

## Refinement of the crystal structure of celsian

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## Abstract

The crystal structure of celsian from Jakobsberg, Sweden, ( $\text{Ba}_{0.95}\text{K}_{0.05}\text{Al}_{1.96}\text{Si}_{2.05}\text{O}_8$ ,  $a = 8.622$ ,  $b = 13.078$ ,  $c = 14.411$  Å,  $\beta = 115.09^\circ$ , space group  $I2/c$ ) has been refined using 528 'a' reflections ( $h+k$  even,  $l$  even) and 272 'b' reflections ( $h+k$  odd,  $l$  odd)  $> 1\sigma$ . The 'b' reflections were measured at one-quarter the rate of 'a' reflections to obtain a higher level of significance for these very much weaker 'difference' reflections whose intensities are related only to Al/Si ordering in the tetrahedral framework.

The Jakobsberg celsian is very similar to a celsian from Broken Hill, Australia, ( $\text{Ca}_{\sim 84}\text{Or}_{\sim 18}$ ) refined by Newnham and Megaw (1960). The mean T-O distances for the symmetrically non-equivalent tetrahedral sites are  $T_1\text{O} = 1.639$ ,  $T_2z = 1.636$ ;  $T_1z = 1.719$ ,  $T_2\text{O} = 1.718$  Å, indicating that by comparison with fully ordered anorthite the Si-rich sites contain  $\sim 0.18$  Al and the Al-rich sites  $\sim 0.79$  Al. In the Broken Hill celsian the Al contents are  $\sim 0.17$  and  $\sim 0.76$ , respectively, consistent with a somewhat lower Al/(Al+Si) ratio. These partially disordered Al/Si distributions are not in strict accord with the aluminum avoidance principle and may result from anti-phase domain textures as previously observed in bytownite and transitional anorthite.

## Introduction

The first X-ray study of celsian ( $\text{BaAl}_2\text{Si}_2\text{O}_8$ , symbol: Cn) by Taylor *et al.*, (1934) showed it to be approximately isomorphous with the monoclinic K-feldspar orthoclase. Subsequently, Gay (1956) found that single crystal photographs of celsian showed a set of very weak diffraction maxima with  $h+k$  odd,  $l$  odd, indicating that celsian is body-centered and that the  $c$ -dimension of its unit cell is  $\sim 14.4$  Å, approximately twice that of the  $C2/m$  orthoclase. The choice of the unconventional space group symbol  $I2/c$  (cf. Fig. 1, Chiari *et al.*, 1975) was made by Newnham and Megaw (1960) in order to preserve the axial orientation of celsian relative to orthoclase and other feldspars, some of which also have been assigned unconventional space group symbols (albite and microcline,  $C\bar{1}$ ; bytownite,  $I\bar{1}$ ).

Newnham and Megaw (1960) solved the structure of a celsian (approximate formula  $\text{Ba}_{0.84}\text{K}_{0.16}\text{Al}_{1.90}\text{Si}_{2.11}\text{O}_8$ ) from Broken Hill, Australia, using intensities from five zero-layer Weissenberg photographs taken about

the zones [100], [010], [001], [110], and [111]. They first determined the "average" structure, using only the strong 'a'-type reflections ( $h+k$  even,  $l$  even) and refining in space group  $C2/m$  with  $c = 7.2$  Å. This symmetrized unit cell has the Ba atom and one oxygen ( $\text{O}_{A2}$ ) on the mirror plane, one oxygen ( $\text{O}_{A1}$ ) on the two-fold axis through the origin, and the two tetrahedrally coordinated Al, Si "average" atoms ( $T_1$  and  $T_2$ ) and the other oxygens  $\text{O}_B$ ,  $\text{O}_C$ ,  $\text{O}_D$  in general positions. Having refined the "average" or symmetrized structure, they continued the refinement in space group  $I2/c$  by including the weak 'b' reflections ( $h+k$  odd,  $l$  odd) and doubling the  $c$  cell edge. The Ba,  $\text{O}_{A1}$ , and  $\text{O}_{A2}$  atoms were shifted slightly from special to general positions. The tetrahedral and oxygen sites were "split" and given a notation which has since been simplified to  $T_1\text{O}$ ,  $T_1z$ ,  $T_2\text{O}$ ,  $T_2z$ ;  $\text{O}_B\text{O}$ ,  $\text{O}_Bz$ ;  $\text{O}_C\text{O}$ ,  $\text{O}_Cz$ ;  $\text{O}_D\text{O}$ ,  $\text{O}_Dz$  to indicate that they are related by a pseudo- $c/2$  translation in the doubled cell.<sup>2</sup>

Newnham and Megaw found that the mean T-O

<sup>2</sup> This notation is modified somewhat and simplified from that suggested by Megaw (1956). It corresponds to that used by Chiari *et al.* (1975).

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	Y(OBS)	Y(CALC)	A	B	OBS-CALC	SIG(D)	(O-C)/(SIG(D))	IQ	IL	Q	EXTING
-7	100.1828	99.7225	-99.7226	0.0	0.4603	2.4643	0.1868	1	1	12055.96	1.0
-7	46.5935	47.5729	-47.5729	0.0	-0.9794	3.7996	-0.2578	1	1	2745.40	1.0
-7	106.9943	105.3408	105.3408	0.0	1.6535	2.5393	0.6512	1	1	13043.32	1.0
-7	216.0962	213.2008	213.2008	0.0	2.8954	3.6567	0.7918	1	1	50303.04	1.0
-7	59.8767	61.5142	-61.5142	0.0	-1.6375	3.3900	-0.4831	1	1	4063.73	1.0
-7	26.6120	8.2481	-8.2481	0.0	18.3639	6.3071	2.9116	1	1	73.10	1.0
-6	86.9117	86.1747	86.1748	0.0	0.7370	2.8781	0.2561	1	1	7916.22	1.0
-6	86.1573	86.7328	-86.7328	0.0	-0.5754	2.6711	-0.2154	1	1	8342.32	1.0
-6	226.8059	220.0318	-220.0318	0.0	6.7741	3.6997	1.8310	1	1	54287.32	1.0
-6	130.6795	131.9816	-131.9816	0.0	-1.3021	2.7065	-0.4811	1	1	19174.52	1.0
-6	33.0591	37.7575	37.7575	0.0	-4.6984	5.4645	-0.8598	1	1	1616.00	1.0
-6	53.2680	51.4677	51.4677	0.0	1.8003	3.2509	0.5538	1	1	3236.32	1.0
-6	100.6489	102.8384	102.8384	0.0	-2.1894	2.4846	-0.8812	1	1	13538.10	1.0
-6	195.2009	195.0907	-195.0908	0.0	0.1101	3.2546	0.0338	1	1	49367.12	1.0
-6	197.6348	197.4440	-197.4440	0.0	0.1909	3.2939	0.0579	1	1	49466.71	1.0
-6	98.1329	92.1095	-92.1095	0.0	6.0234	2.6775	2.2496	1	1	10195.30	1.0
-6	105.9568	111.8101	111.8101	0.0	-5.8532	3.0961	-1.8905	1	1	14218.98	1.0
-6	285.4048	287.4377	287.4380	0.0	-2.0330	4.4804	-0.4537	1	1	104806.44	1.0
-6	142.4862	145.6172	145.6172	0.0	-3.1310	2.7528	-1.1374	1	1	29329.78	1.0
-6	139.5867	138.3758	-138.3758	0.0	1.2110	2.5900	0.4676	1	1	27976.43	1.0
-6	253.9609	255.3746	-255.3746	0.0	-1.4137	4.0381	-0.3501	1	1	96782.88	1.0
-6	172.7356	171.1059	-171.1059	0.0	1.6297	2.9560	0.5513	1	1	42334.07	1.0
-6	40.2741	32.5249	32.5249	0.0	7.7493	4.3752	1.7712	1	1	1138.46	1.0
-6	116.2769	120.0380	120.0380	0.0	-3.7611	2.5602	-1.4691	1	1	17738.11	1.0
-6	214.1829	214.7299	214.7299	0.0	-0.5470	3.4848	-0.1570	1	1	64064.50	1.0
-6	17.1553	16.0332	16.0332	0.0	1.1222	8.1653	0.1374	1	1	393.89	1.0
-6	150.3685	150.7283	-150.7284	0.0	-0.3599	2.6454	-0.1360	1	1	37076.86	1.0
-6	55.3755	54.2652	-54.2653	0.0	1.1103	2.8026	0.3962	1	1	4893.58	1.0
-6	326.3638	324.1465	-324.1467	0.0	2.2171	5.0381	0.4401	1	1	169422.94	1.0
-6	183.5703	186.5545	-186.5545	0.0	-2.9841	3.1150	-0.9580	1	1	52169.40	1.0
-6	96.3631	94.4299	94.4299	0.0	1.9333	2.5646	0.7538	1	1	10023.57	1.0
-6	207.4498	206.5882	206.5883	0.0	0.4615	3.4230	0.1348	1	1	55522.71	1.0
-6	106.0748	104.7480	104.7481	0.0	1.3268	2.3527	0.5639	1	1	16189.59	1.0
-6	15.0578	13.3780	13.3780	0.0	1.6799	8.3685	0.2007	1	1	314.95	1.0
-6	140.6768	139.1405	-139.1405	0.0	1.5363	2.5576	0.6007	1	1	34763.82	1.0
-6	306.7603	307.0046	-307.0049	0.0	-0.2446	4.7472	-0.0515	1	1	163663.31	1.0
-6	173.6399	173.5430	-173.5430	0.0	0.0969	3.80134	0.0322	1	1	48261.05	1.0
-6	66.3106	61.1674	-61.1674	0.0	5.1432	2.8559	1.8009	1	1	4269.43	1.0
-6	178.4853	176.6931	176.6932	0.0	1.7921	3.1614	0.5669	1	1	41188.89	1.0
-6	278.3633	280.3677	280.3679	0.0	-2.0044	4.3528	-0.4605	1	1	118461.88	1.0
-6	241.3130	243.3672	243.3672	0.0	-2.0542	3.8109	-0.5390	1	1	99626.38	1.0
-6	77.1367	80.8661	-80.8661	0.0	-3.7295	3.8413	-0.9709	1	1	11823.09	1.0
-6	487.0171	492.6995	-492.6997	0.0	5.6822	7.3883	-0.7691	1	1	448204.94	1.0
-6	68.4075	71.5770	-71.5771	0.0	-3.1695	2.4485	-1.2945	1	1	9135.27	1.0
-6	161.5661	152.4268	152.4268	0.0	9.1393	3.4407	2.6843	1	1	38122.06	1.0
-5	128.1762	125.2424	-125.2424	0.0	2.9338	2.5802	1.1370	1	1	18601.68	1.0
-5	214.0201	215.0691	-215.0692	0.0	-1.0490	3.4814	-0.3013	1	1	64790.87	1.0
-5	112.4123	114.6927	114.6927	0.0	-2.2803	2.3322	-0.9778	1	1	21664.67	1.0
-5	286.0437	286.6191	286.6194	0.0	-0.5754	4.4332	-0.1298	1	1	156650.38	1.0
-5	136.9963	142.7605	142.7605	0.0	-3.0247	2.4209	-2.3810	1	1	43482.43	1.0
-5	174.8954	177.9202	177.9202	0.0	5.7642	2.8696	-1.0541	1	1	71270.44	1.0
-5	24.6999	13.7661	13.7661	0.0	10.9337	4.3619	2.5066	1	1	417.94	1.0
-5	184.6166	185.9809	-185.9810	0.0	-1.3643	3.0525	-0.4470	1	1	69815.94	1.0
-5	141.9541	139.6482	-139.6483	0.0	2.3059	2.7385	0.8420	1	1	22417.59	1.0
-5	77.4901	79.8208	-79.8209	0.0	-2.3307	2.5866	-0.9011	1	1	8591.52	1.0

	Y(OBS)	Y(CALC)	A	B	OBS-CALC	SIG(O)	(O-C)/SIG(O)	TO	TL	Q	EXTING
-5	142.4792	143.9525	-143.9525	0.0	-1.4733	2.6027	-0.5661	1	1	32568.46	1.0
-5	120.6905	122.7457	122.7457	0.0	-2.0552	2.3266	-0.8833	1	1	27130.84	1.0
-5	384.5852	391.1064	391.1064	0.0	-6.5211	5.8686	-1.1112	1	1	305193.88	1.0
-5	114.3339	119.6927	119.6928	0.0	-5.3588	2.2257	-2.4066	1	1	29998.68	1.0
-5	112.5418	112.8995	-112.8995	0.0	-0.3578	2.2267	-0.1607	1	1	26201.45	1.0
-5	288.7673	287.1309	-287.1311	0.0	1.6363	4.4905	0.3644	1	1	156422.06	1.0
-5	259.2874	251.1415	-251.1415	0.0	8.1459	4.1287	1.9730	1	1	68343.44	1.0
-5	65.4408	61.0662	-61.0662	0.0	4.3746	2.8006	1.5620	1	1	4683.62	1.0
-5	161.7734	165.0965	165.0966	0.0	-3.3232	2.7992	-1.1872	1	1	44333.43	1.0
-5	307.1509	310.1963	310.1965	0.0	-3.0454	4.7476	-0.6415	1	1	170823.06	1.0
-5	18.7162	8.0241	8.0241	0.0	10.6921	6.4057	1.6692	1	1	719.02	1.0
-5	72.2460	74.3685	-74.3685	0.0	-2.1224	2.3456	-0.9048	1	1	10067.36	1.0
-5	77.7718	86.5430	-86.5431	0.0	-8.7712	3.2074	-2.7346	1	1	12740.69	1.0
-5	157.1593	159.4654	-159.4654	0.0	-2.3061	2.8690	-0.8038	1	1	29007.65	1.0
-5	74.3858	80.6004	80.6005	0.0	-6.2146	2.8120	-2.2101	1	1	8371.64	1.0
-5	213.8581	217.5347	217.5348	0.0	-3.6767	3.4629	-1.0617	1	1	67559.19	1.0
-5	152.7603	149.2619	149.2620	0.0	3.4984	2.6892	1.3009	1	1	34203.39	1.0
-5	161.3259	158.0659	158.0659	0.0	3.2600	2.8075	1.1612	1	1	39637.09	1.0
-5	18.2269	19.3885	19.3885	0.0	-1.1276	2.8828	-0.1430	1	1	589.00	1.0
-5	160.4433	156.1990	-156.1991	0.0	4.2243	2.8187	1.5058	1	1	36161.74	1.0
-5	15.8200	4.4748	-4.4748	0.0	11.3452	10.7724	1.0532	1	1	22.67	1.0
-5	180.6540	178.3799	178.3799	0.0	2.2741	3.0844	0.7373	1	1	392774.44	1.0
-5	144.4752	146.4498	146.4498	0.0	-1.9746	2.6862	-0.7351	1	1	28107.40	1.0
-5	190.4833	192.0675	-192.0675	0.0	-1.5842	3.1585	-0.4953	1	1	49649.82	1.0
-5	29.9393	29.9393	-29.9393	0.0	-0.6777	5.4377	-0.1246	1	1	1194.33	1.0
-5	267.7278	266.6423	-266.6426	0.0	1.0854	4.2253	0.2557	1	1	90524.75	1.0
-5	170.9507	172.4355	172.4355	0.0	-1.4849	2.9957	-0.4957	1	1	33134.16	1.0
-5	58.0841	6.7522	6.7522	0.0	51.3319	2.2102	23.2247	1	0	51.93	1.0
-5	49.3652	44.3428	-44.3428	0.0	5.0225	3.5943	1.3973	1	1	2221.14	1.0
-5	98.7641	99.7064	-99.7064	0.0	-0.9423	2.6659	-0.3535	1	1	10817.19	1.0
-5	22.6056	22.1612	-22.1613	0.0	0.4444	7.6457	0.0561	1	1	534.90	1.0
-4	17.1154	17.7938	17.7938	0.0	-0.6785	11.0139	-0.0616	1	1	355.98	1.0
-4	261.8118	254.5699	254.5699	0.0	7.2421	4.1570	1.7421	1	1	73041.63	1.0
-4	103.1719	94.6230	94.6231	0.0	8.5488	2.9264	2.9213	1	1	9821.52	1.0
-4	103.3139	101.2855	-101.2856	0.0	2.0283	2.5162	0.8061	1	1	11274.82	1.0
-4	126.4099	127.7557	-127.7597	0.0	-1.3498	2.5754	-0.5241	1	1	19725.53	1.0
-4	59.6784	58.9170	-58.9171	0.0	0.7613	2.8966	0.2628	1	1	4502.87	1.0
-4	91.6241	90.9313	90.9313	0.0	0.6929	2.4279	0.2855	1	1	11157.08	1.0
-4	172.8725	175.6840	175.6841	0.0	-2.8115	3.0173	-0.9318	1	1	41775.88	1.0
-4	193.3489	188.4064	188.4065	0.0	4.9424	3.2598	1.5162	1	1	46454.79	1.0
-4	43.7805	35.8776	-35.8777	0.0	7.9029	4.0974	1.8098	1	1	1431.35	1.0
-4	155.9437	153.1047	-153.1048	0.0	2.8390	2.8111	0.5590	1	1	98.85	1.0
-4	329.6580	326.8118	-326.8120	0.0	2.8462	5.0918	0.2051	1	1	20.56	1.0
-4	27.6577	26.5853	26.5853	0.0	1.0724	5.2277	0.0085	1	1	95.34	1.0
-4	451.2153	451.1567	451.1572	0.0	0.0585	6.8758	0.0085	1	1	17810.43	1.0
-4	102.6886	104.3494	104.3494	0.0	-1.6608	2.3283	-0.7133	1	1	3523.37	1.0
-4	60.9259	47.4169	47.4169	0.0	13.5089	2.7273	4.9533	1	1	582.48	1.0
-4	24.2053	23.4186	-23.4186	0.0	0.7868	7.5344	0.1044	1	1	18605.32	1.0
-4	123.8228	122.4412	-122.4412	0.0	1.3816	2.5274	0.5466	1	1	17553.18	1.0
-4	109.0200	110.2998	-110.2998	0.0	-1.1293	2.4127	-0.5304	1	1	13304.64	1.0
-4	88.4401	89.6694	-89.6694	0.0	1.1293	2.2461	0.5473	1	1	25388.15	1.0
-4	118.3822	117.2532	-117.2532	0.0	-0.2877	2.3146	-0.4878	1	1	19342.05	1.0
-4	101.1776	99.0830	99.0830	0.0	2.0945	2.1621	0.9688	1	1	292473.31	1.0
-4	384.0066	384.2944	384.2947	0.0	-0.2877	5.8692	-0.0490	1	1	125589.06	1.0
-4	267.3855	258.9365	258.9368	0.0	8.4489	4.1797	2.0214	1	1		1.0

1	H	K	L	A	B	GBS-CALC	SIG(0)	(0-C)/SIG(0)	IQ	IL	Q	EXTING	
-4	4	14	50.0665	48.0403	48.0403	0.0	2.0262	3.6903	0.5491	1	1	2636.00	1.0
-4	4	12	120.5290	118.9904	-118.9904	0.0	1.5305	2.5185	0.6109	1	1	19196.26	1.0
-4	4	10	326.0127	331.4692	-331.4692	0.0	-5.4566	5.0357	-1.0836	1	1	176715.13	1.0
-4	4	8	121.4999	123.2650	-123.2650	0.0	-1.7652	3.0828	-0.5726	1	1	28729.82	1.0
-4	4	6	23.3175	11.8912	11.8912	0.0	11.4263	4.4778	2.5518	1	1	306.31	1.0
-4	4	2	374.9365	374.5488	374.5491	0.0	-1.6122	5.6904	-0.2833	1	1	332756.44	1.0
-4	4	0	77.0206	92.7435	92.7436	0.0	-15.7230	3.7852	-4.1538	1	1	18974.70	1.0
-4	4	14	75.8457	75.1639	75.1639	0.0	0.6818	2.6879	0.2537	1	1	6762.11	1.0
-4	2	12	77.9734	75.5557	-75.5557	0.0	2.4178	2.5141	0.9617	1	1	8203.49	1.0
-4	2	10	276.4868	280.6060	-280.6062	0.0	-4.1193	4.3104	-0.9557	1	1	136343.25	1.0
-4	2	8	300.4272	304.3494	-304.3496	0.0	-3.9223	4.6411	-0.8451	1	1	192527.63	1.0
-4	2	6	45.2577	41.2116	41.2116	0.0	4.0861	2.4408	1.6741	1	1	4143.83	1.0
-4	2	4	350.6902	351.1924	351.1929	0.0	-0.5024	5.3519	-0.0939	1	1	333637.38	1.0
-4	2	2	225.0633	230.6489	230.6489	0.0	-5.5855	3.5357	-1.5798	1	1	145154.63	1.0
-4	2	0	48.4211	45.2324	45.2325	0.0	3.1887	2.5334	1.2587	1	1	5103.14	1.0
-4	0	14	93.3432	87.7431	-87.7431	0.0	5.6001	2.4549	1.2582	1	1	9365.42	1.0
-4	0	12	165.3737	162.4414	-162.4414	0.0	2.9323	2.8460	1.0303	1	1	38700.86	1.0
-4	0	10	44.3001	45.7378	45.7378	0.0	-1.4376	3.2630	-0.4406	1	1	3719.25	1.0
-4	0	8	176.2384	182.4378	-182.4378	0.0	-6.1994	3.0447	-2.0361	1	1	71631.00	1.0
-4	0	6	225.3747	221.0146	-221.0146	0.0	4.3601	3.5391	1.2320	1	1	124704.31	1.0
-4	0	4	321.8828	319.1062	319.1064	0.0	2.7764	4.9269	0.5635	1	1	290798.50	1.0
-4	0	2	348.8057	345.1040	345.1042	0.0	3.7017	5.3239	0.6953	1	1	343344.25	1.0
-4	0	0	419.3058	419.0171	419.0173	0.0	0.2927	6.3806	0.0459	1	1	459021.38	1.0
-3	1	14	140.6490	135.4290	135.4291	0.0	5.2199	2.7271	1.9141	1	1	22197.93	1.0
-3	1	12	300.7683	298.6011	298.6013	0.0	2.1671	4.6821	0.4629	1	1	131830.94	1.0
-3	1	10	5.2118	1.2645	1.2645	0.0	3.9473	2.39271	0.1650	1	0	2.93	1.0
-3	1	8	103.9417	103.2013	-103.2013	0.0	0.7204	2.0665	0.3486	1	1	24543.16	1.0
-3	1	6	174.1170	183.3408	-183.3408	0.0	-9.2238	2.8183	-3.2729	1	1	97954.44	1.0
-3	1	4	311.0647	326.8557	-326.8562	0.0	-15.7910	4.7631	-3.3153	1	1	380639.75	1.0
-3	1	2	32.6192	35.8590	-35.8590	0.0	-3.2398	2.7708	-1.1593	1	1	4956.61	1.0
-3	1	0	249.8125	255.6028	255.6028	0.0	-5.7903	3.8890	-1.4889	1	1	227965.31	1.0
-3	3	14	212.9224	207.3624	207.3625	0.0	5.5600	3.5125	1.5829	1	1	50358.38	1.0
-3	3	12	102.6313	97.4332	97.4332	0.0	5.1981	2.8171	1.8452	1	1	13476.34	1.0
-3	3	10	68.1389	66.7209	66.7209	0.0	1.4018	2.4118	0.5880	1	1	7728.46	1.0
-3	3	8	167.1096	172.2103	-172.2104	0.0	-5.1107	2.7971	-1.8235	1	1	63399.33	1.0
-3	3	6	288.0049	289.5229	-289.5232	0.0	-1.5181	4.4406	-0.3419	1	1	219447.56	1.0
-3	3	4	267.4238	256.2166	-256.2168	0.0	11.2073	4.1213	2.7193	1	1	202021.44	1.0
-3	3	2	189.2663	186.7720	-186.7720	0.0	2.4942	3.0247	0.8246	1	1	113947.63	1.0
-3	3	0	169.1905	159.0298	159.0298	0.0	10.1607	3.5272	2.8807	1	1	76579.38	1.0
-3	3	14	112.5947	109.7204	109.7205	0.0	2.8743	2.6499	1.0847	1	1	13283.17	1.0
-3	5	12	74.2795	73.6298	73.6299	0.0	0.6497	2.6142	0.2485	1	1	7136.00	1.0
-3	5	10	191.5750	192.2715	192.2715	0.0	0.6965	3.1680	-0.2199	1	1	58237.91	1.0
-3	5	8	99.1839	101.6712	-101.6712	0.0	-2.4873	2.1532	-1.1551	1	1	19438.25	1.0
-3	5	6	351.2136	352.1736	-352.1738	0.0	-0.9599	5.3745	-0.1786	1	1	273888.44	1.0
-3	5	4	243.1120	245.1286	-245.1286	0.0	-2.0166	3.7986	-0.5309	1	1	1492289.25	1.0
-3	5	2	136.7722	133.7570	-133.7571	0.0	3.0152	2.3764	1.2688	1	1	46300.87	1.0
-3	5	0	222.4202	215.1646	215.1646	0.0	7.2256	3.5218	1.0602	1	1	113726.81	1.0
-3	7	12	243.2162	242.2928	242.2928	0.0	0.92334	3.9068	0.2364	1	1	69812.94	1.0
-3	7	8	91.7298	92.5862	-92.5862	0.0	-0.8564	2.3009	-0.3722	1	1	13788.06	1.0
-3	7	6	142.2276	143.6858	-143.6858	0.0	-1.4581	2.5370	-0.5747	1	1	37617.49	1.0
-3	7	4	200.2989	200.8489	-200.8489	0.0	-0.5500	3.2264	-0.1705	1	1	80068.38	1.0
-3	7	2	25.2347	19.4954	-19.4954	0.0	5.7393	4.3747	1.3119	1	1	776.05	1.0
-3	9	10	156.0933	157.8938	-157.8938	0.0	-1.8005	2.6992	-0.6670	1	1	49088.93	1.0
-3	9	8	61.6173	67.3492	-67.3492	0.0	-5.7319	3.2151	-1.7828	1	1	5473.59	1.0
-3	9	6	122.5767	124.4353	-124.4353	0.0	-1.8586	2.5100	-0.7405	1	1	21072.49	1.0

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1	H	K	L	Y(OBS)	Y(CALC)	A	B	OBS-CALC	SIG(O)	(O-C)/SIG(O)	IQ	II	Q	EXTING
-3	9	6	77.3002	79.7541	-79.7541	0.0	-2.4539	3.3553	-0.7313	1	1	9545.84	1.0	
-3	9	4	229.5791	224.1686	-224.1687	0.0	5.4104	3.6616	1.4776	1	1	80412.81	1.0	
-3	9	2	61.1106	64.2999	-64.3000	0.0	-3.1894	2.7089	-1.1774	1	1	6754.14	1.0	
-3	9	0	140.1855	137.2298	137.2298	0.0	2.9557	2.6617	0.11104	1	1	29958.43	1.0	
-3	11	8	56.0430	53.7843	-53.7844	0.0	2.2586	3.3204	0.6802	1	1	3324.64	1.0	
-3	11	6	247.6469	245.0211	-245.0211	0.0	2.6257	3.9449	0.6656	1	1	74624.13	1.0	
-3	11	4	257.4055	254.4197	-254.4197	0.0	2.9861	4.0700	0.7337	1	1	84580.13	1.0	
-3	11	2	71.0530	74.1851	-74.1852	0.0	-3.1322	2.7125	-1.1547	1	1	7305.83	1.0	
-3	11	0	210.3201	205.4852	205.4852	0.0	4.8349	3.4639	1.3958	1	1	54924.05	1.0	
-3	13	4	52.1845	49.9307	-49.9308	0.0	2.2538	3.4578	0.6518	1	1	2692.47	1.0	
-3	13	2	67.7417	63.8730	-63.8730	0.0	3.8687	2.8476	1.3586	1	1	4461.74	1.0	
-3	13	0	35.3984	32.6634	32.6634	0.0	2.7350	5.1200	0.5342	1	1	1148.08	1.0	
-2	12	8	103.3194	102.0380	102.0381	0.0	1.2814	2.5765	0.4973	1	1	11107.28	1.0	
-2	12	6	71.3148	67.8737	67.8737	0.0	3.4411	2.6991	1.2749	1	1	5336.69	1.0	
-2	12	4	71.5341	66.3967	-66.3967	0.0	5.1374	2.5860	1.9866	1	1	5408.91	1.0	
-2	12	2	251.3097	247.2503	-247.2503	0.0	4.0594	3.9910	1.0171	1	1	77034.19	1.0	
-2	12	0	59.9973	63.7369	-63.7369	0.0	-3.7397	3.2080	-1.1657	1	1	5082.70	1.0	
-2	10	10	172.6926	175.2012	175.2012	0.0	-2.5086	3.0510	-0.8222	1	1	34384.15	1.0	
-2	10	8	259.5002	265.5955	265.5957	0.0	-6.0954	4.1381	-1.4730	1	1	89207.19	1.0	
-2	10	6	10.5190	15.8628	-15.8628	0.0	-5.3439	14.2015	-0.3763	1	0	352.52	1.0	
-2	10	4	185.4861	186.3528	-186.3528	0.0	-0.8667	3.1576	-0.2745	1	1	52361.04	1.0	
-2	10	2	122.3575	117.9703	-117.9704	0.0	4.3871	2.3969	1.8304	1	1	21728.33	1.0	
-2	10	0	159.3942	155.2553	-155.2553	0.0	4.1390	2.8166	0.9615	1	1	37282.66	1.0	
-2	8	12	74.2623	77.1279	77.1279	0.0	-2.8656	2.9805	-0.9615	1	1	6602.67	1.0	
-2	8	10	33.4221	17.9028	17.9028	0.0	15.5193	4.6996	3.3023	1	1	415.22	1.0	
-2	8	8	227.9810	233.6233	233.6233	0.0	-5.6423	3.6530	-1.5445	1	1	81937.94	1.0	
-2	8	6	161.4672	165.0596	165.0597	0.0	-3.5924	2.7775	-1.2934	1	1	46594.72	1.0	
-2	8	4	28.4069	16.3342	16.3342	0.0	12.0727	4.0630	2.9713	1	1	503.37	1.0	
-2	8	2	118.9528	117.5803	-117.5804	0.0	1.3725	2.2626	0.6066	1	1	27372.95	1.0	
-2	8	0	542.9600	527.3518	-527.3521	0.0	15.6082	8.2219	1.8984	1	1	543463.94	1.0	
-2	6	12	7.9818	14.7191	-14.7191	0.0	-6.7372	22.8894	-0.2943	1	0	268.30	1.0	
-2	6	10	249.4655	249.8382	249.8382	0.0	-0.3726	3.9539	-0.0942	1	1	92498.31	1.0	
-2	6	8	317.2710	326.9358	326.9360	0.0	-9.6647	4.9260	-1.9620	1	1	189584.00	1.0	
-2	6	6	95.3000	94.9240	94.9240	0.0	0.3760	2.0688	0.1817	1	1	18939.00	1.0	
-2	6	4	221.7961	217.9055	-217.9055	0.0	3.8906	3.5222	1.1046	1	1	114566.00	1.0	
-2	6	2	234.3542	232.1213	-232.1213	0.0	2.2329	3.6575	0.6105	1	1	139740.94	1.0	
-2	6	0	100.1369	99.7493	-99.7494	0.0	6.3876	2.3384	0.1657	1	1	25296.66	1.0	
-2	4	14	177.7395	171.6600	-171.6600	0.0	6.0795	3.0897	1.9677	1	1	32884.94	1.0	
-2	4	12	15.3631	24.2990	24.2990	0.0	-8.9359	10.6558	-0.8386	1	1	798.54	1.0	
-2	4	10	282.5103	285.1243	285.1245	0.0	-2.6141	4.4081	-0.5930	1	1	134871.81	1.0	
-2	4	8	99.0769	107.0578	107.0578	0.0	-7.9809	2.1720	-3.6745	1	1	23600.00	1.0	
-2	4	6	65.6172	73.5687	73.5687	0.0	-7.9515	2.0220	-3.9324	1	1	13912.52	1.0	
-2	4	4	74.4852	75.7192	-75.7192	0.0	-1.2340	1.8469	-0.6682	1	1	18034.84	1.0	
-2	4	2	454.8081	458.0947	-458.0950	0.0	-3.2867	6.8886	-0.4771	1	1	742832.69	1.0	
-2	4	0	122.7833	127.5079	-127.5079	0.0	-4.7245	2.2099	-2.1379	1	1	55646.64	1.0	
-2	2	14	43.3736	40.4285	-40.4286	0.0	2.9451	4.1622	0.7076	1	1	1908.97	1.0	
-2	2	12	60.5085	71.0473	71.0473	0.0	-10.5387	3.6763	-2.8667	1	1	7235.38	1.0	
-2	2	10	141.0299	140.5474	140.5474	0.0	0.4825	2.5351	-0.1903	1	1	35403.96	1.0	
-2	2	8	178.0321	187.2164	187.2164	0.0	-9.1843	3.0485	-3.0128	1	1	80479.38	1.0	
-2	2	6	154.2324	157.0008	157.0008	0.0	-2.7684	2.5431	-1.0886	1	1	74590.63	1.0	
-2	2	2	322.9695	323.7461	-323.7463	0.0	-0.7767	4.9199	-0.1579	1	1	516303.13	1.0	
-2	2	0	531.6477	519.3391	-519.3394	0.0	12.3085	8.0266	1.5335	1	1	1250931.00	1.0	
-2	0	14	79.9584	77.9123	-77.9124	0.0	2.0461	2.7786	0.7364	1	1	7202.25	1.0	
-2	0	12	52.0804	51.1766	-51.1766	0.0	0.9037	3.3381	0.2707	1	1	3831.27	1.0	
-2	0	10	191.5012	196.5258	196.5258	0.0	-5.0246	3.1456	-1.5973	1	1	71171.06	1.0	

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1	H	K	L	Y(OBS)	Y(CALC)	A	B	OBS-CALC	SIG(D)	(O-C)/SIG(D)	IQ	IL	Q	EXTING
-2	0	8	603.6389	616.8945	616.8950	0.0	-13.2557	9.1123	-1.4547	1	1	910313.00	1.0	
-2	0	6	85.6813	79.4636	79.4637	0.0	6.2177	1.8665	3.3312	1	1	20420.12	1.0	
-2	0	4	434.2061	435.7688	-435.7690	0.0	-1.5628	6.5726	-0.2378	1	1	861109.63	1.0	
-2	0	2	33.0017	14.1209	14.1209	0.0	18.8808	2.1323	8.8547	1	1	1175.30	1.0	
-2	0	0	306.6428	294.6699	-294.6702	0.0	11.9737	4.6786	2.5593	1	1	471112.75	1.0	
-1	1	14	164.8566	159.5198	-159.5198	0.0	5.3369	3.0024	1.7775	1	1	28768.68	1.0	
-1	1	12	241.2435	239.9447	-239.9448	0.0	1.2988	3.8810	0.3347	1	1	80252.38	1.0	
-1	1	10	16.0202	21.9347	-21.9347	0.0	-5.9145	8.6458	-0.6841	1	1	846.15	1.0	
-1	1	8	21.5907	8.0664	-8.0664	0.0	13.5242	4.9654	2.7237	1	1	149.44	1.0	
-1	1	6	276.9263	281.0449	281.0452	0.0	-4.1187	4.2765	-0.9631	1	1	250502.63	1.0	
-1	1	4	423.7095	433.2207	433.2209	0.0	-9.5111	6.4156	-1.4825	1	1	902970.88	1.0	
-1	1	2	129.5526	121.2433	121.2433	0.0	8.3092	2.0747	4.0050	1	1	120614.81	1.0	
-1	3	14	46.3398	43.6757	-43.6757	0.0	2.6641	4.1019	0.6495	1	1	2093.96	1.0	
-1	3	12	111.5534	112.6720	-112.6721	0.0	-1.1186	2.5561	-0.4376	1	1	17039.11	1.0	
-1	3	10	292.8198	297.0745	-297.0747	0.0	-4.2547	4.5620	-0.9326	1	1	147477.56	1.0	
-1	3	8	53.0637	55.4470	-55.4471	0.0	-2.3833	2.5444	-0.9367	1	1	6552.95	1.0	
-1	3	6	203.5424	215.6050	215.6051	0.0	-11.6627	3.2395	-3.6002	1	1	130469.38	1.0	
-1	3	4	397.7266	409.2104	409.2109	0.0	-11.4838	6.0404	-1.9012	1	1	638505.38	1.0	
-1	3	2	248.0585	237.8985	237.8985	0.0	10.1600	3.8172	2.6616	1	1	285013.19	1.0	
-1	3	0	302.1240	272.5527	-272.5530	0.0	29.5713	4.6105	6.4140	1	1	392694.81	1.0	
-1	5	12	129.8866	129.4439	-129.4440	0.0	0.4427	2.6361	0.1679	1	1	20955.16	1.0	
-1	5	10	165.6555	169.5526	-169.5526	0.0	-3.8971	2.9044	-1.3418	1	1	43795.56	1.0	
-1	5	8	61.3946	57.5955	57.5956	0.0	3.7990	2.4747	1.5352	1	1	6222.69	1.0	
-1	5	6	151.5426	156.2841	156.2842	0.0	-4.7415	2.5819	-1.8364	1	1	56814.68	1.0	
-1	5	4	233.3102	234.9506	234.9506	0.0	-1.6403	3.6491	-0.4495	1	1	157634.13	1.0	
-1	5	2	257.7556	253.7439	253.7440	0.0	4.0117	3.9880	1.0060	1	1	213188.38	1.0	
-1	5	0	87.8258	75.3599	-75.3599	0.0	12.4659	1.9535	6.3813	1	1	19220.16	1.0	
-1	7	12	190.0174	191.2617	-191.2617	0.0	-1.2443	3.2483	-0.3830	1	1	41570.36	1.0	
-1	7	10	73.0068	73.1612	-73.1613	0.0	-0.1545	2.7004	-0.0572	1	1	7228.78	1.0	
-1	7	8	7.5443	14.7574	14.7574	0.0	-7.2131	3.9721	-1.8384	1	1	349.61	1.0	
-1	7	6	252.4961	259.7981	259.7983	0.0	-4.7011	4.6104	-1.0197	1	1	127793.38	1.0	
-1	7	4	298.8967	303.5977	303.5979	0.0	1.6727	2.0563	0.8135	1	1	200925.00	1.0	
-1	7	2	105.4445	103.7718	103.7718	0.0	0.2394	11.8389	0.0202	1	0	25687.13	1.0	
-1	7	0	8.7349	8.4955	-8.4955	0.0	0.6500	2.7835	0.2335	1	1	174.32	1.0	
-1	9	10	73.7489	73.0989	-73.0990	0.0	-1.0108	2.4609	-0.4107	1	1	6294.66	1.0	
-1	9	8	88.4244	89.4351	-89.4352	0.0	-6.5206	2.9981	-2.1749	1	1	10868.30	1.0	
-1	9	6	176.7974	183.3180	183.3180	0.0	-7.5523	5.8022	-1.3016	1	1	51923.09	1.0	
-1	9	4	379.3154	386.8677	386.8679	0.0	-0.5119	2.5740	-0.1989	1	1	256144.75	1.0	
-1	9	2	54.0968	54.6086	54.6086	0.0	-10.3764	2.6382	3.8630	1	1	5425.93	1.0	
-1	9	0	155.0211	144.6446	-144.6447	0.0	6.8201	6.0586	1.1257	1	1	38380.36	1.0	
-1	11	8	28.9502	22.1301	22.1301	0.0	0.4482	2.8329	0.1582	1	1	562.14	1.0	
-1	11	6	63.7959	63.3477	63.3477	0.0	-4.8279	2.7057	-1.7844	1	1	5103.20	1.0	
-1	11	4	148.3300	153.1579	153.1579	0.0	1.8197	2.7407	0.6640	1	1	32252.47	1.0	
-1	11	2	154.1823	152.3621	-152.3626	0.0	0.7569	4.8793	0.1551	1	1	33389.43	1.0	
-1	11	0	31.7610	31.0041	-31.0041	0.0	-0.3304	2.7488	0.0194	1	1	1390.79	1.0	
-1	13	4	146.3609	146.6913	146.6913	0.0	0.0513	2.6501	-0.1202	1	1	24192.92	1.0	
-1	13	2	134.6758	134.6245	134.6245	0.0	0.6326	3.5178	0.0179	1	1	21102.03	1.0	
-1	13	0	55.6741	55.0415	-55.0415	0.0	21.5276	3.5178	4.6824	1	1	3543.51	1.0	
0	14	0	123.3758	101.8482	101.8482	0.0	-10.4869	3.4855	-3.0087	1	1	11093.59	1.0	
0	12	6	206.8205	217.3074	-217.3075	0.0	2.1890	7.3091	0.2995	1	1	53496.23	1.0	
0	12	4	25.6983	23.5093	-23.5093	0.0	-4.4713	3.1786	-1.4067	1	1	677.64	1.0	
0	12	2	185.3856	189.8570	189.8570	0.0	-21.2346	7.5295	-2.8202	1	1	46522.27	1.0	
0	10	8	76.1729	97.4075	97.4075	0.0	-5.3105	2.9352	-1.8092	1	1	12466.57	1.0	
0	10	6	161.1186	166.4291	-166.4291	0.0	-1.0924	2.5732	-0.4245	1	1	33382.52	1.0	
0	10	4	131.7897	132.8820	-132.8821	0.0				1	1	24052.75	1.0	

0	10	4	112.5105	113.6977	-113.6977	0.0	-1.1871	2.3757	-0.4997	1	19473.74	1.0
0	10	2	115.1414	115.6914	115.6915	0.0	-0.5500	2.3569	-0.2334	1	21570.27	1.0
0	10	0	327.4182	331.3479	331.3481	0.0	-3.9297	5.2922	-0.7425	1	181225.10	1.0
0	8	10	120.0753	120.1649	-120.1649	0.0	-0.0896	2.6651	-0.0336	1	17392.19	1.0
0	8	8	349.3364	355.2151	-355.2156	0.0	-5.8788	5.4328	-1.0821	1	178527.50	1.0
0	8	6	1.2038	2.4106	-2.4106	0.0	-1.2068	120.3784	-0.0100	1	9.58	1.0
0	8	4	69.4857	69.6763	69.6764	0.0	-0.1905	2.8785	-0.0662	1	9147.95	1.0
0	8	2	75.1537	78.6012	78.6012	0.0	-3.4475	2.1212	-1.6253	1	12795.64	1.0
0	6	0	378.1692	373.6926	373.6926	0.0	4.4765	5.9290	0.7550	1	299458.04	1.0
0	6	12	36.0467	35.1442	-35.1442	0.0	0.9025	6.5341	0.1381	1	1395.84	1.0
0	6	10	57.2728	54.2941	-54.2941	0.0	2.9787	3.0935	0.9629	1	4010.45	1.0
0	6	8	72.9744	74.4901	-74.4902	0.0	-1.5158	2.5190	-0.6017	1	9144.21	1.0
0	6	6	236.0426	244.1269	-244.1269	0.0	-8.0842	3.7810	-2.1381	1	119313.13	1.0
0	6	4	191.6258	189.5214	-189.5215	0.0	2.1043	3.0943	0.6801	1	86507.94	1.0
0	6	4	251.2904	254.3771	254.3771	0.0	-3.0867	3.9150	-0.7884	1	180120.50	1.0
0	6	2	574.0496	541.3650	541.3652	0.0	32.6847	8.6688	3.7704	1	863905.69	1.0
0	6	0	214.1924	218.1847	-218.1848	0.0	-3.9924	3.5034	-1.1396	1	71578.31	1.0
0	4	8	165.7404	171.5323	-171.5323	0.0	-5.7919	2.8389	-2.0402	1	55361.81	1.0
0	4	6	331.5168	341.7246	-341.7249	0.0	-10.2079	5.0905	-2.0053	1	280999.81	1.0
0	4	2	322.1450	328.8320	328.8323	0.0	-6.6869	4.9296	-1.3565	1	435023.56	1.0
0	2	12	93.5707	94.6062	94.6062	0.0	-1.0355	2.6147	-0.3960	1	11522.18	1.0
0	2	10	202.1940	199.2651	-199.2651	0.0	2.9289	3.3196	0.8823	1	63840.74	1.0
0	2	8	352.8594	357.4587	-357.4587	0.0	-4.5991	5.4134	-0.8496	1	264083.63	1.0
0	2	6	159.2113	162.7687	-162.7687	0.0	-3.5575	2.6486	-1.3431	1	73614.38	1.0
0	2	4	105.6961	102.2375	102.2375	0.0	3.4586	1.9873	1.7403	1	41997.04	1.0
0	2	2	219.7115	213.4268	213.4268	0.0	6.2847	3.3925	1.8525	1	293434.31	1.0
0	2	0	269.3308	233.3524	233.3524	0.0	35.9786	4.0910	8.7946	1	498808.00	1.0
0	14	14	54.1692	13.0677	13.0677	0.0	41.1015	5.0545	8.1317	1	182.10	1.0
0	12	12	17.5798	9.7337	9.7337	0.0	7.8461	12.9259	0.6070	1	124.15	1.0
0	10	10	12.6416	9.1579	9.1579	0.0	3.4838	17.3398	0.2009	1	138.08	1.0
0	8	8	150.8278	157.1230	-157.1230	0.0	-6.2952	2.8390	-2.2174	1	52815.05	1.0
0	6	6	99.9459	107.7208	-107.7209	0.0	-7.7749	3.4090	-2.2807	1	34127.98	1.0
0	4	4	396.5281	393.4709	-393.4714	0.0	3.0571	6.0231	0.5076	1	698253.75	1.0
0	2	2	176.0488	161.2350	161.2350	0.0	14.8138	2.7305	5.4254	1	237638.38	1.0
0	12	12	157.9562	154.3489	154.3485	0.0	3.6073	2.9104	1.2394	1	28571.11	1.0
0	11	10	217.9806	219.6490	219.6490	0.0	-1.6684	3.5619	-0.4684	1	71761.06	1.0
0	11	8	157.9729	197.6232	197.6232	0.0	0.3497	3.2444	0.1078	1	73919.69	1.0
0	11	6	253.8753	249.8168	-249.8168	0.0	4.0584	3.9736	1.0214	1	156348.38	1.0
0	11	4	328.9670	343.9614	-343.9617	0.0	-14.9945	5.0397	-2.9753	1	418594.44	1.0
0	11	4	103.9851	103.9519	-103.9519	0.0	0.0332	1.9011	0.0174	1	60164.02	1.0
0	12	12	164.5673	158.8099	158.8099	0.0	5.7574	2.9561	1.9476	1	29306.64	1.0
0	10	10	132.4954	133.5739	133.5739	0.0	-1.0786	2.6172	-0.4121	1	25472.04	1.0
0	8	8	46.1524	44.7956	-44.7957	0.0	1.3568	3.2187	0.4215	1	3589.28	1.0
0	6	6	41.2634	40.8620	-40.8620	0.0	0.4014	2.9273	0.1371	1	3841.98	1.0
0	4	4	246.2608	240.2913	-240.2913	0.0	5.9695	3.8375	1.5556	1	176733.13	1.0
0	3	3	440.2666	444.4419	-444.4421	0.0	-4.1754	6.6756	-0.6255	1	824086.06	1.0
0	3	2	297.7375	272.5505	-272.5505	0.0	25.1869	4.5512	5.5341	1	392688.25	1.0
0	5	12	116.4259	113.1575	113.1575	0.0	3.2684	2.6929	1.2137	1	14015.32	1.0
0	5	10	289.1831	289.5481	289.5483	0.0	-0.3651	4.5462	-0.0803	1	110924.13	1.0
0	5	8	31.1052	30.2845	30.2846	0.0	0.8206	4.8342	0.1698	1	1482.91	1.0
0	5	6	155.2186	155.2679	-155.2679	0.0	-0.0493	2.6814	-0.0184	1	48130.06	1.0
0	5	4	272.2017	277.2788	-277.2791	0.0	-5.0772	4.2262	-1.2014	1	190301.31	1.0
0	5	2	319.3386	322.5388	-322.5391	0.0	-3.2002	4.8956	-0.6537	1	312941.19	1.0
0	5	0	91.4934	75.3557	-75.3557	0.0	16.1377	1.9153	8.4259	1	19218.01	1.0
0	7	10	177.7808	179.6804	179.6805	0.0	-1.8996	3.0985	-0.6131	1	38568.51	1.0

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EXITING

EXTING	Q	IL	IQ	(IN-C)/SIG(0)	SIG(IN)	STIG(IN)	NRS-FAIC	R	A	VIC(AIC)	VIC(NRS)	I	K	H
1.0	25400.63	1	1	-1.6091	2.5625	-4.1232	0.0	133.7198	133.7197	129.5965	129.5965	7	7	1
1.0	44385.18	1	1	-0.9444	2.8052	-2.6492	0.0	-162.2242	162.2242	159.5750	159.5750	7	7	1
1.0	110284.19	1	1	-2.4631	3.6256	-8.9301	0.0	-236.0315	236.0314	227.1013	227.1013	7	7	1
1.0	26757.76	1	1	-0.1609	2.1928	-0.3528	0.0	-108.9870	108.9870	108.6342	108.6342	7	7	1
1.0	11168.54	1	1	-0.7756	2.6556	-2.0597	0.0	95.3227	95.3227	93.2630	93.2630	9	9	1
1.0	17079.38	1	1	-0.6387	2.4663	-1.5753	0.0	-109.9314	109.9314	108.3560	108.3560	9	9	1
1.0	67557.13	1	1	-0.3633	3.3481	-1.2163	0.0	-205.6696	205.6696	204.4533	204.4533	9	9	1
1.0	23347.14	1	1	1.3147	2.3800	3.1289	0.0	-115.4792	115.4792	118.6081	118.6081	9	9	1
1.0	38378.73	1	1	2.2360	2.6485	5.9221	0.0	-144.6416	144.6416	150.5637	150.5637	9	9	1
1.0	14765.25	1	1	-0.6499	2.6438	-1.7181	0.0	-111.6267	111.6267	109.9086	109.9086	11	11	1
1.0	84603.56	1	1	-0.7668	4.0194	-3.0811	0.0	-254.6498	254.6498	251.5687	251.5687	11	11	1
1.0	61877.99	1	1	-1.4110	3.3969	-4.7931	0.0	-210.3596	210.3596	205.5664	205.5664	11	11	1
1.0	1390.37	1	1	-1.3442	6.9651	-9.3622	0.0	30.9994	30.9994	21.6372	21.6372	11	11	1
1.0	7012.58	1	1	-0.5734	2.8368	-1.6266	0.0	80.6288	80.6288	79.0022	79.0022	11	11	1
1.0	46496.56	1	1	-0.5262	3.8658	-1.7711	0.0	-202.0276	202.0276	200.2565	200.2565	11	11	1
1.0	3542.93	1	1	-0.1419	3.4088	-0.4837	0.0	55.0370	55.0370	54.5533	54.5533	11	11	1
1.0	815.73	1	1	1.3791	5.2504	7.2410	0.0	-26.9611	26.9611	34.2021	34.2021	12	12	1
1.0	14064.82	1	1	-3.0439	2.6926	-8.1961	0.0	-108.1734	108.1734	99.9773	99.9773	12	12	1
1.0	5083.06	1	1	0.1973	2.8838	0.5690	0.0	-63.7392	63.7392	64.3081	64.3081	12	12	1
1.0	38143.79	1	1	-0.3198	3.3606	-1.0747	0.0	189.6051	189.6051	188.5303	188.5303	12	12	1
1.0	27938.87	1	1	-1.3368	2.8120	-3.7590	0.0	152.3137	152.3137	148.5546	148.5546	12	12	1
1.0	26414.53	1	1	-1.2860	2.5697	-3.3045	0.0	-134.1254	134.1254	130.8209	130.8209	12	12	1
1.0	37282.83	1	1	1.4718	2.8063	4.1302	0.0	-155.2557	155.2557	159.3859	159.3859	12	12	1
1.0	10166.71	1	1	0.0627	2.6878	0.1685	0.0	91.4732	91.4732	91.6416	91.6416	10	10	1
1.0	20340.80	1	1	-0.9729	2.5599	-2.4905	0.0	119.9566	119.9566	117.4661	117.4661	8	8	1
1.0	259947.81	1	1	-0.7195	6.0562	-4.3577	0.0	400.0378	400.0378	395.6802	395.6802	8	8	1
1.0	2694.29	1	1	1.2181	3.2846	4.0011	0.0	-38.4753	38.4753	42.4764	42.4764	8	8	1
1.0	543465.06	1	1	1.8916	8.2196	15.5048	0.0	-527.3525	527.3521	542.9004	542.9004	2	2	1
1.0	4105.78	1	1	-0.1457	3.5043	-0.5102	0.0	59.7426	59.7426	59.2321	59.2321	6	6	1
1.0	74883.38	1	1	-0.0304	3.7903	-0.1153	0.0	243.5149	243.5149	239.8081	239.8081	6	6	1
1.0	97612.88	1	1	-0.9716	3.8151	-3.7068	0.0	100.2604	100.2604	100.5503	100.5503	6	6	1
1.0	23030.45	1	1	0.1363	2.1267	0.2899	0.0	-99.7509	99.7509	99.5582	99.5582	6	6	1
1.0	25297.48	1	1	-0.0827	2.3314	-0.1927	0.0	-31.3180	31.3180	45.4741	45.4741	6	6	1
1.0	1222.56	1	1	3.9721	3.5639	14.1561	0.0	109.5702	109.5702	108.8233	108.8233	4	4	1
1.0	18261.93	1	1	-0.2952	2.5303	-0.7469	0.0	415.6990	415.6990	411.6895	411.6895	4	4	1
1.0	324699.63	1	1	-0.6378	6.2864	-4.0096	0.0	-55.8315	55.8315	63.0997	63.0997	4	4	1
1.0	7305.40	1	1	3.3208	2.1887	7.2683	0.0	-250.3839	250.3839	259.6519	259.6519	4	4	1
1.0	182264.98	1	1	2.2978	4.0334	9.2680	0.0	127.5096	127.5096	122.5699	122.5699	2	2	1
1.0	55548.21	1	1	-2.2448	2.2006	-4.9398	0.0	45.6804	45.6804	43.2549	43.2549	2	2	1
1.0	2247.55	1	1	-0.4711	5.1482	-2.4425	0.0	3.5182	3.5182	26.0550	26.0550	2	2	1
1.0	16.26	1	1	3.6548	6.1663	22.5368	0.0	94.4219	94.4219	96.3381	96.3381	2	2	1
1.0	14517.39	1	1	0.7197	2.6625	1.9162	0.0	281.9734	281.9734	281.1738	281.1738	2	2	1
1.0	164067.25	1	1	-0.1829	4.3731	-0.7997	0.0	282.8547	282.8547	283.7222	283.7222	2	2	1
1.0	215029.06	1	1	0.1975	4.3925	0.8674	0.0	157.9440	157.9440	159.4816	159.4816	2	2	1
1.0	89441.00	1	1	0.5823	2.6403	1.5376	0.0	-519.3408	519.3408	521.5981	521.5981	2	2	1
1.0	1250938.00	1	1	0.2866	7.8774	2.2577	0.0	-190.1958	190.1958	195.4404	195.4404	2	2	1
1.0	39523.62	1	1	1.5795	3.3203	5.2446	0.0	137.8122	137.8122	141.1687	141.1687	2	2	1
1.0	25398.83	1	1	1.2272	2.7350	3.3566	0.0	365.1270	365.1270	362.1643	362.1643	2	2	1
1.0	222400.25	1	1	-0.5315	5.5740	-2.9626	0.0	93.5495	93.5495	89.4989	89.4989	2	2	1
1.0	18691.32	1	1	-1.8393	2.2022	-4.0506	0.0	198.8981	198.8981	207.0526	207.0526	2	2	1
1.0	112176.13	1	1	2.4723	3.2984	8.1545	0.0	54.2572	54.2572	52.5438	52.5438	2	2	1
1.0	11569.89	1	1	-0.8315	2.0608	-1.7135	0.0	-294.6702	294.6699	303.2991	303.2991	2	2	1
1.0	471112.75	1	1	1.8640	4.6292	8.6290	0.0	-146.4531	146.4530	150.7365	150.7365	2	2	1
1.0	25327.76	1	1	1.4943	2.8664	4.2834	0.0	161.1859	161.1859	164.5854	164.5854	3	3	1
1.0	37423.97	1	1	1.1635	2.9219	3.3995	0.0	-161.1859	161.1859	164.5854	164.5854	3	3	1

1	H	K	L	A	B	DBS-CALC	SIG(D)	(D-C)/SIG(D)	IQ	IL	Q	EXTING						
3	1	1	6	71.1393	70.1622	70.1622	0.0	0.0	0.0	0.0	0.9771	2.4693	0.3957	1	1	1	8771.85	1.0
3	1	2	4	215.3909	215.9036	215.9036	0.0	0.0	0.0	0.0	-4.5127	3.3984	-1.3279	1	1	1	104278.94	1.0
3	1	0	2	316.2292	309.8259	309.8259	0.0	0.0	0.0	0.0	6.4032	4.8532	1.3194	1	1	1	271700.06	1.0
3	1	0	0	247.2283	255.6029	255.6029	0.0	0.0	0.0	0.0	-8.3746	3.8479	-2.1764	1	1	1	227965.63	1.0
3	3	10	8	244.4216	-242.3849	-242.3849	0.0	0.0	0.0	0.0	2.0366	3.9568	0.5147	1	1	1	67258.38	1.0
3	3	3	8	131.3124	130.4571	130.4571	0.0	0.0	0.0	0.0	0.8553	2.6137	0.3272	1	1	1	23568.17	1.0
3	3	3	6	7.0503	16.8172	-16.8172	0.0	0.0	0.0	0.0	-9.7668	37.9476	-0.2574	1	1	0	478.41	1.0
3	3	3	4	178.0845	183.7568	183.7569	0.0	0.0	0.0	0.0	-5.6723	2.9763	-1.9058	1	1	1	70301.75	1.0
3	3	3	2	294.8640	304.9292	304.9294	0.0	0.0	0.0	0.0	-10.0654	4.5558	-2.2093	1	1	1	237550.50	1.0
3	3	3	0	165.9254	159.0266	159.0266	0.0	0.0	0.0	0.0	6.8989	3.4935	1.9748	1	1	1	76576.31	1.0
3	5	10	8	142.7657	140.9476	-140.9476	0.0	0.0	0.0	0.0	1.8180	2.8199	0.6447	1	1	1	21444.30	1.0
3	5	8	6	17.9528	7.8684	-7.8684	0.0	0.0	0.0	0.0	10.0844	9.2459	1.0907	1	1	1	21444.30	1.0
3	5	6	4	99.3432	98.7800	-98.7800	0.0	0.0	0.0	0.0	0.5633	2.4358	0.2312	1	1	1	15025.62	1.0
3	5	4	2	76.4064	76.4178	76.4178	0.0	0.0	0.0	0.0	-0.0114	2.3429	-0.0049	1	1	1	10743.38	1.0
3	5	2	0	373.4602	371.8862	371.8867	0.0	0.0	0.0	0.0	1.5740	5.7104	0.2756	1	1	1	299763.56	1.0
3	5	0	0	217.5840	215.1615	215.1615	0.0	0.0	0.0	0.0	2.4225	3.4540	0.7014	1	1	1	113723.56	1.0
3	7	8	6	143.5006	140.3548	-140.3549	0.0	0.0	0.0	0.0	3.2058	2.7612	1.1610	1	1	1	113723.56	1.0
3	7	6	4	86.7261	86.4409	86.4409	0.0	0.0	0.0	0.0	0.2852	2.5476	0.1120	1	1	1	22962.89	1.0
3	7	4	2	211.8627	212.0157	212.0157	0.0	0.0	0.0	0.0	-0.1529	3.4660	-0.0441	1	1	1	10184.30	1.0
3	7	2	0	241.7880	240.4522	240.4522	0.0	0.0	0.0	0.0	1.3358	3.8395	0.3479	1	1	1	71038.50	1.0
3	7	0	0	155.5147	157.8906	157.8906	0.0	0.0	0.0	0.0	-2.3759	2.6813	-0.8861	1	1	1	103879.38	1.0
3	9	9	6	78.0882	76.2215	76.2216	0.0	0.0	0.0	0.0	1.8667	2.8591	0.6529	1	1	1	49086.92	1.0
3	9	4	2	208.6826	212.9225	212.9225	0.0	0.0	0.0	0.0	-4.2430	3.4663	-1.2241	1	1	1	6897.27	1.0
3	9	2	0	160.3889	162.9634	162.9634	0.0	0.0	0.0	0.0	-2.5746	2.8380	-0.9072	1	1	1	60830.16	1.0
3	9	0	0	136.8730	137.2281	137.2282	0.0	0.0	0.0	0.0	0.3551	2.6631	-0.1334	1	1	1	39429.12	1.0
3	11	11	4	28.3836	21.5455	21.5455	0.0	0.0	0.0	0.0	6.8381	6.3010	1.0852	1	1	1	29957.71	1.0
3	11	2	0	215.2093	211.7440	211.7440	0.0	0.0	0.0	0.0	3.4653	3.5393	0.9791	1	1	1	527.37	1.0
3	11	0	0	210.4770	205.4814	205.4814	0.0	0.0	0.0	0.0	4.9956	3.4685	1.4403	1	1	1	54922.04	1.0
3	13	13	0	32.7683	32.6598	32.6598	0.0	0.0	0.0	0.0	0.1085	5.5836	0.0194	1	1	1	1147.83	1.0
4	10	10	4	94.1043	94.6260	94.6261	0.0	0.0	0.0	0.0	-0.5217	3.1711	-0.1645	1	1	1	9822.14	1.0
4	10	4	0	220.6657	218.7598	218.7598	0.0	0.0	0.0	0.0	1.9059	3.6264	0.5256	1	1	1	53494.92	1.0
4	8	8	0	194.0229	188.4086	188.4087	0.0	0.0	0.0	0.0	5.6143	3.2496	1.7277	1	1	1	46455.88	1.0
4	8	8	4	76.7599	75.3456	75.3456	0.0	0.0	0.0	0.0	1.4143	2.8957	0.4884	1	1	1	6454.19	1.0
4	8	8	6	123.0030	128.2468	128.2468	0.0	0.0	0.0	0.0	-5.2467	2.7962	-1.8764	1	1	1	21254.46	1.0
4	8	8	2	72.4721	72.4215	72.4215	0.0	0.0	0.0	0.0	0.0506	2.6533	0.0191	1	1	1	7569.87	1.0
4	8	8	0	51.3190	47.4177	47.4177	0.0	0.0	0.0	0.0	3.9013	3.2413	1.2036	1	1	1	3523.48	1.0
4	6	6	8	38.5024	35.3999	-35.4000	0.0	0.0	0.0	0.0	3.1025	4.9264	0.6298	1	1	1	1365.64	1.0
4	6	6	6	201.0161	200.3144	-200.3145	0.0	0.0	0.0	0.0	0.7016	3.3725	0.2080	1	1	1	51074.44	1.0
4	6	6	4	224.5065	219.1698	-219.1698	0.0	0.0	0.0	0.0	5.3366	3.6261	1.4717	1	1	1	70973.81	1.0
4	6	6	2	57.8861	57.7863	-57.7863	0.0	0.0	0.0	0.0	0.0999	2.7773	0.0360	1	1	1	5639.19	1.0
4	6	6	0	263.7207	258.9387	258.9390	0.0	0.0	0.0	0.0	4.7820	4.1253	1.1592	1	1	1	125591.31	1.0
4	4	4	8	151.5638	153.5127	-153.5127	0.0	0.0	0.0	0.0	-1.9490	3.0224	-0.6448	1	1	1	27682.70	1.0
4	4	4	6	354.4031	357.0376	-357.0381	0.0	0.0	0.0	0.0	-2.6347	5.4754	-0.4812	1	1	1	177794.63	1.0
4	4	4	4	31.6595	29.5451	-29.5451	0.0	0.0	0.0	0.0	2.1144	5.1572	0.4100	1	1	1	1443.22	1.0
4	4	4	2	85.7312	85.7040	-85.7040	0.0	0.0	0.0	0.0	0.0272	2.2172	0.0123	1	1	1	14236.67	1.0
4	4	4	0	83.9024	92.7457	92.7458	0.0	0.0	0.0	0.0	-8.8433	3.3868	-2.6111	1	1	1	18975.59	1.0
4	4	4	8	189.6129	189.4247	-189.4248	0.0	0.0	0.0	0.0	0.1881	3.2425	0.0580	1	1	1	44242.14	1.0
4	4	4	6	229.7796	232.7057	-232.7057	0.0	0.0	0.0	0.0	-2.9261	3.7190	-0.7868	1	1	1	80232.31	1.0
4	4	4	4	85.2744	82.3387	-82.3388	0.0	0.0	0.0	0.0	2.9357	2.3305	1.2597	1	1	1	12104.72	1.0
4	4	4	2	27.8960	23.2387	23.2387	0.0	0.0	0.0	0.0	4.6574	4.2881	1.0861	1	1	1	1155.08	1.0
4	4	4	0	45.5584	45.2335	45.2335	0.0	0.0	0.0	0.0	0.3249	2.6307	0.1235	1	1	1	5103.38	1.0
4	4	4	8	5.4472	13.4608	13.4608	0.0	0.0	0.0	0.0	-8.0135	35.4071	-0.2263	1	1	0	227.20	1.0
4	4	4	6	83.7473	77.6923	-77.6924	0.0	0.0	0.0	0.0	6.0550	2.5094	2.4129	1	1	1	335.27	1.0
4	4	4	4	452.6287	454.3494	-454.3496	0.0	0.0	0.0	0.0	-1.7205	6.8904	-0.2497	1	1	1	378893.38	1.0
4	4	4	2	1.8825	16.3088	16.3088	0.0	0.0	0.0	0.0	-4.4262	9.8879	-0.4476	1	1	1	590.01	1.0

4	0	8	413.5325	419.0171	419.0173	0.0	-5.4847	6.2942	-0.8714	1	1	459021.38	1.0
5	1	6	239.2984	239.7365	239.7365	0.0	-0.4382	3.9069	-0.1121	1	1	62206.70	1.0
5	1	4	42.9614	40.6969	40.6969	0.0	2.2645	4.1303	0.5483	1	1	2119.25	1.0
5	1	4	137.4565	138.7631	-138.7632	0.0	-1.3067	2.6156	-0.4996	1	1	29068.02	1.0
5	1	2	16.2197	217.9179	-217.9179	0.0	-1.6982	3.4960	-0.4858	1	1	83850.13	1.0
5	1	0	182.8186	185.9803	-185.9803	0.0	-3.1617	3.0176	-1.0478	1	1	69815.50	1.0
5	3	6	130.9544	129.8027	129.8028	0.0	1.1516	2.6752	0.4305	1	1	20936.57	1.0
5	3	4	38.0792	37.6005	-37.6005	0.0	0.4787	4.3063	0.1112	1	1	2046.94	1.0
5	3	2	290.1204	293.5820	-293.5823	0.0	-3.4617	4.5267	-0.7647	1	1	144566.19	1.0
5	3	0	283.5569	287.1301	-287.1304	0.0	-3.5733	4.4134	-0.8097	1	1	156421.19	1.0
5	5	6	81.2936	86.1149	86.1149	0.0	-4.8213	2.8784	-1.6750	1	1	8600.50	1.0
5	5	4	174.5368	173.3643	-173.3643	0.0	1.1725	3.0256	0.3875	1	1	40274.93	1.0
5	5	2	251.6514	258.2998	-258.3000	0.0	-6.6487	4.0029	-1.6610	1	1	101974.38	1.0
5	5	0	79.3882	86.5423	-86.5424	0.0	-7.1542	3.0608	-2.3373	1	1	12740.48	1.0
5	5	7	84.5101	85.5469	85.5470	0.0	-1.0369	2.7838	-0.3725	1	1	7772.29	1.0
5	7	6	94.2953	93.6133	-93.6133	0.0	0.6820	2.6124	0.2610	1	1	10587.26	1.0
5	7	4	208.7679	211.9965	-211.9966	0.0	-3.2286	3.4547	-0.9346	1	1	60866.28	1.0
5	7	0	153.6348	156.1984	-156.1984	0.0	-2.5636	2.7773	-0.9231	1	1	36161.45	1.0
5	9	4	27.8738	25.6604	-25.6605	0.0	2.2134	6.6170	0.3345	1	1	705.01	1.0
5	9	2	152.5954	150.9554	-150.9554	0.0	1.6400	2.8582	0.5738	1	1	26907.67	1.0
5	9	0	263.3706	266.6416	-266.6418	0.0	-3.2711	4.1817	-0.7823	1	1	90524.19	1.0
5	11	0	95.8661	99.7049	-99.7049	0.0	-3.8388	2.6819	-1.4313	1	1	10816.86	1.0
6	8	0	54.6588	57.4029	57.4030	0.0	-2.7441	3.5012	-0.7838	1	1	3651.50	1.0
6	8	6	97.6797	92.1117	-92.1117	0.0	5.5680	2.6792	2.0782	1	1	10195.79	1.0
6	6	4	80.3147	78.8623	78.8624	0.0	1.4524	3.1779	0.4570	1	1	6863.46	1.0
6	6	2	113.4320	111.2261	111.2261	0.0	2.2059	2.5167	0.8765	1	1	15292.93	1.0
6	4	4	99.6198	99.0924	99.0924	0.0	0.5274	2.5773	0.2046	1	1	11694.55	1.0
6	4	2	205.2286	207.2507	207.2507	0.0	-2.0221	3.3898	-0.5965	1	1	57980.71	1.0
6	4	0	178.6313	186.5554	-186.5555	0.0	-7.9242	3.0558	-2.5931	1	1	52169.93	1.0
6	2	4	134.6993	133.3274	133.3274	0.0	1.3725	2.8042	0.4894	1	1	19255.46	1.0
6	2	2	261.7693	265.3501	265.3503	0.0	-3.5810	4.2056	-0.8515	1	1	88094.06	1.0
6	2	0	139.6036	141.9459	141.9459	0.0	-2.3422	2.6239	-0.8926	1	1	28818.01	1.0
6	2	0	170.9225	173.5428	-173.5428	0.0	-2.6203	2.9686	-0.8826	1	1	48260.93	1.0
6	0	6	134.6080	132.3212	132.3212	0.0	2.2869	3.8976	0.5867	1	1	19240.71	1.0
6	0	4	177.7730	181.6330	181.6330	0.0	-3.8600	3.1113	-1.2406	1	1	41988.12	1.0
6	0	2	26.1707	19.6996	-19.6996	0.0	6.4711	5.9783	1.0824	1	1	566.42	1.0
6	0	0	156.2843	152.4268	152.4268	0.0	3.8576	3.3181	1.1626	1	1	38122.06	1.0
6	0	0	30.1505	22.4619	-22.4620	0.0	7.6885	5.9719	1.2875	1	1	542.66	1.0
7	1	4	157.5980	157.3168	157.3168	0.0	0.2812	2.8717	0.0979	1	1	30053.41	1.0
7	1	2	292.7026	300.6785	300.6787	0.0	-7.9759	4.5935	-1.7364	1	1	121829.56	1.0
7	1	0	109.4266	112.8180	112.8180	0.0	-3.3914	2.6011	-1.3039	1	1	14968.86	1.0
7	3	2	67.8269	65.8389	65.8390	0.0	1.9880	2.7838	0.7141	1	1	5633.25	1.0
7	3	5	139.1226	140.9396	140.9396	0.0	-1.8171	2.7765	-0.6544	1	1	21987.03	1.0
7	5	2	174.3457	176.7496	176.7497	0.0	-2.4039	3.0468	-0.7890	1	1	37928.62	1.0
7	5	0	210.3034	213.2005	213.2005	0.0	-2.8971	3.5939	-0.8061	1	1	50302.90	1.0
8	4	0	75.8657	77.7721	77.7721	0.0	-1.9064	2.9130	-0.6544	1	1	6479.14	1.0
8	2	2	58.8698	56.5080	-56.5080	0.0	2.3618	3.2355	0.7300	1	1	3571.94	1.0
9	2	0	8.6807	0.6254	0.6254	0.0	8.0552	5.5373	1.4547	1	1	0.43	1.0
9	2	9	6.4685	7.1192	7.1192	0.0	-0.6507	7.3870	-0.0881	1	1	53.97	1.0
8	7	5	17.3764	20.4244	-20.4244	0.0	-3.0480	2.8183	-1.0815	1	1	445.04	1.0
8	7	7	1.5641	5.1618	5.1618	0.0	-3.5977	31.1013	-0.1157	1	1	28.29	1.0
8	5	1	0.9812	10.5914	10.5914	0.0	-9.7102	56.0638	-0.1732	1	0	120.75	1.0
8	3	1	13.3378	13.8491	-13.8491	0.0	-0.5113	3.5330	-0.1447	1	1	218.92	1.0
8	3	5	17.5665	18.2756	18.2756	0.0	-0.7091	2.4786	-0.2861	1	1	415.29	1.0
8	3	11	11.9269	7.1290	-7.1290	0.0	4.7979	3.6833	1.3026	1	1	56.59	1.0
1	H	K	L	Y(CALC)	A	B	DPS-CALC	SIG(D)	(O-C)/SIG(D)	IQ	IL	Q	EXTING

	Y(OBS)	Y(CALC)	A	B	OBS-CALC	SIG(O)	(O-C)/SIG(O)	IO	IL	Q	EXTINC	
-8	1	12.3842	12.0087	-12.0087	0.0	0.3756	3.6808	0.1020	1	1	169.77	1.0
-8	1	12.0405	0.9434	-0.9434	0.0	11.0976	3.4766	3.1920	1	1	1.11	1.0
-8	1	8.3173	5.1138	5.1138	0.0	3.2035	5.0093	0.6395	1	1	33.65	1.0
-8	1	17.7063	8.0897	-8.0897	0.0	9.6165	2.9541	3.2553	1	1	83.73	1.0
-8	1	19.7783	14.1862	14.1862	0.0	5.5921	2.6527	2.1081	1	1	247.45	1.0
-7	2	10.7174	5.5192	5.5192	0.0	5.1982	3.7432	1.3887	1	1	42.22	1.0
-7	2	21.3429	24.6105	-24.6105	0.0	-3.2676	1.9591	-1.6679	1	1	890.85	1.0
-7	2	9.6951	0.3659	0.3659	0.0	9.3292	3.9044	2.3894	1	1	0.20	1.0
-7	2	18.0215	17.8125	17.8125	0.0	0.2086	2.1003	0.0993	1	1	465.96	1.0
-7	2	9.6645	1.6188	1.6188	0.0	8.0457	4.0687	1.9774	1	1	3.62	1.0
-7	2	15.6218	12.2911	-12.2911	0.0	3.3307	2.9496	1.1292	1	1	170.20	1.0
-7	2	10.6685	5.3329	5.3329	0.0	5.3356	3.7597	1.4191	1	1	39.40	1.0
-7	4	8.0148	6.5689	6.5689	0.0	1.0459	4.9528	0.2112	1	1	68.56	1.0
-7	4	15.7054	18.0339	-18.0339	0.0	-2.3285	2.7248	-0.8546	1	1	425.19	1.0
-7	4	18.8358	17.6279	17.6279	0.0	1.2079	2.4992	0.4833	1	1	335.14	1.0
-7	4	11.7397	8.3166	8.3166	0.0	3.4231	3.7655	0.9091	1	1	83.28	1.0
-7	6	17.9419	17.9792	17.9792	0.0	-0.0373	2.3813	-0.0157	1	1	408.98	1.0
-7	6	18.0134	17.1223	-17.1224	0.0	0.8910	2.3463	0.3797	1	1	377.19	1.0
-7	6	9.4645	12.8199	-12.8199	0.0	-3.3555	4.4789	-0.7492	1	1	207.67	1.0
-7	6	5.7036	11.1635	11.1635	0.0	-5.4605	7.6290	-0.7157	1	0	149.69	1.0
-7	6	8.2341	1.7998	1.7998	0.0	6.4342	5.4623	1.1779	1	1	3.60	1.0
-7	8	7.8431	5.8104	-5.8104	0.0	2.0327	5.9181	0.3435	1	1	38.18	1.0
-7	8	11.9423	5.7232	-5.7232	0.0	6.2191	3.6061	1.7246	1	1	37.00	1.0
-7	8	12.9954	11.5820	11.5820	0.0	1.4135	3.6290	0.3895	1	1	144.93	1.0
-6	9	9.3328	6.4904	6.4904	0.0	2.8423	4.7927	0.5931	1	1	48.77	1.0
-6	9	10.9977	12.8953	-12.8993	0.0	-1.9017	8.9757	-0.2119	1	1	199.62	1.0
-6	9	14.9121	8.9479	8.9479	0.0	5.9642	2.8701	2.0780	1	1	96.45	1.0
-6	9	10.2899	7.2409	7.2410	0.0	3.0490	4.1771	0.7299	1	1	61.42	1.0
-6	9	15.5659	12.9780	-12.9780	0.0	2.5879	3.3983	0.7615	1	1	186.40	1.0
-6	9	2.2029	6.7464	-6.7464	0.0	-4.5435	19.1510	-0.2372	1	0	60.22	1.0
-6	7	3.6275	5.1964	-5.1964	0.0	-1.5689	11.3920	-0.1377	1	0	37.26	1.0
-6	7	13.3109	15.5573	-15.5573	0.0	-2.2464	3.0011	-0.7485	1	1	324.73	1.0
-6	7	16.3998	15.2362	15.2362	0.0	1.1636	2.6661	0.4364	1	1	291.39	1.0
-6	7	11.3339	15.6626	15.6626	0.0	-4.3286	3.9937	-1.0839	1	1	280.67	1.0
-6	5	7.9397	7.6381	-7.6381	0.0	0.3016	5.0716	0.0595	1	1	86.78	1.0
-6	5	7.1566	8.4635	8.4635	0.0	-1.3069	5.4097	-0.2416	1	1	111.92	1.0
-6	5	14.6857	11.8146	11.8146	0.0	2.8710	2.4504	1.1717	1	1	219.36	1.0
-6	5	7.2368	11.0728	-11.0728	0.0	-3.8360	5.6158	-0.6831	1	1	171.63	1.0
-6	5	8.2031	4.4714	-4.4714	0.0	3.7317	5.0814	0.7344	1	1	25.19	1.0
-6	5	17.2786	15.7895	15.7895	0.0	1.4891	2.6522	0.5615	1	1	277.74	1.0
-6	5	10.7191	6.6379	6.6379	0.0	4.0812	3.4452	1.1812	1	1	71.67	1.0
-6	3	15.4207	12.3287	-12.3287	0.0	3.0921	2.1659	1.4276	1	1	263.14	1.0
-6	3	7.8058	14.3441	14.3441	0.0	-6.5344	4.7085	-1.3878	1	1	340.86	1.0
-6	3	6.8857	2.1843	-2.1843	0.0	4.7013	5.7886	0.8122	1	1	7.25	1.0
-6	3	17.2862	10.2134	10.2134	0.0	7.0728	2.3662	2.9891	1	1	123.53	1.0
-6	3	8.3568	4.9596	-4.9596	0.0	3.3973	4.1462	0.8194	1	1	44.62	1.0
-6	1	24.0074	25.4512	-25.4513	0.0	-1.4439	1.4499	-0.9627	1	1	1183.45	1.0
-6	1	9.7276	8.9225	8.9225	0.0	0.8051	3.7393	0.2153	1	1	138.71	1.0
-6	1	26.7964	5.8204	26.1462	0.0	0.6503	1.4617	0.4449	1	1	1086.24	1.0
-6	1	8.4885	5.8204	5.8204	0.0	2.6680	4.5005	0.5928	1	1	47.63	1.0
-6	1	23.9451	24.3244	-24.3244	0.0	-0.3792	1.8837	-0.2013	1	1	723.68	1.0
-5	2	12.8940	14.0867	14.0867	0.0	-1.1927	2.3480	-0.5080	1	1	410.97	1.0
-5	2	9.9930	8.5787	8.5787	0.0	1.4143	2.9192	0.4845	1	1	160.96	1.0
-5	2	20.5904	22.7750	-22.7750	0.0	-2.1846	1.4708	-1.4853	1	1	1115.82	1.0
-5	2	8.7286	8.7753	-8.7753	0.0	-0.0467	3.4927	-0.0134	1	1	152.51	1.0

	Y(OBS)	Y(CALC)	A	B	DBS-CALC	SIG(D)	(O-C)/SIG(D)	IQ	IL	Q	EXTINC
-5	28.2615	27.7729	27.7729	0.0	0.4886	1.3642	0.3582	1	1	1343.90	1.0
-5	9.3380	4.5480	4.5480	0.0	4.7900	3.9984	1.1980	1	1	30.95	1.0
-5	21.1861	17.1652	-17.1653	0.0	4.0209	1.9333	2.0798	1	1	374.88	1.0
-5	14.3629	12.1687	-12.1687	0.0	2.1941	2.3011	0.9535	1	1	279.12	1.0
-5	6.3292	1.6154	1.6154	0.0	4.7138	4.8124	0.9795	1	1	5.16	1.0
-5	18.2167	19.7746	19.7746	0.0	-1.5579	1.7693	-0.8805	1	1	761.67	1.0
-5	8.0001	7.3688	-7.3688	0.0	0.6312	4.0353	0.1564	1	1	98.43	1.0
-5	10.8868	9.8713	-9.8713	0.0	1.0155	3.3584	0.3024	1	1	157.60	1.0
-5	5.6399	11.4968	-11.4968	0.0	-5.8570	6.2960	-0.9303	1	0	226.73	1.0
-5	4.1768	8.1492	8.1492	0.0	-3.9724	8.3677	-0.4747	1	0	112.60	1.0
-5	10.6492	10.6492	-10.6492	0.0	0.0465	3.6168	0.0129	1	1	164.41	1.0
-5	10.2581	1.7916	1.7916	0.0	8.4666	3.9331	2.1527	1	1	4.12	1.0
-5	6.6706	0.6067	0.6067	0.0	6.0640	6.7637	0.8965	1	0	0.41	1.0
-5	7.7252	8.4614	8.4614	0.0	-0.7362	5.3029	-0.1388	1	1	101.42	1.0
-5	17.9400	16.2641	-16.2642	0.0	1.6759	2.1512	0.7791	1	1	383.03	1.0
-5	15.3912	17.2185	17.2185	0.0	-1.8273	2.6558	-0.6880	1	1	408.94	1.0
-5	10.2713	4.5951	4.5951	0.0	5.6762	3.9364	1.4420	1	1	26.85	1.0
-5	11.3277	12.6131	-12.6131	0.0	-1.2854	3.9271	-0.3273	1	1	182.15	1.0
-5	15.3245	19.2169	19.2169	0.0	-3.8924	2.9373	-1.3252	1	1	457.03	1.0
-5	14.2348	9.0479	-9.0479	0.0	5.1870	2.9378	1.7656	1	1	96.62	1.0
-5	11.3554	5.3377	5.3377	0.0	6.0177	3.8457	1.5648	1	1	31.42	1.0
-4	5.1922	6.2438	6.2438	0.0	-1.0515	8.4745	-0.1241	1	1	47.58	1.0
-4	14.0174	12.6222	-12.6222	0.0	1.3952	3.0835	0.4525	1	1	197.15	1.0
-4	10.3525	9.9945	9.9945	0.0	0.3580	4.1902	0.0854	1	1	121.25	1.0
-4	7.8833	11.5330	-11.5330	0.0	-3.6498	5.0923	-0.7167	1	1	195.04	1.0
-4	23.5919	26.0399	26.0399	0.0	-2.4479	1.7176	-1.4252	1	1	1011.88	1.0
-4	16.6960	17.6210	-17.6210	0.0	-0.9250	2.3964	-0.3860	1	1	424.80	1.0
-4	6.8448	9.8800	-9.8800	0.0	-3.0352	6.1612	-0.4926	1	1	121.74	1.0
-4	2.9924	8.5299	-8.5299	0.0	-5.5374	11.6155	-0.4767	1	0	130.95	1.0
-4	8.6501	8.5090	8.5090	0.0	0.1411	3.8954	0.0362	1	1	130.95	1.0
-4	25.5246	25.6342	-25.6342	0.0	-0.1096	1.4683	-0.0746	1	1	1151.60	1.0
-4	22.1905	23.2924	23.2924	0.0	-1.1019	1.8944	-0.5817	1	1	784.30	1.0
-4	1.9747	10.8701	-10.8701	0.0	-8.8954	21.7614	-0.4408	1	0	149.40	1.0
-4	21.2578	18.5931	-18.5931	0.0	2.6647	2.2413	1.1889	1	1	378.29	1.0
-4	5.0616	19.7557	-19.7557	0.0	1.4154	1.3920	-0.5274	1	1	853.43	1.0
-4	17.3738	8.0518	8.0518	0.0	-2.9902	5.6695	-0.5404	1	0	136.00	1.0
-4	15.5929	16.3941	16.3941	0.0	0.9797	1.8131	0.5404	1	1	509.57	1.0
-4	7.5453	18.3186	-18.3186	0.0	-2.7257	2.3998	-1.1358	1	1	553.99	1.0
-4	3.6339	8.2025	-8.2025	0.0	-0.6573	5.2885	-0.1243	1	1	94.97	1.0
-4	5.1884	9.8120	9.8120	0.0	-6.1781	12.5118	-0.4938	1	0	115.43	1.0
-4	7.5381	7.1965	7.1965	0.0	-2.0081	5.2624	-0.3816	1	1	128.73	1.0
-4	16.7538	1.6084	1.6084	0.0	5.9297	3.2883	1.8033	1	1	6.69	1.0
-4	17.7791	17.4413	17.4413	0.0	-0.6875	1.6058	-0.4281	1	1	745.06	1.0
-4	16.0942	15.3299	-15.3299	0.0	2.4492	1.5970	1.5336	1	1	507.44	1.0
-4	5.9015	13.3194	-13.3194	0.0	2.7748	1.9733	1.4062	1	1	325.06	1.0
-4	10.8932	10.0398	10.0398	0.0	-4.1384	6.5822	-0.6287	1	0	154.60	1.0
-4	10.8469	6.1920	6.1920	0.0	4.7012	2.1442	2.1925	1	1	110.02	1.0
-4	13.9761	10.6135	-10.6135	0.0	0.2333	2.3122	0.1009	1	1	303.38	1.0
-4	25.2217	14.2400	-14.2400	0.0	-0.2640	1.8908	-0.1396	1	1	472.57	1.0
-4	9.1668	25.6739	25.6740	0.0	-0.4522	1.3427	-0.3368	1	1	1280.70	1.0
-4	21.6664	10.9531	10.9531	0.0	-1.7862	4.0832	-0.4375	1	1	192.51	1.0
-3	5.2851	24.5760	-24.5760	0.0	-2.9096	2.0471	-1.4213	1	1	802.38	1.0
-3	5.1781	2.9461	2.9461	0.0	2.3390	4.3392	0.5390	1	1	30.45	1.0
-3	5.0402	3.7068	-3.7068	0.0	1.4713	4.0885	0.3599	1	1	48.71	1.0
-3		4.2471	4.2471	0.0	0.7931	4.4579	0.1779	1	1	55.72	1.0

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1	H	K	L	Y(OBS)	Y(CALC)	A	B	OBS-CALC	SIG(O)	(O-C)/SIG(O)	IQ	IL	Q	EXTINC
-2	3	13	13	8.1167	10.3574	10.3574	0.0	-2.2407	5.4395	-0.4119	1	1	135.55	1.0
-2	1	1	1	9.2008	9.3275	-9.3275	0.0	-0.1267	1.9045	-0.0665	1	1	491.30	1.0
-2	1	3	3	10.6320	10.0673	-10.0673	0.0	0.5647	1.7280	0.3268	1	1	515.69	1.0
-2	1	5	5	16.6116	17.3034	-17.3034	0.0	-0.6918	1.3240	-0.5225	1	1	1117.76	1.0
-2	1	7	7	18.3872	20.6786	-20.6786	0.0	-2.2914	1.4418	-1.5893	1	1	1167.00	1.0
-2	1	9	9	17.6977	21.3595	-21.3595	0.0	-3.6618	1.7818	-2.0551	1	1	945.57	1.0
-2	1	11	11	0.9472	9.7733	-9.7733	0.0	-8.8260	40.5282	-0.2178	1	0	155.40	1.0
-1	2	13	13	20.9949	20.1060	-20.1060	0.0	0.8839	2.1026	0.4228	1	1	528.98	1.0
-1	2	1	1	10.8325	6.5252	-6.5252	0.0	4.3064	1.2384	3.4773	1	1	307.96	1.0
-1	2	3	3	14.4352	18.9581	-18.9581	0.0	-4.5230	1.3146	-3.4406	1	1	1919.52	1.0
-1	2	5	5	5.7513	8.1983	8.1983	0.0	-2.4471	3.7777	-0.6478	1	1	241.70	1.0
-1	2	7	7	5.3786	3.1031	3.1031	0.0	2.2754	4.9210	0.4624	1	1	24.82	1.0
-1	2	9	9	2.6485	2.1711	2.1711	0.0	0.4774	12.3255	0.0387	1	0	9.20	1.0
-1	2	11	11	10.6022	12.2200	12.2200	0.0	-1.6178	3.7097	-0.4361	1	1	229.16	1.0
-1	2	13	13	17.0875	20.2359	-20.2359	0.0	-3.1484	2.7292	-1.1536	1	1	506.39	1.0
-1	4	7	7	7.3873	6.5619	6.5619	0.0	0.8254	3.7696	0.2190	1	1	97.58	1.0
-1	4	9	9	15.3562	13.6820	-13.6820	0.0	1.6742	2.3570	0.2190	1	1	335.13	1.0
-1	4	11	11	9.2462	4.4815	-4.4815	0.0	4.7647	4.3428	1.0972	1	1	28.93	1.0
-1	4	13	13	11.7384	6.0949	6.0949	0.0	5.6435	3.9318	1.4353	1	1	43.76	1.0
-1	6	3	3	7.6787	7.4241	7.4241	0.0	0.2546	3.0467	0.0836	1	1	156.93	1.0
-1	6	5	5	11.4603	9.8148	9.8148	0.0	1.6455	2.1007	0.7833	1	1	255.98	1.0
-1	6	7	7	8.0933	3.9401	-3.9401	0.0	4.1532	3.3235	1.2496	1	1	35.62	1.0
-1	6	9	9	12.6587	6.9344	-6.9344	0.0	5.7243	2.5525	2.2426	1	1	91.97	1.0
-1	6	11	11	9.2540	0.9264	-0.9264	0.0	8.3277	4.5948	1.8124	1	1	1.12	1.0
-1	8	1	1	13.4686	9.7486	-9.7486	0.0	3.7199	3.2876	0.5786	1	1	167.65	1.0
-1	8	3	3	4.9688	2.2194	-2.2194	0.0	2.7494	2.0217	1.8400	1	1	199.58	1.0
-1	8	5	5	4.9625	1.2202	-1.2202	0.0	3.7423	5.8270	0.4718	1	0	9.91	1.0
-1	8	7	7	10.0446	7.6903	7.6903	0.0	2.3543	6.5500	0.5713	1	0	2.71	1.0
-1	8	9	9	12.9749	11.0726	11.0726	0.0	1.9023	3.7617	0.6259	1	1	94.19	1.0
-1	8	11	11	20.6337	18.9372	-18.9372	0.0	1.6965	2.4170	0.7019	1	1	418.08	1.0
-1	10	3	3	8.1399	11.1654	11.1654	0.0	-3.0255	4.5315	-0.6677	1	1	196.82	1.0
-1	12	1	1	7.4712	3.5847	3.5847	0.0	3.8865	5.2572	0.7393	1	1	16.70	1.0
-1	12	3	3	10.6654	9.9139	-9.9139	0.0	0.7515	3.8539	0.1950	1	1	124.90	1.0
-1	12	5	5	10.8493	8.1810	8.1810	0.0	2.6683	3.9113	0.6822	1	1	80.49	1.0
-1	12	7	7	17.8255	22.1905	-22.1905	0.0	-4.3650	2.6437	-1.6511	1	1	580.03	1.0
-1	13	1	1	21.6754	21.2580	-21.2580	0.0	0.4174	2.5387	0.1644	1	1	486.54	1.0
-1	13	3	3	3.9079	10.0890	10.0890	0.0	-6.1811	10.5666	-0.5850	1	0	148.63	1.0
-1	13	5	5	10.0671	8.7361	-8.7361	0.0	1.3310	4.1797	0.3185	1	1	107.05	1.0
-1	13	7	7	4.9289	4.3065	-4.3065	0.0	0.6224	8.7168	0.0714	1	0	24.14	1.0
-1	13	9	9	11.2357	8.4760	8.4760	0.0	2.7597	4.2347	0.6517	1	1	84.56	1.0
-1	13	11	11	13.8401	16.9006	-16.9006	0.0	-3.0604	2.5196	-1.2147	1	1	530.72	1.0
-1	9	3	3	12.7005	11.4936	11.4936	0.0	1.2069	4.6079	0.2619	1	1	232.25	1.0
-1	9	5	5	17.4725	18.8506	18.8506	0.0	-1.3782	2.2577	-0.6104	1	1	565.76	1.0
-1	9	7	7	34.3925	30.8044	-30.8044	0.0	3.5881	1.5599	2.3002	1	1	1329.91	1.0
-1	9	9	9	21.5668	5.5708	-5.5708	0.0	15.9960	5.6119	2.8504	1	1	37.70	1.0
-1	9	11	11	13.3975	10.6587	-10.6587	0.0	2.7389	1.9549	1.4010	1	1	279.83	1.0
-1	9	13	13	12.7625	12.1538	-12.1538	0.0	0.6087	2.5994	0.2342	1	1	291.18	1.0
-1	7	5	5	42.3330	2.9435	-2.9435	0.0	39.3895	2.4008	16.4069	1	0	14.46	1.0
-1	7	7	7	28.3356	8.6750	-8.6750	0.0	4.1830	1.8035	2.3194	1	1	817.04	1.0
-1	7	9	9	10.3000	8.1209	-8.1209	0.0	1.6249	7.4262	0.3438	1	1	88.47	1.0
-1	7	11	11	3.0324	8.1209	8.1209	0.0	-5.0885	7.4574	-0.6823	1	0	231.25	1.0
-1	5	5	5	7.2102	7.7485	7.7485	0.0	-0.5383	5.0558	-0.1065	1	1	118.26	1.0
-1	5	7	7	19.6637	18.7752	-18.7752	0.0	0.8885	2.0508	0.4332	1	1	560.49	1.0
-1	5	9	9	7.9927	4.2453	-4.2453	0.0	3.7473	5.4351	0.6895	1	1	23.42	1.0
-1	5	11	11	18.8953	18.6429	-18.6429	0.0	0.2525	3.5522	0.0711	1	1	373.40	1.0

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	Y(OBS)	Y(CALC)	A	B	OBS-CALC	SIG(I)	(O-C)/SIG(I)	IQ	IL	Q	EXTING
0	14.3769	17.0839	17.0839	0.0	-2.7070	1.3163	-2.0565	1	1	1679.34	1.0
0	4.2215	3.0558	3.0558	0.0	1.1657	5.8364	0.1997	1	0	28.34	1.0
0	9.6513	4.5310	-4.5310	0.0	5.1203	3.2693	1.5661	1	1	46.46	1.0
0	6.1656	11.7277	-11.7278	0.0	-5.5621	7.7618	-0.7166	1	0	241.33	1.0
0	6.7066	8.1354	8.1354	0.0	-1.4288	8.9502	-0.1596	1	0	92.62	1.0
0	16.1554	19.7594	-19.7594	0.0	-3.6040	1.2333	-2.9221	1	1	2242.71	1.0
0	9.9561	11.3645	-11.3645	0.0	-1.4084	2.4733	-0.5694	1	1	451.95	1.0
0	5.5301	7.8901	7.8901	0.0	-2.3600	5.1652	-0.4569	1	1	153.00	1.0
0	20.3741	22.1217	22.1218	0.0	-1.7477	1.8714	-0.9339	1	1	907.11	1.0
0	7.7877	2.0002	-2.0002	0.0	5.7876	5.4073	1.0703	1	1	5.83	1.0
0	25.3212	23.0914	-23.0914	0.0	2.2298	1.9780	1.1273	1	1	626.36	1.0
0	18.6808	21.1913	-21.1914	0.0	-2.5106	1.0360	-2.4233	1	1	2691.98	1.0
1	10.3408	4.0308	4.0308	0.0	6.3100	2.1841	2.8891	1	1	65.20	1.0
1	3.0235	5.2073	5.2073	0.0	-2.1838	8.6016	-0.2539	1	0	76.51	1.0
1	9.4861	11.1619	-11.1619	0.0	-1.6758	3.4153	-0.4907	1	1	262.57	1.0
1	13.6572	12.2645	12.2649	0.0	4.0365	2.9067	0.4790	1	1	246.87	1.0
1	4.8250	0.7885	-0.7885	0.0	1.3923	9.0216	0.4474	1	0	0.82	1.0
1	6.1388	0.4391	-0.4391	0.0	5.6997	4.5239	1.2599	1	1	0.47	1.0
1	7.8861	3.3600	3.3600	0.0	4.5261	4.2642	1.0614	1	1	21.61	1.0
1	7.0563	0.2356	0.2356	0.0	6.8207	5.6580	1.2055	1	1	0.09	1.0
1	11.9195	8.4651	8.4651	0.0	3.4544	2.0897	1.6531	1	1	196.24	1.0
1	2.2411	4.7662	4.7662	0.0	-2.5251	12.6520	-0.1996	1	0	54.68	1.0
1	7.1085	1.3094	1.3094	0.0	5.7992	5.9211	0.9794	1	1	2.37	1.0
1	13.8808	16.4491	16.4491	0.0	-2.5683	3.3273	-0.7719	1	1	311.42	1.0
1	10.7783	6.5550	-6.5550	0.0	4.2233	2.7413	1.5406	1	1	88.09	1.0
1	13.8608	15.7934	-15.7934	0.0	-1.9326	2.4833	-0.7783	1	1	459.84	1.0
1	11.3253	6.2280	6.2280	0.0	5.0974	3.2114	1.5873	1	1	54.40	1.0
1	14.2155	12.8911	12.8911	0.0	1.3245	3.1285	0.4233	1	1	237.82	1.0
1	5.0803	9.4610	-9.4610	0.0	-4.3807	9.6631	-0.4533	1	0	109.35	1.0
1	10.3942	7.3680	-7.3680	0.0	3.0262	3.9778	0.7608	1	1	69.69	1.0
1	8.1579	6.0647	6.0647	0.0	2.0932	5.4219	0.3861	1	1	45.09	1.0
1	5.7518	8.1548	-8.1548	0.0	-2.4030	8.5046	-0.2826	1	0	70.67	1.0
1	8.3615	11.6228	11.6229	0.0	-3.2613	5.7485	-0.5673	1	1	158.16	1.0
1	11.9105	7.1507	7.1507	0.0	4.7597	2.9374	1.6204	1	1	86.47	1.0
1	6.4343	13.4844	13.4844	0.0	-7.0501	6.2285	-1.1319	1	1	283.47	1.0
1	11.5899	10.2613	-10.2613	0.0	1.3286	3.6252	0.3665	1	1	146.60	1.0
1	14.1440	11.0842	11.0842	0.0	3.0598	2.0561	1.4881	1	1	263.29	1.0
1	13.5262	17.8247	-17.8248	0.0	-4.2986	2.9905	-1.4374	1	1	525.84	1.0
1	19.7235	21.3408	21.3408	0.0	-1.6173	2.1372	-0.7567	1	1	640.94	1.0
1	12.5891	12.4082	12.4082	0.0	0.1809	3.7945	0.0477	1	1	183.40	1.0
1	21.1785	19.4182	19.4182	0.0	1.7603	1.6481	1.0681	1	1	734.93	1.0
1	6.5799	6.6640	-6.6640	0.0	-0.0841	6.8210	-0.0123	1	0	58.56	1.0
1	16.7347	12.1355	12.1355	0.0	4.5993	2.8454	1.6164	1	1	161.45	1.0
1	11.9967	6.8810	6.8810	0.0	5.1157	2.3920	2.1386	1	1	105.76	1.0
1	7.1438	7.6111	-7.6111	0.0	-0.4674	5.2046	-0.0898	1	1	102.31	1.0
1	4.3202	3.4763	-3.4763	0.0	0.8439	4.9795	0.1695	1	0	54.49	1.0
1	13.1258	14.0825	-14.0825	0.0	-0.9568	1.9380	-0.4937	1	1	646.90	1.0
1	16.3306	13.8496	-13.8496	0.0	2.4810	1.8175	1.3650	1	1	464.49	1.0
1	16.9787	18.2202	18.2202	0.0	-1.2415	2.1411	-0.5799	1	1	619.72	1.0
1	14.0281	16.3616	16.3616	0.0	-2.3335	3.1203	-0.7479	1	1	396.67	1.0
1	15.5693	15.2246	-15.2246	0.0	0.3447	3.0520	0.1130	1	1	278.48	1.0
1	8.3917	6.5135	6.5135	0.0	1.8782	2.9490	0.6369	1	1	127.91	1.0
1	15.9040	13.8583	-13.8583	0.0	2.0458	2.2446	0.9114	1	1	373.91	1.0
1	8.5121	8.8547	8.8547	0.0	-0.3426	4.7390	-0.0723	1	1	123.24	1.0
1	2.0314	3.6497	3.6497	0.0	-1.6183	25.3412	-0.0639	1	0	14.16	1.0

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3	4	7	7.6701	8.2821	8.2821	0.0	-0.6120	5.4952	-0.1114	1	1	101.02	1.0
3	4	9	9.5027	12.1634	-12.1634	0.0	-2.6607	5.0004	-0.5321	1	1	180.68	1.0
3	6	1	9.4882	3.0339	-3.0339	0.0	6.4543	3.1623	2.0410	1	1	19.31	1.0
3	6	5	8.0533	8.9104	8.9104	0.0	-0.8571	4.9527	-0.1731	1	1	125.25	1.0
3	6	7	8.4976	18.9983	-18.9983	0.0	-10.5007	5.2812	-1.9883	1	1	482.16	1.0
3	6	1	14.0010	13.1751	-13.1751	0.0	0.8259	2.6063	0.3169	1	1	296.42	1.0
3	6	7	7.7822	2.3488	-2.3488	0.0	5.4335	5.9439	0.9141	1	1	6.54	1.0
3	10	1	8.3637	7.4669	7.4669	0.0	0.8967	4.9160	0.1824	1	1	78.02	1.0
3	10	3	11.5054	6.3774	6.3774	0.0	5.1280	3.6980	1.3867	1	1	52.71	1.0
3	10	5	5.8416	7.9370	-7.9370	0.0	-2.0953	8.3184	-0.2519	1	0	73.71	1.0
3	12	1	9.5189	6.2374	6.2374	0.0	3.2815	4.7420	0.6920	1	1	45.03	1.0
3	12	1	11.3743	0.5384	0.5384	0.0	10.8359	4.6666	2.3220	1	1	0.32	1.0
4	11	3	7.1931	5.5881	-5.5881	0.0	1.6050	6.3905	0.2512	1	1	36.41	1.0
4	9	3	6.5577	9.5140	-9.5140	0.0	-2.9563	6.7552	-0.4376	1	1	114.81	1.0
4	7	1	2.1114	3.3442	3.3442	0.0	-1.2328	17.5741	-0.0701	1	0	18.39	1.0
4	7	1	19.4378	21.0662	-21.0662	0.0	-1.6284	2.2328	-0.7293	1	1	654.76	1.0
4	7	3	12.3572	4.6091	4.6091	0.0	7.7481	3.4006	2.2785	1	1	27.48	1.0
4	7	7	10.2494	6.3908	6.3908	0.0	3.8585	4.7409	0.8139	1	1	45.79	1.0
4	5	3	10.5752	9.5500	9.5500	0.0	1.0252	3.5697	0.2872	1	1	154.29	1.0
4	5	5	5.3233	0.2626	0.2626	0.0	5.0657	7.7661	0.6523	1	0	0.10	1.0
4	3	3	9.4534	10.1579	10.1579	0.0	-0.7045	3.7379	-0.1885	1	1	194.52	1.0
4	3	5	5.6277	11.4300	-11.4300	0.0	-5.8023	7.1405	-0.8126	1	0	206.39	1.0
4	1	1	8.6637	10.2088	10.2088	0.0	-1.5451	3.2250	-0.4791	1	1	249.63	1.0
4	1	5	9.1828	10.4759	-10.4759	0.0	-1.2931	4.2568	-0.3038	1	1	181.74	1.0
4	1	7	11.9349	11.9445	11.9445	0.0	-0.0096	3.6012	-0.0027	1	1	195.45	1.0
4	1	9	4.6220	8.5820	8.5820	0.0	-3.9601	10.6938	-0.3703	1	0	83.97	1.0
5	2	3	12.2942	4.0828	4.0828	0.0	8.2114	3.1495	2.6072	1	1	26.78	1.0
5	2	5	13.6453	9.5083	9.5083	0.0	4.1370	3.1787	1.3015	1	1	123.92	1.0
5	4	1	9.5091	3.9928	-3.9928	0.0	5.5164	3.7441	1.4733	1	1	27.27	1.0
5	4	3	11.8531	7.0325	7.0325	0.0	4.8206	3.4090	1.4141	1	1	74.32	1.0
5	6	1	3.7515	3.7751	-3.7751	0.0	-0.0236	10.5419	-0.0022	1	0	21.68	1.0
5	6	3	6.0147	7.8243	7.8243	0.0	-1.8095	7.2907	-0.2482	1	0	83.24	1.0
5	5	5	10.5088	12.7607	-12.7607	0.0	-2.2519	4.5797	-0.4917	1	1	194.24	1.0
5	8	5	10.9420	0.8279	-0.8279	0.0	10.1141	4.5253	2.2350	1	1	0.74	1.0
5	10	1	11.4013	11.2941	11.2941	0.0	0.1072	4.1628	0.0257	1	1	145.54	1.0
6	9	1	7.8411	12.4807	-12.4807	0.0	-4.6396	6.1673	-0.7523	1	1	159.25	1.0
6	7	1	3.6240	6.8811	-6.8811	0.0	-3.2571	12.5412	-0.2597	1	0	58.18	1.0
6	7	3	8.8250	4.3687	4.3687	0.0	4.4563	5.3361	0.8351	1	1	21.26	1.0
6	5	1	9.0225	7.6127	7.6127	0.0	1.4098	4.6431	0.3036	1	1	79.17	1.0
6	3	3	8.6312	2.7699	-2.7699	0.0	5.8613	5.4493	1.0756	1	1	10.05	1.0
6	3	5	8.0901	9.0904	9.0904	0.0	-1.0003	5.8428	-0.1712	1	1	94.45	1.0
6	1	1	4.5440	4.8139	-4.8139	0.0	-0.2699	8.8718	-0.0304	1	0	35.78	1.0
6	1	3	6.6430	5.3739	-5.3739	0.0	1.2692	6.6070	0.1921	1	1	39.24	1.0
7	2	1	19.0898	18.3311	-18.3311	0.0	0.7586	2.4077	0.3151	1	1	425.46	1.0
7	2	3	9.4545	13.1107	13.1107	0.0	-3.6562	5.1155	-0.7147	1	1	194.55	1.0
7	4	3	6.8173	7.2291	-7.2291	0.0	-0.4118	7.8274	-0.0526	1	0	56.61	1.0
7	6	1	17.6489	20.5454	20.5454	0.0	-2.8965	2.7372	-1.0582	1	1	470.64	1.0
8	1	1	12.3743	7.4304	-7.4304	0.0	4.9439	3.8724	1.2767	1	1	59.69	1.0

ICELSIAN REFINEMENT - 'A' AND 'B' REFLECTIONS ON SAME SCALE  
 TIME FOR MATRIX SETUP WAS 0 SEC.  
 NUMBER OF OBSERVATIONS ACCEPTED IS 800, NUMBER OF DEGREES OF FREEDOM IS 682  
 NUMBER OF PARAMETERS VARIED IN THIS CYCLE WAS 118, TOTAL NUMBER OF PARAMETERS FITTED TO DATA SET TAKEN AS 118  
 \*\*\*\*\* MEASURES OF AGREEMENT BEFORE CYCLE 5 \*\*\*\*\*  
 R(F) R(F\*\*2) MR(Y0) SIG 1  
 END DECIEMTAV

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\*\*\*\*\* MEASURES OF AGREEMENT BEFORE CYCLE 5 \*\*\*\*\*

FOR REFLECTIONS	R(F)	R(F**2)	WR(YD)	SIG L
ACCEPTED BY LOGIC				
ALL INTENSITIES ( 800 REFLECTIONS)				
RATIO	0.0335	0.0391	0.0369	1.5963
NUMEPATOR	0.252869409E 04	0.755882688E 06	0.173790918E 04	
DENOMINATOR	0.873748750E 05	0.193089440E 08	0.127739500E 07	
GREATER THAN SIGMA ( 800 REFLECTIONS)				
RATIO	0.0335	0.0391	0.0369	1.5963
NUMERATOR	0.252869409E 04	0.755882688E 06	0.173790918E 04	
DENOMINATOR	0.873748750E 05	0.193089440E 08	0.127739500E 07	
NO TEST ON LOGIC				
ALL INTENSITIES ( 869 REFLECTIONS)				
RATIO	0.0371	0.0396	0.0447	1.8457
NUMERATOR	0.325369922E 04	0.764093438E 06	0.255829346E 04	
DENOMINATOR	0.877903750E 05	0.193154080E 08	0.127839700E 07	
GREATER THAN SIGMA ( 802 REFLECTIONS)				
RATIO	0.0345	0.0394	0.0446	1.9295
NUMERATOR	0.301941528E 04	0.760994188E 06	0.254647314E 04	
DENOMINATOR	0.874752500E 05	0.193140960E 08	0.127839500E 07	

ICELSIAN REFINEMENT - 'A' AND 'B' REFLECTIONS ON SAME SCALE  
 ELEMENTS OF CORRELATION MATRIX OF MAGNITUDE GREATER THAN 0.30

SCALE	1	-	BA	B11	0.6321
		-	BA	B22	0.6283
		-	BA	B33	0.5996
		-	BA	B13	0.3573
BA	X	-	BA	Z	0.4100
BA	B11	-	BA	B33	0.3587
		-	BA	B13	0.5782
BA	B33	-	BA	B13	0.5984
BA	B12	-	BA	B23	0.5533
T10	X	-	T10	Z	0.5138
T10	B11	-	T10	B13	0.5392
		-	T1M	B11	-0.3644
T10	B22	-	T1M	B22	-0.3017
T10	B33	-	T1M	B13	0.5413
		-	T1M	B33	-0.4170
T10	B12	-	T10	B23	0.5720
		-	T1M	B12	-0.4498
		-	T1M	B23	-0.3263
T10	B13	-	T1M	B13	-0.3417
T10	B23	-	T1M	B12	-0.3243
		-	T1M	B23	-0.4033
T1M	X	-	T1M	Z	0.5253
T1M	B11	-	T1M	B13	0.5268
T1M	B33	-	T1M	B13	0.4807
T1M	B12	-	T1M	B23	0.5706
T20	X	-	T20	Z	0.5490
		-	T2M	X	-0.3783
T20	Z	-	T2M	Z	-0.3049
T20	B11	-	T20	B13	0.5994
		-	T2M	B11	-0.3264
T20	B22	-	T2M	B22	-0.3431
T20	B33	-	T20	B13	0.5964
T20	B12	-	T20	B23	0.5774
		-	T2M	B12	-0.5104
		-	T2M	B23	-0.3254
T20	B13	-	T2M	B13	-0.3433
T20	B23	-	T2M	B12	-0.3314
		-	T2M	B23	-0.3984
T2M	X	-	T2M	Z	0.5526
T2M	B11	-	T2M	Z	

Y(OBS)	Y(CALC)	A	B	OBS-CALC
T1M B11	T1M B13	0.5268		
T1M B33	T1M B13	0.4807		
T1M B12	T1M B23	0.5706		
T20 X	T20 Z	0.5490		
	T2M X	-.3783		
T20 Z	T2M Z	-.3049		
T20 B11	T20 B13	0.5994		
	T2M B11	-.3264		
T20 B22	T2M B22	-.3431		
T20 B33	T20 B13	0.5964		
T20 B12	T20 B23	0.5774		
	T2M B12	-.5104		
	T2M B23	-.3254		
T20 B13	T2M B13	-.3433		
T20 B23	T2M B12	-.3314		
	T2M B23	-.3984		
T2M X	T2M Z	0.5526		
T2M B11	T2M B13	0.5957		
T2M B33	T2M B13	0.5985		
T2M B12	T2M B23	0.5732		
OBO X	OBO Z	0.5400		
OBO B11	OBO B13	0.5582		
	OBO B11	-.4043		
OBO B33	OBO B13	0.6056		
	OBO B33	-.3108		
OBO B12	OBO B23	0.5437		
	OBO B12	-.3833		
OBO B13	OBO B13	-.3472		
OBO B23	OBO B23	-.3163		
OBO X	OBO Z	0.4687		
OBO B11	OBO B13	0.5283		
OBO B33	OBO B13	0.5656		
OBO B12	OBO B23	0.4711		
OBO X	OBO Z	0.5287		
OBO B11	OBO B13	0.5383		
	OBO B11	-.3548		
OBO B33	OBO B13	0.5045		
OBO B12	OBO B23	0.5675		
	OBO B12	-.4212		
	OBO B23	-.3194		
OBO B13	OBO B13	-.3342		
OBO B23	OBO B12	-.3193		
	OBO B23	-.3118		
OBO X	OBO Z	0.5824		
OBO B11	OBO B13	0.5671		
OBO B33	OBO B13	0.5041		
OBO B12	OBO B23	0.5972		
OBO X	OBO Z	0.4913		
OBO B11	OBO B13	0.6051		
	OBO B11	-.3240		
OBO B33	OBO B13	0.5827		
OBO B12	OBO B23	0.5450		
	OBO B12	-.4030		
OBO B13	OBO B13	-.3422		
OBO X	OBO Z	0.5037		
OBO B11	OBO B13	0.6198		
OBO B33	OBO B13	0.6190		
OBO B12	OBO B23	0.5658		
OBO X	OBO Z	0.6282		
OBO B11	OBO B13	0.4657		
OBO B33	OBO B13	0.5293		
OBO B12	OBO B23	0.5710		
OBO X	OBO Z	0.4038		
OBO B11	OBO B13	0.4420		
OBO B33	OBO B13	0.5119		
OBO B12	OBO B23	0.5295		