

Table 3A. Identified lines in Er IV. $\Delta\lambda=\lambda_{\text{exp}}-\lambda_{\text{Ritz}}$; intensities in arbitrary units (PP : photographic plates, IP : image plates) ; calculated transition probabilities gA, g being the statistical weight of the upper level, A being the Einstein coefficient of spontaneous emission. CF is the cancellation factor defined by equation (14.107), p432 in [22]. λ_{Ritz} is derived from the optimized level energies as $\lambda_{\text{Ritz}}=(E_{\text{up}}-E_{\text{low}})^{-1}$. All energies and wave numbers are in cm^{-1} .

λ_{exp} (Å) *	σ_{exp} (cm^{-1})	λ_{Ritz} (Å) *	$\Delta\lambda$ (Å)	Int (PP)	Int (IP)	gA (10^6 s^{-1})	CF	Lower level**	J _{lower}	Upper level**	J _{upper}	E _{lower} (cm^{-1})	E _{upper} (cm^{-1})	Comment***
851.578	117429.0	851.578	0.000	30	11	100.6	-0.04	4f11(4I)4I	7.5	4f105d(3L)4K	6.5	0.00	117429.1	
851.906	117383.8	851.903	0.003	77	32	288	-0.10	4f11(4I)4I	7.5	4f105d(3M)4K	7.5	0.00	117384.3	
854.337	117049.9	854.331	0.006	53	26	317.5	-0.14	4f11(4I)4I	7.5	4f105d(3L)2I	6.5	0.00	117050.7	
872.351	114632.7	872.353	-0.001	149	34	807.9	-0.36	4f11(4I)4I	6.5	4f105d(3M)4K	5.5	6507.750	121140.3	
873.959	114421.8	873.960	-0.001	124	138	708.2	-0.24	4f11(4I)4I	6.5	4f105d(3L)4K	5.5	6507.750	120929.5	
886.165	112845.8	886.169	-0.004	51	50	253	-0.06	4f11(4I)4I	7.5	4f105d(3L)4I	7.5	0.00	112845.3	
890.223	112331.4	890.223	0.000	289	296	9292	0.86	4f11(4I)4I	7.5	4f105d(3M)4K	8.5	0.00	112331.4	
894.355	111812.4	894.354	0.001	292	306	7144	-0.76	4f11(4I)4I	7.5	4f105d(5G)4H	6.5	0.00	111812.5	
901.154	110968.8	901.157	-0.003	64	18	97.47	0.03	4f11(4I)4I	5.5	4f105d(3M)4K	5.5	10171.79	121140.3	
901.532	110922.3	901.540	-0.008	176	136	1331	0.35	4f11(4I)4I	6.5	4f105d(3L)4K	6.5	6507.750	117429.1	
901.901	110876.9	901.904	-0.003	275	243	6712	0.95	4f11(4I)4I	6.5	4f105d(3M)4K	7.5	6507.750	117384.3	
902.876	110757.2	902.872	0.004	73	125	944.4	0.17	4f11(4I)4I	5.5	4f105d(3L)4K	5.5	10171.79	120929.5	
904.625	110543.0	904.626	-0.001	174	135	1314	0.58	4f11(4I)4I	6.5	4f105d(3L)2I	6.5	6507.750	117050.7	
917.163	109031.8	917.168	-0.005	167	38	405.5	0.25	4f11(4I)4I	5.5	4f106s(5F)6F	5.5	10171.79	119203.1	
920.206	108671.3	920.203	0.003	177	53	810.3	0.13	4f11(4I)4I	4.5	4f105d(3M)4K	5.5	12468.66	121140.3	
920.887	108591.0	920.888	-0.001	50	2	3.61	0.00	4f11(4I)4I	7.5	4f106s(5I)6I	6.5	0.00	108590.8	
921.995	108460.5	921.992	0.003	253	146	2628	0.53	4f11(4I)4I	4.5	4f105d(3L)4K	5.5	12468.66	120929.5	
922.492	108402.0	922.486	0.006	313	151	2340	0.43	4f11(4I)4I	7.5	4f105d(3H)4H4	6.5	0.00	108402.8	
925.374	108064.4	925.369	0.005	218	85	553.4	0.95	4f11(4I)4I	7.5	4f106s(5I)6I	7.5	0.00	108065.0	
932.344	107256.5	932.337	0.007	167	144	3482	-0.71	4f11(4I)4I	5.5	4f105d(3L)4K	6.5	10171.79	117429.1	
936.907	106734.1	936.905	0.002	60	47	140.4	-0.18	4f11(4I)4I	4.5	4f106s(5F)6F	5.5	12468.66	119203.1	
940.405	106337.2	940.402	0.003	111	98	912	-0.45	4f11(4I)4I	6.5	4f105d(3L)4I	7.5	6507.750	112845.3	
945.770	105734.0	945.757	0.010	141	95	1991	-0.49	4f11(4F)4F	4.5	4f105d(3M)4K	5.5	15404.86	121140.3	
949.624	105304.8	949.625	-0.001	29	8	104	0.05	4f11(4I)4I	6.5	4f105d(5G)4H	6.5	6507.750	111812.5	
953.282	104900.7	953.283	-0.001	71	89	278.2	-0.09	4f11(4I)4I	7.5	4f105d(5G)6Ib	6.5	0.00	104900.7	
963.408	103798.2	963.407	0.001	16	9	65.09	0.13	4f11(4F)4F	4.5	4f106s(5F)6F	5.5	15404.86	119203.1	
969.144	103183.9	969.149	-0.005	46	18	332.6	-0.08	4f11(4I)4I	7.5	4f105d(5G)6I	6.5	0.00	103183.3	
979.604	102082.1	979.595	0.010	96	95	131.2	0.10	4f11(4I)4I	6.5	4f106s(5I)6I	6.5	6507.750	108590.8	
981.404	101894.8	981.402	0.002	93	39	81.51	-0.03	4f11(4I)4I	6.5	4f105d(3H)4H4	6.5	6507.750	108402.8	
982.240	101808.1	982.235	0.005	122	99	26.54	-0.04	4f11(2H)2H2	5.5	4f105d(3M)4K	5.5	19331.69	121140.3	
984.275	101597.6	984.273	0.002	133	85	546.0	-0.15	4f11(2H)2H2	5.5	4f105d(3L)4K	5.5	19331.69	120929.5	
984.673	101556.6	984.673	0.000	71	26	44.56	0.02	4f11(4I)4I	7.5	4f105d(5G)4I	7.5	0.00	101556.6	
988.498	101163.6	988.497	0.001	149	108	769.8	0.40	4f11(4I)4I	6.5	4f105d(3K)2H2	5.5	6507.750	107671.5	
991.046	100903.5	991.046	0.000	107	53	348.5	0.10	4f11(4I)4I	4.5	4f105d(3D4D1)	3.5	12468.66	113372.2	
992.149	100791.3	992.153	-0.004	161	97	563.7	0.14	4f11(4I)4I	5.5	4f105d(3K)2I2	5.5	10171.79	110962.7	
995.580	100444.0	995.589	-0.009	137	63	465.9	-0.17	4f11(4I)4I	5.5	4f105d(5G)6G	5.5	10171.79	110614.9	
996.634	100337.7	996.632	0.002	232	150	1068	-0.21	4f11(4I)4I	7.5	4f105d(5F)6H	6.5	0.00	100337.9	
999.647	100035.3	999.649	-0.002	251	223	2018	-0.41	4f11(4I)4I	7.5	4f105d(3K)4K2	7.5	0.00	100035.2	
1001.151	99885.10	1001.167	-0.020	172	113	553.1	0.31	4f11(4I)4I	6.5	4f105d(5G)4G	5.5	6507.750	106391.2	
1016.326	98393.70	1016.333	-0.007	107	39	97.77	-0.07	4f11(4I)4I	6.5	4f105d(5G)6Ib	6.5	6507.750	104900.7	
1018.881	98146.90	1018.888	-0.007	94	43	341.9	-0.13	4f11(4I)4I	4.5	4f105d(5G)6G	5.5	12468.66	110614.9	
1020.747	97967.40	1020.748	-0.001	152	113	748.8	0.22	4f11(4F)4F	4.5	4f105d(3D4D1)	3.5	15404.86	113372.2	
1023.339	97719.40	1023.342	-0.003	128	70	650	-0.21	4f11(2H)2H2	5.5	4f105d(3L)2I	6.5	19331.69	117050.7	
1023.581	97696.20	1023.584	-0.003	150	121	979.4	-0.24	4f11(4I)4I	5.5	4f105d(3K)4K2	5.5	10171.79	107867.7	
1024.065	97650.00	1024.063	0.002	35	23	27.91	0.02	4f11(4I)4I	6.5	4f105d(5F)4Gb	5.5	6507.750	104157.9	

1034.390	96675.30	1034.388	0.002	83	60	308.6	0.16	4f11(4I)4I	6.5	4f105d(5G)6I	6.5	6507.750	103183.3
1037.291	96405.00	1037.298	-0.007	17		69.07	-0.02	4f11(4F)4F2	4.5	4f105d(3M)4K	5.5	24736.00	121140.3
1046.486	95557.90	1046.486	0.000	3		18.65	-0.02	4f11(4F)4F	4.5	4f105d(3K)2I2	5.5	15404.86	110962.7
1048.230	95398.90	1048.228	0.002	23	12	73.44	-0.02	4f11(4I)4I	4.5	4f105d(3K)4K2	5.5	12468.66	107867.7
1049.472	95286.00	1049.471	0.001	26	22	100.6	-0.09	4f11(4I)4I	4.5	4f105d(3H)4F4	4.5	12468.66	107754.8
1049.859	95250.90	1049.861	-0.002	49	30	93.79	-0.07	4f11(4I)4I	5.5	4f105d(5G)6G	4.5	10171.79	105422.5
1050.387	95203.00	1050.389	-0.002	51	38	236.4	0.09	4f11(4I)4I	4.5	4f105d(3K)2H2	5.5	12468.66	107671.5
1052.284	95031.40	1052.284	0.000	81	50	315	-0.13	4f11(4I)4I	4.5	4f105d(5F)4F	3.5	12468.66	107500.0
1055.643	94728.90	1055.644	-0.001	60	39	178.4	-0.14	4f11(4I)4I	5.5	4f105d(5G)6Ib	6.5	10171.79	104900.7
1058.950	94433.20	1058.957	-0.007	14	8	29.95	0.01	4f11(4G)4G	5.5	4f105d(3M)4K	5.5	26707.79	121140.3
1061.321	94222.20	1061.327	-0.006	28	14	124.3	0.06	4f11(4G)4G	5.5	4f105d(3L)4K	5.5	26707.79	120929.5
1063.985	93986.30	1063.986	-0.001	34	15	37.3	-0.02	4f11(4I)4I	5.5	4f105d(5F)4Gb	5.5	10171.79	104157.9
1066.823	93736.30	1066.824	-0.001	90	46	179.7	0.08	4f11(4I)4I	5.5	4f105d(5F)4H	4.5	10171.79	103908.0
1067.263	93697.60	1067.262	0.001	103	41	186.5	-0.26	4f11(4I)4I	7.5	4f105d(5I)4K	6.5	0.00	93697.73
1067.894	93642.20	1067.897	-0.003	7		17.58	0.07	4f11(4I)4I	7.5	4f105d(5F)6H	7.5	0.00	93641.97
1069.743	93480.40	1069.745	-0.002	105	54	169.7	0.08	4f11(4I)4I	6.5	4f105d(5F)4H	5.5	6507.750	99987.95
1070.968	93373.50	1070.968	0.000	10		28.56	-0.01	4f11(4G)4G	4.5	4f105d(3M)4K	5.5	27766.82	121140.3
1075.135	93011.60	1075.136	-0.001	41	21	90.46	0.08	4f11(4I)4I	5.5	4f105d(5G)6I	6.5	10171.79	103183.3
1075.799	92954.20	1075.803	-0.004	19		61.89	0.06	4f11(4I)4I	4.5	4f105d(5G)6G	4.5	12468.66	105422.5
1081.516	92462.80	1081.515	0.001	3		15.01	-0.01	4f11(4F)4F	4.5	4f105d(3K)4K2	5.5	15404.86	107867.7
1082.835	92350.10	1082.838	-0.003	64	26	228	-0.12	4f11(4F)4F	4.5	4f105d(3H)4F4	4.5	15404.86	107754.8
1085.111	92156.40	1085.107	0.004	22		62.32	0.12	4f11(4I)4I	6.5	4f105d(5F)4G	5.5	6507.750	98664.60
1085.833	92095.20	1085.834	-0.001	104	51	474	-0.18	4f11(4F)4F	4.5	4f105d(5F)4F	3.5	15404.86	107500.0
1086.193	92064.70	1086.195	-0.002	20		40.93	0.02	4f11(4I)4I	7.5	4f105d(5F)6H	6.5	0.00	92064.49
1088.006	91911.20	1088.018	-0.010	1		11.7	0.00	4f105d(5I)6H	7.5	4f106p(5I)6I	6.5	73426.17	165336.4
1091.328	91631.50	1091.334	-0.006	75	20	181.7	-0.08	4f11(2H)2H2	5.5	4f105d(3K)2I2	5.5	19331.69	110962.7
1093.621	91439.30	1093.622	-0.001	8		10.61	-0.01	4f11(4I)4I	4.5	4f105d(5F)4H	4.5	12468.66	103908.0
1093.723	91430.80	1093.724	-0.001	69		96.69	-0.05	4f11(4I)4I	4.5	4f105d(5G)6G	3.5	12468.66	103899.4
1095.492	91283.20	1095.492	0.000	101	21	278.6	-0.09	4f11(2H)2H2	5.5	4f105d(5G)6G	5.5	19331.69	110614.9
1099.068	90986.10	1099.067	0.001	13		52.28	-0.07	4f11(4F)4F	4.5	4f105d(5G)4G	5.5	15404.86	106391.2
1102.489	90703.90	1102.492	-0.003	21		23.53	-0.43	4f11(4I)4I	7.5	4f105d(5I)4L	8.5	0.00	90703.64
1103.770	90598.60	1103.771	-0.001	159	77	396.7	-0.20	4f11(4I)4I	7.5	4f105d(5I)4I	6.5	0.00	90598.50
1106.893	90343.00	1106.894	-0.001	20		148.9	0.07	4f11(4G)4G	5.5	4f105d(3L)2I	6.5	26707.79	117050.7
1110.891	90017.90	1110.894	-0.003	46	24	138.5	0.12	4f11(4F)4F	4.5	4f105d(5G)6G	4.5	15404.86	105422.5
1111.735	89949.50	1111.739	-0.004	125	49	298.3	-0.28	4f11(4I)4I	7.5	4f105d(5I)4K	7.5	0.00	89949.21
1113.384	89816.30	1113.385	-0.001	15		69.45	-0.09	4f11(4I)4I	5.5	4f105d(5F)4H	5.5	10171.79	99987.95
1115.489	89646.80	1115.488	0.001	29		66.26	-0.17	4f11(4I)4I	6.5	4f105d(5I)4K	5.5	6507.750	96154.60
1122.691	89071.70	1122.699	-0.008	24	17	106.1	0.09	4f11(2H)2H2	5.5	4f105d(3H)4H4	6.5	19331.69	108402.8
1126.716	88753.50	1126.721	-0.005	48	18	117	-0.16	4f11(4F)4F	4.5	4f105d(5F)4Gb	5.5	15404.86	104157.9
1129.478	88536.50	1129.484	-0.006	4		37.02	-0.01	4f11(2H)2H2	5.5	4f105d(3K)4K2	5.5	19331.69	107867.7
1129.900	88503.40	1129.904	-0.004	47	26	62.88	0.06	4f11(4F)4F	4.5	4f105d(5F)4H	4.5	15404.86	103908.0
1130.009	88494.90	1130.013	-0.004	140	90	386.8	-0.16	4f11(4F)4F	4.5	4f105d(5G)6G	3.5	15404.86	103899.4
1130.927	88423.00	1130.926	0.001	3		20	0.01	4f11(2H)2H2	5.5	4f105d(3H)4F4	4.5	19331.69	107754.8
1136.760	87969.30	1136.764	-0.004	161	114	321.1	-0.15	4f11(4I)4I	6.5	4f105d(5I)4I	5.5	6507.750	94476.78
1140.419	87687.10	1140.425	-0.006	12		107.7	0.01	4f105d(5I)6H	7.5	4f106p(5I)6I	7.5	73426.17	161112.8
1145.190	87321.80	1145.191	-0.001	72	28	80.28	0.06	4f11(4I)4I	6.5	4f105d(5F)6H	5.5	6507.750	93829.40
1146.922	87189.90	1146.921	0.001	205	131	297.2	-0.18	4f11(4I)4I	6.5	4f105d(5I)4K	6.5	6507.750	93697.73
1148.638	87059.60	1148.640	-0.002	109	43	124.9	0.06	4f11(2H)2H2	5.5	4f105d(5G)4G	5.5	19331.69	106391.2
1149.274	87011.50	1149.277	-0.003	205	173	361.4	-0.20	4f11(4I)4I	5.5	4f105d(5I)4I	4.5	10171.79	97183.02
1152.639	86757.50	1152.640	-0.001	166	125	126.2	-0.29	4f11(4I)4I	7.5	4f105d(5I)6L	7.5	0.00	86757.34
1155.041	86577.00	1155.047	-0.006	54	13	68.89	-0.02	4f105d(5I)6G	6.5	4f106p(5I)6I	7.5	74536.27	161112.8

1157.136	86420.30	1157.145	-0.009	70	19	109.9	-0.02	4f105d(5I)6I	6.5	4f106p(5I)6I	6.5	78916.79	165336.4	
1159.730	86227.00	1159.734	-0.004	67		44.26	-0.02	4f11(4F)4F2	4.5	4f105d(3K)2I2	5.5	24736.00	110962.7	
1160.939	86137.20	1160.938	0.001	70	12	33.68	0.05	4f11(4I)4I	5.5	4f105d(5F)6H	4.5	10171.79	96309.02	
1161.568	86090.60	1161.565	0.003	79	38	64.46	-0.06	4f11(2H)2H2	5.5	4f105d(5G)6G	4.5	19331.69	105422.5	
1163.024	85982.78	1163.023	0.001	170	113	167.6	-0.13	4f11(4I)4I	5.5	4f105d(5I)4K	5.5	10171.79	96154.60	D
1163.024	85982.78	1163.028	-0.004	170	113	47.74	0.09	4f105d(5I)6I	6.5	4f106p(5F)4G	5.5	78916.79	164899.2	D
1164.437	85878.40	1164.431	0.006	71	34	109	0.05	4f11(4F)4F2	4.5	4f105d(5G)6G	5.5	24736.00	110614.9	
1165.726	85783.50	1165.727	-0.001	228	196	391	-0.21	4f11(4I)4I	4.5	4f105d(5I)4H	3.5	12468.66	98252.07	
1166.312	85740.40	1166.311	0.001	332	367	679.3	-0.23	4f11(4I)4I	7.5	4f105d(5I)4H	6.5	0.00	85740.41	
1166.449	85730.30	1166.454	-0.005	36	33	123.3	-0.11	4f105d(5I)6I	5.5	4f106p(5I)4K	6.5	83109.96	168839.9	
1168.313	85593.50	1168.316	-0.003	8		112.3	-0.03	4f105d(5I)6G	5.5	4f106p(5I)6I	6.5	79743.13	165336.4	
1168.648	85569.00	1168.648	0.000	87	34	59.75	-0.03	4f11(2H)2H2	5.5	4f105d(5G)6Ib	6.5	19331.69	104900.7	
1169.007	85542.70	1169.009	-0.002	42	34	10.56	0.00	4f105d(5I)6K	6.5	4f106p(5I)4I	5.5	82921.55	168464.1	
1171.577	85355.00	1171.590	-0.010	67		174.4	0.03	4f105d(5I)6I	5.5	4f106p(5I)4I	5.5	83109.96	168464.1	
1171.706	85345.60	1171.707	-0.001	148	114	79.02	0.38	4f11(4I)4I	7.5	4f105d(5I)6K	8.5	0.00	85345.53	
1175.360	85080.30	1175.357	0.003	75	7	44.78	-0.04	4f11(4I)4I	5.5	4f105d(5F)6D	4.5	10171.79	95252.35	
1176.421	85003.60	1176.422	-0.001	188	136	228.1	-0.17	4f11(4I)4I	6.5	4f105d(5I)4Hb	5.5	6507.750	91511.24	
1176.569	84992.90	1176.574	-0.005	364	335	998.6	-0.32	4f11(4I)4I	7.5	4f105d(5I)4Ib	7.5	0.00	84992.54	
1178.880	84826.30	1178.880	0.000	91	20.4	81.74	0.04	4f11(2H)2H2	5.5	4f105d(5F)4Gb	5.5	19331.69	104157.9	
1179.867	84755.30	1179.867	0.000	30		153.4	-0.05	4f105d(5I)6H	4.5	4f106p(5I)4I	5.5	83708.79	168464.1	
1180.430	84714.90	1180.437	-0.007	264	177	518.6	-0.16	4f11(4I)4I	4.5	4f105d(5I)4I	4.5	12468.66	97183.02	
1180.599	84702.80	1180.604	-0.005	228	136	217.4	-0.12	4f11(4I)4I	5.5	4f105d(5I)4H	4.5	10171.79	94874.22	
1181.173	84661.60	1181.174	-0.001	61	7	28.44	-0.17	4f11(4I)4I	6.5	4f105d(5I)6L	5.5	6507.750	91169.27	
1182.224	84586.40	1182.222	0.002	7		127.5	0.05	4f105d(5I)6I	4.5	4f106p(5I)4I	4.5	86401.13	170987.6	
1182.367	84576.10	1182.365	0.002	19	14	19.89	-0.01	4f11(2H)2H2	5.5	4f105d(5F)4H	4.5	19331.69	103908.0	
1186.164	84305.40	1186.169	-0.005	279	221	495.8	-0.16	4f11(4I)4I	5.5	4f105d(5I)4I	5.5	10171.79	94476.78	
1187.594	84203.90	1187.593	0.001	187	107	144.5	-0.09	4f11(4I)4I	6.5	4f105d(5I)4H	5.5	6507.750	90711.70	
1189.191	84090.80	1189.191	0.000	355	275	705.3	-0.18	4f11(4I)4I	6.5	4f105d(5I)4I	6.5	6507.750	90598.50	
1191.800	83906.70	1191.795	0.005	126	34	106.3	0.06	4f11(4G)4G	5.5	4f105d(5G)6G	5.5	26707.79	110614.9	
1192.743	83840.40	1192.743	0.000	63	7	19.27	-0.06	4f11(4I)4I	4.5	4f105d(5F)6H	4.5	12468.66	96309.02	
1194.948	83685.60	1194.944	0.004	127	63	59.37	-0.05	4f11(4I)4I	4.5	4f105d(5I)4K	5.5	12468.66	96154.60	
1195.352	83657.40	1195.349	0.003	70	32	55.72	0.06	4f11(4I)4I	5.5	4f105d(5F)6H	5.5	10171.79	93829.40	
1197.240	83525.40	1197.233	0.007	130	77	868.9	-0.08	4f11(4I)4I	5.5	4f105d(5I)4K	6.5	10171.79	93697.73	
1198.450	83441.10	1198.445	0.005	188	126	132.3	-0.16	4f11(4I)4I	6.5	4f105d(5I)4K	7.5	6507.750	89949.21	
1198.979	83404.30	1198.979	0.000	155	56	108.6	0.14	4f11(4I)4I	4.5	4f105d(5I)4G	3.5	12468.66	95872.96	
1199.375	83376.80	1199.376	-0.001	398	439	961.4	-0.34	4f11(4I)4I	7.5	4f105d(5I)4I	7.5	0.00	83376.71	
1201.062	83259.60	1201.061	0.001	77	24	29.38	-0.10	4f11(4F)4F	4.5	4f105d(5F)4G	5.5	15404.86	98664.60	
1201.986	83195.70	1201.983	0.003	89	39	100.2	0.06	4f11(4G)4G	4.5	4f105d(3K)2I2	5.5	27766.82	110962.7	
1202.558	83156.10	1202.549	0.009	83	31	514.3	-0.34	4f105d(5I)6H	7.5	4f106p(5I)4H	6.5	73426.17	156582.9	
1202.916	83131.30	1202.910	0.006	124	77	173.5	0.07	4f11(4F)4F2	4.5	4f105d(3K)4K2	5.5	24736.00	107867.7	
1203.383	83099.10	1203.378	0.005	15		169.8	0.09	4f105d(5I)4H	6.5	4f106p(5I)4K	6.5	85740.41	168839.9	
1203.959	83059.30	1203.949	0.010	41	14	113.2	0.01	4f105d(5I)6L	8.5	4f106p(5I)6K	7.5	82610.32	165670.3	
1205.401	82959.90	1205.395	0.006	100	54	621.1	0.34	4f105d(5I)6I	5.5	4f106p(5I)6H	4.5	83109.96	166070.3	
1205.765	82934.90	1205.757	0.008	30	15	38.99	-0.02	4f11(4F)4F2	4.5	4f105d(3K)2H2	5.5	24736.00	107671.5	
1205.962	82921.40	1205.959	0.003	247	153	203.2	0.14	4f11(4I)4I	7.5	4f105d(5I)6K	6.5	0.00	82921.55	
1207.043	82847.10	1207.041	0.002	120	78	95.33	0.10	4f11(4F)4F	4.5	4f105d(5I)4H	3.5	15404.86	98252.07	
1207.971	82783.40	1207.967	0.004	48	22	34.66	0.05	4f11(4I)4I	4.5	4f105d(5F)6D	4.5	12468.66	95252.35	
1208.257	82763.80	1208.255	0.002	77	53	48.99	-0.02	4f11(4F)4F2	4.5	4f105d(5F)4F	3.5	24736.00	107500.0	
1208.480	82748.50	1208.477	0.003	77	43	628.5	-0.41	4f105d(5I)6K	6.5	4f106p(5I)6K	7.5	82921.55	165670.3	
1208.831	82724.60	1208.844	-0.010	59	22	109.6	-0.04	4f105d(5I)4H	6.5	4f106p(5I)4I	5.5	85740.41	168464.1	
1209.921	82650.02	1209.927	-0.006	173	99	51.69	-0.13	4f11(4I)4I	6.5	4f105d(5I)6L	6.5	6507.750	89157.31	Asym

1210.506	82610.10	1210.503	0.003	243	194	204.5	-0.38	4f11(4I)4I	7.5	4f105d(5I)6L	8.5	0.00	82610.32	
1211.115	82568.50	1211.110	0.005	85	36	624.8	0.21	4f105d(5I)6G	5.5	4f106p(5I)4H	5.5	79743.13	162312.0	
1213.380	82414.40	1213.374	0.006	106	58	850.3	0.12	4f105d(5I)6K	6.5	4f106p(5I)6I	6.5	82921.55	165336.4	
1213.512	82405.40	1213.510	0.002	222	165	235	0.16	4f11(4I)4I	4.5	4f105d(5I)4H	4.5	12468.66	94874.22	
1213.952	82375.60	1213.953	-0.001	44		125.6	-0.02	4f105d(5I)6H	7.5	4f106p(5I)4I	7.5	73426.17	155801.7	
1214.160	82361.40	1214.159	0.001	97	49	800.3	-0.24	4f105d(5I)6H	4.5	4f106p(5I)6H	4.5	83708.79	166070.3	
1215.168	82293.20	1215.161	0.007	176	53	835	-0.17	4f105d(5I)4I	7.5	4f106p(5I)6K	7.5	83376.71	165670.3	
1215.362	82280.00	1215.355	0.007	52		244.7	-0.32	4f105d(5I)6H	5.5	4f106p(5I)4K	6.5	86559.40	168839.9	
1216.147	82226.90	1216.154	-0.007	130	51	408.7	-0.13	4f105d(5I)6I	5.5	4f106p(5I)6I	6.5	83109.96	165336.4	
1216.606	82195.90	1216.604	0.002	128	46	886.2	-0.21	4f105d(5I)6I	6.5	4f106p(5I)6I	7.5	78916.79	161112.8	
1216.837	82180.30	1216.835	0.002	144	58	826.5	-0.12	4f105d(5I)4K	8.5	4f106p(5I)6K	8.5	79154.18	161334.6	
1217.041	82166.52	1217.056	-0.020	103	37	73.61	-0.03	4f105d(5I)6I	4.5	4f106p(5F)6G	4.5	86401.13	168566.6	Asym
1218.095	82095.40	1218.099	-0.004	132	54	528.9	0.16	4f105d(5I)6Kb	6.5	4f106p(5I)4K	6.5	86744.73	168839.9	
1218.291	82082.20	1218.286	0.005	25	3	202.2	-0.02	4f105d(5I)6L	7.5	4f106p(5I)4K	6.5	86757.34	168839.9	
1218.825	82046.20	1218.820	0.005	114	49	524	0.29	4f105d(5I)6G	6.5	4f106p(5I)4H	6.5	74536.27	156582.9	
1219.083	82028.90	1219.084	-0.001	63	15	376.6	-0.10	4f105d(5I)6I	3.5	4f106p(5I)6I	3.5	88834.27	170863.1	
1219.281	82015.50	1219.277	0.004	140	65	63.85	0.11	4f11(4I)4I	5.5	4f105d(5I)4G	4.5	10171.79	92187.63	
1219.395	82007.89	1219.391	0.004	167	75	81.45	0.14	4f11(4I)4I	4.5	4f105d(5I)4I	5.5	12468.66	94476.78	D
1219.395	82007.89	1219.405	-0.010	167	75	114	-0.04	4f105d(5I)6H	5.5	4f106p(5F)6G	4.5	86559.40	168566.6	D
1219.857	81976.80	1219.845	0.010	40		100.3	0.11	4f105d(5I)6K	6.5	4f106p(5F)4G	5.5	82921.55	164899.2	
1219.922	81972.50	1219.920	0.002	218	119	1059	0.55	4f105d(5I)6Hb	7.5	4f106p(5I)6K	8.5	79362.02	161334.6	
1220.125	81958.82	1220.127	-0.002	114	17	229.6	0.02	4f105d(5I)4K	8.5	4f106p(5I)6I	7.5	79154.18	161112.8	D
1220.125	81958.82	1220.111	0.010	114	17	162.8	0.02	4f105d(5I)4I	7.5	4f106p(5I)6I	6.5	83376.71	165336.4	D
1220.275	81948.70	1220.270	0.005	138	53	54.45	-0.07	4f11(4I)4I	6.5	4f105d(5I)6K	5.5	6507.750	88456.86	
1220.931	81904.70	1220.932	-0.001	90		355.1	0.08	4f105d(5I)6H	5.5	4f106p(5I)4I	5.5	86559.40	168464.1	
1221.482	81867.80	1221.479	0.003	129	39	586.2	0.09	4f105d(5I)6G	5.5	4f106p(5I)4I	6.5	79743.13	161611.1	
1221.926	81838.00	1221.935	-0.009	86		138.7	-0.03	4f105d(5I)6H	4.5	4f106p(5I)6H	5.5	83708.79	165546.2	
1222.311	81812.20	1222.310	0.001	83	12	322.7	0.03	4f105d(5I)4L	9.5	4f106p(5I)6K	8.5	79522.29	161334.6	
1222.819	81778.30	1222.820	-0.001	115	68	77.56	0.05	4f11(4F)4F	4.5	4f105d(5I)4I	4.5	15404.86	97183.02	
1223.229	81750.80	1223.230	-0.001	204	104	1459	-0.16	4f105d(5I)6Hb	7.5	4f106p(5I)6I	7.5	79362.02	161112.8	
1224.067	81694.90	1224.065	0.002	95	22	59.65	0.07	4f11(4G)4G	5.5	4f105d(3H)4H4	6.5	26707.79	108402.8	
1224.134	81690.40	1224.144	-0.010	5		13.82	-0.01	4f105d(5I)6I	6.5	4f106p(5I)6K	5.5	78916.79	160606.5	
1225.794	81579.80	1225.789	0.005	256	104	1836	0.38	4f105d(5I)6H	7.5	4f106p(5I)6I	8.5	73426.17	155006.2	
1228.649	81390.20	1228.650	-0.001	263	138	2170	0.99	4f105d(5I)6I	8.5	4f106p(5I)6K	9.5	73708.00	155098.1	
1229.414	81339.60	1229.416	-0.002	245	87	150.6	0.14	4f11(4I)4I	5.5	4f105d(5I)4Hb	5.5	10171.79	91511.24	
1230.037	81298.40	1230.039	-0.002	322	219	3045	-0.29	4f105d(5I)6I	8.5	4f106p(5I)6I	8.5	73708.00	155006.2	
1230.536	81265.40	1230.535	0.001	246	136	1402	0.22	4f105d(5I)6G	6.5	4f106p(5I)4I	7.5	74536.27	155801.7	
1234.479	81005.80	1234.473	0.006	112	12	14.2	-0.01	4f11(2H)2H2	5.5	4f105d(5F)6H	6.5	19331.69	100337.9	
1235.118	80964.00	1235.122	-0.004	60	3	20.45	-0.01	4f11(4G)4G	5.5	4f105d(3K)2H2	5.5	26707.79	107671.5	
1236.034	80904.00	1236.030	0.004	131	51	23.17	0.09	4f11(4F)4F	4.5	4f105d(5F)6H	4.5	15404.86	96309.02	
1236.651	80863.60	1236.653	-0.002	4		24.01	-0.02	4f105d(5I)6G	5.5	4f106p(5I)6K	5.5	79743.13	160606.5	
1237.276	80822.70	1237.283	-0.007	35		62.87	-0.13	4f105d(5I)4K	7.5	4f106p(3K)4I2	7.5	89949.21	170771.5	
1239.496	80678.00	1239.499	-0.003	90		198.8	0.05	4f105d(5I)4Ib	7.5	4f106p(5I)6K	7.5	84992.54	165670.3	
1239.833	80656.00	1239.829	0.004	27		11.17	-0.01	4f11(2H)2H2	5.5	4f105d(5F)4H	5.5	19331.69	99987.95	
1241.618	80540.10	1241.621	-0.003	248	107	201.4	0.14	4f11(4I)4I	5.5	4f105d(5I)4H	5.5	10171.79	90711.70	
1242.727	80468.20	1242.728	-0.001	107	9	27.76	-0.05	4f11(4F)4F	4.5	4f105d(5I)4G	3.5	15404.86	95872.96	
1243.367	80426.80	1243.368	-0.001	210	90	142.5	0.19	4f11(4I)4I	5.5	4f105d(5I)4I	6.5	10171.79	90598.50	
1244.049	80382.70	1244.044	0.005	70	7	94.7	0.08	4f105d(5I)6K	5.5	4f106p(5I)4K	6.5	88456.86	168839.9	
1244.334	80364.20	1244.334	0.000	219	109	92.42	0.15	4f11(4I)4I	6.5	4f105d(5I)4G	5.5	6507.750	86872.06	
1244.657	80343.40	1244.650	0.007	44		71.88	-0.01	4f105d(5I)4Ib	7.5	4f106p(5I)6I	6.5	84992.54	165336.4	
1244.946	80324.70	1244.946	0.000	103	66	421.5	0.04	4f105d(5I)6K	8.5	4f106p(5I)6K	7.5	85345.53	165670.3	

1246.113	80249.50	1246.112	0.001	176	70	62.81	-0.14	4f11(4I)4I	6.5	4f105d(5I)6L	7.5	6507.750	86757.34
1246.303	80237.30	1246.308	-0.005	309	303	327.9	-0.23	4f11(4I)4I	6.5	4f105d(5I)6Kb	6.5	6507.750	86744.73
1248.289	80109.60	1248.288	0.001	110		602.1	0.14	4f105d(5I)6K	5.5	4f106p(5F)6G	4.5	88456.86	168566.6
1248.436	80100.20	1248.453	-0.020	73		14.48	0.00	4f105d(5I)6H	7.5	4f106p(5I)6K	7.5	73426.17	153525.3
1249.194	80051.60	1249.194	0.000	71		16.36	-0.03	4f11(4I)4I	6.5	4f105d(5I)6H	5.5	6507.750	86559.40
1249.883	80007.50	1249.887	-0.004	93		338	0.05	4f105d(5I)6K	5.5	4f106p(5I)4I	5.5	88456.86	168464.1
1251.088	79930.40	1251.096	-0.008	58	27	73.07	-0.12	4f105d(5I)4H	6.5	4f106p(5I)6K	7.5	85740.41	165670.3
1251.490	79904.80	1251.492	-0.002	129	48	106.2	0.12	4f11(4G)4G	4.5	4f105d(3K)2H2	5.5	27766.82	107671.5
1252.379	79848.00	1252.388	-0.009	86	65	40.72	-0.09	4f11(4F)4F	4.5	4f105d(5F)6D	4.5	15404.86	95252.35
1252.844	79818.40	1252.845	-0.001	176	19	1168	-0.21	4f105d(5I)6L	5.5	4f106p(5I)4I	4.5	91169.27	170987.6
1253.045	79805.60	1253.042	0.003	117	24	344.6	0.17	4f105d(5I)4H	6.5	4f106p(5I)6H	5.5	85740.41	165546.2
1254.182	79733.20	1254.183	-0.001	219	107	36.95	0.04	4f11(4G)4G	4.5	4f105d(5F)4F	3.5	27766.82	107500.0
1254.402	79719.20	1254.407	-0.005	165	39	47.45	-0.12	4f11(4I)4I	4.5	4f105d(5I)4G	4.5	12468.66	92187.63
1254.900	79687.60	1254.895	0.005	63		100.9	-0.03	4f105d(5I)6H	7.5	4f106p(5I)6H	6.5	73426.17	153114.1
1254.980	79682.50	1254.980	0.000	154	41	791.6	-0.28	4f105d(5I)6L	6.5	4f106p(5I)4K	6.5	89157.31	168839.9
1255.189	79669.30	1255.190	-0.001	48		139.3	0.07	4f105d(5I)6I	4.5	4f106p(5I)6H	4.5	86401.13	166070.3
1257.686	79511.10	1257.689	-0.003	132		547.7	0.48	4f105d(5I)6H	5.5	4f106p(5I)6H	4.5	86559.40	166070.3
1258.346	79469.40	1258.347	-0.001	169	68	73.01	-0.07	4f11(4F)4F	4.5	4f105d(5I)4H	4.5	15404.86	94874.22
1259.099	79421.90	1259.098	0.001	57		10.23	-0.01	4f11(4F)4F2	4.5	4f105d(5F)4Gb	5.5	24736.00	104157.9
1260.053	79361.70	1260.049	0.004	239	22	69.01	-0.37	4f11(4I)4I	7.5	4f105d(5I)6Hb	7.5	0.00	79362.02
1260.511	79332.90	1260.511	0.000	167	46	82.26	0.14	4f11(2H)2H2	5.5	4f105d(5F)4G	5.5	19331.69	98664.60
1260.932	79306.40	1260.927	0.005	197	58	1468	-0.21	4f105d(5I)6L	6.5	4f106p(5I)4I	5.5	89157.31	168464.1
1261.436	79274.70	1261.437	-0.001	112	26	20.35	0.03	4f105d(5I)6H	4.5	4f106p(5I)6K	4.5	83708.79	162983.5
1262.109	79232.40	1262.106	0.003	301	241	146.2	0.26	4f11(4I)4I	6.5	4f105d(5I)4H	6.5	6507.750	85740.41
1262.592	79202.10	1262.594	-0.002	66	14	436.6	0.22	4f105d(5I)6I	5.5	4f106p(5I)4H	5.5	83109.96	162312.0
1262.653	79198.30	1262.654	-0.001	91	7	33.61	-0.13	4f105d(5I)4G	5.5	4f106p(5I)6H	4.5	86872.06	166070.3
1263.215	79163.10	1263.210	0.005	65		16.68	-0.01	4f11(4F)4F2	4.5	4f105d(5G)6G	3.5	24736.00	103899.4
1263.289	79158.40	1263.283	0.006	97		124.8	0.17	4f105d(5I)4H	6.5	4f106p(5F)4G	5.5	85740.41	164899.2
1263.360	79154.00	1263.357	0.003	346	296	239.2	-0.40	4f11(4I)4I	7.5	4f105d(5I)4K	8.5	0.00	79154.18
1263.504	79145.00	1263.503	0.001	148	48	933.9	-0.27	4f105d(5I)6I	4.5	4f106p(5I)6H	5.5	86401.13	165546.2
1263.981	79115.10	1263.979	0.002	412	379	6133	-1.00	4f105d(5I)6K	9.5	4f106p(5I)6K	9.5	75982.90	155098.1
1264.673	79071.80	1264.672	0.001	118	37	37.76	-0.10	4f11(4F)4F	4.5	4f105d(5I)4I	5.5	15404.86	94476.78
1265.144	79042.40	1265.141	0.003	86	32	21.63	-0.09	4f11(4I)4I	4.5	4f105d(5I)4Hb	5.5	12468.66	91511.24
1265.449	79023.40	1265.449	0.000	127	12	203.2	0.02	4f105d(5I)6K	9.5	4f106p(5I)6I	8.5	75982.90	155006.2
1266.037	78986.70	1266.035	0.002	261	138	1516	-0.30	4f105d(5I)6H	5.5	4f106p(5I)6H	5.5	86559.40	165546.2
1267.223	78912.70	1267.218	0.005	188	82	1080	0.31	4f105d(5I)6L	7.5	4f106p(5I)6K	7.5	86757.34	165670.3
1267.580	78890.50	1267.578	0.002	61	14	253.4	0.05	4f105d(5I)4K	7.5	4f106p(5I)4K	6.5	89949.21	168839.9
1269.018	78801.10	1269.012	0.006	285	219	2874	0.65	4f105d(5I)6Kb	6.5	4f106p(5I)6H	5.5	86744.73	165546.2
1269.405	78777.10	1269.406	-0.001	53	9	235.3	0.08	4f105d(5I)6H	5.5	4f106p(5I)6I	6.5	86559.40	165336.4
1270.258	78724.10	1270.256	0.002	316	235	3109	0.76	4f105d(5I)6L	8.5	4f106p(5I)6K	8.5	82610.32	161334.6
1270.417	78714.30	1270.411	0.006	55		25.7	-0.03	4f11(4G)4G	5.5	4f105d(5G)6G	4.5	26707.79	105422.5
1270.640	78700.50	1270.638	0.002	61		15.64	-0.10	4f11(4I)4I	4.5	4f105d(5I)6L	5.5	12468.66	91169.27
1270.822	78689.20	1270.817	0.005	240	105	1358	0.28	4f105d(5I)6K	6.5	4f106p(5I)4I	6.5	82921.55	161611.1
1271.064	78674.30	1271.066	-0.002	105	5	138	0.11	4f105d(5I)4G	5.5	4f106p(5I)6H	5.5	86872.06	165546.2
1271.881	78623.70	1271.871	0.010	121	44	66.21	0.06	4f11(4G)4G	4.5	4f105d(5G)4G	5.5	27766.82	106391.2
1272.218	78602.90	1272.213	0.005	200	60	977.7	-0.58	4f105d(5I)6H	4.5	4f106p(5I)4H	5.5	83708.79	162312.0
1272.408	78591.20	1272.399	0.009	301	206	1006	-0.13	4f105d(5I)6Kb	6.5	4f106p(5I)6I	6.5	86744.73	165336.4
1272.604	78579.00	1272.604	0.000	232	90	1452	0.21	4f105d(5I)6L	7.5	4f106p(5I)6I	6.5	86757.34	165336.4
1272.622	78577.90	1272.624	-0.002	123	29	340.1	0.07	4f105d(5I)6G	6.5	4f106p(5I)6H	6.5	74536.27	153114.1
1273.871	78500.90	1273.867	0.004	294	112	1064	-0.29	4f105d(5I)6I	5.5	4f106p(5I)4I	6.5	83109.96	161611.1
1274.132	78484.80	1274.132	0.000	344	214	193.8	0.42	4f11(4I)4I	6.5	4f105d(5I)4Ib	7.5	6507.750	84992.54

1274.470	78464.00	1274.464	0.006	48		34.02	-0.03	4f105d(5I)4G	5.5	4f106p(5I)6I	6.5	86872.06	165336.4
1275.110	78424.60	1275.111	-0.001	83	143	23.9	0.14	4f11(4F)4F	4.5	4f105d(5F)6H	5.5	15404.86	93829.40
1275.330	78411.10	1275.332	-0.002	46		44.77	-0.01	4f105d(5I)6I	6.5	4f106p(5I)6I	5.5	78916.79	157327.8
1276.491	78339.80	1276.490	0.001	74	41	338.7	-0.36	4f105d(5I)6H	5.5	4f106p(5F)4G	5.5	86559.40	164899.2
1277.382	78285.10	1277.383	-0.001	112	37	46.2	-0.05	4f11(4I)4I	5.5	4f105d(5I)6K	5.5	10171.79	88456.86
1278.066	78243.20	1278.069	-0.003	129	61	47.36	-0.17	4f11(4I)4I	4.5	4f105d(5I)4H	5.5	12468.66	90711.70
1278.214	78234.10	1278.211	0.003	252	138	2173	0.69	4f105d(5I)4I	7.5	4f106p(5I)4I	6.5	83376.71	161611.1
1278.894	78192.60	1278.889	0.005	92	9	40.75	0.03	4f11(4G)4G	5.5	4f105d(5G)6Ib	6.5	26707.79	104900.7
1278.913	78191.40	1278.915	-0.002	37		113.3	-0.04	4f105d(5I)6K	6.5	4f106p(5I)6I	7.5	82921.55	161112.8
1279.938	78128.80	1279.948	-0.010	46		41.7	-0.07	4f105d(5I)4H	5.5	4f106p(5I)4K	6.5	90711.70	168839.9
1281.854	78012.00	1281.857	-0.003	73	24	125.4	0.07	4f105d(5I)6G	5.5	4f106p(5I)6K	6.5	79743.13	157754.9
1282.740	77958.10	1282.744	-0.004	45		92.01	-0.07	4f105d(5I)4I	7.5	4f106p(5I)6K	8.5	83376.71	161334.6
1284.435	77855.20	1284.441	-0.006	45		34.08	0.02	4f105d(5I)4H	5.5	4f106p(5F)6G	4.5	90711.70	168566.6
1284.503	77851.10	1284.500	0.003	64		22.14	0.03	4f11(2H)2H2	5.5	4f105d(5I)4I	4.5	19331.69	97183.02
1284.553	77848.10	1284.547	0.006	52		200.2	-0.45	4f105d(5I)6H	5.5	4f106p(5F)6D	4.5	86559.40	164407.8
1286.132	77752.50	1286.134	-0.002	35		171.6	0.06	4f105d(5I)4H	5.5	4f106p(5I)4I	5.5	90711.70	168464.1
1287.250	77685.00	1287.250	0.000	36	20	134.3	0.07	4f105d(5I)6K	6.5	4f106p(5I)6K	5.5	82921.55	160606.5
1287.566	77665.90	1287.563	0.003	100	20	470	0.34	4f105d(5I)6I	6.5	4f106p(5I)4H	6.5	78916.79	156582.9
1288.431	77613.80	1288.436	-0.005	149	124	775.3	0.63	4f105d(5I)6K	5.5	4f106p(5I)6H	4.5	88456.86	166070.3
1288.915	77584.60	1288.915	0.000	114	48	416.2	-0.07	4f105d(5I)6G	5.5	4f106p(5I)6I	5.5	79743.13	157327.8
1293.175	77329.10	1293.182	-0.007	41	12	22.32	0.04	4f105d(5I)4Hb	5.5	4f106p(5I)4K	6.5	91511.24	168839.9
1294.299	77261.90	1294.300	-0.001	30		78.56	-0.03	4f105d(5I)6I	5.5	4f106p(5I)6I	4.5	83109.96	160371.8
1294.733	77236.00	1294.732	0.001	113	107	849.2	-0.52	4f105d(5I)6I	3.5	4f106p(5I)6H	4.5	88834.27	166070.3
1294.987	77220.90	1294.987	0.000	67	12	321.3	0.31	4f105d(5I)6Hb	7.5	4f106p(5I)4H	6.5	79362.02	156582.9
1296.033	77158.50	1296.039	-0.006	47	3	81.25	-0.10	4f105d(5F)6H	5.5	4f106p(5I)4I	4.5	93829.40	170987.6
1297.197	77089.30	1297.196	0.001	61	3	297.6	-0.08	4f105d(5I)6K	5.5	4f106p(5I)6H	5.5	88456.86	165546.2
1299.489	76953.30	1299.497	-0.008	51	80	274.8	-0.11	4f105d(5I)4Hb	5.5	4f106p(5I)4I	5.5	91511.24	168464.1
1300.425	76898.00	1300.428	-0.003	154	70	40.11	-0.03	4f105d(5I)6H	4.5	4f106p(5I)6K	5.5	83708.79	160606.5
1300.641	76885.20	1300.645	-0.004	233	172	1501	-0.55	4f105d(5I)6I	6.5	4f106p(5I)4I	7.5	78916.79	155801.7
1301.409	76839.80	1301.410	-0.001	127	48	723.3	0.46	4f105d(5I)6G	5.5	4f106p(5I)4H	6.5	79743.13	156582.9
1302.490	76776.00	1302.501	-0.010	188	116	329.4	-0.34	4f105d(5F)6H	6.5	4f106p(5I)4K	6.5	92064.49	168839.9
1303.788	76699.60	1303.776	0.010	227	130	57.18	-0.14	4f11(4I)4I	5.5	4f105d(5I)4G	5.5	10171.79	86872.06
1304.411	76662.90	1304.410	0.001	134	63	818.8	0.18	4f105d(5I)6H	4.5	4f106p(5I)6I	4.5	83708.79	160371.8
1304.673	76647.60	1304.673	0.000	351	216	5608	0.95	4f105d(5I)4K	8.5	4f106p(5I)4I	7.5	79154.18	155801.7
1305.170	76618.40	1305.167	0.003	225	147	2919	-0.62	4f105d(5I)4Ib	7.5	4f106p(5I)4I	6.5	84992.54	161611.1
1307.611	76475.40	1307.609	0.002	149	103	37	-0.04	4f11(4G)4G	5.5	4f105d(5G)6I	6.5	26707.79	103183.3
1308.215	76440.00	1308.221	-0.006	278	171	2335	-0.69	4f105d(5I)6Hb	7.5	4f106p(5I)4I	7.5	79362.02	155801.7
1308.658	76414.10	1308.664	-0.006	53	36	15.62	-0.04	4f11(4I)4I	6.5	4f105d(5I)6K	6.5	6507.750	82921.55
1308.909	76399.50	1308.908	0.001	82	22	501.9	0.27	4f105d(5F)6H	6.5	4f106p(5I)4I	5.5	92064.49	168464.1
1309.090	76388.90	1309.091	-0.001	35		475.2	0.30	4f105d(5I)6L	6.5	4f106p(5I)6H	5.5	89157.31	165546.2
1309.896	76342.00	1309.894	0.002	137	51	684.6	-0.45	4f105d(5I)4Ib	7.5	4f106p(5I)6K	8.5	84992.54	161334.6
1313.353	76141.00	1313.351	0.002	124	53	65.95	0.07	4f11(4G)4G	4.5	4f105d(5F)4H	4.5	27766.82	103908.0
1313.716	76119.90	1313.710	0.006	312	218	5048	0.69	4f105d(5I)4Ib	7.5	4f106p(5I)6I	7.5	84992.54	161112.8
1315.979	75989.10	1315.979	0.000	336	162	3039	-0.51	4f105d(5I)6K	8.5	4f106p(5I)6K	8.5	85345.53	161334.6
1316.753	75944.40	1316.761	-0.008	232	123	183.6	0.21	4f105d(5I)4K	8.5	4f106p(5I)6K	9.5	79154.18	155098.1
1317.332	75911.00	1317.334	-0.002	180	50	886.3	-0.58	4f105d(5I)6I	4.5	4f106p(5I)4H	5.5	86401.13	162312.0
1318.031	75870.70	1318.033	-0.002	172	63	1213	0.46	4f105d(5I)4H	6.5	4f106p(5I)4I	6.5	85740.41	161611.1
1318.357	75852.00	1318.356	0.001	467	255	4985	-0.67	4f105d(5I)4K	8.5	4f106p(5I)6I	8.5	79154.18	155006.2
1318.870	75822.50	1318.869	0.001	482	472	18140	1.00	4f105d(5I)6L	10.5	4f106p(5I)6K	9.5	79275.60	155098.1
1319.833	75767.20	1319.831	0.002	490	321	10590	0.92	4f105d(5I)6K	8.5	4f106p(5I)6I	7.5	85345.53	161112.8
1320.089	75752.50	1320.087	0.002	142	83	1295	-0.51	4f105d(5I)6H	5.5	4f106p(5I)4H	5.5	86559.40	162312.0

1320.633	75721.30	1320.636	-0.003	341	185	3730	0.61	4f105d(5I)4K	7.5	4f106p(5I)6K	7.5	89949.21	165670.3	
1321.975	75644.40	1321.978	-0.003	245	108	1041	0.39	4f105d(5I)6Hb	7.5	4f106p(5I)6I	8.5	79362.02	155006.2	
1323.175	75575.80	1323.174	0.001	313	162	1918	-0.54	4f105d(5I)4L	9.5	4f106p(5I)6K	9.5	79522.29	155098.1	
1323.302	75568.60	1323.301	0.001	196	86	76.05	-0.28	4f11(4I)4I	5.5	4f105d(5I)4H	6.5	10171.79	85740.41	
1323.322	75567.40	1323.324	-0.002	26		771.3	0.39	4f105d(5I)6Kb	6.5	4f106p(5I)4H	5.5	86744.73	162312.1	
1324.784	75484.00	1324.785	-0.001	844	397	12130	1.00	4f105d(5I)4L	9.5	4f106p(5I)6I	8.5	79522.29	155006.2	
1325.560	75439.80	1325.558	0.002	96	30	320.9	0.14	4f105d(5I)4G	5.5	4f106p(5I)4H	5.5	86872.06	162312.0	
1325.908	75420.00	1325.912	-0.004	456	421	15930	1.00	4f105d(5I)6L	9.5	4f106p(5I)6K	8.5	85914.80	161334.6	
1326.486	75387.20	1326.485	0.001	446	235	7900	-0.84	4f105d(5I)4K	7.5	4f106p(5I)6I	6.5	89949.21	165336.4	
1326.748	75372.30	1326.745	0.003	314	95	1303	-0.72	4f105d(5I)4H	6.5	4f106p(5I)6I	7.5	85740.41	161112.8	
1329.825	75197.90	1329.825	0.000	176	42	6018	-0.99	4f105d(5F)6H	7.5	4f106p(5I)4K	6.5	93641.97	168839.9	
1330.806	75142.40	1330.812	-0.006	335	139	2952	-0.61	4f105d(5I)4K	6.5	4f106p(5I)4K	6.5	93697.73	168839.9	
1332.050	75072.20	1332.058	-0.008	261	106	689	-0.53	4f105d(5I)4I	6.5	4f106p(5I)6K	7.5	90598.50	165670.3	
1332.416	75051.60	1332.415	0.001	234	72	522.2	0.17	4f105d(5I)6H	5.5	4f106p(5I)4I	6.5	86559.40	161611.1	
1333.512	74990.00	1333.509	0.003	82	14	1146	-0.09	4f105d(5I)4G	3.5	4f106p(5I)6I	3.5	95872.96	170863.1	
1333.929	74966.50	1333.926	0.003	714	376	13830	-1.00	4f105d(5I)4L	8.5	4f106p(5I)6K	7.5	90703.64	165670.3	
1334.262	74947.80	1334.264	-0.002	254	109	1938	-0.52	4f105d(5I)4I	6.5	4f106p(5I)6H	5.5	90598.50	165546.2	
1335.711	74866.50	1335.714	-0.003	395	152	2375	-0.44	4f105d(5I)6Kb	6.5	4f106p(5I)4I	6.5	86744.73	161611.1	
1335.938	74853.80	1335.939	-0.001	278	70	1167	0.59	4f105d(5I)6L	7.5	4f106p(5I)4I	6.5	86757.34	161611.1	
1336.300	74833.50	1336.308	-0.008	538	226	5503	-0.24	4f105d(5I)4K	5.5	4f106p(5I)4I	4.5	96154.60	170987.6	D
1336.300	74833.50	1336.302	-0.002	538	226	1258	0.98	4f105d(5I)6K	6.5	4f106p(5I)6K	6.5	82921.55	157754.9	D
1337.508	74765.90	1337.500	0.008	545	178	5876	0.85	4f105d(5I)4K	6.5	4f106p(5I)4I	5.5	93697.73	168464.1	
1338.013	74737.68	1338.009	0.004	550	123	4137	0.71	4f105d(5I)4I	6.5	4f106p(5I)6I	6.5	90598.50	165336.4	D
1338.013	74737.68	1338.021	-0.008	550	123	3268	0.63	4f105d(5F)6H	5.5	4f106p(5F)6G	4.5	93829.40	168566.6	D
1339.680	74644.70	1339.675	0.005	273	152	1149	0.48	4f105d(5I)6I	5.5	4f106p(5I)6K	6.5	83109.96	157754.9	
1339.863	74634.50	1339.860	0.003	185	71	707.6	0.35	4f105d(5F)6H	5.5	4f106p(5I)4I	5.5	93829.40	168464.1	
1340.040	74624.70	1340.039	0.001	198	66	772.9	-0.59	4f105d(5I)4H	5.5	4f106p(5I)6I	6.5	90711.70	165336.4	
1340.328	74608.60	1340.329	-0.001	360	194	2489	0.75	4f105d(5I)6I	6.5	4f106p(5I)6K	7.5	78916.79	153525.3	
1341.222	74558.90	1341.218	0.004	135	29	225.9	-0.25	4f105d(5I)4Hb	5.5	4f106p(5I)6H	4.5	91511.24	166070.3	
1341.311	74553.90	1341.309	0.002	121	20	546.8	-0.38	4f105d(5F)6H	4.5	4f106p(5I)6I	3.5	96309.02	170863.1	
1343.982	74405.80	1343.974	0.008	184	153	1433	0.35	4f105d(5I)6K	6.5	4f106p(5I)6I	5.5	82921.55	157327.8	
1344.030	74403.10	1344.025	0.005	210	135	124.4	-0.23	4f11(4I)4I	4.5	4f105d(5I)4G	5.5	12468.66	86872.06	
1344.490	74377.70	1344.480	0.010	210	92	481.6	-0.08	4f105d(5I)4I	7.5	4f106p(5I)6K	6.5	83376.71	157754.9	
1344.616	74370.70	1344.608	0.008	290	211	1454	-0.20	4f105d(5I)4K	8.5	4f106p(5I)6K	7.5	79154.18	153525.3	
1344.650	74368.80	1344.663	-0.010	383	106	648.7	0.25	4f105d(5I)6Kb	6.5	4f106p(5I)6I	7.5	86744.73	161112.8	
1344.756	74362.90	1344.754	0.002	127	23	459	0.49	4f105d(5I)4I	5.5	4f106p(5I)4K	6.5	94476.78	168839.9	
1344.897	74355.10	1344.891	0.006	82	13	195.1	-0.09	4f105d(5I)6L	7.5	4f106p(5I)6I	7.5	86757.34	161112.8	
1347.389	74217.60	1347.386	0.003	533	248	4143	-0.71	4f105d(5I)6I	5.5	4f106p(5I)6I	5.5	83109.96	157327.8	
1347.617	74205.10	1347.611	0.006	248	103	1440	0.82	4f105d(5I)6I	4.5	4f106p(5I)6K	5.5	86401.13	160606.5	
1347.767	74196.80	1347.758	0.009	551	299	5077	0.69	4f105d(5I)6I	6.5	4f106p(5I)6H	6.5	78916.79	153114.1	
1347.946	74186.90	1347.936	0.010	354	141	1921	0.75	4f105d(5I)4H	5.5	4f106p(5F)4G	5.5	90711.70	164899.2	
1348.379	74163.10	1348.376	0.003	394	262	4392	0.63	4f105d(5I)6Hb	7.5	4f106p(5I)6K	7.5	79362.02	153525.3	
1348.632	74149.20	1348.632	0.000	246	78	49.82	-0.03	4f105d(5I)6I	3.5	4f106p(5I)6K	4.5	88834.27	162983.5	
1349.702	74090.41	1349.696	0.006	142	18	24.58	-0.12	4f11(4I)4I	4.5	4f105d(5I)6H	5.5	12468.66	86559.40	D
1349.702	74090.41	1349.713	-0.010	142	18	1.34	0.00	4f105d(5I)4I	5.5	4f106p(5F)6G	4.5	94476.78	168566.6	D
1350.216	74062.20	1350.216	0.000	260	92	6053	0.62	4f105d(5I)4L	7.5	4f106p(5I)4K	6.5	94777.64	168839.9	
1350.496	74046.90	1350.491	0.005	304	135	1498	0.51	4f105d(5I)6H	5.5	4f106p(5I)6K	5.5	86559.40	160606.5	
1350.721	74034.60	1350.713	0.008	294	100	2098	0.56	4f105d(5I)4Hb	5.5	4f106p(5I)6H	5.5	91511.24	165546.2	
1350.776	74031.50	1350.769	0.007	435	245	3215	-1.00	4f105d(5I)6H	7.5	4f106p(5I)4K	8.5	73426.17	147458.0	
1351.590	73987.00	1351.583	0.007	299	153	3018	-0.71	4f105d(5I)4I	5.5	4f106p(5I)4I	5.5	94476.78	168464.1	
1351.890	73970.50	1351.887	0.003	416	190	3097	-0.73	4f105d(5I)6I	4.5	4f106p(5I)6I	4.5	86401.13	160371.8	

1353.885	73861.50	1353.880	0.005	180	59	597.5	-0.17	4f105d(5I)6Kb	6.5	4f106p(5I)6K	5.5	86744.73	160606.5
1354.560	73824.70	1354.552	0.008	247	81	1032	-0.53	4f105d(5I)4Hb	5.5	4f106p(5I)6I	6.5	91511.24	165336.4
1354.788	73812.30	1354.785	0.003	226	88	943.1	-0.34	4f105d(5I)6H	5.5	4f106p(5I)6I	4.5	86559.40	160371.8
1354.937	73804.20	1354.930	0.007	285	131	3331	-0.78	4f105d(5I)4I	4.5	4f106p(5I)4I	4.5	97183.02	170987.6
1355.902	73751.70	1355.894	0.008	264	121	2347	0.46	4f105d(5I)6Hb	7.5	4f106p(5I)6H	6.5	79362.02	153114.1
1355.934	73749.90	1355.931	0.003	219	353	6337	0.87	4f105d(5I)6I	8.5	4f106p(5I)4K	8.5	73708.00	147458.0
1356.924	73696.10	1356.923	0.001	140	48	688	0.37	4f105d(5I)4H	5.5	4f106p(5F)6D	4.5	90711.70	164407.8
1356.998	73692.10	1356.992	0.006	57	7	349.9	0.11	4f105d(5I)4H	4.5	4f106p(5F)6G	4.5	94874.22	168566.6
1357.220	73680.00	1357.219	0.001	178	78	1389	-0.84	4f105d(5I)4I	4.5	4f106p(5I)6I	3.5	97183.02	170863.1
1357.571	73661.00	1357.565	0.006	327	175	2817	0.75	4f105d(5I)6K	6.5	4f106p(5I)4H	6.5	82921.55	156582.9
1358.350	73618.70	1358.345	0.005	412	270	482.2	0.98	4f105d(5I)6H	4.5	4f106p(5I)6I	5.5	83708.79	157327.8
1358.605	73604.90	1358.601	0.004	479	401	6577	-0.78	4f105d(5I)6H	7.5	4f106p(5I)6H	7.5	73426.17	147031.3
1358.885	73589.70	1358.883	0.002	238	74	1224	0.60	4f105d(5I)4H	4.5	4f106p(5I)4I	5.5	94874.22	168464.1
1360.248	73516.00	1360.247	0.001	106	75	22.51	-0.02	4f11(4F)4F2	4.5	4f105d(5I)4H	3.5	24736.00	98252.07
1361.046	73472.90	1361.046	0.000	324	129	1426	-0.78	4f105d(5I)6I	5.5	4f106p(5I)4H	6.5	83109.96	156582.9
1361.910	73426.30	1361.912	-0.002	209	58	28.73	0.04	4f11(4I)4I	7.5	4f105d(5I)6H	7.5	0.00	73426.17
1362.622	73387.90	1362.621	0.001	125	83	756.6	-0.26	4f105d(5I)4Hb	5.5	4f106p(5F)4G	5.5	91511.24	164899.2
1362.939	73370.80	1362.937	0.002	234	386	6648	0.93	4f105d(5I)6G	5.5	4f106p(5I)6H	6.5	79743.13	153114.1
1363.170	73358.40	1363.167	0.003	112	201	1306	-0.86	4f105d(5I)4G	4.5	4f106p(5I)6H	5.5	92187.63	165546.2
1363.823	73323.30	1363.823	0.000	160	286	3279	0.63	4f105d(5I)6I	8.5	4f106p(5I)6H	7.5	73708.00	147031.3
1363.997	73313.90	1363.991	0.006	58	113	1476	0.46	4f105d(5F)6D	4.5	4f106p(5F)6G	4.5	95252.35	168566.6
1364.769	73272.50	1364.779	-0.010	71	117	169.6	-0.27	4f105d(5F)6H	6.5	4f106p(5I)6I	6.5	92064.49	165336.4
1365.992	73206.90	1366.005	-0.010	223	127	1558	0.59	4f105d(5I)4I	7.5	4f106p(5I)4H	6.5	83376.71	156582.9
1366.265	73192.20	1366.281	-0.020	186	115	1496	0.57	4f105d(5I)6L	8.5	4f106p(5I)4I	7.5	82610.32	155801.7
1366.958	73155.10	1366.966	-0.008	71	26	298.7	0.60	4f105d(5I)6L	6.5	4f106p(5I)4H	5.5	89157.31	162312.0
1368.886	73052.10	1368.888	-0.002	117	69	9.584	-0.05	4f11(4F)4F	4.5	4f105d(5I)6K	5.5	15404.86	88456.86
1371.800	72896.90	1371.806	-0.006	94	66	833	-0.39	4f105d(5I)4Hb	5.5	4f106p(5F)6D	4.5	91511.24	164407.8
1372.109	72880.50	1372.116	-0.007	183	129	1409	-0.53	4f105d(5I)6K	6.5	4f106p(5I)4I	7.5	82921.55	155801.7
1372.575	72855.80	1372.572	0.003	160	96	22.42	-0.07	4f11(2H)2H2	5.5	4f105d(5I)4G	4.5	19331.69	92187.63
1372.971	72834.70	1372.972	-0.001	358	283	6281	0.80	4f105d(5F)6H	6.5	4f106p(5F)4G	5.5	92064.49	164899.2
1374.330	72762.70	1374.336	-0.006	197	160	635	0.16	4f105d(5I)4Ib	7.5	4f106p(5I)6K	6.5	84992.54	157754.9
1374.843	72735.60	1374.844	-0.001	134	98	1301	0.63	4f105d(5I)4H	3.5	4f106p(5I)4I	4.5	98252.07	170987.6
1375.291	72711.90	1375.297	-0.006	145	90	37.56	-0.07	4f105d(5I)4G	4.5	4f106p(5F)4G	5.5	92187.63	164899.2
1375.641	72693.40	1375.636	0.005	131	55	963.7	-0.73	4f105d(5I)4G	3.5	4f106p(5F)6G	4.5	95872.96	168566.6
1377.197	72611.20	1377.202	-0.005	211	124	1946	0.77	4f105d(5I)4H	3.5	4f106p(5I)6I	3.5	98252.07	170863.1
1379.406	72495.00	1379.405	0.001	472	498	8242	1.00	4f105d(5I)6G	6.5	4f106p(5I)6H	7.5	74536.27	147031.3
1380.315	72447.20	1380.319	-0.004	293	246	23.91	-0.02	4f11(4F)4F2	4.5	4f105d(5I)4I	4.5	24736.00	97183.02
1380.737	72425.10	1380.739	-0.002	282	217	2828	-0.63	4f105d(5I)4I	7.5	4f106p(5I)4I	7.5	83376.71	155801.7
1380.982	72412.20	1380.987	-0.005	41	24	159.9	0.07	4f105d(5I)4K	5.5	4f106p(5F)6G	4.5	96154.60	168566.6
1381.049	72408.70	1381.043	0.006	105	66	27.18	-0.07	4f11(4I)4I	6.5	4f105d(5I)6I	6.5	6507.750	78916.79
1381.298	72395.70	1381.293	0.005	120	69	359.8	0.19	4f105d(5I)6L	8.5	4f106p(5I)6I	8.5	82610.32	155006.2
1383.665	72271.80	1383.666	-0.001	72	21	331.1	-0.39	4f105d(5I)4H	5.5	4f106p(5I)6K	4.5	90711.70	162983.5
1384.650	72220.40	1384.654	-0.004	47	13	151.9	0.31	4f105d(5I)4G	4.5	4f106p(5F)6D	4.5	92187.63	164407.8
1385.430	72179.70	1385.434	-0.004	142	98	70.18	-0.1	4f11(2H)2H2	5.5	4f105d(5I)4Hb	5.5	19331.69	91511.24
1385.907	72154.90	1385.904	0.003	52	9	214.6	-0.46	4f105d(5F)6H	4.5	4f106p(5I)4I	5.5	96309.02	168464.1
1386.010	72149.50	1386.008	0.002	243	160	2401	-0.54	4f105d(5I)6K	5.5	4f106p(5I)6K	5.5	88456.86	160606.5
1388.617	72014.10	1388.609	0.008	331	171	22.68	-0.57	4f105d(5I)4H	6.5	4f106p(5I)6K	6.5	85740.41	157754.9
1389.723	71956.80	1389.723	0.000	89	46	47.29	0.10	4f11(4G)4G	5.5	4f105d(5F)4G	5.5	26707.79	98664.60
1390.532	71914.90	1390.531	0.001	207	130	1743	0.41	4f105d(5I)6K	5.5	4f106p(5I)6I	4.5	88456.86	160371.8
1391.800	71849.40	1391.818	-0.020	21	2	113.7	0.03	4f105d(5I)4K	6.5	4f106p(5I)6H	5.5	93697.73	165546.2
1392.484	71814.10	1392.482	0.002	378	278	6499	0.95	4f105d(5I)6L	5.5	4f106p(5I)6K	4.5	91169.27	162983.5

1394.439	71713.40	1394.438	0.001	114	74	651.3	0.31	4f105d(5I)4I	6.5	4f106p(5I)4H	5.5	90598.50	162312.0	
1395.442	71661.90	1395.442	0.000	85	65	233.1	0.06	4f105d(5I)4K	7.5	4f106p(5I)4I	6.5	89949.21	161611.1	
1395.893	71638.70	1395.894	-0.001	21	16	28.13	-0.01	4f105d(5I)4K	6.5	4f106p(5I)6I	6.5	93697.73	165336.4	
1396.075	71629.40	1396.072	0.003	111	26	500.7	0.36	4f105d(5I)4I	7.5	4f106p(5I)6I	8.5	83376.71	155006.2	
1396.644	71600.20	1396.642	0.002	136	94	921.6	-0.43	4f105d(5I)4H	5.5	4f106p(5I)4H	5.5	90711.70	162312.0	
1396.776	71593.40	1396.774	0.002	60	52	326.7	0.27	4f105d(5I)4I	5.5	4f106p(5I)6H	4.5	94476.78	166070.3	
1396.896	71587.30	1396.895	0.001	140	91	793.9	0.42	4f105d(5I)4H	6.5	4f106p(5I)6I	5.5	85740.41	157327.8	
1397.867	71537.60	1397.867	0.000	67	41	324.6	0.14	4f105d(5I)6I	3.5	4f106p(5I)6I	4.5	88834.27	160371.8	
1399.086	71475.20	1399.088	-0.002	744	447	9120	-0.83	4f105d(5I)6K	9.5	4f106p(5I)4K	8.5	75982.90	147458.0	
1399.246	71467.00	1399.243	0.003	440	247	392.9	-0.34	4f11(4F)4F	4.5	4f105d(5I)4G	5.5	15404.86	86872.06	
1399.599	71449.00	1399.595	0.004	428	306	7036	0.85	4f105d(5I)6L	6.5	4f106p(5I)6K	5.5	89157.31	160606.5	
1400.196	71418.60	1400.195	0.001	83	35	23.28	-0.05	4f11(4F)4F2	4.5	4f105d(5I)4K	5.5	24736.00	96154.60	
1400.873	71384.10	1400.882	-0.009	169	73	34.06	-0.02	4f105d(5I)4I	4.5	4f106p(5F)6G	4.5	97183.02	168566.6	
1400.954	71379.90	1400.952	0.002	196	72	59.76	-0.07	4f11(2H)2H2	5.5	4f105d(5I)4H	5.5	19331.69	90711.70	
1403.180	71266.70	1403.178	0.002	200	127	96.94	-0.25	4f11(2H)2H2	5.5	4f105d(5I)4I	6.5	19331.69	90598.50	
1404.461	71201.70	1404.465	-0.004	73	46	259.6	-0.22	4f105d(5I)4K	6.5	4f106p(5F)4G	5.5	93697.73	164899.2	
1404.576	71195.86	1404.571	0.005	169		552.4	0.13	4f105d(5I)4H	4.5	4f106p(5I)6H	4.5	94874.22	166070.3	D
1404.576	71195.86	1404.583	-0.007	169		285.4	-0.27	4f105d(5I)6H	5.5	4f106p(5I)6K	6.5	86559.40	157754.9	D
1405.207	71163.90	1405.213	-0.006	98	55	258	-0.06	4f105d(5I)4K	7.5	4f106p(5I)6I	7.5	89949.21	161112.8	
1405.401	71154.10	1405.392	0.009	345	252	69.05	-0.22	4f11(4F)4F	4.5	4f105d(5I)6H	5.5	15404.86	86559.40	
1407.068	71069.78	1407.074	-0.006	228	101	696.8	0.14	4f105d(5I)4I	5.5	4f106p(5I)6H	5.5	94476.78	165546.2	D
1407.068	71069.78	1407.067	0.001	228	101	323.4	-0.21	4f105d(5F)6H	5.5	4f106p(5F)4G	5.5	93829.40	164899.2	D
1408.196	71012.80	1408.201	-0.005	234	111	1353	-0.33	4f105d(5I)4I	6.5	4f106p(5I)4I	6.5	90598.50	161611.1	
1408.249	71010.10	1408.248	0.001	249	96	958.8	-0.19	4f105d(5I)6Kb	6.5	4f106p(5I)6K	6.5	86744.73	157754.9	
1408.495	70997.70	1408.499	-0.004	531	313	7250	0.85	4f105d(5I)6L	7.5	4f106p(5I)6K	6.5	86757.34	157754.9	
1409.900	70927.00	1409.907	-0.007	120	20	239.5	0.08	4f105d(5I)6I	4.5	4f106p(5I)6I	5.5	86401.13	157327.8	
1410.135	70915.20	1410.139	-0.004	493	428	7790	0.88	4f105d(5I)6L	8.5	4f106p(5I)6K	7.5	82610.32	153525.3	
1410.446	70899.60	1410.450	-0.004	136	77	609.5	0.50	4f105d(5I)4H	5.5	4f106p(5I)4I	6.5	90711.70	161611.1	
1410.581	70892.80	1410.583	-0.002	100	30	30.5	-0.03	4f105d(5I)4L	7.5	4f106p(5I)6K	7.5	94777.64	165670.3	
1410.779	70882.80	1410.778	0.001	154	186	488.1	0.29	4f105d(5I)4G	5.5	4f106p(5I)6K	6.5	86872.06	157754.9	
1411.235	70859.90	1411.241	-0.006	9		64.09	0.05	4f105d(5I)4I	5.5	4f106p(5I)6I	6.5	94476.78	165336.4	
1411.583	70842.50	1411.583	0.000	256	170	1471	-0.30	4f105d(5I)4H	6.5	4f106p(5I)4H	6.5	85740.41	156582.9	
1412.065	70818.20	1412.071	-0.006	103	51	584.6	-0.73	4f105d(5F)6D	4.5	4f106p(5I)6H	4.5	95252.35	166070.3	
1412.244	70809.30	1412.246	-0.002	293	200	1675	-0.44	4f105d(5I)4Ib	7.5	4f106p(5I)4I	7.5	84992.54	155801.7	
1412.411	70800.90	1412.414	-0.003	167	86	644.1	-0.24	4f105d(5I)4Hb	5.5	4f106p(5I)4H	5.5	91511.24	162312.0	
1413.055	70768.70	1413.061	-0.006	93	45	264.9	-0.05	4f105d(5I)6H	5.5	4f106p(5I)6I	5.5	86559.40	157327.8	
1413.701	70736.30	1413.701	0.000	412	258	5561	0.76	4f105d(3K)4K2	7.5	4f106p(3K)4I2	7.5	100035.2	170771.5	
1414.980	70672.40	1414.988	-0.008	62	10	248.3	0.13	4f105d(5I)4H	4.5	4f106p(5I)6H	5.5	94874.22	165546.2	
1416.352	70603.93	1416.355	-0.003	76	53	111.6	-0.05	4f105d(5I)6K	6.5	4f106p(5I)6K	7.5	82921.55	153525.3	
1416.769	70583.13	1416.771	-0.002	179	128	812.8	0.18	4f105d(5I)6Kb	6.5	4f106p(5I)6I	5.5	86744.73	157327.8	
1416.863	70578.44	1416.863	0.000	99	70	187.5	0.11	4f105d(5F)6H	5.5	4f106p(5F)6D	4.5	93829.40	164407.8	
1417.261	70558.66	1417.258	0.003	30	8	61.37	0.02	4f105d(5I)4L	7.5	4f106p(5I)6I	6.5	94777.64	165336.4	
1418.159	70513.93	1418.152	0.007	74	39	196.8	0.16	4f105d(5I)4I	6.5	4f106p(5I)6I	7.5	90598.50	161112.8	
1419.317	70456.43	1419.322	-0.005	102	9	51.85	-0.03	4f105d(5I)6K	8.5	4f106p(5I)4I	7.5	85345.53	155801.7	
1419.784	70433.25	1419.778	0.006	184	140	1633	-0.94	4f105d(5F)6H	6.5	4f106p(3K)4I2	7.5	100337.9	170771.5	
1420.004	70422.34	1420.002	0.002	12		136.6	0.17	4f105d(5I)4I	5.5	4f106p(5F)4G	5.5	94476.78	164899.2	
1420.265	70409.40	1420.269	-0.004	63	18	174.6	0.03	4f105d(5I)4L	8.5	4f106p(5I)6I	7.5	90703.64	161112.8	
1422.602	70293.72	1422.600	0.002	217	161	282.6	0.31	4f105d(5F)6D	4.5	4f106p(5I)6H	5.5	95252.35	165546.2	
1423.534	70247.69	1423.538	-0.004	15		77.43	0.21	4f105d(5F)6H	6.5	4f106p(5I)4H	5.5	92064.49	162312.0	
1424.547	70197.76	1424.555	-0.008	211	129	2055	0.85	4f105d(5I)4G	3.5	4f106p(5I)6H	4.5	95872.96	166070.3	

1424.647	70192.81	1424.653	-0.006	116	79	333.7	-0.06	4f105d(5I)6K	6.5	4f106p(5I)6H	6.5	82921.55	153114.1
1425.540	70148.87	1425.545	-0.005	263	182	1607	-0.31	4f105d(5I)4I	7.5	4f106p(5I)6K	7.5	83376.71	153525.3
1426.032	70124.63	1426.038	-0.006	346	231	3976	0.88	4f105d(5I)4G	4.5	4f106p(5I)4H	5.5	92187.63	162312.0
1426.533	70100.04	1426.537	-0.004	107	43	233.1	0.12	4f105d(5I)4Hb	5.5	4f106p(5I)4I	6.5	91511.24	161611.1
1427.316	70061.58	1427.322	-0.006	255	157	1440	0.63	4f105d(5I)4H	6.5	4f106p(5I)4I	7.5	85740.41	155801.7
1428.087	70023.76	1428.093	-0.006	216	150	837.6	0.32	4f105d(5I)6H	5.5	4f106p(5I)4H	6.5	86559.40	156582.9
1428.289	70013.82	1428.292	-0.003	136	28	330.9	0.37	4f105d(5I)4Ib	7.5	4f106p(5I)6I	8.5	84992.54	155006.2
1428.489	70004.04	1428.487	0.002	125	81	50.53	-0.01	4f105d(5I)6I	5.5	4f106p(5I)6H	6.5	83109.96	153114.1
1430.577	69901.86	1430.574	0.003	170	129	1087	0.39	4f105d(5F)4G	5.5	4f106p(5F)6G	4.5	98664.60	168566.6
1431.883	69838.11	1431.883	0.000	97	44	224	0.15	4f105d(5I)6Kb	6.5	4f106p(5I)4H	6.5	86744.73	156582.9
1432.130	69826.08	1432.141	-0.010	82	25	165.9	-0.16	4f105d(5I)6L	7.5	4f106p(5I)4H	6.5	86757.34	156582.9
1432.672	69799.64	1432.676	-0.004	94	48	91.32	0.21	4f105d(5F)4G	5.5	4f106p(5I)4I	5.5	98664.60	168464.1
1433.952	69737.33	1433.951	0.001	219	137	985.3	-0.29	4f105d(5I)4I	7.5	4f106p(5I)6H	6.5	83376.71	153114.1
1434.493	69711.04	1434.498	-0.005	407	309	4274	0.63	4f105d(5I)4G	5.5	4f106p(5I)4H	6.5	86872.06	156582.9
1435.535	69660.43	1435.529	0.006	88	38	139.1	0.06	4f105d(5I)6K	8.5	4f106p(5I)6I	8.5	85345.53	155006.2
1435.811	69647.04	1435.815	-0.004	9		34.19	0.04	4f105d(5F)6D	4.5	4f106p(5F)4G	5.5	95252.35	164899.2
1437.884	69546.62	1437.885	-0.001	65	85	47.13	-0.14	4f105d(5I)6H	6.5	4f106p(5I)4I	6.5	92064.49	161611.1
1440.588	69416.12	1440.586	0.002	50		15.71	-0.02	4f11(4G)4G	4.5	4f105d(5I)4I	4.5	27766.82	97183.02
1441.100	69391.46	1441.097	0.003	10		27.13	-0.02	4f105d(5I)4K	5.5	4f106p(5I)6H	5.5	96154.60	165546.2
1447.360	69091.31	1447.357	0.003	27		111.1	-0.03	4f105d(5I)6L	9.5	4f106p(5I)6I	8.5	85914.80	155006.2
1448.267	69048.06	1448.261	0.006	39		31.82	0.15	4f105d(5F)6H	6.5	4f106p(5I)6I	7.5	92064.49	161112.8
1448.346	69044.26	1448.344	0.002	17		48.27	-0.10	4f105d(5I)6L	7.5	4f106p(5I)4I	7.5	86757.34	155801.7
1451.649	68887.16	1451.646	0.003	129	32	146.3	-0.12	4f105d(5I)4I	4.5	4f106p(5I)6H	4.5	97183.02	166070.3
1464.044	68303.94	1464.046	-0.002	169	166	778.3	-0.13	4f105d(5I)4K	8.5	4f106p(5I)4K	8.5	79154.18	147458.0
1466.710	68179.79	1466.710	0.000	167	162	350.5	0.04	4f105d(5I)6K	8.5	4f106p(5I)6K	7.5	85345.53	153525.3
1468.129	68113.92	1468.116	0.010	248	156	59.83	-0.01	4f105d(5I)6I	6.5	4f106p(5I)6H	7.5	78916.79	147031.3
1468.287	68106.55	1468.296	-0.009	90	12	16.87	-0.05	4f11(4G)4G	4.5	4f105d(5I)4G	3.5	27766.82	95872.96
1471.978	67935.82	1471.979	-0.001	293	193	1438	0.14	4f105d(5I)4L	9.5	4f106p(5I)4K	8.5	79522.29	147458.0
1473.251	67877.11	1473.250	0.001	148	103	526.8	-0.12	4f105d(5I)4K	8.5	4f106p(5I)6H	7.5	79154.18	147031.3
1474.531	67818.16	1474.529	0.002	34	15	214.4	0.17	4f105d(5I)4H	3.5	4f106p(5I)6H	4.5	98252.07	166070.3
1475.253	67785.00	1475.255	-0.002	31	12	122.4	0.11	4f105d(5I)4H	6.5	4f106p(5I)6K	7.5	85740.41	153525.3
1475.327	67781.56	1475.325	0.002	67	49	48.97	0.15	4f105d(5F)6H	5.5	4f106p(5I)4I	6.5	93829.40	161611.1
1475.601	67768.98	1475.601	0.000	15		16.39	-0.04	4f11(4G)4G	5.5	4f105d(5I)4I	5.5	26707.79	94476.78
1476.992	67705.16	1476.994	-0.002	67	41	14.24	0.15	4f11(4F)4F	4.5	4f105d(5I)6I	5.5	15404.86	83109.96
1477.775	67669.31	1477.775	0.000	29		15.79	0.00	4f105d(5I)6Hb	7.5	4f106p(5I)6H	7.5	79362.02	147031.3
1480.593	67540.49	1480.596	-0.003	159	133	91.75	-0.10	4f11(2H)2H2	5.5	4f105d(5I)4G	5.5	19331.69	86872.06
1481.799	67485.55	1481.799	0.000	48	42	22.04	-0.06	4f11(4G)4G	4.5	4f105d(5F)6D	4.5	27766.82	95252.35
1482.539	67451.85	1482.544	-0.005	65	36	35.11	-0.07	4f11(4F)4F2	4.5	4f105d(5I)4G	4.5	24736.00	92187.63
1484.259	67373.69	1484.259	0.000	38	29	147.6	0.06	4f105d(5I)4H	6.5	4f106p(5I)6H	6.5	85740.41	153114.1
1487.480	67227.79	1487.482	-0.002	124	89	39.14	-0.13	4f11(2H)2H2	5.5	4f105d(5I)6H	5.5	19331.69	86559.40
1489.059	67156.53	1489.061	-0.002	72	31	282.3	-0.08	4f105d(5I)4I	6.5	4f106p(5I)6K	6.5	90598.50	157754.9
1490.146	67107.50	1490.149	-0.003	128	65	55.89	-0.08	4f11(4G)4G	4.5	4f105d(5I)4H	4.5	27766.82	94874.22
1491.209	67059.68	1491.210	-0.001	16		27.12	0.06	4f105d(5F)6D	4.5	4f106p(5I)4H	5.5	95252.35	162312.0
1492.763	66989.86	1492.761	0.002	93	37	13.4	-0.07	4f11(4G)4G	5.5	4f105d(5I)4K	6.5	26707.79	93697.73
1494.566	66909.05	1494.572	-0.006	22		63.42	0.02	4f105d(5I)4K	6.5	4f106p(5I)6K	5.5	93697.73	160606.5
1496.359	66828.90	1496.359	0.000	29	8	65.32	0.02	4f105d(5I)4K	5.5	4f106p(5I)6K	4.5	96154.60	162983.5
1497.553	66775.58	1497.561	-0.008	52	29	16.82	-0.06	4f11(4F)4F2	4.5	4f105d(5I)4Hb	5.5	24736.00	91511.24
1497.709	66768.64	1497.724	-0.010	17	16	52.1	-0.02	4f105d(5I)6L	7.5	4f106p(5I)6K	7.5	86757.34	153525.3
1498.586	66729.58	1498.593	-0.007	17		51.89	0.03	4f105d(5I)4I	6.5	4f106p(5I)6I	5.5	90598.50	157327.8
1499.026	66710.00	1499.027	-0.001	155	89	71.45	-0.20	4f11(4G)4G	4.5	4f105d(5I)4I	5.5	27766.82	94476.78
1501.148	66615.68	1501.139	0.009	42		59.68	-0.04	4f105d(5I)4H	5.5	4f106p(5I)6I	5.5	90711.70	157327.8

Asym

1502.514	66555.10	1502.523	-0.009	43	14	33.42	-0.01	4f105d(5I)6H	5.5	4f106p(5I)6H	6.5	86559.40	153114.1
1505.822	66408.91	1505.826	-0.004	274	158	123.9	-0.21	4f11(2H)2H2	5.5	4f105d(5I)4H	6.5	19331.69	85740.41
1509.615	66242.07	1509.615	0.000	100	19	367.9	-0.17	4f105d(5I)4G	5.5	4f106p(5I)6H	6.5	86872.06	153114.1
1509.786	66234.54	1509.785	0.001	127	74	707.7	-0.30	4f105d(5F)4G	5.5	4f106p(5F)4G	5.5	98664.60	164899.2
1512.179	66129.75	1512.179	0.000	54	11	148.8	-0.08	4f105d(5I)4I	5.5	4f106p(5I)6K	5.5	94476.78	160606.5
1515.082	66003.02	1515.083	-0.001	16		42.46	-0.11	4f105d(5F)6H	4.5	4f106p(5I)4H	5.5	96309.02	162312.0
1515.506	65984.56	1515.511	-0.005	27		59.35	-0.03	4f105d(5I)4I	6.5	4f106p(5I)4H	6.5	90598.50	156582.9
1515.711	65975.66	1515.710	0.001	53	6	14.01	-0.05	4f11(4F)4F2	4.5	4f105d(5I)4H	5.5	24736.00	90711.70
1517.562	65895.14	1517.565	-0.003	4		45.74	0.04	4f105d(5I)4I	5.5	4f106p(5I)6I	4.5	94476.78	160371.8
1518.127	65870.64	1518.115	0.010	21		33.77	0.04	4f105d(5I)4H	5.5	4f106p(5I)4H	6.5	90711.70	156582.9
1519.374	65816.60	1519.375	-0.001	116	55	176.3	-0.08	4f105d(5I)4Hb	5.5	4f106p(5I)6I	5.5	91511.24	157327.8
1519.746	65800.45	1519.746	0.000	79	29	244.2	-0.15	4f105d(5I)4I	4.5	4f106p(5I)6K	4.5	97183.02	162983.5
1521.072	65743.10	1521.069	0.003	101	42	326.7	-0.21	4f105d(5F)4G	5.5	4f106p(5F)6D	4.5	98664.60	164407.8
1521.325	65732.16	1521.322	0.003	30		114	0.13	4f105d(5I)4H	4.5	4f106p(5I)6K	5.5	94874.22	160606.5
1526.775	65497.53	1526.773	0.002	64	15	180.9	-0.10	4f105d(5I)4H	4.5	4f106p(5I)6I	4.5	94874.22	160371.8
1533.671	65203.04	1533.667	0.004	81	23	69.36	0.10	4f105d(5I)4I	6.5	4f106p(5I)4I	7.5	90598.50	155801.7
1535.156	65139.97	1535.152	0.004	152	83	548.8	0.42	4f105d(5I)4G	4.5	4f106p(5I)6I	5.5	92187.63	157327.8
1542.080	64847.47	1542.074	0.006	54	22	47.36	-0.02	4f105d(5I)6L	8.5	4f106p(5I)4K	8.5	82610.32	147458.0
1543.126	64803.52	1543.128	-0.002	40		10.82	-0.02	4f11(4G)4G	5.5	4f105d(5I)4Hb	5.5	26707.79	91511.24
1544.846	64731.39	1544.845	0.001	47	19	201.8	0.28	4f105d(5I)4H	3.5	4f106p(5I)6K	4.5	98252.07	162983.5
1550.406	64499.24	1550.415	-0.009	84	27	515.7	0.35	4f105d(5I)4G	3.5	4f106p(5I)6I	4.5	95872.96	160371.8
1552.289	64421.01	1552.293	-0.004	183	115	109.4	-0.11	4f11(4G)4G	4.5	4f105d(5I)4G	4.5	27766.82	92187.63
1552.584	64408.75	1552.586	-0.002	44		66.37	0.04	4f105d(5F)4Gb	5.5	4f106p(5F)6G	4.5	104157.9	168566.6
1557.219	64217.04	1557.214	0.005	122	42	15.2	0.01	4f105d(5I)4K	5.5	4f106p(5I)6I	4.5	96154.60	160371.8
1559.748	64112.93	1559.747	0.001	50	21	36.36	-0.03	4f105d(5F)6H	7.5	4f106p(5I)6K	6.5	93641.97	157754.9
1562.414	64003.53	1562.405	0.009	81	12	10.34	-0.02	4f11(4G)4G	5.5	4f105d(5I)4H	5.5	26707.79	90711.70
1565.177	63890.53	1565.173	0.004	157	115	28.51	-0.13	4f11(4G)4G	5.5	4f105d(5I)4I	6.5	26707.79	90598.50
1568.768	63744.27	1568.765	0.003	97	40	52.56	-0.14	4f11(4G)4G	4.5	4f105d(5I)4Hb	5.5	27766.82	91511.24
1568.954	63736.73	1568.942	0.010	31	14	15.8	0.21	4f105d(5F)6H	6.5	4f106p(5I)4I	7.5	92064.49	155801.7
1571.585	63630.01	1571.585	0.000	132	50	41	0.02	4f105d(5I)4K	6.5	4f106p(5I)6I	5.5	93697.73	157327.8
1572.581	63589.73	1572.578	0.003	129	47	47.97	0.17	4f11(2H)2H2	5.5	4f105d(5I)6K	6.5	19331.69	82921.55
1572.928	63575.72	1572.918	0.010	51		93.73	-0.02	4f105d(5I)4K	7.5	4f106p(5I)6K	7.5	89949.21	153525.3
1576.695	63423.80	1576.702	-0.007	55		62.83	0.07	4f105d(5I)4I	4.5	4f106p(5I)6K	5.5	97183.02	160606.5
1588.694	62944.79	1588.692	0.002	76	61	42.46	-0.10	4f11(4G)4G	4.5	4f105d(5I)4H	5.5	27766.82	90711.70
1589.166	62926.09	1589.148	0.020	65	25	55.93	0.06	4f105d(5I)4I	6.5	4f106p(5I)6K	7.5	90598.50	153525.3
1599.599	62515.68	1599.601	-0.002	54	14	134.9	0.07	4f105d(5I)4I	6.5	4f106p(5I)6H	6.5	90598.50	153114.1
1600.880	62465.65	1600.883	-0.003	21	6	39.28	0.04	4f105d(5I)4Ib	7.5	4f106p(5I)4K	8.5	84992.54	147458.0
1601.181	62453.90	1601.190	-0.009	32	5	46.43	0.05	4f105d(5I)4H	4.5	4f106p(5I)6I	5.5	94874.22	157327.8
1602.500	62402.50	1602.502	-0.002	31	63	37.45	-0.06	4f105d(5I)4H	5.5	4f106p(5I)6H	6.5	90711.70	153114.1
1608.757	62159.81	1608.758	-0.001	11		25.6	-0.40	4f105d(5F)6H	7.5	4f106p(5I)4I	7.5	93641.97	155801.7
1609.797	62119.62	1609.794	0.003	51	7	69.13	0.06	4f105d(5I)4H	3.5	4f106p(5I)6I	4.5	98252.07	160371.8
1609.978	62112.65	1609.981	-0.003	107		24.03	0.01	4f105d(5I)6K	8.5	4f106p(5I)4K	8.5	85345.53	147458.0
1610.214	62103.53	1610.203	0.010	101	92	11.03	0.05	4f105d(5I)4K	6.5	4f106p(5I)4I	7.5	93697.73	155801.7
1627.054	61460.79	1627.053	0.001	78	34	14.4	-0.11	4f105d(5F)6H	6.5	4f106p(5I)6K	7.5	92064.49	153525.3
1631.559	61291.09	1631.564	-0.005	31	9	72.45	-0.07	4f105d(5I)4H	6.5	4f106p(5I)6H	7.5	85740.41	147031.3
1662.105	60164.67	1662.116	-0.010	269	145	74.27	-0.10	4f11(4G)4G	5.5	4f105d(5I)4G	5.5	26707.79	86872.06
1671.484	59827.07	1671.470	0.010	47		10.84	0.02	4f105d(5I)4K	6.5	4f106p(5I)6K	7.5	93697.73	153525.3
1677.154	59624.83	1677.155	-0.001	8		31.04	-0.01	4f106s(5I)6I	8.5	4f106p(5I)6K	8.5	101709.8	161334.6
1691.898	59105.23	1691.897	0.001	186	149	49.01	0.15	4f11(4G)4G	4.5	4f105d(5I)4G	5.5	27766.82	86872.06
1693.972	59032.84	1693.979	-0.007	292	229	85.24	-0.17	4f11(4G)4G	5.5	4f105d(5I)4H	6.5	26707.79	85740.41
1705.393	58637.52	1705.399	-0.006	33	3	13.46	-0.03	4f105d(5I)4I	5.5	4f106p(5I)6H	6.5	94476.78	153114.1

1733.750	57678.44	1733.749	0.001	4		39.36	-0.14	4f105d(3K)4K2	5.5	4f106p(5I)6H	5.5	107867.7	165546.2
1778.933	56213.47	1778.924	0.009	83	112	23.67	0.11	4f11(4G)4G	5.5	4f105d(5I)6K	6.5	26707.79	82921.55
1779.547	56194.08	1779.537	0.010	2		389.4	-0.03	4f106s(3F)4G4	5.5	4f106p(5I)4K	6.5	112645.5	168839.9
1781.271	56139.68	1781.267	0.004	29		115.4	-0.05	4f106s(5I)4I	6.5	4f106p(5I)4K	6.5	112700.0	168839.9
1830.210	54638.54	1830.203	0.007	99	89	502.5	0.17	4f106s(5I)4I	7.5	4f106p(5I)6K	6.5	103116.2	157754.9
1832.053	54583.57	1832.056	-0.003	19	21	84.86	0.19	4f105d(3K)2I2	5.5	4f106p(5I)6H	5.5	110962.7	165546.2
1848.707	54091.85	1848.706	0.001	467	269	3857	0.71	4f106s(5I)6I	8.5	4f106p(5I)4I	7.5	101709.8	155801.7
1861.469	53721.02	1861.463	0.006	376	333	5724	0.82	4f106s(5I)6I	6.5	4f106p(5I)4H	5.5	108590.8	162312.0
1867.555	53545.93	1867.549	0.006	402	253	3299	0.51	4f106s(5I)6I	7.5	4f106p(5I)4I	6.5	108065.0	161611.1
1870.329	53466.54	1870.324	0.005	683	597	10720	0.88	4f106s(5I)4I	7.5	4f106p(5I)4H	6.5	103116.2	156582.9
1871.789	53424.82	1871.787	0.002	428	306	7450	0.94	4f106s(3F)4G4	5.5	4f106p(5I)6H	4.5	112645.5	166070.3
1873.072	53388.23	1873.069	0.003	902	679	18850	1.00	4f106s(5I)6I	8.5	4f106p(5I)6K	9.5	101709.8	155098.1
1876.294	53296.56	1876.299	-0.005	674	487	8797	0.82	4f106s(5I)6I	8.5	4f106p(5I)6I	8.5	101709.8	155006.2
1877.243	53269.62	1877.242	0.001	361	494	15700	0.99	4f106s(5I)6I	7.5	4f106p(5I)6K	8.5	108065.0	161334.6
1885.086	53047.99	1885.090	-0.004	523	246	7493	0.69	4f106s(5I)6I	7.5	4f106p(5I)6I	7.5	108065.0	161112.8
1886.066	53020.41	1886.071	-0.005	372	236	5519	0.80	4f106s(5I)6I	6.5	4f106p(5I)4I	6.5	108590.8	161611.1
1887.849	52970.35	1887.850	-0.001	628	451	13840	-0.99	4f106s(5I)4I	6.5	4f106p(5I)6K	7.5	112700.0	165670.3
1890.337	52900.63	1890.333	0.004	330	238	6441	0.81	4f106s(3F)4G4	5.5	4f106p(5I)6H	5.5	112645.5	165546.2
1891.904	52856.80	1891.908	-0.004	508	360	11450	0.97	4f106s(5I)4I	5.5	4f106p(5I)4K	6.5	115983.1	168839.9
1892.290	52846.04	1892.285	0.005	223	142	3099	-0.49	4f106s(5I)4I	6.5	4f106p(5I)6H	5.5	112700.0	165546.2
1897.171	52710.05	1897.171	0.000	15	11	76.42	0.41	4f105d(3H)4H4	6.5	4f106p(5I)6I	7.5	108402.8	161112.8
1897.861	52690.90	1897.859	0.002	234	176	4931	0.74	4f106s(3F)4G4	5.5	4f106p(5I)6I	6.5	112645.5	165336.4
1898.059	52685.42	1898.054	0.005	541	534	9654	0.90	4f106s(5I)4I	7.5	4f106p(5I)4I	7.5	103116.2	155801.7
1899.829	52636.33	1899.827	0.002	349	337	6949	-0.67	4f106s(5I)4I	6.5	4f106p(5I)6I	6.5	112700.0	165336.4
1903.969	52521.86	1903.964	0.005	204	237	3663	0.69	4f106s(5I)6I	6.5	4f106p(5I)6I	7.5	108590.8	161112.8
1905.460	52480.77	1905.454	0.006	230	298	5977	0.67	4f106s(5I)4I	5.5	4f106p(5I)4I	5.5	115983.1	168464.1
1915.730	52199.42	1915.739	-0.009	174	271	195	-0.38	4f106s(5I)4I	6.5	4f106p(5F)4G	5.5	112700.0	164899.2
1927.147	51890.17	1927.151	-0.004	449	509	7047	0.93	4f106s(5I)4I	7.5	4f106p(5I)6I	8.5	103116.2	155006.2
1929.923	51815.55	1929.925	-0.002	77	147	122.5	-0.08	4f106s(5I)6I	8.5	4f106p(5I)6K	7.5	101709.8	153525.3
2014.993	49611.94	2014.992	0.001	23		848.1	0.11	4f106s(5I)4I	6.5	4f106p(5I)4H	5.5	112700.0	162312.0
2051.182	48736.76	2051.174	0.008	13		545	-0.13	4f106s(5I)6I	6.5	4f106p(5I)6I	5.5	108590.8	157327.8
2185.193	45748.23	2185.194	-0.001	463		5027	-0.98	4f106s(5I)6I	8.5	4f106p(5I)4K	8.5	101709.8	147458.0
2199.029	45460.42	2199.031	-0.002	330		3545	-0.70	4f106s(5I)6I	7.5	4f106p(5I)6K	7.5	108065.0	153525.3
2205.776	45321.39	2205.772	0.004	531		6818	0.99	4f106s(5I)6I	8.5	4f106p(5I)6H	7.5	101709.8	147031.3
2216.133	45109.60	2216.139	-0.006	72		3851	0.62	4f106s(3F)4G4	5.5	4f106p(5I)6K	6.5	112645.5	157754.9
2218.821	45054.96	2218.823	-0.002	131		2716	0.64	4f106s(5I)4I	6.5	4f106p(5I)6K	6.5	112700.0	157754.9
2219.107	45049.14	2219.107	0.000	268		4789	0.83	4f106s(5I)6I	7.5	4f106p(5I)6H	6.5	108065.0	153114.1
2224.758	44934.73	2224.769	-0.010	86		2740	0.54	4f106s(5I)6I	6.5	4f106p(5I)6K	7.5	108590.8	153525.3
2237.323	44682.40	2237.327	-0.004	28		1807	0.36	4f106s(3F)4G4	5.5	4f106p(5I)6I	5.5	112645.5	157327.8
2240.063	44627.75	2240.063	0.000	86		3749	0.81	4f106s(5I)4I	6.5	4f106p(5I)6I	5.5	112700.0	157327.8
2240.284	44623.34	2240.282	0.002	13		2126	0.66	4f106s(5I)4I	5.5	4f106p(5I)6K	5.5	115983.1	160606.5
2245.321	44523.26	2245.319	0.002	77		1212	-0.33	4f106s(5I)6I	6.5	4f106p(5I)6H	6.5	108590.8	153114.1
2252.125	44388.75	2252.129	-0.004	137		2768	0.80	4f106s(5I)4I	5.5	4f106p(5I)6I	4.5	115983.1	160371.8
2254.506	44341.89	2254.506	0.000	404		4737	0.67	4f106s(5I)4I	7.5	4f106p(5I)4K	8.5	103116.2	147458.0
2276.409	43915.27	2276.417	-0.008	205		2082	-0.50	4f106s(5I)4I	7.5	4f106p(5I)6H	7.5	103116.2	147031.3

* Wavelengths below 2000Å are in vacuum, and above 2000Å, in air.

**The number after a term designation is a seniority number of the parent term as given by Cowan's code ; a lowercase letter is used to distinguish two levels with the same main component.

*** D : double identification ; asym : asymmetrical line. The marked lines were excluded from the optimization of level energies.