28	0.41	0.50		13% 1 (² G1)	³ H	+ 12% 1 (⁴ F)	³ G	+ 10% 1 (² F1)	¹ G
211529.26	211535.34	-6.08	14	8	0.17	0.23	0.21		11% 1 (² G1)	³ F	+ 10% 1 (² F1)	³ G	+ 9% 1 (⁴ P)	⁵ D
210017.82	210018.20	-0.38	16	11	0.14	0.10	0.17		9% 1 (⁴ F)	³ G	+ 8% 1 (⁴ F)	³ F	+ 7% 1 (⁴ G)	³ G
207360.87	207389.41	-28.54	13	9	0.17	0.14	0.22		20% 1 (² G2)	³ F	+ 13% 1 (² H)	³ H	+ 8% 1 (² F2)	¹ G
206105.98	206131.99	-26.01	15	12	0.16	0.19	0.21		39% 1 (² I)	³ H	+ 12% 1 (⁴ G)	³ F	+ 7% 1 (² H)	³ G
205180.52	205166.19	14.34	13	12	0.14	0.16	0.20		24% 1 (² F2)	³ F	+ 8% 1 (⁴ F)	⁵ G	+ 8% 1 (² G2)	¹ G
204440.00	204416.49	23.51	12	10	0.18	0.16	0.21		23% 1 (² G2)	³ G	+ 8% 1 (² H)	¹ G	+ 7% 1 (² G2)	¹ G
201378.51	201391.44	-12.93	13	9	0.16	0.13	0.19		17% 1 (⁴ F)	⁵ G	+ 12% 1 (² F1)	³ G	+ 10% 1 (⁴ F3)	⁵ F
199173.83	199203.64	-29.81	13	8	0.17	0.20	0.23		14% 1 (⁴ D)	³ F	+ 11% 1 (⁴ D)	⁵ F	+ 8% 1 (² I)	³ H
198090.74	198068.93	21.81	15	13	0.14	0.11	0.19		19% 1 (⁴ G)	³ G	+ 11% 1 (⁴ F)	³ F	+ 11% 1 (² H)	¹ G
196538.04	196524.55	13.49	11	11	0.13	0.11	0.17		17% 1 (⁴ D)	⁵ D	+ 14% 1 (⁴ G)	⁵ F	+ 11% 1 (⁴ F)	⁵ F
195114.70	195110.73	3.97	16	10	0.14	0.12	0.16		15% 1 (² F1)	³ F	+ 14% 1 (⁴ G)	³ G	+ 10% 1 (² G1)	³ H
192165.20	192151.59	13.61	16	12	0.13	0.10	0.16		18% 1 (² G2)	³ H	+ 18% 1 (⁴ G)	³ F	+ 11% 1 (² G2)	¹ G
191561.46	191565.02	-3.56	15	10	0.14	0.08	0.16		22% 1 (⁴ G)	³ F	+ 11% 1 (⁴ F)	⁵ D	+ 8% 1 (⁴ D)	⁵ D
191058.98	191070.88	-11.90	18	16	0.10	0.10	0.14		21% 1 (² G2)	³ H	+ 9% 1 (² H)	³ H	+ 7% 1 (² F2)	³ G
190648.63	190654.29	-5.66	15	11	0.14	0.10	0.16		31% 1 (⁴ G)	³ H	+ 16% 1 (⁴ P)	⁵ D	+ 7% 1 (² H)	³ H
186345.35	186307.90	37.45	13	13	0.12	0.13	0.16		32% 1 (⁴ G)	⁵ F	+ 14% 1 (⁴ D)	³ F	+ 14% 1 (⁴ F)	⁵ F
183766.93	183752.60	14.33	13	13	0.12	0.12	0.14		18% 1 (⁴ G)	⁵ G	+ 15% 1 (⁴ D)	⁵ D	+ 13% 1 (⁴ F)	⁵ D
182007.38	182020.27	-12.89	17	11	0.12	0.12	0.17		15% 1 (⁴ G)	³ H	+ 12% 1 (⁴ D)	⁵ F	+ 11% 1 (² F1)	³ G
179486.69	179500.66	-13.97	17	13	0.10	0.10	0.15		12% 1 (² F1)	¹ G	+ 9% 1 (⁴ G)	⁵ H	+ 8% 1 (⁴ D)	³ F
174982.96	174974.84	8.12	13	11	0.12	0.09	0.14		21% 1 (⁴ G)	⁵ H	+ 16% 1 (⁴ D)	⁵ F	+ 9% 1 (⁴ D)	⁵ D
170930.63	170868.86	61.77	15	14	0.10	0.07	0.12		23% 1 (⁴ G)	⁵ F	+ 19% 1 (⁴ G)	⁵ G	+ 13% 1 (⁴ G)	³ F
165712.29	165716.27	-3.98	8	8	0.12	0.11	0.15		33% 1 (⁴ G)	⁵ H	+ 17% 1 (⁴ G)	⁵ G	+ 8% 1 (⁴ F)	⁵ G
161069.23	161100.80	-31.57	3	3	0.31	0.15	0.30		80% 1 (⁶ S)	⁷ P	+ 15% 1 (⁴ P)	⁵ D	+ 2% 1 (⁴ D)	⁵ F

J = 5

240252.81	240251.02	1.80	3	3	0.63	0.25	0.70		45% 1 (² G1)	¹ H	+ 27% 1 (² G1)	³ H	+ 10% 1 (² F2)	³ G
238145.96	238170.10	-24.14	5	4	0.24	0.24	0.30		59% 1 (² G1)	³ G	+ 11% 1 (² G2)	³ G	+ 9% 1 (² G1)	³ H
226388.24	226373.77	14.47	10	7	0.19	0.22	0.22		28% 1 (² H)	¹ H	+ 21% 1 (² H)	³ G	+ 12% 1 (² H)	³ H
224359.08	224358.00	1.08	8	8	0.18	0.18	0.23		19% 1 (² H)	¹ H	+ 18% 1 (² G2)	³ G	+ 11% 1 (² H)	³ H
220456.09	220451.82	4.27	10	7	0.19	0.18	0.23		22% 1 (⁴ F)	⁵ G	+ 19% 1 (² F2)	³ G	+ 16% 1 (⁴ F)	³ G
219260.02	219263.63	-3.61	9	7	0.17	0.17	0.22		34% 1 (² F1)	³ G	+ 17% 1 (² G2)	¹ H	+ 8% 1 (² G1)	¹ H
217317.19	217281.73	35.46	11	8	0.17	0.14	0.23		21% 1 (² F1)	³ G	+ 18% 1 (² G1)	³ H	+ 13% 1 (² F2)	³ G
215655.04	215718.01	-62.97	13	12	0.14	0.19	0.21		26% 1 (² I)	¹ H	+ 14% 1 (² H)	³ H	+ 8% 1 (² H)	¹ H
213559.13	213546.26	12.87	12	8	0.20	0.16	0.24		24% 1 (⁴ F)	⁵ F	+ 20% 1 (² G2)	³ H	+ 7% 1 (² F2)	³ G
209840.99	209823.49	17.50	15	15	0.12	0.11	0.16		19% 1 (² I)	¹ H	+ 15% 1 (² G2)	³ H	+ 9% 1 (² F2)	³ G
206332.53	206343.05	-10.52	10	6	0.18	0.15	0.21		33% 1 (² I)	³ H	+ 16% 1 (² H)	³ H	+ 13% 1 (⁴ G)	³ G
205581.06	205539.30	41.76	16	11	0.13	0.14	0.20		24% 1 (² G2)	³ G	+ 13% 1 (² H)	³ I	+ 12% 1 (² H)	³ H
203534.37	203536.56	-2.19	15	12	0.12	0.06	0.14		25% 1 (² I)	³ I	+ 20% 1 (² H)	³ G	+ 9% 1 (² H)	³ I
202492.70	202501.08	-8.38	14	12	0.13	0.05	0.16		18% 1 (⁴ F)	⁵ F	+ 14% 1 (² I)	³ I	+ 13% 1 (² I)	¹ H
199791.13	199784.84	6.29	14	10	0.14	0.09	0.16		13% 1 (⁴ F)	⁵ G	+ 13% 1 (² F2)	³ G	+ 9% 1 (² G1)	³ H
196600.97	196611.05	-10.08	14	11	0.14	0.07	0.16		26% 1 (⁴ D)	⁵ F	+ 25% 1 (⁴ G)	³ G	+ 13% 1 (⁴ G)	³ H

195103.39	195102.87	0.52	12	10	0.14	0.11	0.17	27% 1 (⁴ G)	³ G + 27% 1 (⁴ D)	⁵ F + 10% 1 (² I)	³ H
193411.29	193390.33	20.96	16	12	0.11	0.05	0.14	24% 1 (² H)	³ I + 20% 1 (⁴ F)	³ G + 12% 1 (⁴ G)	³ H
188845.35	188869.34	-23.99	14	9	0.16	0.11	0.19	25% 1 (⁴ G)	⁵ G + 17% 1 (⁴ G)	⁵ F + 7% 1 (² G2)	³ H
187363.17	187376.60	-13.43	13	11	0.11	0.08	0.14	26% 1 (⁴ G)	³ H + 22% 1 (⁴ D)	⁵ F + 13% 1 (⁴ F)	⁵ G
185142.58	185125.53	17.05	17	17	0.10	0.09	0.12	28% 1 (⁴ G)	⁵ H + 11% 1 (⁴ G)	⁵ G + 9% 1 (² G2)	³ G
180331.80	180346.30	-14.50	13	10	0.11	0.08	0.15	19% 1 (² I)	³ I + 14% 1 (² I)	¹ H + 10% 1 (⁴ G)	⁵ F
171546.55	171557.78	-11.23	11	9	0.12	0.05	0.15	35% 1 (⁴ G)	⁵ F + 14% 1 (⁴ G)	³ G + 13% 1 (⁴ G)	⁵ H
167611.32	167610.68	0.64	10	7	0.14	0.06	0.15	29% 1 (⁴ G)	⁵ G + 23% 1 (⁴ G)	⁵ H + 11% 1 (⁴ G)	³ H
J = 6											
233808.24	233786.39	21.85	1	1	0.34	0.34	0.40	86% 1 (² G1)	³ H + 4% 1 (² G2)	³ H + 3% 1 (² I)	³ H
225409.63	225395.47	14.16	6	4	0.18	0.18	0.22	25% 1 (² H)	¹ I + 24% 1 (² H)	³ H + 17% 1 (² G2)	³ H
220981.43	220982.10	-0.67	5	5	0.22	0.21	0.30	25% 1 (² H)	³ I + 25% 1 (² H)	³ H + 19% 1 (² G2)	³ H
212643.45	212664.67	-21.22	4	4	0.24	0.15	0.30	38% 1 (⁴ F)	⁵ G + 33% 1 (² H)	¹ I + 14% 1 (² H)	³ I
210083.67	210106.71	-23.04	6	6	0.20	0.23	0.24	58% 1 (² I)	¹ I + 20% 1 (² I)	³ H + 9% 1 (² H)	³ I
205833.23	205832.58	0.65	9	6	0.14	0.10	0.18	20% 1 (² H)	¹ I + 17% 1 (² I)	³ I + 14% 1 (² H)	³ I
203255.48	203283.02	-27.54	7	6	0.19	0.08	0.21	32% 1 (² G2)	³ H + 24% 1 (⁴ F)	⁵ G + 16% 1 (² I)	³ I
200658.47	200684.62	-26.15	7	6	0.17	0.16	0.23	29% 1 (² I)	³ K + 22% 1 (² H)	³ H + 17% 1 (² I)	³ I
192024.16	192060.31	-36.15	10	10	0.13	0.07	0.16	40% 1 (⁴ G)	³ H + 16% 1 (² I)	³ H + 10% 1 (⁴ G)	⁵ H
189531.52	189542.24	-10.72	6	6	0.16	0.14	0.21	49% 1 (⁴ G)	⁵ H + 32% 1 (⁴ G)	⁵ G + 6% 1 (² H)	³ H
187065.29	187026.67	38.62	9	7	0.16	0.11	0.19	39% 1 (² I)	³ H + 20% 1 (² I)	³ I + 14% 1 (⁴ G)	⁵ G
180881.45	180870.63	10.82	8	7	0.12	0.11	0.16	51% 1 (² I)	³ K + 13% 1 (² I)	³ I + 11% 1 (⁴ G)	⁵ G
167845.16	167875.65	-30.49	6	6	0.15	0.09	0.18	27% 1 (⁴ G)	³ H + 24% 1 (⁴ G)	⁵ G + 19% 1 (⁴ G)	⁵ H
J = 7											
222933.07	222901.61	31.46	4	3	0.31	0.63	0.40	68% 1 (² H)	³ I + 14% 1 (² I)	¹ K + 11% 1 (² I)	³ K
205835.07	205827.35	7.72	3	2	0.33	0.18	0.40	71% 1 (² I)	³ I + 14% 1 (² I)	¹ K + 14% 1 (² I)	³ K
201570.58	201561.48	9.10	4	4	0.24	0.24	0.30	40% 1 (² I)	¹ K + 30% 1 (² I)	³ K + 16% 1 (⁴ G)	⁵ H
188096.33	188081.41	14.92	4	3	0.22	0.20	0.30	72% 1 (⁴ G)	⁵ H + 16% 1 (² H)	³ I + 10% 1 (² I)	¹ K
185291.73	185295.62	-3.89	5	5	0.15	0.10	0.20	45% 1 (² I)	³ K + 26% 1 (² I)	³ I + 22% 1 (² I)	¹ K
J = 8											
205054.96	205041.52	13.44	1	1	0.34	0.34	0.50	100% 1 (² I)	³ K		

Table 4Fitted and calculated parameter values (cm^{-1}) in the $5d^6$, $5d^56s$ and $5d^46s^2$ configurations of Pt V.

Parameter	Fitted value		HFR	Fitted/HFR
5d⁶				
E _{av}	35194.8	(3.5)	40101.3	
O ₂	6938.5	(3.8)	8272.5	0.8388
O ₂ '	4303.1	(4.4)	5602.0	0.7681
E _α	91.0	(3.1)		
E _β	55.1	(3.5)		
ζ _d	5354.0	(2.9)	5526.7	0.9687
T ₁	-0.21	(0.09)		
T ₂	0.28	(0.10)		
T ₃	0.0			
T ₄	0.0			
A _c	30.5	(2.3)		
A ₃	4.5	(2.4)		
A ₄	3.2	(3.2)		
A ₅	8.7	(2.9)		
A ₆	17.4	(2.4)		
A ₁	-4.0			
A ₂	4.8			
A ₀	-4.0			
5d⁵6s				
E _{av}	119831.9	(3.5)	127951.9	0.9634 ^a
O ₂	7084.5	(5.1)	8449.6	0.8384
O ₂ '	4404.6	(5.1)	5708.1	0.7716
E _α	92.6	(3.8)		
E _β	57.2	(5.5)		
ζ _d	5615.3	(3.4)	5773.4	0.9726
T ₁	-0.47	(0.19)		
T ₂	0.38	(0.25)		
T ₃	0.0			
T ₄	0.0			
A _c	25.7	(3.2)		
A ₃	3.2			
A ₄	9.2	(3.4)		
A ₅	5.6	(3.4)		
A ₆	9.6	(2.1)		
A ₁	-4.0			
A ₂	4.8			
A ₀	-4.0			
C _{ds}	3185.9	(3.6)	3870.1	0.8232
T _{dds}	-7.5	(5.7)		
A _{mso}	55.3	(2.9)		
5d⁴6s²				
E _{av}	220361.0		234077.1	0.9546 ^a
O ₂	7240.0		8619.6	0.8399
O ₂ '	4493.0		5809.8	0.7733
E _α	84.0			
E _β	55.0			
ζ _d	5860.0		6022.2	0.9731

$R^2(\text{dd, ds})12^{\text{b}}$	-22421.1	-27013.4	0.83
$R^2(\text{dd, ss})12$	20299.6	24457.4	0.83
$R^2(\text{dd, ds})23$	-22404.8	-26993.7	0.83

Mean Deviation^c = 18 cm⁻¹

^a The energy differences with respect to the ground configuration were used:

$(E_{\text{av}}(\text{conf}) - E_{\text{av}}(5d^6))_{\text{LSF}} / (E_{\text{av}}(\text{conf}) - E_{\text{av}}(5d^6))_{\text{HFR}}$, where "conf" is either $5d^56s$ or $5d^46s^2$.

^b "xy" in the end of the *R*-parameter names means interaction between configurations *x* and *y*, where 1 stands for $5d^6$, 2 stands for $5d^56s$ and 3 stands for $5d^46s^2$.

^c Mean Deviation = $[(\sum (E_{\text{obs}} - E_{\text{calc}})^2) / (n-m)]^{1/2}$, where *n* is the number of known levels, *m* is the number of free parameters.

Table 5Fitted and calculated parameter values (cm^{-1}) in the $5d^56p$, $5d^46s6p$ and $5d^36s^26p$ configurations of Pt V.

Parameter	Fitted value		HFR	Fitted/HFR
5d⁵6p				
E _{av}	206390.8	(2.8)	212282.4	0.9943 ^a
O ₂	7114.1	(4.3)	8497.1	0.8372
O ₂ '	4418.0	(4.4)	5736.2	0.7702
E _α	84.2	(3.8)		
E _β	67.4	(4.7)		
ζ _d	5726.7	(3.4)	5832.6	0.9818
T ₁	-0.30	(0.18)		
T ₂	-0.19	(0.22)		
T ₃	-0.46	(0.18)		
T ₄	0.14	(0.16)		
A _c	31.0	(3.9)		
A ₃	3.5			
A ₄	6.2	(3.6)		
A ₅	7.4	(3.4)		
A ₆	13.3	(2.5)		
A ₁	-3.0			
A ₂	3.0			
A ₀	-3.0			
C ₁ (dp)	2988.8	(5.9)	3527.6	0.8472
C ₂ (dp)	2398.5	(6.5)	3094.8	0.7750
C ₃ (dp)	1231.3	(5.8)	1586.6	0.7761
S ₁ (dp)	171.4	(6.4)		
S ₂ (dp)	-111.3	(5.5)		
ζ _p	13448.0	(9.1)	12115.6	1.1100
S _d .L _p	-89.6	(6.2)		
S _p .L _d	-30.6	(8.2)		
Z ² _{pp'}	-45.8	(6.5)		
Z ² _{dd'}	53.9	(7.2)		
Z ¹ _{pp'}	144.6	(5.0)		
Z ¹ _{dd'}	-9.8	(5.7)		
Z ³ _{pp'}	70.8	(5.7)		
Z ³ _{dd'}	-29.4	(5.9)		
SS ₀₂	-21.2	(5.0)		
SS ₂₀	-25.4	(6.5)		
T ₁₆	-36.6	(4.6)		
T ₁₇	16.8	(3.5)		
T ₁₈	-9.2	(4.9)		
T ₁₉	-13.0	(3.7)		
T ₂₀	-52.2	(4.9)		
T ₂₁	-13.0	(3.4)		
T ₂₂	-26.6	(4.4)		
T ₂₃	-19.4	(4.3)		
T ₂₄	-5.6	(4.0)		
T ₂₅	8.4	(4.2)		
T ₂₆	-33.0	(5.2)		
T ₂₇	1.9	(4.6)		
T ₂₈	52.5	(5.0)		
T ₂₉	-27.4	(4.0)		
T ₃₀	16.9	(4.2)		

T ₃₁	-2.7	(4.7)
T ₃₂	0.4	(3.8)
T ₃₃	9.5	(4.4)
T ₃₄	-32.4	(5.0)
T ₃₅	-64.8	(4.2)

5d⁴6s6p

E _{av}	303220.0	312505.8	1.0163 ^a
O ₂	7247.0	8662.2	0.8366
O ₂ '	4494.0	5834.9	0.7702
E _α	82.0		
E _β	64.0		
ζ _d	5973.0	6078.2	0.9827
A _c	23.0		
A ₃	3.5		
A ₄	4.0		
A ₅	4.5		
A ₆	12.5		
A ₁	-3.0		
A ₂	3.0		
A ₀	-3.0		
C _{ds}	3199.0	3863.3	0.8280
T _{dds}	-15.0		
A _{mso}	56.0		
A _{ss}	0.0		
C ₁ (dp)	3130.0	3692.5	0.8477
C ₂ (dp)	2453.0	3167.2	0.7745
C ₃ (dp)	1231.0	1605.9	0.7666
S ₁ (dp)	171.0		
S ₂ (dp)	-102.0		
ζ _p	14800.0	13367.5	1.1072
S _d .L _p	-90.4		
S _p .L _d	-22.0		
Z ₂ ^{pp'}	-66.7		
Z ₂ ^{dd'}	61.1		
Z ₁ ^{pp'}	156.2		
Z ₁ ^{dd'}	-1.0		
Z ₃ ^{pp'}	74.3		
Z ₃ ^{dd'}	-21.1		
C _{sp}	12827.0	15455.3	0.8299
A _{mso} (sp)	-500.0		

5d³6s²6p

E _{av}	416301.0	431151.1	1.0261 ^a
O ₂	7379.0	8819.8	0.8366
O ₂	4567.0	5929.0	0.7703
E _α	82.0		
E _β	64.0		
ζ _d	6215.0	6324.5	0.9827
C ₁ (dp)	3270.0	3857.9	0.8476
C ₂ (dp)	2512.0	3244.1	0.7743
C ₃ (dp)	1248.0	1628.0	0.7666
S ₁ (dp)	171.0		
S ₂ (dp)	-102.0		
ζ _p	16284.0	14675.9	1.1096

$R^2(\text{dd, ds})12^b$	-22318.7	-26890.0	0.83
$R^2(\text{dp, sp})12$	-20772.7	-25027.4	0.83
$R^1(\text{dp, ps})12$	-18336.8	-22092.5	0.83
$R^2(\text{dd, ss})13$	20234.5	24378.9	0.83
$R^2(\text{dd, ds})23$	-22324.0	-26896.4	0.83
$R^2(\text{dp, sp})23$	-21108.9	-25432.4	0.83
$R^1(\text{dp, ps})23$	-18536.9	-22333.6	0.83

Mean Deviation^c = 30 cm⁻¹

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- ^a The energy differences with respect to the ground configuration were used:
 $(E_{\text{av}}(\text{conf}) - E_{\text{av}}(5d^6))_{\text{LSF}} / (E_{\text{av}}(\text{conf}) - E_{\text{av}}(5d^6))_{\text{HFR}}$, where "conf" is either $5d^56p$, $5d^46s6p$ or $5d^36s^26p$.
- ^b "xy" in the end of the R -parameter names means interaction between configurations x and y, where 1 stands for $5d^56p$, 2 stands for $5d^46s6p$ and 3 stands for $5d^36s^26p$.
- ^c Mean Deviation = $[(\sum (E_{\text{obs}} - E_{\text{calc}})^2) / (n-m)]^{1/2}$, where n is the number of known levels, m is the number of free parameters.