

ANDALUSITE (MINSK GEM) AT 400 DEGREES C FOR FC TABLE

STRUCTURE FACTORS

PAGE 1C

H	K	L	F(OH)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
5	0	3	1.105	* 000	-000	.000	1.105	1.3656	1.0000
5	0	3	28.025	26.943	-26.942	-.155	1.062	4.5599	1.0000
5	0	3	1.785	* 000	-.000	-.000	1.785	3.9144	* 000
5	0	3	8.453	7.553	-.7.553	-.050	1.901	6.6416	1.0000
5	0	3	1.754	* 000	000	.000	1.784	3.6474	1.0000
5	0	3	15.123	14.429	-14.429	-.167	1.694	4.1207	1.0000
5	0	3	48.790	47.179	47.178	.353	1.611	8.583	1.0000
5	0	3	49.640	48.361	48.358	-.502	1.280	6.620	1.0000
5	0	3	25.901	25.040	25.039	-.139	1.862	3.8472	1.0000
5	0	3	36.720	37.355	37.352	-.482	1.373	6.1033	1.0000
5	0	3	32.696	31.367	31.366	.323	1.329	5.3442	1.0000
5	0	3	33.811	23.906	33.903	-.448	1.995	4.3462	1.0000
5	0	3	14.427	13.611	13.613	-.815	4.7821	1.0000	*
5	0	3	18.711	18.109	18.105	-.397	6.601	3.2170	1.0000
5	0	3	18.335	16.937	16.935	.212	1.308	5.6436	1.0000
5	0	3	3.944	3.262	3.262	.001	1.682	3.0581	1.0000
5	0	3	55.474	55.914	55.914	-.222	1.440	2.1318	1.0000
5	0	3	6.709	6.602	6.602	-.049	1.307	6.640	1.0000
5	0	3	14.380	13.887	13.885	.195	4.93	2.7741	1.0000
5	0	3	2.518	2.069	2.069	.046	4.48	1.2720	1.0000
5	0	3	26.776	27.243	27.243	.152	1.532	4.6904	1.0000
5	0	3	4.821	5.118	5.118	-.082	1.298	1.1536	1.0000
5	0	3	11.645	10.641	10.640	.102	1.004	5.6490	1.0000
5	0	3	18.598	17.875	17.875	.232	1.721	2.9122	1.0000
5	0	3	17.923	16.606	16.602	-.369	1.317	7.1612	1.0000
5	0	3	18.766	18.841	18.841	-.226	1.075	4.016	1.0000
5	0	3	8.456	8.173	8.173	.092	2.263	2.0405	1.0000
5	0	3	13.113	10.190	10.186	.207	1.923	6.8056	1.0000
5	0	3	9.361	9.938	9.933	-.309	1.577	4.1280	1.0000
5	0	3	11.849	11.709	11.707	-.162	1.141	4.6904	1.0000
5	0	3	10.821	12.098	12.098	-.114	1.277	6.6827	1.0000
5	0	3	26.634	26.209	26.209	.199	4.925	1.6210	1.0000
5	0	3	15.730	16.181	16.180	-.064	4.950	2.3182	1.0000
5	0	3	19.439	19.246	19.245	.144	1.93	1.0001	1.0000
5	0	3	8.664	8.774	8.774	-.105	1.05	8.259	1.0000
5	0	3	17.140	16.908	16.907	.219	2.32	1.4005	1.0000
5	0	3	8.609	8.690	8.690	-.072	0.81	5.5406	1.0000
5	0	3	7.375	7.552	7.552	.079	1.76	9.9662	1.0000
5	0	3	9.229	8.404	8.402	.169	1.69	5.7790	1.0000
5	0	3	7.157	6.357	6.356	-.132	7.99	5.6517	1.0000
5	0	3	23.363	-23.022	-.271	-.227	1.358	1.3794	1.0000
5	0	3	9.435	8.820	8.820	-.125	6.15	4.6640	1.0000
5	0	3	1.830	1.661	1.658	-.102	1.15	4.911	1.0000
5	0	3	7.250	7.660	7.660	.155	1.24	2.9204	1.0000
5	0	3	3.521	3.162	3.159	-.132	1.124	3.60	1.0000
5	0	3	12.097	11.804	11.802	-.227	2.27	2.0390	1.0000
5	0	3	10.508	9.463	9.462	-.138	1.158	1.445	1.0000
5	0	3	1.198	* 545	-15.445	-.125	1.127	1.5587	1.0000
5	0	3	16.027	-15.445	-15.445	-.082	1.051	6.653	1.0000
5	0	3	22.795	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	4.543	5.682	5.680	-.141	1.225	1.3603	1.0000
5	0	3	7.383	7.609	7.608	-.127	1.226	1.5587	1.0000
5	0	3	1.198	* 545	-15.445	-.082	1.051	6.653	1.0000
5	0	3	16.027	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	22.795	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	4.543	5.682	5.680	-.141	1.225	1.3603	1.0000
5	0	3	7.383	7.609	7.608	-.127	1.226	1.5587	1.0000
5	0	3	1.198	* 545	-15.445	-.082	1.051	6.653	1.0000
5	0	3	16.027	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	22.795	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	4.543	5.682	5.680	-.141	1.225	1.3603	1.0000
5	0	3	7.383	7.609	7.608	-.127	1.226	1.5587	1.0000
5	0	3	1.198	* 545	-15.445	-.082	1.051	6.653	1.0000
5	0	3	16.027	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	22.795	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	4.543	5.682	5.680	-.141	1.225	1.3603	1.0000
5	0	3	7.383	7.609	7.608	-.127	1.226	1.5587	1.0000
5	0	3	1.198	* 545	-15.445	-.082	1.051	6.653	1.0000
5	0	3	16.027	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	22.795	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	4.543	5.682	5.680	-.141	1.225	1.3603	1.0000
5	0	3	7.383	7.609	7.608	-.127	1.226	1.5587	1.0000
5	0	3	1.198	* 545	-15.445	-.082	1.051	6.653	1.0000
5	0	3	16.027	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	22.795	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	4.543	5.682	5.680	-.141	1.225	1.3603	1.0000
5	0	3	7.383	7.609	7.608	-.127	1.226	1.5587	1.0000
5	0	3	1.198	* 545	-15.445	-.082	1.051	6.653	1.0000
5	0	3	16.027	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	22.795	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	4.543	5.682	5.680	-.141	1.225	1.3603	1.0000
5	0	3	7.383	7.609	7.608	-.127	1.226	1.5587	1.0000
5	0	3	1.198	* 545	-15.445	-.082	1.051	6.653	1.0000
5	0	3	16.027	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	22.795	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	4.543	5.682	5.680	-.141	1.225	1.3603	1.0000
5	0	3	7.383	7.609	7.608	-.127	1.226	1.5587	1.0000
5	0	3	1.198	* 545	-15.445	-.082	1.051	6.653	1.0000
5	0	3	16.027	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	22.795	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	4.543	5.682	5.680	-.141	1.225	1.3603	1.0000
5	0	3	7.383	7.609	7.608	-.127	1.226	1.5587	1.0000
5	0	3	1.198	* 545	-15.445	-.082	1.051	6.653	1.0000
5	0	3	16.027	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	22.795	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	4.543	5.682	5.680	-.141	1.225	1.3603	1.0000
5	0	3	7.383	7.609	7.608	-.127	1.226	1.5587	1.0000
5	0	3	1.198	* 545	-15.445	-.082	1.051	6.653	1.0000
5	0	3	16.027	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	22.795	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	4.543	5.682	5.680	-.141	1.225	1.3603	1.0000
5	0	3	7.383	7.609	7.608	-.127	1.226	1.5587	1.0000
5	0	3	1.198	* 545	-15.445	-.082	1.051	6.653	1.0000
5	0	3	16.027	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	22.795	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	4.543	5.682	5.680	-.141	1.225	1.3603	1.0000
5	0	3	7.383	7.609	7.608	-.127	1.226	1.5587	1.0000
5	0	3	1.198	* 545	-15.445	-.082	1.051	6.653	1.0000
5	0	3	16.027	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	22.795	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	4.543	5.682	5.680	-.141	1.225	1.3603	1.0000
5	0	3	7.383	7.609	7.608	-.127	1.226	1.5587	1.0000
5	0	3	1.198	* 545	-15.445	-.082	1.051	6.653	1.0000
5	0	3	16.027	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	22.795	-15.445	-15.445	-.082	1.051	5.82	1.0000
5	0	3	4.543	5.682	5.680	-.141	1.225	1.3603	1.0000
5	0	3	7.383	7.609	7.608	-.127	1		

ANDALUSITE (MINAS GERAIS) AT 400 DEGREES C FO-FC TABLE

STRUCTURE FACTORS

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M	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
5	7	1	21.787	20.893	20.890	*313	*895	4.4436	1.0000
5	7	2	20.835	21.200	-21.199	-305	-265	-1.7396	1.0000
5	7	3	17.630	17.284	17.282	*306	-6005	*0246	1.0000
5	7	4	15.442	16.526	16.525	*318	-8085	*4889	1.0000
5	7	5	15.491	15.531	15.529	*276	-6040	*2522	1.0000
5	7	6	4.159	4.852	4.852	*042	-6697	-3.1116	1.0000
5	7	7	5.774	5.411	-5.411	-056	-363	2.4321	1.0000
5	7	8	15.117	15.570	15.569	*086	-452	-2.8075	1.0000
5	8	9	8.305	8.047	-8.046	-001	-259	1.0522	1.0000
5	8	10	3.680	3.621	3.621	*030	-656	-2.0252	1.0000
5	8	11	1.804	1.629	-1.629	-103	-175	1.9448	1.0000
5	8	12	14.308	13.732	13.732	*153	-275	1.6307	1.0000
5	8	13	25.406	25.605	-25.601	-420	-156	-1.7041	1.0000
5	8	14	8.900	9.062	-9.060	-182	-162	-1.1770	1.0000
5	8	15	19.932	20.413	-20.410	-399	-461	-2.5453	1.0000
5	9	16	10.208	10.069	10.069	*150	-136	1.0556	1.0000
5	9	17	5.100	5.484	5.483	*121	-375	-1.6750	1.0000
5	9	18	1.291	*165	-1.148	*072	-127	1.4078	1.0000
5	9	19	18.450	17.975	17.975	*166	-473	2.5604	1.0000
5	9	20	2.771	1.245	-1.245	*036	-226	1.4346	1.0000
5	9	21	*1.292	*0.995	-0.995	-063	-298	1.4346	1.0000
5	9	22	*2.069	*0.000	-0.000	-050	-245	0.8530	1.0000
5	9	23	*7.744	-6.798	-6.796	-526	-945	4.3209	1.0000
5	9	24	*3.054	*0.000	-0.000	-000	-954	1.3540	1.0000
5	9	25	32.511	31.690	-31.690	-063	-821	2.1337	1.0000
5	9	26	1.156	*0.000	-0.000	-000	-156	1.3941	1.0000
5	9	27	32.763	31.933	-31.930	-438	-770	2.4425	1.0000
5	9	28	1.293	*0.000	-0.000	-000	-293	1.3942	1.0000
5	9	29	26.996	25.904	-25.903	-254	-767	1.3134	1.0000
5	9	30	5.279	5.719	-5.719	-004	-719	1.3112	1.0000
5	9	31	3.987	-3.980	-3.980	-241	-529	1.3112	1.0000
5	9	32	3.345	2.850	-2.850	-051	-496	0.0116	1.0000
5	9	33	20.187	19.221	-19.219	-234	-966	0.7030	1.0000
5	9	34	3.899	3.366	-3.365	-041	-634	2.1213	1.0000
5	9	35	3.723	4.138	-4.133	-204	-415	-1.3461	1.0000
5	9	36	*2.749	*2.286	-2.275	-081	-963	1.6610	1.0000
5	9	37	*5.253	*1.812	-1.809	-558	-761	3.6810	1.0000
5	9	38	18.170	16.671	-16.669	-256	-506	3.5628	1.0000
5	9	39	39.466	38.818	-38.815	-515	-646	2.4747	1.0000
5	9	40	10.837	10.374	-10.372	-222	-462	3.1251	1.0000
5	9	41	4.146	3.015	-3.014	-066	-129	4.0687	1.0000
5	9	42	10.739	10.934	-10.932	-200	-196	-1.2632	1.0000
5	9	43	6.181	6.189	-6.189	-068	-606	-0.503	1.0000
5	9	44	1.055	*0.918	-0.918	-022	-137	*1811	*0.000
5	9	45	7.611	7.768	-7.768	-061	-157	-1.1406	*0.000
5	9	46	5.591	5.907	-5.907	-025	-315	-1.9552	1.0000
5	9	47	5.451	-5.185	-5.185	-080	-265	1.5007	1.0000
5	9	48	6.181	6.189	-6.189	-110	-5926	1.0000	1.0000
5	9	49	5.846	5.950	-5.950	-061	-110	-5926	1.0000
5	9	50	3.401	3.056	-3.055	-051	-346	1.0261	1.0000
5	9	51	2.9028	2.9028	-2.9028	-131	-311	-1.2927	1.0000
5	9	52	11.969	12.012	-12.012	-093	-2802	-1.2802	1.0000

ANDALUSITE (MIMIC GEPALIS) AT 400 DEGREES C FOO-FC TABLE

STRUCTURE FACTORS

PAGE 12

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTAE	DELTA/SIGMA	F(X), FACTOR
6	4	2	35.766	35.651	-35.646	-0.561	+0.112	+0.4544	1.0000
6	4	3	9.703	9.989	-29.989	-0.086	+0.196	-1.0235	1.0000
6	4	4	18.371	17.675	17.675	-0.124	-0.696	3.08473	1.0000
6	4	5	6.996	7.036	-7.035	-0.095	-0.040	-0.2434	1.0000
6	4	6	21.399	21.204	-21.199	-0.477	-0.105	-0.5100	1.0000
6	4	7	39.478	19.160	19.159	+0.162	+0.316	1.0305	1.0000
6	5	1	3.055	3.055	-1.571	+0.055	+0.534	5.9474	1.0000
6	5	2	4.669	4.274	4.274	+0.196	+0.395	2.1594	1.0000
6	5	3	6.141	5.850	-5.850	+0.010	+0.291	1.8606	1.0000
6	5	4	14.147	13.870	13.869	+0.148	+0.276	1.7433	1.0000
6	5	5	3.429	3.826	-3.825	+0.049	+0.397	-1.2602	1.0000
6	5	6	1.945	2.352	2.346	+0.164	+1.107	-1.2391	1.0000
6	6	0	33.615	32.690	32.683	+0.518	+0.626	3.4523	1.0000
6	6	1	12.133	11.761	-11.759	+0.191	+0.372	2.4161	1.0000
6	6	2	7.646	7.419	7.418	+0.111	+0.065	+0.5134	1.0000
6	6	3	24.295	31.612	-11.610	+0.179	+0.464	-3.1168	1.0000
6	6	4	24.295	26.675	24.671	+0.478	+0.381	-3.6686	1.0000
6	6	5	7.155	7.210	-7.208	+0.173	+0.050	+0.3153	1.0000
6	6	6	7.123	6.994	-6.992	+0.050	+0.026	2.00516	1.0000
6	6	7	6.222	6.333	-6.333	+0.065	+0.105	-0.6690	1.0000
6	7	1	1.126	* 0.009	* 0.009	+0.097	+0.219	+0.2711	1.0000
6	7	2	5.918	* 0.009	* 0.009	+0.076	+0.042	+0.042	1.0000
6	7	3	1.197	* 0.009	* 0.009	+0.047	+0.206	+0.2397	1.0000
6	7	4	3.595	* 0.009	* 0.009	+0.022	+0.039	+0.0550	1.0000
6	7	5	3.935	-3.935	-3.935	+0.022	+0.039	+0.0550	1.0000
6	7	6	20.226	19.413	-10.413	+0.069	+0.515	+0.5247	1.0000
6	7	7	11.930	12.313	12.312	+0.131	+0.383	-2.5390	1.0000
6	7	8	27.772	27.670	-27.667	+0.420	+0.102	+0.4602	1.0000
6	7	9	10.929	11.290	11.289	+0.131	+0.361	-2.6041	1.0000
6	7	10	16.052	15.312	-15.311	+0.057	+0.744	4.0702	1.0000
6	7	11	20.846	20.549	-20.547	+0.264	+0.297	1.4838	1.0000
6	7	12	6.559	6.266	-6.265	+0.061	+0.293	-2.5390	1.0000
6	7	13	6.4466	6.056	-6.053	+0.205	+0.409	1.6504	1.0000
6	7	14	4.0464	4.464	-4.464	+0.025	+0.216	-2.5051	1.0000
6	7	15	24.273	24.039	-24.036	+0.372	+0.235	-0.6217	1.0000
6	7	16	6.055	6.430	-6.429	+0.120	+0.375	+0.473	1.0000
6	7	17	1.071	* 0.000	* 0.000	+0.000	+0.071	-1.8251	1.0000
6	7	18	14.509	13.942	13.941	+0.163	+0.567	1.3944	1.0000
6	7	19	1.071	* 0.000	* 0.000	+0.000	+0.071	+0.473	1.0000
6	7	20	11.546	10.761	10.760	+0.112	+0.766	-1.8251	1.0000
6	7	21	1.141	* 0.000	* 0.000	+0.000	+0.141	1.3944	1.0000
6	7	22	10.282	* 0.000	10.048	+0.184	+0.233	1.408	1.0000
6	7	23	1.292	* 0.000	* 0.000	+0.000	+0.292	1.3947	1.0000
6	7	24	11.222	11.615	-11.614	+0.089	+0.393	-2.3469	1.0000
6	7	25	15.500	15.302	15.301	+0.190	+0.286	2.0972	1.0000
6	7	26	18.969	18.605	-18.603	+0.200	+0.364	1.3940	1.0000
6	7	27	11.569	10.965	-10.965	+0.122	+0.604	3.0601	1.0000
6	7	28	2.157	1.579	1.579	+0.030	+0.578	1.5376	1.0000
6	7	29	9.813	10.408	-10.408	+0.138	+0.138	-4.1670	1.0000
6	7	30	2.031	2.168	-2.168	+0.015	+0.643	2.0463	1.0000

ANDALUSITE (MINAS GERAIS) AT 400 DEGREES C FUGIT TABLE

STRUCTURE FACTORS

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	F(CALC)	B(CALC)	DELTA F	DELTA SIGMA	EXT. FACTOR
7	8.655	8.511	.112	.143	1.0420
7	8.683	8.506	.068	.374	-1.2328
7	4.976	4.056			1.0000
7	3.876	4.056			1.0000
7	5.696	5.446			1.0000
7	7.499	3.888			1.0000
7	20.641	19.983	-19.983	-3.89	-1.0000
7	1.938	1.317			1.0000
7	20.981	20.308	-20.308	-3.72	3.2444
7	4.0435	4.1800			1.0000
7	4.1798	4.355			1.0000
7	13.892	13.895	-13.891	-3.50	-1.0000
7	1.273	1.501			1.0000
7	11.076	10.631	-10.631	-3.04	1.0000
7	16.803	16.660	-16.658	-2.26	-1.0000
7	2.181	2.804	-2.804	-2.26	-1.0000
7	19.204	19.545	-19.543	-2.60	-1.0000
7	7.359	7.326	-7.326	-0.37	
7	6.905	7.351	-7.356	-1.62	
7	1.232	0.906	-0.906	-0.04	
7	29.508	28.834	-28.833	-2.68	-1.0000
7	29.576	29.135	-29.132	-2.29	-1.0000
7	9.017	8.953	-8.952	-1.29	
7	26.564	26.127	-26.124	-1.417	
7	21.929	21.692	-21.691	-2.45	
7	17.482	18.050	18.046	-3.78	
7	14.186	13.859	-13.858	-1.76	
7	11.636	11.266	-11.256	-1.57	
7	5.652	4.820	-4.819	-1.25	
7	7.940	7.737	-7.737	-1.12	
7	10.634	10.658	-10.657	-1.62	
7	9.066	9.171	-9.169	-1.75	
7	17.853	18.177	-18.177	-0.03	
7	20.871	20.930	-20.929	-0.29	
7	25.975	26.241	-26.238	-3.57	
7	16.544	16.718	-16.717	-2.44	
7	14.455	14.379	-14.379	-0.04	
7	13.288	13.314	-13.314	-0.98	
7	5.486	5.230	-5.229	-0.68	
7	10.6376	10.468	-10.467	-1.52	
7	3.400	3.925	-3.924	-0.50	
7	9.525	8.934	-8.932	-1.73	
7	3.541	3.517	-3.516	-1.32	
7	7.469	7.370	-7.369	-1.39	
7	6.0765	6.1436	-6.1431	-0.74	
7	1.115	*.000	*.000		
7	8.039	7.603	-7.595	-3.32	
7	1.152	*.000	-*.000	1.152	
7	4.5549	4.5578	-4.5573	-0.714	
7	1.269	*.000	*.000		
7	4.5056	5.129	-5.120	-3.06	
7	13.496	13.126	-13.126	-0.95	
7	14.957	14.659	-14.659	-1.53	
7	4.321	4.062	-4.060	-1.03	
7	17.386	17.442	-17.441	-1.88	
7	9.341	9.169	-9.168	-0.68	

ANDALUSITE (MILLES GRAMS) AT 400 DEGREES C FC-CFC TABLE

STRUCTURE FACTORS

PAGE 14

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	FXT.	FACTOR	
0	1	1	5.319	5.343	-5.342	-0.096	-0.024	-0.1011	1.0000		
0	1	6	3.716	2.876	-2.874	-0.088	-0.042	2.5217	1.0000		
0	2	0	6.333	6.477	-6.475	-0.156	-0.256	2.4247	1.0000		
0	2	1	9.275	9.311	-9.311	-0.049	-0.036	0.4247	1.0000		
0	2	2	34.912	35.120	-35.115	-0.52	-0.208	-0.2456	1.0000		
0	2	3	9.605	9.605	-9.605	-0.045	-0.001	-0.7644	1.0000		
0	3	4	5.301	5.753	-5.751	-0.147	-0.372	-1.7409	1.0000		
0	3	5	6.93	6.606	-6.606	-0.045	-0.057	1.3577	1.0000		
0	4	6	21.312	21.465	-21.400	-0.470	-0.693	-0.4913	1.0000		
0	4	7	3.467	3.367	-3.386	-0.054	-0.060	-0.2901	1.0000		
0	5	8	18.104	18.337	-18.330	-0.239	-0.231	-1.3052	1.0000		
0	5	9	6.467	5.766	-5.766	-0.025	-0.703	4.4025	1.0000		
0	6	10	14.672	15.138	-15.136	-0.189	-0.266	-1.6716	1.0000		
0	6	11	2.308	1.491	-1.491	-0.01	-0.617	-1.7475	1.0000		
0	7	12	12.322	12.620	-12.618	-0.248	-0.296	-1.8955	1.0000		
0	7	13	17.361	17.034	-17.032	-0.278	-0.326	1.7946	1.0000		
0	8	14	2.218	2.174	-2.174	-0.021	-0.644	-1.6810	1.0000		
0	8	15	3.655	3.650	-3.648	-0.107	-0.095	-1.0202	1.0000		
0	9	16	1.193	1.030	-1.030	-0.024	-0.162	-1.1762	1.0000		
0	9	17	14.129	14.172	-14.170	-0.252	-0.643	-2.4099	1.0000		
0	10	18	1.270	*	-1.429	-0.015	-0.159	-1.751	1.0000		
0	10	19	2.655	2.452	-2.452	-0.005	-0.403	1.1988	1.0000		
0	11	20	5.678	6.325	-6.325	-0.051	-0.647	-3.4062	1.0000		
0	12	21	16.219	16.437	-16.437	-0.050	-0.216	-1.2399	1.0000		
0	12	22	4.032	4.264	-4.264	-0.011	-0.222	-0.8456	1.0000		
0	13	23	1.770	*	-1.631	-0.004	-0.135	-0.225	1.0000		
0	13	24	4.913	*	-4.636	-0.079	-0.614	-0.043	1.0000		
0	14	25	1.953	*	-1.848	-0.010	-0.153	-0.205	1.0000		
0	15	26	3.366	3.927	-3.927	-0.026	-0.541	-1.7337	1.0000		
0	16	27	4.686	27.475	-27.477	-0.340	-0.961	-4.3860	1.0000		
0	17	28	5.182	*	-5.182	-0.030	-0.266	-1.1507	1.0000		
0	18	29	1.735	*	-1.735	-0.005	-0.216	-0.3841	1.0000	*	
0	19	30	8.740	8.849	-8.849	-0.087	-0.109	-0.7376	1.0000	*	
0	20	31	8.649	-8.649	-8.649	-0.156	-0.379	-4.5299	1.0000	*	
0	21	32	8.625	-8.625	-8.625	-0.156	-0.379	-5.5685	1.0000	*	
0	22	33	1.900	*	-1.466	-0.309	-0.334	-0.5012	1.0000	*	
0	23	34	10.323	10.788	-10.786	-0.183	-0.465	-3.2775	1.0000	*	
0	24	35	20.346	30.180	-30.175	-0.564	-0.634	-2.4680	1.0000	*	
0	25	36	2.645	2.974	-2.974	-0.018	-0.329	-7.700	1.0000	*	
0	26	37	4.538	-2.603	-2.603	-0.242	-0.035	2.035	1.0000	*	
0	27	38	1.160	*	-0.000	-0.000	-0.160	-0.0512	1.0000	*	
0	28	39	22.115	22.026	-22.025	-0.212	-0.689	-1.2939	1.0000	*	
0	29	40	1.176	*	-1.000	-0.000	-0.176	-0.4126	1.0000	*	
0	30	41	1.176	*	-1.000	-0.000	-0.176	-1.3929	1.0000	*	
0	31	42	13.925	13.952	-13.951	-0.165	-0.167	-1.3529	1.0000	*	
0	32	43	3.366	-3.463	-3.463	-0.000	-0.000	-2.0845	1.0000	*	
0	33	44	3.958	4.186	-4.184	-0.000	-0.223	-1.4247	1.0000	*	
0	34	45	4.735	5.031	-5.030	-0.095	-0.104	-0.92	-0.5249	1.0000	*
0	35	46	5.964	6.566	-6.566	-0.139	-0.151	-2.58	-1.4709	1.0000	*
0	36	47	24.612	35.498	-35.497	-0.196	-0.196	-1.15	-4.021	1.0000	*
0	37	48	2.988	3.321	-3.320	-0.082	-0.082	-0.8045	-0.8019	1.0000	*
0	38	49	2.988	3.321	-3.320	-0.332	-0.332	-0.9801	-0.9801	1.0000	*

ANALYTIC CRINAS GRAMS AT 400 DEGREES C

STRUCTURE FACTORS

PAGE 15

H K L

F(OBS)

A(CALC)

B(CALC)

DELTA F

DELTA/SIGMA

EXT. FACTOR

0	2	2	19.312	19.410	-19.409	-1.172	-0.97	-5.046	1.0000
0	2	3	4.938	5.344	-5.343	-1.17	-0.406	-1.7192	1.0000
0	2	4	26.446	26.598	-26.598	-1.17	-0.152	-6.370	1.0000
0	2	5	1.285 *	1.665	-1.664	-0.38	-0.420	-4.560	1.0000
0	2	6	18.453	18.794	-18.792	-0.301	-0.242	-1.7684	1.0000
0	3	1	27.339	27.249	-27.246	-0.295	-0.089	-4.183	1.0000
0	3	2	9.348	9.408	-9.407	-0.066	-0.060	-4.109	1.0000
0	3	3	24.751	25.486	-25.486	-0.383	-0.735	-3.1240	1.0000
0	3	4	14.001	14.249	-14.249	-0.276	-0.249	-1.6685	1.0000
0	3	5	17.246	17.448	-17.446	-0.349	-0.204	-1.2411	1.0000
0	4	1	3.769	4.186	-4.186	-0.025	-0.417	-1.4704	1.0000
0	4	2	8.090	8.432	-8.432	-0.42	-0.242	-2.2195	1.0000
0	4	3	4.016	4.468	-4.467	-0.62	-0.672	-1.6650	1.0000
0	4	4	7.430	7.313	-7.312	-0.076	-0.126	-0.7291	1.0000
0	4	5	2.480 *	3.421	-3.421	-0.023	-0.941	-1.5866	1.0000
0	5	1	15.006	16.095	-16.094	-0.206	-0.411	-2.2587	1.0000
0	5	2	26.519	26.911	-26.911	-0.366	-0.366	-1.7443	1.0000
0	5	3	1.236 *	1.807	-1.807	-0.137	-0.429	-0.641	1.0000
0	5	4	24.030	25.141	-25.137	-0.440	-1.3111	-4.5259	1.0000
0	5	5	12.082	11.969	-11.967	-0.183	-0.312	-0.7724	1.0000
0	6	1	23.225	24.218	-24.217	-0.166	-0.992	-3.992	1.0000
0	6	2	2.636	2.985	-2.985	-0.008	-0.349	-0.1336	1.0000
0	6	3	16.455	16.878	-16.877	-0.213	-0.224	-2.4401	1.0000
0	6	4	4.627	4.701	-4.701	-0.026	-0.071	-0.2824	1.0000
0	6	5	7.694	7.657	-7.656	-0.05	-0.386	-0.2200	1.0000
0	6	6	9.066	9.446	-9.443	-0.234	-0.361	-2.5041	1.0000
0	6	7	21.872	22.337	-22.336	-0.253	-0.475	-2.323	1.0000
0	6	8	10.400	7.317	-7.315	-0.170	-0.316	-4.2109	1.0000
0	6	9	1.241	4.000	-0.000	-0.000	1.241	-4.9356	1.0000
0	7	1	19.545	19.720	-19.713	-0.519	-0.175	-0.8540	1.0000
0	7	2	1.277 *	1.000	-1.000	-1.277	1.3935	1.0000	
0	7	3	6.413 *	6.363	-6.360	-0.169	-0.216	-0.5990	1.0000
0	7	4	9.070	10.281	-10.280	-0.296	-0.311	-2.6602	1.0000
0	7	5	1.875 *	2.192	-2.193	-0.050	-0.319	-0.5232	1.0000
0	7	6	5.349	5.122	-5.121	-0.104	-0.227	-0.8536	1.0000
0	7	7	2.413 *	2.361	-2.361	-0.013	-0.32	-0.6337	1.0000
0	7	8	7.936	6.277	-6.276	-0.096	-0.261	-1.6074	1.0000
0	7	9	30.423	30.961	-30.957	-0.477	-0.537	-1.7098	1.0000
0	8	1	12.495	12.631	-12.629	-0.226	-0.136	-0.9125	1.0000
0	8	2	8.259	7.767	-7.766	-0.131	-0.192	-0.314	1.0000
0	8	3	8.910	8.969	-8.966	-0.208	-0.058	-0.3686	1.0000
0	8	4	23.498	24.120	-24.116	-0.41	-0.632	-3.0099	1.0000
0	8	5	1.987 *	2.184	-2.177	-0.167	-0.197	-0.3415	1.0000
0	9	1	2.253 *	1.207	-1.206	-0.057	-1.046	2.1165	1.0000
0	9	2	9.261	9.083	-9.083	-0.196	-0.175	-1.3723	1.0000
0	9	3	4.089	4.475	-4.474	-0.088	-0.386	-1.3017	1.0000
0	9	4	1.846 *	1.709	-1.702	-0.154	-0.157	-0.2042	1.0000
0	9	5	3.386	3.477	-3.477	-0.070	-0.091	-0.2629	1.0000
0	10	1	4.526	5.108	-5.108	-0.070	-0.483	-1.6143	1.0000
0	10	2	27.974	29.465	-29.463	-0.391	-1.491	-6.2025	1.0000
0	10	3	4.479	4.343	-4.342	-0.071	-1.36	-0.4816	1.0000
0	10	4	1.302 *	1.363	-1.363	-0.293	-0.936	1.0513	1.0000
0	10	5	6.502	6.653	-6.653	-0.023	-0.7539	-0.1511	1.0000

ANDALUSITE (KIRK'S CERAMICS) AT 400 DEGREES C FG--FC TABLE

STRUCTURE FACTORS

PAGE 16

H	K	L	F (CALS)	F (CALC)	A (CALC)	B (CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
10	5	2	10.813	11.573	-11.571	-2.41	-0.760	-0.0683	1.0000
10	6	0	14.669	14.281	14.275	-3.90	-0.211	-1.3093	1.0000
10	6	1	6.555	9.068	9.076	-5.33	-3.2198	1.0000	
11	6	0	1.295	*000	*000	1.295	1.2949	1.0000	
11	6	1	12.434	12.491	-12.488	-2.68	-0.359	-2.4965	1.0000
11	6	2	2.775	*000	-0.000	2.775	2.775	1.0000	
11	6	3	10.174	10.942	-10.926	-0.289	-0.768	-4.6540	1.0000
11	7	0	10.564	11.305	11.302	-2.86	-7.21	-4.7439	1.0000
11	7	1	17.626	17.897	17.893	-3.73	-2.71	-1.5716	1.0000
11	7	2	4.632	4.657	-4.657	-0.29	-2.25	-0.7693	1.0000
11	7	3	14.650	15.051	15.047	-0.360	-4.01	-2.7708	1.0000
11	7	4	9.338	9.905	-8.904	-1.34	-4.93	-2.7347	1.0000
11	8	0	7.558	7.503	7.502	-1.22	-0.65	-3.032	1.0000
11	8	1	12.605	13.115	-13.115	-1.11	-5.11	-3.3364	1.0000
11	8	2	3.267	3.267	-3.267	-0.019	-4.95	-1.5126	1.0000
11	8	3	3.766	-14.056	-14.054	-0.224	-5.16	-3.4856	1.0000
11	8	4	13.540	25.229	-26.535	-1.319	-1.304	-6.2046	1.0000
11	9	2	6.979	7.018	7.016	-0.043	-0.36	-1.1950	1.0000
11	9	4	4.689	4.417	4.416	.106	.272	.9915	1.0000

ANDALUSITE (MINS. GENERALLY) AT 490 DEGREES C FPCFC TABLE

ALL REFLECTIONS

WEIGHTED R

1372.98.24

UNWEIGHTED R

955.62

1084.9.36

814

*088

NUMERATOR

DENOMINATOR

NUMBER

R

RANGES OF F(OBS)
 116727.43 1199408.94 .560 *312
 2406.48 1867983.72 173 *036
 2577.70 2327290.13 50 *025
 1294.14 1727100.23 22 *027
 3916.70 1436503.18 7 *052
 2054.36 231334.26 1 *113
 *000 *000 *000 *000
 7421.44 437416.01 1 *130

RANGES OF (SIN(THETA)/LAMBDA)**2

100545.48 363866.43 5.6 *162
 15766.58 2105777.31 74 *067
 4011.63 1068244.07 84 *061
 4463.88 605050.18 6 *074
 5022.93 592561.59 116 *101
 1642.98 624193.09 21 *054
 1722.41 513192.67 131 *058
 2922.35 669627.03 135 *079

UNREFLECTED REFLECTIONS

WEIGHTED R

25410.34

9215732.26

637

*032

UNWEIGHTED R

410.03

10587.92

517

*039

RANGES OF F(OBS)

4839.53 1137804.71 363 *064
 2405.48 1867983.72 173 *036
 2577.70 2327290.13 50 *023
 1294.14 1727100.23 22 *027
 3916.70 1436803.18 7 *052
 2954.36 231334.28 1 *113
 *000 *000 *000 *000
 7421.44 437416.01 1 *130

RANGES OF (SIN(THETA)/LAMBDA)**2

5907.06 3038474.12 34 *064
 1289.80 2105599.02 78 *076
 1279.64 1068166.57 71 *035
 1127.44 604874.59 72 *037
 1309.23 592370.68 67 *047
 538.42 623999.35 96 *026
 639.50 512947.63 99 *035
 1715.84 469300.31 100 *060

RESULTS OF STRUCTURE FACTOR CALCULATIONS

R

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z

SUM FCA1
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6.67

The thermal expansion and the high temperature crystal chemistry
of Al_2SiO_5 polymorphs

John K. Winter

and

Subrata Ghose

Department of Geological Sciences
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Table 10. Sillimanite, andalusite and kyanite: observed and
calculated structure factors at various temperatures.

Andalusite 600°C

111
74743
FWA OF THE LOAD
LWA+1 OF THE LOAD

THE JOURNAL OF POLITICS

JOURNAL OF CLIMATE

11
22

FERRER SUMAKY

NE4105//1 CM BLANK COMMON TRUNCATED BY 207008 WORDS

PROGRAM AND BLOCK ASSIGNMENTS

ANDALUSITE (HILMAS GERAIS) AT 600 DEGREES C FO-FC TABLE

STRUCTURE FACTORS

PAGE 1

H	K	L	F(OBS)	F(CALC)	A(CALC)	b(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR	
0	0	2	61.875	63.183	352	-1.308	-10.037	1.0000	*	
0	0	4	120.639	141.616	834	-20.927	-111.0028	1.0000	*	
0	0	6	25.538	25.107	291	-481	1.7708	1.0000		
0	0	8	50.762	51.765	622	+1.003	-3.1959	1.0000		
0	1	1	45.690	47.334	172	-1.644	-15.3229	1.0000		
0	1	3	44.062	42.621	217	1.441	8.6580	1.0000		
0	1	5	10.390	9.836	976	-6.270	-43.7227	1.0000	*	
0	1	7	20.075	19.703	213	-19.702	-2.0154	1.0000		
0	2	0	19.062	18.105	131	-18.104	-3.25	1.0000		
0	2	2	68.401	71.670	683	-71.667	-6.745	-5.1590	1.0000	
0	2	4	10.173	10.200	200	-10.200	-1.122	-1.1713	1.0000	
0	2	6	37.011	37.671	279	-37.667	-4.548	-2.5095	1.0000	
0	2	8	6.136	5.811	659	-5.810	-5.097	-5.325	1.0000	
0	3	1	38.219	33.964	130	-38.219	-2.74	-7.745	1.0000	
0	3	3	31.108	30.106	208	-31.108	-2.08	-5.2840	1.0000	
0	3	5	21.695	21.416	282	-21.695	-2.82	-1.0998	1.0000	
0	3	7	11.431	11.553	118	-11.431	-1.122	-3.3563	1.0000	
0	4	0	49.105	48.062	350	-49.105	-1.023	6.5593	1.0000	
0	4	2	36.738	36.867	157	-36.738	-1.130	-7.7144	1.0000	
0	4	4	14.599	15.759	320	-14.599	-1.160	-7.5598	1.0000	
0	4	6	15.123	15.313	122	-15.123	-1.122	-1.1776	1.0000	
0	4	8	19.686	19.370	649	-19.686	-0.649	2.4633	1.0000	
0	5	0	11.710	12.223	1001	-11.710	-0.001	-3.6066	1.0000	
0	5	2	9.279	9.370	514	-9.279	-0.091	-7.7893	1.0000	
0	5	4	3.709	2.420	491	-3.709	-0.491	1.6751	1.0000	
0	6	0	19.304	18.902	289	-19.304	-0.45	1.7459	1.0000	
0	6	2	40.274	41.363	402	-40.274	-1.089	-5.0982	1.0000	
0	6	4	12.715	13.048	336	-12.715	-0.336	-2.4769	1.0000	
0	6	6	21.176	21.613	439	-21.176	-0.335	-2.3811	1.0000	
0	7	1	11.647	10.776	158	-11.647	-1.0777	6.866	1.0000	
0	7	3	15.573	15.998	191	-15.573	-1.191	-4.425	1.0000	
0	7	5	2.475	2.441	496	-2.475	-0.496	0.032	0.921	1.0000
0	8	0	69.093	73.703	625	-69.093	-3.703	-19.4809	1.0000	
0	8	2	18.165	17.918	229	-18.165	-1.7918	1.6572	1.0000	
0	8	4	51.528	53.725	567	-51.528	-2.198	-2.198	1.0000	
0	8	6	10.999	11.057	191	-10.999	-0.059	-6.4427	1.0000	
0	9	0	7.180	6.995	185	-7.180	-0.040	1.4621	1.0000	
0	9	2	9.290	9.151	139	-9.290	-0.073	1.1758	1.0000	
0	9	4	1.270	1.270	226	-1.270	-0.004	1.2050	1.0000	
0	9	6	19.721	19.295	639	-19.721	-0.004	1.2950	1.0000	
0	10	0	27.980	28.101	221	-27.980	-0.221	1.9679	1.0000	
0	10	2	15.770	15.950	527	-15.770	-0.527	-4.2121	1.0000	
0	10	4	1.290	1.290	202	-1.290	-0.002	-1.0805	1.0000	
0	11	1	8.648	8.600	597	-8.648	-0.226	1.3568	1.0000	
0	11	3	7.843	7.888	186	-7.843	-0.186	-6.045	1.0000	
0	12	0	5.876	6.063	257	-5.876	-0.257	-1.187	1.0000	
1	0	1	54.046	56.545	215	-54.046	-2.046	-2.497	1.0000	
1	0	3	30.556	29.123	150	-30.556	-0.215	-23.7140	1.0000	
1	0	5	27.757	26.645	150	-27.757	-0.257	8.2616	1.0000	
1	0	7	6.837	6.361	234	-6.837	-0.234	1.111	1.0000	
1	1	1	44.725	44.725	153	-44.725	-0.153	-4.432	1.0000	
1	1	3	34.898	34.510	389	-34.898	-0.3489	-3.1023	1.0000	
1	1	5	41.589	42.949	390	-41.589	-0.390	-9.6843	1.0000	
1	1	7	15.721	15.721	360	-15.721	-0.15721	-6.04	1.0000	

ANDALUSITE (MINAS GERAIS) AT 600 DEGREES C FO-FC TABLE

STRUCTURE FACTORS

PAGE 2

H	K	L	F(UBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT.	FACTOR		
1	1	4	24.0178	24.0070	24.0069	.139	*109	*4936	1.0000			
1	1	5	18.477	18.306	-18.306	*179	*170	*9321	1.0000			
1	1	6	20.805	-20.266	-20.266	-318	*536	2.6472	1.0000			
1	1	7	6.282	-5.703	-5.703	-158	*579	3.3560	1.0000			
1	1	8	10.706	10.380	10.380	*104	*326	2.4059	1.0000			
1	1	9	39.555	39.502	-39.501	-179	*054	*4253	1.0000			
1	2	0	3.238	1.653	1.653	*652	*029	1.586	1.0000			
1	2	1	4.748	4.5742	4.5742	*742	*170	2.006	1.0000			
1	2	2	6.261	5.876	-5.876	-676	*081	*365	2.3013	1.0000		
1	2	3	22.515	22.462	-22.462	-161	*053	*2361	1.0000			
1	2	4	3.938	5.538	5.538	*457	*024	2.4503	1.0000			
1	2	5	9.608	9.420	9.420	*419	*137	*187	1.3839	1.0000		
1	2	6	6.300	6.285	-6.284	-284	*107	*015	*0839	1.0000		
1	2	7	9.057	8.664	-8.664	-17	*117	*393	2.6124	1.0000		
1	2	8	24.835	25.731	25.728	*427	*896	-5.8027	1.0000			
1	3	1	33.919	34.912	34.912	*437	*994	-6.5625	1.0000			
1	3	2	34.208	30.773	-30.773	-773	*059	*435	2.5650	1.0000		
1	3	3	34.906	35.343	35.343	*341	*417	*358	-1.8867	1.0000		
1	3	4	23.424	22.087	22.083	*087	*386	1.338	5.8768	1.0000		
1	3	5	22.135	21.779	21.775	*779	*379	*356	1.3708	1.0000		
1	3	6	13.381	13.448	-13.448	-448	-0.62	-0.67	-6.4496	1.0000		
1	3	7	20.638	20.266	20.266	*266	*351	*349	1.6429	1.0000		
1	3	8	8.754	8.806	8.806	*802	*284	*052	-1.3416	1.0000		
1	3	9	17.824	16.379	16.379	*379	*030	1.444	7.6617	1.0000		
1	4	0	29.514	28.406	-28.405	-405	-146	1.109	6.3915	1.0000		
1	4	1	2.458	1.423	-1.422	-422	*037	1.035	3.9103	1.0000		
1	4	2	26.180	25.850	-25.850	-850	-185	*330	*1.5651	1.0000		
1	4	3	7.467	8.479	8.479	*479	*026	-0.992	-7.5523	1.0000		
1	4	4	10.121	10.064	-10.064	-064	-079	*057	*4013	1.0000		
1	4	5	1.075	*939	-9.39	-939	*030	*136	*1774	*0000	*	
1	4	6	12.485	12.472	-12.472	-472	-1.471	-1.186	*013	*0905	1.0000	
1	4	7	33.269	33.004	33.003	*004	*295	*285	1.5280	1.0000		
1	4	8	46.168	46.382	-46.380	-380	-492	-2.14	-1.1559	1.0000		
1	4	9	18.564	17.952	-17.951	-951	-17.951	-18.3	*612	2.6657	1.0000	
1	5	0	42.428	43.525	-43.522	-522	-4.522	-4.66	-5.1574	1.0000		
1	5	1	22.215	21.930	21.930	*930	*267	*283	1.1377	1.0000		
1	5	2	25.906	26.538	-26.534	-534	-427	-631	-2.3405	1.0000		
1	5	3	10.814	11.118	-11.117	-11.117	-1350	-304	-2.0339	1.0000		
1	5	4	23.243	23.042	-23.039	-3042	-2368	-201	*8477	1.0000		
1	5	5	24.776	24.062	-24.061	-062	-187	*714	3.2819	1.0000		
1	5	6	3.228	2.830	2.829	*091	*398	1.7395	1.0000			
1	5	7	9.254	9.763	-9.761	-761	-509	-3.4519	*0000			
1	6	0	*929	*606	-604	-604	*042	*323	*4871	*0000	*	
1	6	1	16.912	16.748	16.747	*747	*169	*164	1.0217	1.0000		
1	6	2	6.098	6.254	6.253	*254	*118	*156	-1.0523	1.0000		
1	6	3	3.717	2.741	-2.736	-736	*158	*976	3.0333	1.0000		
1	6	4	1.393	-1.393	-1.393	-393	-005	1.474	4.1054	1.0000		
1	6	5	2.867	2.867	-2.867	-867	-158	-4.71	-1.9990	1.0000		
1	6	6	23.915	24.386	24.386	*386	*058	-4.71	-0.414	1.0000		
1	6	7	25.924	25.934	25.934	*934	*269	-0.10	-0.414	1.0000		
1	6	8	17.933	17.222	-17.219	-219	-355	*711	3.8948	1.0000		
1	6	9	19.837	20.040	20.039	*040	*259	-2.03	-1.0604	1.0000		
1	6	10	16.644	16.506	16.506	*506	*053	-1.39	*8083	1.0000		
1	6	11	17.245	17.395	17.395	*395	*234	-1.50	*9276	1.0000		

ANDALUSITE (MINAS GERAIS) AT 600 DEGREES C F.D.-FC TABLE

STRUCTURE FACTORS

PAGE 3

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
1	7	6	9.343	9.808	-9.804	-2.289	-4.655	-3.4610	1.0000
1	8	0	21.399	20.979	-20.978	-1.166	-2.20	1.6241	1.0000
1	8	1	12.196	11.665	-11.664	.123	.531	3.8949	1.0000
1	8	2	5.680	5.597	-5.595	.149	.082	.5867	1.0000
1	8	3	6.930	6.820	-6.820	.079	.110	.6586	1.0000
1	8	4	14.825	14.801	-14.800	-.150	.024	.1631	1.0000
1	8	5	9.440	9.409	-9.408	.140	.031	.2496	1.0000
1	8	6	3.186	2.276	-2.273	.122	.910	2.8706	1.0000
1	9	0	11.672	11.229	-11.227	.182	.643	4.2772	1.0000
1	9	1	4.174	4.242	-4.241	-.115	.069	-.3627	1.0000
1	9	2	13.927	13.662	-13.661	-.166	.255	1.8200	1.0000
1	9	3	2.271	1.863	-1.863	-.109	.409	1.1196	1.0000
1	9	4	6.797	8.927	-8.925	-.008	.341	.9975	1.0000
1	9	5	5.601	5.505	-5.504	.105	.096	.5017	1.0000
1	9	6	5.69	4.858	-4.858	-.022	.211	1.1626	1.0000
1	10	1	2.964	3.022	-3.021	-.096	.038	-.0306	1.0000
1	10	2	6.033	7.692	-7.692	-.110	.409	1.0000	1.0000
1	10	3	4.676	4.707	-4.706	-.122	.31	-.1497	1.0000
1	10	4	3.403	3.370	-3.370	-.019	.036	.1144	1.0000
1	11	0	4.452	4.512	-4.506	.251	.060	-.2666	1.0000
1	11	1	6.080	7.853	-7.851	.187	.226	1.6130	1.0000
1	11	2	10.546	9.975	-9.975	-.030	.571	2.5215	1.0000
1	11	3	7.984	7.826	-7.834	-.180	.148	4.2772	1.0000
1	11	4	21.756	19.763	-19.768	-.095	.968	1.9982	1.0000
2	0	0	*.949	*.729	-3.677	-.625	-.761	1.0000	*.474
2	0	1	9.385	8.928	-8.928	-.089	.457	2.6204	1.0000
2	0	2	16.525	15.787	-15.779	-.517	.738	4.2039	1.0000
2	0	3	5.025	4.149	-4.149	-.073	.876	3.6852	1.0000
2	0	4	3.696	3.790	-3.790	.193	.795	6.2950	1.0000
2	1	1	4.360	3.440	-3.440	.030	.920	3.3607	1.0000
2	1	2	46.082	45.415	-45.415	.192	.667	4.4609	1.0000
2	1	3	1.952	1.671	-1.671	-.024	.281	*.8881	1.0000
2	1	4	3.750	2.3107	-2.3107	.173	.643	2.8495	1.0000
2	1	5	1.672	1.283	-1.283	.074	.389	*.6855	1.0000
2	1	6	20.399	20.075	-20.075	.156	.324	1.5746	1.0000
2	1	7	1.966	1.469	-1.466	-.063	.9730	1.0000	*.999
2	1	8	10.220	9.999	-9.999	.126	.219	1.5615	1.0000
2	2	0	73.404	81.886	-81.886	.619	.682	-.66079	1.0000
2	2	1	16.091	16.350	-16.347	-.265	-.259	-.14737	1.0000
2	2	2	4.944	4.057	-4.056	.063	.887	.52329	1.0000
2	2	3	16.381	-15.812	-.251	.567	2.5571	1.0000	
2	2	4	51.263	52.012	-.509	.563	-.749	-.36080	1.0000
2	2	5	15.679	15.368	-15.367	.227	.310	1.9102	1.0000
2	2	6	1.072	*	1.45	.124	.075	1.2115	1.0000
2	2	7	9.524	9.490	-9.488	.192	.033	*.2520	1.0000
2	2	8	22.430	22.183	-22.179	.424	.247	1.2068	1.0000
2	2	9	12.659	12.659	-12.659	.139	.269	6.5220	1.0000
2	2	10	21.041	20.578	-20.577	.124	.023	1.298	1.0000
2	2	11	11.505	10.424	-10.423	.148	.463	2.4055	1.0000
2	2	12	11.056	11.312	-11.312	.125	.027	6.9577	1.0000
2	2	13	6.393	6.760	-6.760	-.256	-.367	-.6797	1.0000
2	2	14	12.113	11.951	-11.951	.162	.121	2.7554	1.0000
2	2	15	1.0000	1.0000	-1.0000	1.0000	1.0000	1.0000	1.0000

ANDALUSITE (MINAS GERAIS) AT 600 DEGREES C F50-M50 TABLE

STRUCTURE FACTORS

PAGE 4

H	K	L	F (OBS)	F (CALC)	A (CALC)	B (CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
2	3	7	9.224	9.217	-9.216	-0.098	.007	.0508	1.0000
2	3	8	6.263	6.199	6.198	.092	.065	.3336	1.0000
2	4	0	7.174	6.658	6.657	-.074	.0516	.1581	1.0000
2	4	1	19.668	19.166	19.165	.092	.0502	.5429	1.0000
2	4	2	85.181	96.851	96.849	-.559	-.559	-11.670	-64.6517
2	4	3	13.800	14.228	14.228	.089	-.429	-2.3373	1.0000
2	4	4	2.313	2.221	2.220	-.070	.092	.3158	1.0000
2	4	5	6.7	8.904	8.904	-.077	-.029	-.2307	1.0000
2	4	6	4.6	4.048	4.045	-.463	-.463	-.5458	5.711
2	4	7	5.321	5.265	5.265	.070	.056	.2663	2.663
2	4	8	4.2.384	4.2.379	4.2.379	-.260	.055	.0260	1.0000
2	4	9	9.295	9.142	9.142	-.051	.153	.9532	1.0000
4.3	1.22	*	4.4.547	4.4.547	4.4.547	-.234	-.029	-.2307	1.0000
4.3	9.53	*	4.4.500	4.6.048	4.6.045	-.463	-.463	-.5458	5.711
2.7	7.92	*	2.8.311	2.8.310	2.8.310	-.02	-.02	-.780	1.0000
2.7	9.60	*	9.8.811	9.8.810	9.8.810	-.173	-.235	-.519	1.0000
2.1	7.56	*	2.2.057	2.2.057	2.2.057	-.190	-.157	1.2938	1.0000
4.0	2.50	*	3.3.748	3.3.748	3.3.748	-.036	-.036	5.02	1.0000
4.1	8.59	*	4.1.772	4.1.769	4.1.769	-.523	-.087	.4151	1.0000
1.5	0.53	*	1.4.266	1.4.264	1.4.264	-.199	-.787	.3367	1.0000
1.1	8.45	*	1.2.202	1.2.202	1.2.202	-.076	-.327	1.5034	1.0000
1.2	6.62	*	1.2.489	1.2.488	1.2.488	-.191	-.173	2.0117	1.0000
3.1	3.20	*	3.1.630	3.1.627	3.1.627	-.476	-.310	1.2031	1.0000
1.0	1.39	*	1.0.271	1.0.270	1.0.270	-.168	-.132	1.0436	1.0000
7.3	3.4	*	7.7.735	7.7.735	7.7.735	-.067	-.601	2.1588	1.0000
6.3	1.1	*	6.5.589	6.5.587	6.5.587	-.149	-.6279	1.2090	1.0000
6.9	4.0	*	1.3.73	1.3.73	1.3.73	-.028	-.6434	1.6463	1.0000
1.3	4.6	*	2.0.000	2.0.000	2.0.000	-.032	-.654	1.3867	1.0000
1.8	1.2	*	1.9.200	1.9.200	1.9.200	-.005	-.105	1.2957	1.0000
1.0	1.39	*	2.9.90	2.1.31	2.1.31	-.071	-.659	3.6308	1.0000
1.0	2.6	*	1.0.263	1.0.261	1.0.261	-.025	-.765	1.0426	1.0000
1.8	1.9	*	1.2.279	1.2.279	1.2.279	-.009	-.540	1.1019	1.0000
1.1	1.49	*	1.2.215	1.2.215	1.2.215	-.002	-.934	1.1375	1.0000
7.1	7.2	*	7.0.29	7.0.29	7.0.29	-.087	-.143	1.1944	1.0000
7.1	7.2	*	2.1.30	2.1.30	2.1.30	-.071	-.191	1.0426	1.0000
1.7	0.34	*	1.7.225	1.7.224	1.7.224	-.143	-.9566	1.9566	1.0000
1.7	2.96	*	1.6.943	1.6.937	1.6.937	-.457	.354	2.1365	1.0000
1.3	4.31	*	1.3.198	1.3.197	1.3.197	-.133	-.366	2.4353	1.0000
5.5	4.29	*	5.5.414	5.5.413	5.5.413	-.081	-.011	.0662	1.0000
10.	1.29	*	10.1.30	10.1.29	10.1.29	-.124	-.005	-.0366	1.0000
10.	0.70	*	10.0.360	10.0.353	10.0.353	-.378	-.290	-.1710	1.0000
23.	1.80	*	2.4.465	2.4.457	2.4.457	-.167	-.734	3.676	1.0000
2.	7.99	*	2.4.69	2.4.68	2.4.68	-.066	-.330	1.2136	1.0000
26.	2.01	*	2.6.356	2.6.356	2.6.356	-.188	-.165	-.5719	1.0000
1.0	0.81	*	1.1.197	1.1.197	1.1.197	-.030	-.116	-.1503	1.0000
16.	6.39	*	1.6.415	1.6.414	1.6.414	-.150	-.225	1.4562	1.0000
2.	9	*	2.7.24	2.7.24	2.7.24	-.089	-.057	-.1572	1.0000
10.	0	*	27.558	26.651	26.648	-.396	-.907	3.0349	1.0000
10.	1	*	7.163	7.0.020	7.0.019	-.103	-.143	-.9890	1.0000
3.7	3.0	*	3.3.399	3.3.398	3.3.398	-.084	-.332	1.3397	1.0000
5.5	5.23	*	5.6.671	5.6.670	5.6.670	-.096	-.148	-.8046	1.0000
20.	3.30	*	20.4.28	20.4.25	20.4.25	-.060	-.093	-.4615	1.0000
11.	4	*	3.6.648	3.6.646	3.6.646	-.040	-.312	1.1457	1.0000
3.8	1.19	*	3.8.619	3.8.619	3.8.619	-.658	-.658	6.357	1.0000

ANDALUSITE (MINAS GERAIS) AT 600 DEGREES C F0-FC TABLE

STRUCTURE FACTORS

PAGE 5

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT.	FACTOR	
2	2	11	2.622	2.765	-2.765	-0.014	-0.143	-0.3822	1.0000		
2	2	11	6.612	6.263	-6.262	-0.085	0.349	2.0495	1.0000		
3	3	0	36.615	35.496	-35.496	-0.215	1.119	7.6426	1.0000		
3	3	0	31.369	30.734	-30.734	-0.256	0.524	3.3609	1.0000		
3	3	0	15.269	14.488	-14.487	-0.137	7.81	7.187	1.0000		
0	0	0	15.229	14.970	-14.965	-0.240	0.255	1.5510	1.0000		
1	1	1	54.333	54.011	-54.010	-0.392	0.321	2.3398	1.0000		
1	1	1	44.604	45.583	-45.583	-0.485	-7.79	-5.2849	1.0000		
1	1	1	1.550	*	*	-1.28	1.115	2.8573	1.0000		
1	1	1	34.509	33.265	-33.262	-0.416	1.244	1.244	1.0000		
1	1	1	34.939	34.689	-34.689	-0.354	2.498	6.4620	1.0000		
1	1	1	34.459	32.633	-32.633	-0.420	8.24	3.3938	1.0000		
1	1	1	3.557	3.120	-3.116	-0.106	4.337	1.7427	1.0000		
1	1	1	16.516	16.454	-16.450	-0.366	0.62	3.507	1.0000		
1	1	1	13.835	13.679	-13.677	-0.261	1.155	1.0466	1.0000		
1	1	1	6.9841	6.8736	-6.8736	-0.199	1.105	7.5980	1.0000		
1	1	1	6.578	6.556	-6.556	-0.075	0.022	0.226	1.0000		
1	1	1	5.081	*	*	-5.226	-1.061	-0.8776	1.0000		
1	1	1	1.837	*	*	-5.226	-1.061	-0.8776	1.0000		
2	2	2	27.198	27.295	-27.295	-0.160	1.097	-4.8000	1.0000		
2	2	2	8.773	8.448	-8.447	-0.111	3.26	2.2563	1.0000		
2	2	2	5.525	5.568	-5.565	-0.147	-0.43	-2.463	1.0000		
2	2	2	2.345	*	*	-2.027	-0.025	-3.17	7.182	1.0000	
2	2	2	9.562	6.612	-6.612	-0.132	0.949	6.3967	1.0000		
2	2	2	13.632	12.352	-12.352	-0.077	1.280	6.0775	1.0000		
2	2	2	37.255	36.013	-36.012	-0.252	1.242	7.2864	1.0000		
2	2	2	56.946	58.665	-58.664	-0.413	-1.720	-9.5809	1.0000		
2	2	2	31.036	31.069	-31.068	-0.240	-0.34	-1.1608	1.0000		
2	2	2	6.633	6.255	-6.255	-0.070	3.76	2.8526	1.0000		
2	2	2	16.453	16.409	-16.407	-0.223	0.64	0.2632	1.0000		
2	2	2	28.314	28.599	-28.597	-0.337	-2.85	-9.9883	1.0000		
2	2	2	14.609	14.716	-14.715	-0.192	-1.07	-6.6216	1.0000		
2	2	2	2.802	1.676	1.676	-0.082	1.124	5.0938	1.0000		
2	2	2	23.342	22.621	-22.620	-0.165	7.22	3.5976	1.0000		
2	2	2	17.439	16.353	-16.353	-0.104	1.066	4.7070	1.0000		
2	2	2	12.769	12.531	-12.530	-0.109	-0.238	1.4912	1.0000		
2	2	2	2.249	1.206	1.204	-0.074	1.043	3.4269	1.0000		
2	2	2	16.281	16.482	-16.481	-0.184	-2.01	-1.1513	1.0000		
2	2	2	7.000	7.113	-7.112	-0.085	0.113	-7.429	1.0000		
2	2	2	3.575	2.426	-2.426	-0.049	1.149	3.8959	1.0000		
2	2	2	15.994	15.365	-15.364	-0.174	-6.29	3.7311	1.0000		
2	2	2	10.363	9.024	-9.022	-0.161	1.359	9.1573	1.0000		
2	2	2	33.565	33.306	-33.304	-0.277	0.259	1.2071	1.0000		
2	2	2	12.200	12.281	-12.280	-0.158	-0.80	-5.692	1.0000		
2	2	2	12.098	11.809	-11.808	-0.158	0.268	2.0395	1.0000		
2	2	2	5.637	4.271	-4.268	-0.141	1.366	6.6461	1.0000		
2	2	2	16.878	16.787	-16.786	-0.226	0.020	1.1303	1.0000		
2	2	2	8.813	8.813	-8.812	-0.132	-0.160	-1.0659	1.0000		
2	2	2	30.388	30.813	-30.813	-0.058	-0.425	-1.9286	1.0000		
2	2	2	4.317	3.073	-3.072	-0.060	1.244	7.8032	1.0000		
2	2	2	4.338	3.620	-3.619	-0.093	0.718	4.5328	1.0000		
2	2	2	6.691	6.286	-6.286	-0.098	0.404	3.3323	1.0000		
2	2	2	18.790	18.849	-18.849	-0.058	-0.2870	-0.2870	1.0000		

ANDALUSITE (MINAS GERAIS) AT 600 DEGREES C FO-FC TABLE

STRUCTURE FACTORS

PAGE 6

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR	
3	6	2	1.089 *	-0.055	+0.064	-0.012	1.024	1.3156	1.0000	
3	6	0	2.010 *	1.979	1.978	0.079	*0.036	*0.0750	*0.0000	
3	7	0	28.735	28.170	26.168	*361	2.3594	1.0060	*	
3	7	1	16.281	15.810	-15.808	-0.305	2.4719	1.0000	*	
3	7	2	1.368 *	2.077	2.077	-0.039	-1.3896	-1.3896	1.0000	
3	7	3	12.590	12.697	-12.693	-0.288	-1.06	-1.7525	1.0000	
3	7	4	20.776	20.846	20.843	*326	-0.070	-3.332	1.0000	
3	7	5	13.596	13.526	-13.525	-0.269	*0.068	*4.906	1.0000	
3	7	6	2.399 *	1.351	1.350	-0.033	1.045	2.5125	1.0000	
3	7	7	1.511	1.511	1.511	-0.054	-0.507	-0.7072	1.0000	
3	8	0	10.299	9.796	-9.795	-1.122	*503	3.8893	1.0000	
3	8	1	6.345	6.160	-6.150	-0.017	*185	1.3350	1.0000	
3	8	2	10.467	10.347	-10.346	-0.151	*120	*9054	1.0000	
3	8	3	3.201	2.196	2.195	-0.048	1.003	3.6454	1.0000	
3	8	4	4.811	4.731	-4.730	-0.071	*0.081	*3748	1.0000	
3	8	5	13.227	12.642	12.641	*162	*555	3.9420	1.0000	
3	8	6	26.846	27.879	27.876	*373	*987	3.3701	1.0000	
3	8	7	10.829	10.526	-10.527	-0.169	*304	2.4009	1.0000	
3	8	8	22.235	22.289	22.286	*359	-0.054	-0.2420	1.0000	
3	8	9	9.352	9.325	9.324	*146	*0.027	*2044	1.0000	
3	9	0	19.611	19.726	19.723	*320	-0.113	-6.430	1.0000	
3	9	1	3.288	2.903	2.899	-0.149	*385	*3563	1.0000	
3	9	2	6.562	6.319	6.318	*130	*362	2.3314	1.0000	
3	9	3	5.219	5.224	5.222	-0.109	-0.005	-0.6252	1.0000	
3	9	4	3.636	3.780	3.778	*0.094	*0.058	*2258	1.0000	
3	9	5	2.603	2.424	2.420	-0.135	*384	1.0661	1.0000	
3	9	6	2.079 *	3.058	3.058	*0.015	-0.979	-2.0548	1.0000	
3	9	7	14.743	14.075	-14.073	-0.235	*669	4.3295	1.0000	
3	9	8	15.610	15.091	-15.089	-0.246	*519	3.3365	1.0000	
3	9	9	36.948	37.509	37.508	*327	1.438	*9094	1.0000	
3	0	0	72.333	74.512	-74.512	-0.169	-2.179	-12.4195	1.0000	
3	0	1	27.090	26.668	26.666	*300	*422	1.7970	1.0000	
3	0	2	30.147	28.378	-28.377	-0.131	1.769	6.2570	1.0000	
3	0	3	33.427	31.803	31.803	*012	1.623	9.7592	1.0000	
3	0	4	36.482	34.412	34.411	*173	2.070	12.1421	1.0000	
3	0	5	9.461	8.919	8.919	*020	*543	3.1282	1.0000	
3	0	6	17.776	16.521	16.521	*116	1.255	5.1066	1.0000	
3	0	7	17.549	17.457	17.457	*011	*092	*5019	1.0000	
3	0	8	23.353	22.802	22.801	*192	*551	2.0359	1.0000	
3	1	0	4.629	4.657	4.657	*017	*028	-0.1359	1.0000	
3	1	1	2.049	1.915	1.914	*048	*578	1.3627	1.0000	
3	1	2	5.848	5.435	-5.434	-0.044	*424	2.5785	1.0000	
3	1	3	11.347	10.422	10.421	*019	*925	5.1030	1.0000	
3	1	4	4.9570	4.925	-4.922	-0.522	-1.9108	-1.9108	1.0000	
3	1	5	5.771	5.673	5.673	*020	*098	*5607	1.0000	
3	1	6	2.965	2.973	-2.973	-0.043	-0.008	-0.0331	1.0000	
3	1	7	4.808	4.808	4.808	*015	*438	2.6494	1.0000	
3	1	8	26.695	26.857	-26.854	-0.433	-1.653	-5.534	1.0000	
3	1	9	1.817	*905	*904	*017	*912	1.5797	1.0000	
3	2	0	8.200	7.782	7.782	-0.053	*427	2.5858	1.0000	
3	2	1	27.372	26.074	-26.073	-1.186	1.299	6.5737	1.0000	
3	2	2	1.684 *	1.788	-0.787	-0.029	*899	2.1171	1.0000	
3	2	3	22.167	21.331	-21.330	-0.222	-0.222	*635	*5907	1.0000

ANDALUSITE (RINGS GÉRAS) AT 600 DEGREES C FU-FC TABLE

STRUCTURE FACTORS

PAGE 7

H	K	L	F(UBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
4	3	4	4*058	4*457	-0*049	-0*399	-2*1606	1*0000	
4	3	5	13*706	13*765	-0*115	-0*365	1*0000	*	
4	3	6	1*759	*394	-0*024	1*365	2*5928	1*0000	*
4	3	7	9*934	9*920	-0*209	0*014	0*0916	1*0000	
4	4	0	69*472	72*238	-0*783	-0*766	-14*5937	1*0000	
4	4	1	2*048	2*436	-0*007	-0*368	-1*1182	1*0000	*
4	4	2	25*105	57*474	-0*316	-0*368	-11*5208	1*0000	
4	4	3	2*396	1*972	-0*004	0*624	1*4881	1*0000	
4	4	4	51*157	52*360	-0*710	-1*193	-4*9796	1*0000	
4	4	5	1*718	*303	-0*009	1*415	2*9634	1*0000	*
4	4	6	27*604	27*969	-0*262	-0*368	-1*2115	1*0000	
4	4	7	1*678	*667	-0*000	1*010	1*6200	1*0000	*
4	5	0	22*766	23*067	-0*004	0*301	-1*3183	1*0000	
4	5	1	19*097	19*079	-0*103	0*019	0*1109	1*0000	*
4	5	2	2*893	3*130	-0*066	-0*237	-1*0051	1*0000	
4	5	3	16*483	16*213	-0*141	-0*270	1*7502	1*0000	
4	5	4	14*400	14*582	-0*211	-0*270	-1*1945	1*0000	
4	5	5	6*599	8*794	-0*028	0*028	-1*195	1*0000	
4	6	6	1*177	1*463	-0*050	-0*195	-3*3400	1*0000	*
4	6	7	7*373	7*511	-0*054	-0*265	-0*1835	1*0000	
4	6	8	4*612	4*271	-0*145	-0*138	-0*8107	1*0000	
4	6	9	3*313	3*203	-0*211	-0*211	2*1486	1*0000	
4	6	10	26*302	4*510	-0*019	0*493	3*4149	1*0000	
4	6	11	4*910	8*794	-0*607	-0*768	-1*3400	1*0000	*
4	6	12	2*180	2*243	-0*014	-0*063	-0*1835	1*0000	
4	6	13	21*105	5*149	-0*193	-0*129	-0*7456	1*0000	
4	6	14	5*020	-5*146	-0*211	-0*334	-0*3790	1*0000	
4	6	15	3*313	-3*202	-0*020	-0*109	-4*1931	1*0000	
4	6	16	29*276	-29*272	-0*501	-0*971	-3*2715	1*0000	
4	6	17	4*599	-4*599	-0*059	-0*350	2*1974	1*0000	
4	6	18	20*296	-20*294	-0*272	-0*609	4*2099	1*0000	
4	6	19	1*012	*614	-0*004	-0*398	-0*5508	1*0000	*
4	7	20	12*553	12*377	-0*221	-0*176	-4*1931	1*0000	
4	7	21	3*118	3*922	-0*45	-0*804	-2*7756	1*0000	
4	7	22	16*825	17*432	-0*267	-0*607	-3*4161	1*0000	
4	7	23	1*191	*470	-0*004	-0*721	*8476	1*0000	
4	7	24	22*879	22*531	-0*292	-0*348	1*7665	1*0000	
4	7	25	1*681	1*351	-0*015	-0*330	*7293	1*0000	*
4	7	26	18*667	-1*351	-0*059	-0*031	-0*1751	1*0000	
4	7	27	18*698	-18*698	-0*059	-0*019	1*1143	1*0000	*
4	7	28	1*463	*818	-0*645	-0*645	-0*8476	1*0000	
4	7	29	17*263	17*200	-0*267	-0*063	-0*3746	1*0000	
4	7	30	1*173	*427	-0*009	-0*009	-0*8906	1*0000	*
4	7	31	13*616	13*216	-0*015	-0*015	2*5573	1*0000	
4	7	32	1*6854	*362	-0*059	-0*059	1*492	1*0000	*
4	7	33	8*723	8*512	-0*032	-0*212	3*2849	1*0000	
4	7	34	2*678	2*871	-0*2670	-0*087	-0*522	1*0000	
4	7	35	10*767	10*232	-0*014	-0*014	4*3052	1*0000	
4	7	36	2*767	1*658	-1*657	-0*055	-0*535	1*0000	*
4	7	37	1*814	*244	-0*001	-0*001	1*100	1*0000	*
4	7	38	10*621	10*313	-0*228	-0*228	1*570	1*0000	
4	7	39	1*637	*006	-0*001	-0*001	1*308	1*0000	*
4	7	40	3*789	3*805	-0*039	-0*039	2*7843	1*0000	
4	7	41	3*190	2*560	-0*084	-0*084	-0*630	1*0000	
4	7	42	26*277	25*729	-0*112	-0*112	1*9579	1*0000	
4	7	43	25*225	-25*224	-0*157	-0*157	2*7071	1*0000	
5	7	44	6*672	-6*672	-0*157	-0*157	6*6766	1*0000	

ANGALUSITE (CHINAS GERMANY) AT 600 DEGREES C FG-HC TABLE

STRUCTURE FACTORS

PAGE 6

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
5	0	5	7.605	7.336	-7.336	-0.053	0.269	1.9185	1.0000
5	0	7	12.751	12.468	-12.467	-0.154	0.283	1.7526	1.0000
5	1	0	46.092	44.885	-44.884	-0.339	1.206	6.5731	1.0000
5	1	1	47.536	46.907	-46.904	-0.487	0.629	3.3723	1.0000
5	1	2	23.569	22.955	-22.955	-0.126	0.634	2.8213	1.0000
5	1	3	36.516	35.937	-35.934	-0.463	0.579	2.6354	1.0000
5	1	4	29.791	29.256	-29.255	-0.306	0.535	2.1856	1.0000
5	1	5	32.160	32.128	-32.125	-0.423	0.032	1.1202	1.0000
5	1	6	13.276	12.894	-12.893	-0.104	0.382	2.5089	1.0000
5	1	7	16.466	16.566	-16.562	-0.365	0.080	1.4691	1.0000
5	0	0	17.060	16.416	-16.416	-0.203	0.643	2.7394	1.0000
5	0	1	3.486	3.055	-3.055	-0.001	0.431	1.7903	1.0000
5	0	2	53.272	54.564	-54.563	-0.217	-1.292	-6.4066	1.0000
5	0	3	5.859	6.023	-6.023	-0.044	-0.163	-0.9934	1.0000
5	0	4	13.530	13.062	-13.060	-0.183	0.468	3.1330	1.0000
5	0	5	2.301	2.023	-2.022	-0.042	0.279	4.279	1.0000
5	0	6	26.800	26.117	-26.117	-0.176	0.689	3.2090	1.0000
5	0	7	4.322	4.461	-4.461	-0.072	-0.139	-5.5216	1.0000
5	0	8	10.217	9.315	-9.314	-0.088	0.902	4.9405	1.0000
5	0	9	18.058	17.543	-17.541	-0.227	0.516	2.1157	1.0000
5	0	10	17.534	16.209	-16.205	-0.352	1.325	0.7611	1.0000
5	0	11	26.315	26.117	-26.117	-0.176	0.689	3.2090	1.0000
5	0	12	7.462	7.228	-7.228	-0.080	0.233	4.9405	1.0000
5	0	13	10.432	9.670	-9.668	-0.197	0.762	5.6306	1.0000
5	0	14	6.862	9.019	-9.014	-0.287	-0.154	-1.0664	1.0000
5	0	15	10.642	10.992	-10.990	-0.180	-0.350	-2.4766	1.0000
5	0	16	11.174	12.221	-12.221	-0.120	-1.047	-5.8004	1.0000
5	0	17	24.476	25.126	-25.126	-0.192	-0.359	-1.5642	1.0000
5	0	18	14.039	15.615	-15.615	-0.082	-0.920	-5.9199	1.0000
5	0	19	17.932	17.923	-17.922	-0.140	0.009	0.506	1.0000
5	0	20	8.616	8.711	-8.711	-0.109	0.104	0.8261	1.0000
5	0	21	15.500	15.597	-15.595	-0.203	-0.097	-0.5870	1.0000
5	0	22	7.952	8.211	-8.211	-0.067	-0.259	-1.6891	1.0000
5	0	23	6.141	6.354	-6.353	-0.074	-0.213	-1.0653	1.0000
5	0	24	7.452	8.230	-8.229	-0.155	0.510	3.5569	1.0000
5	0	25	8.740	8.529	-8.528	-0.130	0.580	4.4168	1.0000
5	0	26	7.109	6.529	-6.528	-0.250	0.389	1.5638	1.0000
5	0	27	21.906	21.517	-21.516	-0.067	-0.259	-1.6891	1.0000
5	0	28	8.664	8.597	-8.596	-0.121	0.067	0.5536	1.0000
5	0	29	7.452	7.635	-7.633	-0.140	-0.183	-1.4026	1.0000
5	0	30	3.139	3.297	-3.295	-0.120	-0.158	-0.5191	1.0000
5	0	31	10.348	10.331	-10.329	-0.205	0.017	0.1247	1.0000
5	0	32	9.595	9.001	-9.001	-0.126	0.592	4.2262	1.0000
5	0	33	2.036	*.050	-*.006	-0.049	1.986	4.1605	1.0000
5	0	34	13.583	13.509	-13.509	-0.059	0.074	4.4771	1.0000
5	0	35	24.625	24.559	-24.559	-0.075	0.066	0.2512	1.0000
5	0	36	5.634	5.360	-5.358	-0.131	0.274	1.7981	1.0000
5	0	37	7.162	6.992	-6.991	-0.113	0.170	1.2278	1.0000
5	0	38	16.357	18.602	-18.602	-0.044	1.986	4.1605	1.0000
5	0	39	15.922	16.038	-16.038	-0.115	-0.7192	1.0000	*
5	0	40	14.925	14.922	-14.922	-0.286	-0.488	-3.0408	1.0000

ANDALUSITE (MINAS GERAIS) AT 600 DEGREES C FO-FC TABLE

STRUCTURE FACTORS

PAGE 9

H	K	L	F(FLUSS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
5	7	5	13.758	14.044	14.042	*248	-2.86	-1.9241	1.0000
5	8	0	3.184	3.026	3.024	*058	*221	1.0000	
5	6	1	5.023	5.021	-5.020	*052	*007	*0414	1.0000
5	8	2	13.933	14.214	14.214	*077	-2.81	-1.8193	1.0000
5	8	3	7.293	6.969	-6.988	*082	*310	*1013	1.0000
5	8	4	2.388	2.086	2.086	*020	*201	*4973	1.0000
5	8	5	1.921	1.722	-1.722	*014	1.192	2.2817	1.0000
5	9	0	11.599	11.361	11.361	*143	*238	*5921	1.0000
5	9	1	22.987	22.943	-22.939	*379	*045	*2010	1.0000
5	9	2	7.689	7.665	-7.663	*157	*025	*1690	1.0000
5	9	3	17.967	17.086	-16.083	*356	*119	*6529	1.0000
5	9	4	8.209	8.066	-8.065	*129	*143	*9525	1.0000
5	10	0	5.330	5.047	-5.046	*105	*262	1.3809	1.0000
5	10	1	1.903	*065	*016	*063	1.441	2.2146	1.0000
5	10	2	16.999	16.304	16.304	*156	*693	*6288	1.0000
5	10	3	1.184	*892	-891	*033	*292	*3455	1.0000
5	10	0	50.191	50.328	-50.328	*076	*137	*6776	1.0000
5	10	2	54.018	53.776	-53.774	-500	*242	*1265	1.0000
5	10	4	30.596	30.888	-30.888	*071	*292	-1.1332	1.0000
5	10	6	29.757	29.150	-29.147	*415	*292	*1332	1.0000
5	10	1	24.411	24.626	-24.625	*246	*295	*4770	1.0000
5	6	1	6.443	5.996	-5.996	*000	*447	*4214	1.0000
5	6	2	5.400	4.233	-4.227	*229	1.167	*9650	1.0000
5	6	3	3.493	3.286	-3.285	*042	*207	*9303	1.0000
5	6	4	19.231	19.225	-18.223	*222	1.006	5.0418	1.0000
5	6	5	3.755	3.083	-3.083	*039	*673	*6828	1.0000
5	6	6	3.913	3.785	-3.785	*761	*167	*4579	1.0000
5	6	7	1.263	*106	*106	*106	*127	*127	1.0000
5	6	8	4.126	*106	-*106	*067	*1337	*1267	1.0000
5	6	9	4.8436	4.8017	-4.8017	*527	*521	*2.9778	1.0000
5	6	0	17.905	16.780	-16.780	*243	1.123	*2.4770	1.0000
5	6	1	2.330	2.767	-2.767	*098	*434	*434	1.0000
5	6	2	17.361	17.007	-17.005	*233	*355	*1.8634	1.0000
5	6	3	36.121	36.211	-36.208	*479	*090	-3.478	1.0000
5	6	4	10.831	10.505	-10.503	*206	*326	*2.2139	1.0000
5	6	5	3.379	3.036	-3.032	*085	*343	*1.0767	1.0000
5	6	6	10.144	10.019	-10.017	*181	*126	*1.3141	1.0000
5	6	7	5.756	5.798	-5.797	*058	*062	*8819	1.0000
5	6	8	1.022	*118	*118	*013	*904	-2.604	1.0000
5	6	9	6.944	6.944	-6.944	*055	*055	*2.6708	1.0000
5	6	0	5.785	5.989	-5.989	*026	*204	*1.3585	1.0000
5	6	1	5.256	-5.075	-5.075	*079	*180	*1.0580	1.0000
5	6	2	4.589	4.986	-4.985	*048	*397	-1.7989	1.0000
5	6	3	3.389	2.644	-2.643	*043	*746	*2.3611	1.0000
5	6	4	26.486	26.762	-26.762	*130	*277	*1.1666	1.0000
5	6	5	11.365	11.499	-11.499	*089	*134	*8709	1.0000
5	6	6	32.894	32.687	-32.688	-518	*021	*0876	1.0000
5	6	7	9.452	9.254	-9.253	*081	*199	*1.5018	1.0000
5	6	8	16.179	16.144	-16.144	*120	*035	*2.232	1.0000
5	6	9	6.676	6.536	-6.536	*080	*139	*6481	1.0000
5	6	0	18.824	19.237	-19.232	*429	*414	-2.3166	1.0000
5	6	1	17.621	17.196	-17.195	*147	*425	2.2093	1.0000
5	6	2	2.754	1.472	-1.471	*054	*282	*6471	1.0000
5	6	3	5.190	4.853	-4.853	*393	*043	*043	1.0000

ANALYSIS (CHINAS GERAIS) AT 600 DEGREES C FOF-FC TABLE

STRUCTURE FACTORS

PAGE 10

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
5	5	3	5.442	5.153	-5.153	.014	+289	1.8011	1.0000
6	5	4	12.169	12.293	12.292	.132	+104	+7462	1.0000
6	2	5	3.930	3.617	3.616	.061	+313	1.2197	1.0000
6	3	6	1.767	* 2.274	2.268	* 154	+507	+8188	1.0000 *
6	6	0	30.298	30.181	30.178	* 476	+116	* 4404	1.0000
6	6	1	11.669	11.436	-11.435	+178	+232	1.6761	1.0000
6	6	2	6.292	6.036	+6.035	+112	+256	2.1446	1.0000
6	3	3	10.635	10.759	-10.759	+164	+124	+8602	1.0000
6	4	4	21.516	22.248	22.248	+433	+731	-3.2275	1.0000
6	5	5	7.194	7.157	-7.155	+157	+037	.2245	1.0000
6	6	6	1.467	* 4.05	+4.04	+037	+082	2.0053	1.0000 *
6	7	7	6.294	6.108	-6.108	+064	+165	1.2466	1.0000
6	7	7	1.896	1.894	-1.894	+093	+033	3.5155	1.0600
6	7	7	5.405	5.346	-5.346	+094	+059	.3163	1.0000
6	7	7	1.169	* 2.49	+2.49	+16	+916	1.0007	1.0000 *
6	7	7	3.810	3.762	-3.762	+025	+047	* 1665	1.0000
6	8	8	18.988	18.393	-18.396	+076	+590	3.1620	1.0000
6	8	8	11.212	11.295	11.295	+121	+083	+4515	1.0000
6	9	9	24.765	25.170	-25.167	+360	+405	-1.8236	1.0000
6	9	9	10.406	10.190	-10.189	+121	+210	1.7514	1.0000
6	10	10	14.756	14.344	-14.344	+073	+412	2.5823	1.0000
6	10	10	18.935	18.315	-18.314	+241	+620	3.1046	1.0000
6	10	10	6.471	6.252	-6.251	+066	+419	2.5170	1.0000
6	10	10	5.349	5.311	-5.311	+173	+1927	1.1927	1.0000
6	10	10	5.199	4.591	-4.591	+035	+607	2.8831	1.0000
6	10	10	21.048	20.715	-20.712	+324	+333	1.6364	1.0000
6	10	10	5.971	5.603	-5.602	+100	+368	1.9219	1.0000
6	10	10	13.289	12.994	-12.993	+153	+295	1.7221	1.0000
6	10	10	16.049	9.753	-9.752	+106	+296	2.1106	1.0000
6	10	10	9.932	9.392	-9.390	+165	+540	4.0475	1.0000
6	10	10	10.391	10.971	-10.971	+075	+560	-3.4231	1.0000
6	10	10	26.537	19.716	-19.715	+198	+822	4.6025	1.0000
6	10	10	29.950	29.617	-29.615	+314	+343	1.4014	1.0000
6	10	10	14.362	14.117	-14.116	+191	+245	1.5544	1.0000
6	10	10	7.258	7.250	-7.249	+058	+009	0.6115	1.0000
6	10	10	13.952	14.015	14.014	+174	+020	-1.207	1.0000
6	10	10	16.877	16.638	-16.636	+256	+239	1.4380	1.0000
6	10	10	14.432	10.799	-10.798	+115	+633	4.0230	1.0000
6	10	10	2.349	1.267	-1.267	+026	+081	3.3467	1.0000
6	10	10	8.356	8.971	-8.970	+134	+615	-4.5774	1.0000
6	10	10	2.611	1.948	-1.948	+013	+163	+4130	1.0000
6	10	10	8.280	8.506	-8.506	+103	+226	-1.7620	1.0000
6	10	10	3.008	3.421	-3.420	+058	+412	-1.1922	1.0000
6	10	10	3.308	3.089	-3.087	+109	+219	+6365	1.0000
6	10	10	5.9166	52.264	-52.263	+353	+902	29.7939	1.0000
6	10	10	21.662	19.124	-19.120	+370	+539	13.8340	1.0000
6	10	10	3.031	1.154	-1.153	+027	+678	6.8841	1.0000
6	10	10	22.229	19.318	-19.315	+350	+911	14.5851	1.0000
6	10	10	46.356	37.717	-37.716	+319	+639	31.3270	1.0000
6	10	10	12.442	-13.153	-13.149	+325	+712	-4.2755	1.0000
6	10	10	1.238	*	*	+023	+373	+4195	1.0000
6	10	10	11.354	+865	-10.568	+040	+786	5.2939	1.0000
6	10	10	15.524	-15.253	-15.253	+209	+270	1.5836	1.0000

ANDALUSITE (MINAS GERAIS) AT 600 DEGREES C FDFC TABLE

STRUCTURE FACTORS

PAGE 11

H	K	L	F (UBS)	F (CALC)	A (CALC)	B (CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR	
7	4	2	2.323	1.977	-1.977	*003	*352	*9994	1.0000	
7	6	3	16.826	17.269	-17.268	-235	-442	-2.4326	1.0000	
7	4	4	6.505	6.949	-6.949	-036	-444	-2.6676	1.0000	
7	4	5	6.826	6.978	-6.976	-147	-150	-2.8621	1.0000	
7	4	6	1.226	*2.27	-2.27	*004	1.000	1.1367	1.0000	
7	5	0	25.049	24.876	-24.875	*233	*173	*6279	1.0000	
7	5	1	27.207	27.263	-27.260	*403	-056	-2.078	1.0000	
7	5	2	7.521	7.362	-7.361	-114	.139	1.0670	1.0000	
7	5	3	25.537	26.152	-26.149	.389	.515	-2.0858	1.0000	
7	5	4	18.329	18.638	-18.638	.211	-3.10	-1.5935	1.0000	
7	5	5	15.842	16.300	-16.296	*345	-458	-2.7165	1.0000	
7	6	0	13.854	14.041	-14.040	-178	.187	-1.1193	1.0000	
7	6	1	10.254	10.366	-10.355	*146	.113	-0.8258	1.0000	
7	6	2	4.664	3.961	-3.959	-117	.703	3.4867	1.0000	
7	6	3	6.623	7.132	-7.131	*105	-0.508	-3.0914	1.0000	
7	6	4	10.345	10.776	-10.774	-161	-431	-3.3299	1.0000	
7	6	5	7.592	8.120	-8.119	.154	-5.28	-3.1540	1.0000	
7	7	0	16.196	16.127	-16.127	-008	.069	*3.545	1.0000	
7	7	1	18.749	19.036	-19.035	-237	-287	-1.5307	1.0000	
7	7	2	22.960	22.987	-22.985	-309	-0.27	-0.21208	1.0000	
7	7	3	15.098	16.935	-16.934	-220	.163	1.0019	1.0000	
7	7	4	13.609	12.664	-12.664	-006	.342	2.3687	1.0000	
7	7	5	12.593	12.178	-12.176	.090	.415	2.6178	1.0000	
7	8	0	4.095	4.215	-4.215	.073	-1.20	-4.714	1.0000	
7	8	1	10.817	10.295	-10.295	.152	-5.21	4.2568	1.0000	
7	8	2	2.216	*4	-2.994	.041	-7.78	-1.6333	1.0000	
7	8	3	8.510	8.145	-8.138	*345	*368	*5120	1.0000	
7	8	4	4.022	7.943	-7.941	.146	.080	1.0323	1.0000	
7	8	5	3.605	3.301	-3.299	*118	.503	1.7925	1.0000	
7	9	0	7.009	6.390	-6.389	-112	.619	3.0723	1.0000	
7	9	1	5.6201	5.612	-5.606	.713	-4.11	-1.6956	1.0000	
7	9	2	8.6510	8.145	-8.138	*345	*368	2.5621	1.0000	
7	9	3	4.0964	4.257	-4.252	*47	-2.93	-1.0323	1.0000	
7	9	4	3.907	4.680	-4.671	.285	-7.73	-2.4862	1.0000	
7	9	5	11.761	11.483	-11.483	.032	.278	1.6192	1.0000	
7	9	6	14.208	13.629	-13.628	-146	.379	2.4392	1.0000	
7	9	7	3.304	3.386	-3.385	*092	-0.82	-3.048	1.0000	
7	9	8	16.099	16.015	-16.014	-173	.064	*4543	1.0000	
7	9	9	7.799	7.832	-7.832	.074	-0.34	-2.233	1.0000	
7	9	0	4.991	4.912	-4.911	-093	.079	*3450	1.0000	
7	9	1	2.762	2.808	-2.807	.076	-0.46	-1.079	1.0000	
7	9	2	7.571	7.443	-7.441	-161	.128	*8929	1.0000	
7	9	3	7.929	7.997	-7.997	-039	-0.68	-4.6855	1.0000	
7	9	4	18.563	18.832	-18.832	-501	.096	*3627	1.0000	
7	9	5	7.887	7.673	-7.673	-035	.079	1.5012	1.0000	
7	9	6	6.001	6.253	-6.251	-148	-0.46	-2.52	1.3736	1.0000
7	9	7	2.662	2.892	-2.892	-036	-0.230	-5.517	1.0000	
7	9	8	14.229	18.448	-18.447	.181	-2.19	-1.4111	1.0000	
7	9	9	1.185	*373	-0.53	.812	*9549	1.0000	*	
7	9	0	11.176	11.273	-11.273	-224	-0.97	-6.6881	1.0000	

ANDALUSITE (MINAS GERAIS) AT 600 DEGREES C FDFC TABLE

STRUCTURE FACTORS

PAGE 12

H	K	L	F (UBS)	F (CALC)	A (CALC)	B (CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
0	0	0	15.152	14.886	2.244	2.70	1.4985	1.0000	*
0	0	1	2.015	2.048	-2.048	.016	-.034	-.0783	1.0000 *
0	1	2	4.169	4.419	4.418	-.064	-.310	-1.3604	1.0000
0	2	3	1.156	1.925	-.924	.021	.232	.2793	1.0000 *
0	3	4	1.2175	1.2376	1.2374	.224	-.201	-1.3021	1.0000
0	4	5	2.083	1.202	-.1.202	.011	.681	1.6854	1.0000 *
0	5	6	2.393	2.323	-.2.323	.007	.070	.1851	1.0000
0	6	7	4.681	5.145	5.145	.039	.264	-1.3165	1.0000
0	7	8	1.476	1.853	1.853	.045	-.067	-1.4229	1.0000
0	8	9	4.013	4.833	4.833	.006	.660	2.6110	1.0000
0	9	10	2.424	3.157	3.157	.206	-.635	1.3833	1.0000 *
1	0	1	1.635	1.635	1.635	-.666	.538	1.0000	*
1	1	2	2.273	3.213	3.213	.061	-.202	-.5839	1.0000
1	2	3	1.623	2.196	2.196	-.003	-.773	-1.1509	1.0000
1	3	4	2.908	3.157	3.157	.157	.619	-.249	1.0000
1	4	5	2.319	2.948	2.948	-.296	-.259	-.757	1.0000
1	5	6	1.916	1.952	1.952	.024	.841	-2.4802	1.0000
1	6	7	3.156	3.996	3.996	.024	-.836	-.252	1.0000
1	7	8	3.563	4.836	4.836	-.006	-.081	.235	1.45245
1	8	9	7.660	7.425	7.425	-.133	-.143	1.6341	1.0000
1	9	10	7.402	7.143	7.143	-.296	-.952	-.239	1.0000
2	0	1	1.191	1.191	1.191	-.016	.046	.3388	1.0000
2	1	2	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
2	2	3	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
2	3	4	2.425	2.480	2.480	.017	.243	1.7832	1.0000
2	4	5	7.425	7.143	7.143	-.133	-.259	1.6341	1.0000
2	5	6	7.402	7.143	7.143	-.296	-.952	-.239	1.0000
2	6	7	1.191	1.191	1.191	-.016	.046	.3388	1.0000
2	7	8	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
2	8	9	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
2	9	10	2.425	2.480	2.480	.017	.243	1.7832	1.0000
3	0	1	1.191	1.191	1.191	-.133	-.259	1.6341	1.0000
3	1	2	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
3	2	3	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
3	3	4	2.425	2.480	2.480	.017	.243	1.7832	1.0000
3	4	5	7.425	7.143	7.143	-.133	-.259	1.6341	1.0000
3	5	6	7.402	7.143	7.143	-.296	-.952	-.239	1.0000
3	6	7	1.191	1.191	1.191	-.016	.046	.3388	1.0000
3	7	8	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
3	8	9	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
3	9	10	2.425	2.480	2.480	.017	.243	1.7832	1.0000
4	0	1	1.191	1.191	1.191	-.133	-.259	1.6341	1.0000
4	1	2	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
4	2	3	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
4	3	4	2.425	2.480	2.480	.017	.243	1.7832	1.0000
4	4	5	7.425	7.143	7.143	-.133	-.259	1.6341	1.0000
4	5	6	7.402	7.143	7.143	-.296	-.952	-.239	1.0000
4	6	7	1.191	1.191	1.191	-.016	.046	.3388	1.0000
4	7	8	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
4	8	9	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
4	9	10	2.425	2.480	2.480	.017	.243	1.7832	1.0000
5	0	1	1.191	1.191	1.191	-.133	-.259	1.6341	1.0000
5	1	2	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
5	2	3	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
5	3	4	2.425	2.480	2.480	.017	.243	1.7832	1.0000
5	4	5	7.425	7.143	7.143	-.133	-.259	1.6341	1.0000
5	5	6	7.402	7.143	7.143	-.296	-.952	-.239	1.0000
5	6	7	1.191	1.191	1.191	-.016	.046	.3388	1.0000
5	7	8	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
5	8	9	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
5	9	10	2.425	2.480	2.480	.017	.243	1.7832	1.0000
6	0	1	1.191	1.191	1.191	-.133	-.259	1.6341	1.0000
6	1	2	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
6	2	3	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
6	3	4	2.425	2.480	2.480	.017	.243	1.7832	1.0000
6	4	5	7.425	7.143	7.143	-.133	-.259	1.6341	1.0000
6	5	6	7.402	7.143	7.143	-.296	-.952	-.239	1.0000
6	6	7	1.191	1.191	1.191	-.016	.046	.3388	1.0000
6	7	8	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
6	8	9	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
6	9	10	2.425	2.480	2.480	.017	.243	1.7832	1.0000
7	0	1	1.191	1.191	1.191	-.133	-.259	1.6341	1.0000
7	1	2	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
7	2	3	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
7	3	4	2.425	2.480	2.480	.017	.243	1.7832	1.0000
7	4	5	7.425	7.143	7.143	-.133	-.259	1.6341	1.0000
7	5	6	7.402	7.143	7.143	-.296	-.952	-.239	1.0000
7	6	7	1.191	1.191	1.191	-.016	.046	.3388	1.0000
7	7	8	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
7	8	9	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
7	9	10	2.425	2.480	2.480	.017	.243	1.7832	1.0000
8	0	1	1.191	1.191	1.191	-.133	-.259	1.6341	1.0000
8	1	2	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
8	2	3	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
8	3	4	2.425	2.480	2.480	.017	.243	1.7832	1.0000
8	4	5	7.425	7.143	7.143	-.133	-.259	1.6341	1.0000
8	5	6	7.402	7.143	7.143	-.296	-.952	-.239	1.0000
8	6	7	1.191	1.191	1.191	-.016	.046	.3388	1.0000
8	7	8	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
8	8	9	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
8	9	10	2.425	2.480	2.480	.017	.243	1.7832	1.0000
9	0	1	1.191	1.191	1.191	-.133	-.259	1.6341	1.0000
9	1	2	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
9	2	3	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
9	3	4	2.425	2.480	2.480	.017	.243	1.7832	1.0000
9	4	5	7.425	7.143	7.143	-.133	-.259	1.6341	1.0000
9	5	6	7.402	7.143	7.143	-.296	-.952	-.239	1.0000
9	6	7	1.191	1.191	1.191	-.016	.046	.3388	1.0000
9	7	8	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
9	8	9	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
9	9	10	2.425	2.480	2.480	.017	.243	1.7832	1.0000
10	0	1	1.191	1.191	1.191	-.133	-.259	1.6341	1.0000
10	1	2	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
10	2	3	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
10	3	4	2.425	2.480	2.480	.017	.243	1.7832	1.0000
10	4	5	7.425	7.143	7.143	-.133	-.259	1.6341	1.0000
10	5	6	7.402	7.143	7.143	-.296	-.952	-.239	1.0000
10	6	7	1.191	1.191	1.191	-.016	.046	.3388	1.0000
10	7	8	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
10	8	9	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
10	9	10	2.425	2.480	2.480	.017	.243	1.7832	1.0000
11	0	1	1.191	1.191	1.191	-.133	-.259	1.6341	1.0000
11	1	2	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
11	2	3	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
11	3	4	2.425	2.480	2.480	.017	.243	1.7832	1.0000
11	4	5	7.425	7.143	7.143	-.133	-.259	1.6341	1.0000
11	5	6	7.402	7.143	7.143	-.296	-.952	-.239	1.0000
11	6	7	1.191	1.191	1.191	-.016	.046	.3388	1.0000
11	7	8	9.287	9.239	9.239	-.153	-.239	-.387	1.0000
11	8	9	1.836	1.836	1.836	-.006	-.017	.6205	1.0000
11	9</td								

ANALUSITE (MINAS GERAIS) AT 600 DEGREES C FOR FG TABLE

STRUCTURE FACTORS

PAGE 13

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
9	9	3	21.800	22.519	-22.516	-3.390	-719	-3.6218	1.0000
9	9	5	9.973	10.207	10.206	.158	-234	-1.6312	1.0000
9	6	6	20.826	21.119	21.118	.142	-293	-1.2104	1.0000
9	6	1	2.583	2.552	-2.552	.008	.331	.9100	1.0000
9	6	2	1.6125	1.5188	1.5187	.197	-.063	-.4028	1.0000
9	6	3	3.987	3.749	-3.749	-.019	.238	.8358	1.0000
9	7	0	5.795	5.274	5.274	.031	.521	2.5612	1.0000
9	7	1	6.274	6.541	6.538	.212	-.320	-2.0327	1.0000
9	7	2	8.414	8.831	-18.830	-.215	.182	.9848	1.0000
9	7	0	1.9013	1.917	-7.813	-.174	-.618	-3.7592	1.0000
10	0	0	1.06	2.358	-2.338	-.041	.732	2.1049	1.0000
10	0	1	1.070	4.870	4.525	.098	.049	.1888	1.0000
10	0	2	1.132	1.6667	-16.601	-.444	-.475	-7.9219	1.0000
10	0	4	6.46	6.763	-6.761	-.159	-.510	-2.5164	1.0000
10	1	0	0.0	8.036	-.607	.089	.377	2.5724	1.0000
10	1	1	1.071	3.071	-.2.338	-.200	-.151	1.0000	1.0000
10	1	2	1.2	4.870	4.824	.024	-.049	-.049	1.0000
10	1	4	3.293	2.032	2.032	.012	1.261	3.6355	1.0000
10	1	5	6.784	6.608	6.607	.079	.176	.9169	1.0000
10	2	0	2.318	2.675	2.6871	.413	-.526	-1.7717	1.0000
10	2	1	1.472	1.623	-11.622	-.200	-.151	-1.0067	1.0000
10	2	2	7.882	8.055	8.054	.054	-.051	-.135	1.0000
10	2	3	6.304	8.567	-.5.565	.187	-.263	-1.6559	1.0000
10	2	4	19.833	20.596	20.592	.376	-.762	-4.0879	1.0000
10	3	0	1.877	1.251	-.1.242	.145	-.627	1.0925	1.0000
10	3	1	1.215	* 8.684	-.883	-.051	-.051	-.331	1.0000
10	3	2	7.882	8.051	8.049	.175	-.049	-2.4235	1.0000
10	3	3	6.304	3.477	3.4708	-.074	-.231	-.7033	1.0000
10	3	4	3.477	3.708	3.707	-.132	-.968	1.7356	1.0000
10	4	0	2.066	*	1.096	-.090	-.057	-.023	1.0000
10	4	1	1.439	4.162	4.161	-.057	-.057	-.0558	1.0000
10	4	2	4.262	4.616	4.615	-.065	-.354	-.13172	1.0000
10	4	3	7.882	8.051	8.049	.175	-.049	-2.4235	1.0000
10	4	4	3.477	3.708	3.707	-.132	-.968	1.7356	1.0000
10	5	0	1.06	4.139	4.162	-.057	-.057	-.0558	1.0000
10	5	1	1.215	* 8.684	8.684	-.051	-.051	-.331	1.0000
10	5	2	7.882	8.051	8.049	.175	-.049	-2.4235	1.0000
10	5	3	6.304	3.477	3.4708	-.074	-.231	-.7033	1.0000
10	5	4	3.477	3.708	3.707	-.132	-.968	1.7356	1.0000
10	6	0	2.066	*	1.096	-.090	-.057	-.023	1.0000
10	6	1	1.439	4.162	4.161	-.057	-.057	-.0558	1.0000
10	6	2	4.262	4.616	4.615	-.065	-.354	-.13172	1.0000
10	6	3	7.882	8.051	8.049	.175	-.049	-2.4235	1.0000
10	6	4	3.477	3.708	3.707	-.132	-.968	1.7356	1.0000
10	7	0	1.06	4.139	4.162	-.057	-.057	-.0558	1.0000
10	7	1	1.215	* 8.684	8.684	-.051	-.051	-.331	1.0000
10	7	2	7.882	8.051	8.049	.175	-.049	-2.4235	1.0000
10	7	3	6.304	3.477	3.4708	-.074	-.231	-.7033	1.0000
10	7	4	3.477	3.708	3.707	-.132	-.968	1.7356	1.0000
10	8	0	1.06	4.139	4.162	-.057	-.057	-.0558	1.0000
10	8	1	1.215	* 8.684	8.684	-.051	-.051	-.331	1.0000
10	8	2	7.882	8.051	8.049	.175	-.049	-2.4235	1.0000
10	8	3	6.304	3.477	3.4708	-.074	-.231	-.7033	1.0000
10	8	4	3.477	3.708	3.707	-.132	-.968	1.7356	1.0000
10	9	0	1.06	4.139	4.162	-.057	-.057	-.0558	1.0000
10	9	1	1.215	* 8.684	8.684	-.051	-.051	-.331	1.0000
10	9	2	7.882	8.051	8.049	.175	-.049	-2.4235	1.0000
10	9	3	6.304	3.477	3.4708	-.074	-.231	-.7033	1.0000
10	9	4	3.477	3.708	3.707	-.132	-.968	1.7356	1.0000
11	1	1	1.439	4.162	4.161	-.057	-.057	-.0558	1.0000
11	1	2	6.214	7.946	7.945	.156	-.268	1.6682	1.0000
11	1	3	10.782	11.041	11.039	-.233	-.259	-1.8311	1.0000
11	1	4	9.490	9.634	9.633	-.931	-.931	-3.241	1.0000
11	1	5	11.511	11.782	11.778	.328	-.271	-1.7790	1.0000
11	1	6	6.214	7.946	7.945	.156	-.268	1.6682	1.0000
11	1	7	10.782	11.041	11.039	-.233	-.259	-1.8311	1.0000
11	1	8	9.490	9.634	9.633	-.931	-.931	-3.241	1.0000
11	1	9	11.511	11.782	11.778	.328	-.271	-1.7790	1.0000
11	2	0	6.214	7.946	7.945	.156	-.268	1.6682	1.0000
11	2	1	10.782	11.041	11.039	-.233	-.259	-1.8311	1.0000
11	2	2	9.490	9.634	9.633	-.931	-.931	-3.241	1.0000
11	2	3	11.511	11.782	11.778	.328	-.271	-1.7790	1.0000
11	2	4	6.214	7.946	7.945	.156	-.268	1.6682	1.0000
11	3	0	10.782	11.041	11.039	-.233	-.259	-1.8311	1.0000
11	3	1	9.490	9.634	9.633	-.931	-.931	-3.241	1.0000
11	3	2	11.511	11.782	11.778	.328	-.271	-1.7790	1.0000
11	3	3	6.214	7.946	7.945	.156	-.268	1.6682	1.0000
11	3	4	10.782	11.041	11.039	-.233	-.259	-1.8311	1.0000
11	4	0	9.490	9.634	9.633	-.931	-.931	-3.241	1.0000
11	4	1	11.511	11.782	11.778	.328	-.271	-1.7790	1.0000
11	4	2	6.214	7.946	7.945	.156	-.268	1.6682	1.0000
11	4	3	10.782	11.041	11.039	-.233	-.259	-1.8311	1.0000
11	4	4	9.490	9.634	9.633	-.931	-.931	-3.241	1.0000
11	4	5	11.511	11.782	11.778	.328	-.271	-1.7790	1.0000
11	4	6	6.214	7.946	7.945	.156	-.268	1.6682	1.0000
11	4	7	10.782	11.041	11.039	-.233	-.259	-1.8311	1.0000
11	4	8	9.490	9.634	9.633	-.931	-.931	-3.241	1.0000
11	4	9	11.511	11.782	11.778	.328	-.271	-1.7790	1.0000
11	4	10	6.214	7.946	7.945	.156	-.268	1.6682	1.0000
11	4	11	10.782	11.041	11.039	-.233	-.259	-1.8311	1.0000
11	4	12	9.490	9.634	9.633	-.931	-.931	-3.241	1.0000
11	4	13	11.511	11.782	11.778	.328	-.271	-1.7790	1.0000
11	4	14	6.214	7.946	7.945	.156	-.268	1.6682	1.0000
11	4	15	10.782	11.041	11.039	-.233	-.259	-1.8311	1.0000
11	4	16	9.490	9.634	9.633	-.931	-.931	-3.241	1.0000
11	4	17	11.511	11.782	11.778	.328	-.271	-1.7790	1.0000
11	4	18	6.214	7.946	7.945	.156	-.268	1.6682	1.0000
11	4	19	10.782	11.041	11.039	-.233	-.259	-1.8311	1.0000
11	4	20	9.490	9.634	9.633	-.931	-.931	-3.241	1.0000
11	4	21	11.511	11.782	11.778	.328	-.271	-1.7790	1.0000
11	4	22	6.214	7.946	7.945	.156	-.268	1.6682	1.0000
11	4	23	10.782	11.041	11.039	-.233	-.259	-1.8311	1.0000
11	4	24	9.490	9.634	9.633	-.931	-.931	-3.241	1.0000
11	4	25	11.511	11.782	11.778	.328	-.271	-1.7790	1.0000
11	4	26	6.214	7.946	7.945	.156	-.268	1.6682	1.0000
11	4	27	10.782	11.041	11.039	-.233	-.259	-1.8311	1.0000
11	4	28	9.490	9.634	9.633	-.931	-.931	-3.241	1.0000
11	4	29	11.511	11.782	11.778	.328	-.271	-1.7790	1.0000
11	4	30	6.214	7.946	7.945	.156	-.268	1.6682	1.0000
11	4	31	10.782	11.041	11.039	-.233	-.259	-1.8311	1.0000
11	4	32	9.490	9.634	9.633	-.931	-.931	-3.241	1.0000
11	4	33	11.511	11.782	11.778	.328	-.271	-1.7790	1.0000
11	4	34	6.214	7.946	7.945	.156	-.268	1.6682	1.0000
11	4	35	10.782	11.041	11.039	-.233	-.259	-1.8311	1.0000
11	4	36	9.490	9.634	9.633	-.931	-.931	-3.241	1.0000
11	4	37	11.511	11.782	11.778	.328	-.271	-1.7790	1.0000
11	4	38	6.214	7.946	7.945	.156	-.268	1.6682	1.0000
11									

ANDALUSTITE (MILAS GERALIS) AT 600 DEGREES C FOF-C TABLE

RESULTS OF STRUCTURE FACTOR CALCULATIONS

ALL REFLECTIONS

	NUMERATOR	DENOMINATOR	NUMBER	R
WEIGHTED R	32479.07	8784041.50	686	.061
UNWEIGHTED R	392.49	9973.88	686	.039

RANGES OF F(OBS)	2603.95	1244350.98	451	.046
	1784.33	1748390.60	162	.032
	1263.19	2018922.15	41	.025
	3142.71	1759370.64	23	.042
	7183.42	1380494.28	7	.072
	4179.85	222694.65	1	.137
	*00	*00	0	.000
	12321.62	409817.90	1	.173

RANGES OF (SIN(THETA)/LAMBDA)**2

8797.07	3145780.37	40	.053
17708.95	1946312.31	59	.092
1067.31	902023.69	74	.035
1950.24	788692.93	61	.050
628.19	528817.76	95	.034
1404.12	509782.20	106	.049
421.93	474731.62	112	.030
407697.61	119	119	.034

UNREJECTED REFLECTIONS

WEIGHTED R 7645.09 7522260.04 610 .052

UNWEIGHTED R 277.09 9414.45 610 .029

RANGES OF F(OBS)	2418.74	1243628.25	381	.044
	1764.33	1748390.50	162	.032
	1263.19	2018922.15	41	.022
	1273.65	1665876.52	21	.028
	905.19	845462.42	5	.033
	*00	*00	0	.000
	*00	*00	0	.000
	*00	*00	0	.000

RANGES OF (SIN(THETA)/LAMBDA)**2

2493.80	2610730.75	36	.031
1167.55	1313729.49	54	.030
1082.13	902009.69	70	.035
1059.35	723377.35	75	.038
611.45	528751.77	86	.034
397.75	561450.15	95	.027
382.40	474522.11	98	.028
430.67	407708.74	96	.033

SUM FCAL STANDARD DEV OF UNIT WEIGHT OBS

9893.20
3.68

The thermal expansion and the high temperature crystal chemistry
of Al_2SiO_5 polymorphs

John K. Winter

2nd

Subrata Ghose

Department of Geological Sciences
University of Washington
Seattle, Washington 98195

Table 10. Sillimanite, andalusite and kyanite: observed and calculated structure factors at various temperatures.

Andalusite 800 °C

ANDALUSITE CHLORITE GARNET AT 300 DEGREES C FO-HC TABLE

STRUCTURE FACTORS PAGE 1

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT.	FACTS		
0	0	0	61.937	62.658	.350	-7.21	-5.5221	1.0000	*			
0	0	2	61.115	62.537	.220	-20.422	-10.6170	1.0000	*			
0	0	4	24.784	23.643	.276	1.141	4.2086	1.0000	*			
0	0	6	24.784	23.641	.570	1.141	4.2086	1.0000	*			
0	0	8	47.869	47.766	.131	-1.73	-1.353	1.0000	*			
0	1	1	45.968	47.321	-4.73	-47.321	-12.5950	1.0000	*			
0	1	3	43.244	41.964	-41.964	-41.964	1.279	7.6750	1.0000	*		
0	1	5	9.622	9.193	-9.193	-9.193	4.225	2.6877	1.0000	*		
0	1	7	18.645	16.322	-18.320	-18.320	3.24	1.7140	1.0000	*		
0	1	9	19.465	16.626	-16.625	-16.625	6.320	5.3220	1.0000	*		
0	2	1	64.514	70.836	-70.836	-70.836	6.59	4.4026	1.0000	*		
0	2	3	10.329	10.329	-10.328	-10.328	3.22	-4.4026	1.0000	*		
0	2	5	10.329	10.329	-10.328	-10.328	0.06	-0.0419	1.0000	*		
0	2	7	36.180	36.174	-36.170	-36.170	5.26	.6239	1.0000	*		
0	2	9	5.665	5.451	-5.451	-5.451	0.88	1.0264	1.0000	*		
0	3	1	38.166	38.970	-38.969	-38.969	8.04	1.0264	1.0000	*		
0	3	3	30.764	29.863	-29.862	-29.862	8.43	5.5202	1.0000	*		
0	3	5	21.685	20.674	-20.673	-20.673	7.75	4.3858	1.0000	*		
0	3	7	10.646	10.846	-10.846	-10.846	1.13	3.011	1.0000	*		
0	4	1	47.443	47.443	-47.442	-47.442	3.45	1.7170	1.0000	*		
0	4	3	36.616	36.213	-36.212	-36.212	1.52	1.7170	1.0000	*		
0	4	5	26.645	26.213	-26.212	-26.212	4.52	2.3907	1.0000	*		
0	4	7	13.930	13.743	-13.739	-13.739	1.12	-5.2927	1.0000	*		
0	4	9	14.429	14.421	-14.421	-14.421	1.14	0.6267	1.0000	*		
0	5	1	19.316	18.249	-18.246	-18.246	0.40	1.0686	1.0000	*		
0	5	3	11.055	11.362	-11.362	-11.362	0.08	-0.306	-2.0753	1.0000	*	
0	5	5	7.978	7.935	-7.935	-7.935	0.73	0.042	1.0000	*		
0	5	7	1.570	1.542	-1.542	-1.542	0.44	-0.283	-0.6320	1.0000	*	
0	6	0	18.726	18.549	-18.549	-18.549	0.43	-0.176	-0.7707	1.0000	*	
0	6	2	39.137	40.500	-40.499	-40.499	3.67	-1.363	-6.134	1.0000	*	
0	6	4	12.727	12.860	-12.860	-12.860	0.36	-0.153	-1.0000	1.0000	*	
0	6	6	12.870	12.820	-12.820	-12.820	3.13	-0.456	-2.2946	1.0000	*	
0	6	8	10.426	9.566	-9.565	-9.565	1.47	6.66	4.6672	1.0000	*	
0	6	10	14.372	14.571	-14.570	-14.570	1.76	-1.195	-1.2013	1.0000	*	
0	6	12	2.486	1.867	-1.865	-1.865	0.85	-0.620	-1.0000	1.0000	*	
0	6	14	65.950	69.991	-69.988	-69.988	5.05	-4.041	-17.0500	1.0000	*	
0	6	16	17.851	17.663	-17.663	-17.663	2.23	1.16	0.9550	1.0000	*	
0	6	18	48.024	50.001	-49.990	-49.990	5.31	-1.977	-7.0559	1.0000	*	
0	6	20	10.443	10.443	-10.442	-10.442	1.77	-1.639	-1.3016	1.0000	*	
0	6	22	7.214	7.086	-7.086	-7.086	0.44	-0.326	1.0280	1.0000	*	
0	6	24	9.503	8.986	-8.986	-8.986	0.73	-0.517	4.5140	1.0000	*	
0	6	26	1.140	1.268	-1.268	-1.268	0.10	-1.977	-1.590	1.0000	*	
0	6	28	18.611	18.633	-18.634	-18.634	2.17	-0.639	-0.3016	1.0000	*	
0	6	30	25.587	25.768	-25.763	-25.763	4.91	-0.611	-0.3753	1.0000	*	
0	6	32	53.614	56.415	-56.414	-56.414	1.94	-0.601	-0.0758	1.0000	*	
0	6	34	30.194	15.234	-15.234	-15.234	1.94	-0.149	-1.0438	1.0000	*	
0	6	36	7.590	8.036	-8.035	-8.035	2.19	-0.226	-0.185	1.0000	*	
0	6	38	7.292	7.481	-7.481	-7.481	1.93	-0.066	-0.2375	1.0000	*	
0	6	40	5.326	5.865	-5.860	-5.860	2.32	-0.2538	-0.6664	1.0000	*	
0	6	42	34.949	34.582	-34.581	-34.581	2.02	-0.800	-2.5578	1.0000	*	
0	6	44	41.338	42.337	-42.337	-42.337	3.87	-1.0998	-7.8116	1.0000	*	
0	6	46	15.334	15.470	-15.470	-15.470	1.92	-0.862	-4.1684	1.0000	*	

ANGULUSITE (MINAS GERAIS) AT 800 DEGREES C FOR FC TABLE

STRUCTURE FACTORS

ANDALUSITE (MIRAS GEMIS) AT 600 DEGREES C FC-FC TABLE

STRUCTURE FACTORS

PAGE 3

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA +	DELTA/SIGMA	EXT. FACTOR	
1	7	6	9.047	9.149	-9.145	-2.267	+1.02	+7.626	1.0000	
1	8	0	22.241	21.606	-21.605	+1.71	+0.35	2.4010	1.0000	
1	8	1	11.944	11.321	-11.320	+1.16	+0.24	4.5664	1.0000	
1	9	2	6.074	5.776	-5.776	+1.51	+0.26	2.2494	1.0000	
1	8	6	6.026	6.656	-6.657	+0.75	+1.68	1.3380	1.0000	
1	8	4	14.841	14.907	-14.907	+1.52	+0.66	-0.4561	1.0000	
1	8	5	8.907	8.721	-8.720	+1.29	+1.86	1.4058	1.0000	
1	9	6	3.612	2.146	-2.142	+1.19	+1.46	3.4666	1.0000	
1	9	0	11.066	16.545	-10.348	+1.70	+7.18	5.0676	1.0000	
1	9	1	4.149	2.886	-3.886	+1.10	+2.63	1.2941	1.0000	
1	9	3	4.149	3.288	-12.361	+1.50	+0.23	-0.1669	1.0000	
1	9	2	4.092	3.610	-12.360	+1.50	+0.23	-0.3884	1.0000	
1	9	9	3.612	1.660	-1.637	+1.04	+2.25	-1.3984	* * *	
1	9	8	8.007	8.236	-8.234	+1.19	+2.25	-1.6524	1.0000	
1	9	6	5.153	5.146	-6.139	+0.98	+0.13	+0.0634	1.0000	
1	9	6	4.092	3.790	-2.790	+0.11	+3.03	1.4322	1.0000	
1	10	0	3.660	3.170	-3.166	+0.93	+4.61	2.1336	1.0000	
1	10	1	7.056	7.484	-7.484	+0.04	+3.74	2.7574	1.0000	
1	10	3	4.965	4.659	-4.657	+1.14	+3.06	1.5876	1.0000	
1	10	1	2.599	2.445	-2.445	+0.09	+1.54	0.4245	1.0000	
1	11	0	4.648	4.059	-4.053	+0.27	+0.89	2.9016	1.0000	
1	11	1	7.016	7.131	-7.129	+1.72	+0.26	-0.1673	1.0000	
1	11	2	9.134	8.753	-8.753	+0.21	+3.81	2.8995	1.0000	
1	11	3	7.426	7.231	-7.231	+1.64	+1.95	1.2786	1.0000	
1	12	0	5.392	4.936	-4.936	+0.16	+0.56	2.2613	1.0000	
2	1	6.88	* 9.21	* 9.21	-19.789	+0.95	+1.69	1.699	1.0000	
2	2	0	3.609	3.553	-3.553	+0.18	+6.18	-2.688	1.0000	
2	2	0	8.768	8.636	-8.636	+0.96	+1.32	+1.32	1.0000	
2	2	0	5.088	5.362	-15.354	+0.45	+7.25	+7.25	1.0000	
2	2	0	3.037	3.599	-3.598	+0.65	+0.65	+0.65	1.0000	
2	2	0	2.773	3.930	-37.930	+1.92	+6.42	6.6581	1.0000	
2	2	0	4.216	3.229	-3.229	+0.30	+0.30	+0.30	1.0000	
2	2	0	5.612	4.048	-4.048	+1.92	+5.63	3.7653	1.0000	
2	2	0	1.263	*	-1.198	+0.23	+0.61	+0.61	1.1291	1.0000
2	2	0	2.569	2.886	-22.887	+1.69	+7.01	3.0906	1.0000	
2	2	0	2.256	1.283	-1.283	+0.72	+9.73	3.0290	1.0000	
2	2	0	19.879	19.364	-19.363	+1.49	+5.16	2.5048	1.0000	
2	2	0	1.172	*	-1.163	+0.58	+0.69	+0.69	.0111	1.0000
2	2	0	9.652	9.392	-9.392	+0.15	+2.60	1.6101	1.0000	
2	2	0	61.166	81.689	-81.687	+5.14	+20.523	-15.96651	1.0000 *	
2	2	0	15.924	16.354	-16.352	+2.63	+43.0	-2.4187	1.0000	
2	2	0	4.960	4.285	-4.284	+0.05	+6.75	3.6516	1.0000	
2	2	0	16.808	15.964	-15.962	+2.46	+8.43	3.8343	1.0000	
2	2	0	49.911	50.929	-50.926	+5.49	+1.018	-4.8992	1.0000	
2	2	0	15.583	15.135	-15.133	+2.19	+4.48	2.8264	1.0000	
2	2	0	1.243	*	-1.136	+0.17	+1.107	1.6904	1.0000 *	
2	2	0	9.031	9.205	-9.205	+1.79	+1.177	-1.2946	1.0000	
2	2	0	20.693	20.693	-20.692	+3.93	+0.26	+1.327	1.0000	
2	2	0	13.596	12.445	-12.445	+1.34	+1.150	5.8452	1.0000	
2	2	0	1.596	*	-1.342	+0.26	+1.254	2.6975	1.0000 *	
2	2	0	21.184	20.211	-20.211	+1.46	+0.72	5.0956	1.0000	
2	2	0	11.529	10.566	-10.566	+0.73	+0.61	6.0952	1.0000	
2	2	0	10.948	11.222	-11.221	+1.19	+0.274	-1.7807	1.0000	
2	2	0	6.003	6.133	-6.133	+0.22	+0.130	+0.9386	1.0000	

ANDALUSITE (MIMAS GERAIS) AT 800 DEGREES C F0-F0C TABLE

STRUCTURE FACTORS

0.0000

H K L F(CALC) F(GCALC) A(GCALC) B(GCALC)

DELTA F DELTA/SIGMA FXT. FACTR

2 2 2 3 0 6	11.584	11.503	11.602	.114	-.014	-.1292	1.0000
2 2 2 3 0 7	9.056	6.759	-6.758	-.093	.298	2.1946	1.0000
2 2 2 3 0 8	6.505	5.885	5.885	.092	.705	3.8354	1.0000
2 2 2 4 0 0	6.547	6.031	6.030	-.077	.017	4.973	1.0000
2 2 2 4 1 1	15.193	19.005	19.005	-.002	.126	.6412	1.0000
2 2 2 4 1 2	8.3562	9.653	9.653	-.948	-.548	11.271	1.0000
2 2 2 4 1 3	13.747	13.926	13.927	-.088	-.161	12.974	1.0000
2 2 2 4 1 4	1.917	1.838	1.837	-.070	.675	1.234	1.0000
2 2 2 4 1 5	5.637	5.315	5.315	.074	.122	1.0001	1.0000
2 2 2 4 1 6	4.252	4.3413	4.3413	-.439	-.227	1.961	1.0000
2 2 2 4 1 7	4.677	4.815	4.815	.066	.136	1.6032	1.0000
2 2 2 4 1 8	4.1717	4.1954	4.1954	-.250	.237	1.2561	1.0000
2 2 2 4 1 9	0.416	9.441	9.441	.055	.627	1.1698	1.0000
2 2 2 4 1 10	4.1789	4.3101	4.3100	-.227	-.212	1.4689	1.0000
2 2 2 4 1 11	9.968	0.078	0.078	.009	.678	1.2865	1.0000
2 2 2 4 1 12	27.082	27.445	27.445	-.279	-.403	1.6255	1.0000
2 2 2 4 1 13	10.014	9.638	9.638	.066	.376	2.0461	1.0000
2 2 2 4 1 14	20.321	20.533	20.532	-.177	-.212	1.1462	1.0000
2 2 2 4 1 15	3.217	3.414	3.414	-.028	-.197	1.6102	1.0000
2 2 2 4 1 16	40.304	40.041	40.038	.507	.263	1.2653	1.0000
2 2 2 4 1 17	14.572	13.750	13.748	.194	.522	5.0172	1.0000
2 2 2 4 1 18	12.440	12.656	12.656	.079	.216	1.1462	1.0000
2 2 2 4 1 19	32.284	32.090	32.086	.185	.194	1.3307	1.0000
2 2 2 4 1 20	29.842	29.920	29.917	.454	.078	1.2404	1.0000
2 2 2 4 1 21	9.540	9.764	9.763	.156	.156	1.6842	1.0000
2 2 2 4 1 22	7.831	7.675	7.675	.065	.495	1.4601	1.0000
2 2 2 4 1 23	6.161	6.179	6.179	.137	-.495	1.2981	1.0000
2 2 2 4 1 24	9.264	1.085	1.085	-.029	-.160	1.2404	1.0000
2 2 2 4 1 25	2.625	2.386	2.386	-.380	.245	1.0120	1.0000
2 2 2 4 1 26	1.150	* *	2.436	2.436	1.226	1.2753	1.0000
2 2 2 4 1 27	2.176	* *	2.323	2.323	1.147	1.4227	1.0000
2 2 2 4 1 28	2.108	* *	6.635	6.635	1.473	4.0395	1.0000
2 2 2 4 1 29	1.090	1.061	1.061	-.601	-.511	1.6567	1.0000
2 2 2 4 1 30	1.157	1.087	1.087	-.087	1.069	1.2939	1.0000
2 2 2 4 1 31	7.029	6.929	6.929	-.929	-.100	8.4235	1.0000
2 2 2 4 1 32	16.718	16.712	16.712	-.140	.006	1.0370	1.0000
2 2 2 4 1 33	16.527	16.274	16.274	-.432	.254	1.5395	1.0000
2 2 2 4 1 34	12.930	13.132	13.132	-.129	-.202	1.3881	1.0000
2 2 2 4 1 35	4.575	5.154	5.154	-.154	-.081	1.5759	1.0000
2 2 2 4 1 36	9.047	9.330	9.330	-.329	-.283	1.261	1.0000
2 2 2 4 1 37	9.463	9.752	9.752	-.746	-.346	2.1520	1.0000
2 2 2 4 1 38	15.209	15.051	15.050	-.346	.254	1.5395	1.0000
2 2 2 4 1 39	21.658	21.167	21.167	-.167	.491	1.4321	1.0000
2 2 2 4 1 40	3.009	2.773	2.773	-.844	.072	1.4321	1.0000
2 2 2 4 1 41	25.353	24.949	24.949	-.949	.366	1.4321	1.0000
2 2 2 4 1 42	6.517	6.346	6.346	-.345	-.095	1.171	1.0000
2 2 2 4 1 43	2.356	1.841	1.841	-.540	.038	1.3660	1.0000
2 2 2 4 1 44	2.796	2.912	2.912	-.911	-.084	1.017	1.0000
2 2 2 4 1 45	5.211	5.014	5.014	-.013	-.036	1.0370	1.0000
2 2 2 4 1 46	18.463	18.795	18.795	-.795	-.322	1.6496	1.0000
2 2 2 4 1 47	3.895	3.895	3.895	-.895	-.629	2.9266	1.0000

ANDALUSITE (MILLS GRADS) AT . 800 DEGREES C FCF-FC TABLE

STRUCTURE FACTORS

PAGE 5

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
2	11	1	4.022	4.0233	-4.233	-0.065	2.9173	1.0000	
2	11	2	2.000	*	2.640	-2.640	0.014	0.000	* * *
2	11	3	6.635	6.302	-6.302	-6.302	0.322	1.0000	
0	11	3	3.534	3.4693	-3.4692	-3.4692	0.647	1.0000	
0	11	4	3.037	2.9753	-2.9752	-2.9752	0.554	1.0000	
0	11	5	13.96	13.513	-13.513	-13.513	0.474	2.0705	1.0000
0	11	6	14.200	13.760	-13.758	-13.758	0.223	0.230	1.0000
0	11	7	12.933	12.658	-12.856	-12.856	0.075	0.5432	1.0000
0	11	8	6.459	5.312	-4.310	-4.310	-0.713	-4.0302	1.0000
0	11	9	2.038	1.565	-1.582	-1.582	1.643	6.0386	1.0000
0	11	10	9.369	8.857	-8.854	-8.854	0.812	4.02135	1.0000
0	11	11	3.439	3.397	-3.376	-3.376	0.620	2.0327	1.0000
0	11	12	3.229	3.129	-3.127	-3.127	0.766	3.02752	1.0000
0	11	13	3.641	3.264	-3.263	-3.263	1.150	0.5762	1.0000
0	11	14	15.335	15.615	-15.612	-15.612	0.380	-1.6792	1.0000
0	11	15	12.717	12.623	-12.620	-12.620	0.093	0.6206	1.0000
0	11	16	6.695	6.500	-6.500	-6.500	0.7631	6.07631	1.0000
0	11	17	6.326	6.342	-6.342	-6.342	-0.1120	-0.1120	1.0000
0	11	18	5.641	5.365	-5.382	-5.382	0.655	0.3582	1.0000
0	11	19	1.590	1.461	-1.460	-1.460	1.120	2.05265	1.0000
0	11	20	2.432	2.5745	-2.5744	-2.5744	-1.412	-6.0360	1.0000
0	11	21	0.811	0.008	0.008	0.008	0.733	0.000	1.0000
0	11	22	5.716	4.73	-5.472	-5.472	2.293	1.0000	
0	11	23	1.719	1.801	-1.801	-1.801	-0.082	-0.1367	1.0000
0	11	24	0.147	0.461	-0.460	-0.460	0.022	0.000	1.0000
0	11	25	12.411	11.545	-11.544	-11.544	0.079	-1.412	1.0000
0	11	26	3.639	3.577	-3.576	-3.576	0.008	0.000	1.0000
0	11	27	1.719	1.801	-1.801	-1.801	0.082	-0.1367	1.0000
0	11	28	30.140	29.473	-29.472	-29.472	-0.333	-1.0451	1.0000
0	11	29	6.106	7.758	-7.750	-7.750	0.677	5.04966	1.0000
0	11	30	15.758	15.511	-15.510	-15.510	0.216	0.4779	1.0000
0	11	31	26.901	26.969	-26.967	-26.967	-0.318	1.0000	
0	11	32	13.753	13.629	-13.628	-13.628	-0.170	0.126	1.0000
0	11	33	2.160	1.815	-1.813	-1.813	0.085	0.7669	1.0000
0	11	34	22.046	21.868	-21.867	-21.867	0.161	0.000	1.0000
0	11	35	18.186	17.516	-17.515	-17.515	0.112	0.671	1.0000
0	11	36	12.094	12.060	-12.060	-12.060	0.107	0.334	1.0000
0	11	37	1.635	1.080	-1.077	-1.077	0.075	0.604	1.0000
0	11	38	15.169	15.298	-15.298	-15.298	0.173	-0.130	1.0000
0	11	39	7.077	7.305	-7.305	-7.305	0.059	-0.229	1.0000
0	11	40	1.953	*	2.157	0.041	-2.04	-0.394	1.0000
0	11	41	15.195	14.455	-14.454	-14.454	0.169	0.760	1.0000
0	11	42	14.455	14.454	-14.454	-14.454	0.156	4.02078	1.0000
0	11	43	9.442	8.455	-8.454	-8.454	0.986	7.01182	1.0000
0	11	44	31.587	31.586	-31.586	-31.586	0.176	0.8298	1.0000
0	11	45	11.773	11.704	-11.703	-11.703	0.152	-0.070	1.0000
0	11	46	11.428	11.166	-11.165	-11.165	0.151	0.262	1.0000
0	11	47	5.452	3.871	-3.869	-3.869	0.132	1.561	1.0000
0	11	48	14.959	15.297	-15.296	-15.296	-0.209	-0.339	1.0000
0	11	49	8.176	8.138	-8.138	-8.138	0.123	0.040	1.0000
0	11	50	30.271	30.564	-30.564	-30.564	0.055	-0.293	1.0000
0	11	51	4.242	3.002	-3.001	-3.001	-0.060	-1.3265	1.0000
0	11	52	4.020	3.230	-3.229	-3.229	0.092	0.972	1.0000
0	11	53	6.129	6.063	-6.063	-6.063	-0.095	0.0470	1.0000

ANDALUSITE (MINAS GERAIS) AT 800 DEGREES C F(O)-FC TABLE

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	STRUCTURE FACTORS		PAGE	6	
							DELTA F	DELTA/SIGMA			
3	6	4	17.996	18.286	-18.286	.648	-.296	-1.7512	1.0000	*	
3	6	5	1.078	*.067	-.066	.014	1.010	1.3115	1.0000	*	
3	6	6	1.950	*.673	1.671	.071	*.276	*.528	1.0000	*	
3	7	0	2.817	2.843	2.841	.342	1.274	*.3065	1.0000	*	
3	7	1	1.626	1.643	-15.041	-.293	*.211	*.3356	1.0000	*	
3	7	2	1.803	*.129	2.136	-.034	-.336	-.6716	1.0000	*	
3	7	3	1.921	*.21	11.856	-.116	-.273	*.67	1.0000	*	
3	7	4	19.616	19.55	19.55	.304	*.64	*.3536	1.0000	*	
3	7	5	12.732	12.936	-12.936	-.252	-.206	-1.4664	1.0000	*	
3	7	6	1.702	*.268	1.267	-.030	*.524	*.6551	1.0000	*	
3	7	7	1.721	*.331	1.330	-.051	*.205	*.6405	1.0000	*	
3	8	8	9.216	9.108	-9.108	-.215	*.107	*.6293	1.0000	*	
3	8	9	6.192	5.752	5.752	.006	*.246	*.1965	1.0000	*	
3	8	9	9.462	9.473	-9.472	.252	*.206	*.6699	1.0000	*	
3	8	9	2.623	2.218	2.216	-.044	*.205	*.6205	1.0000	*	
3	8	9	6.164	4.259	4.259	.066	*.661	*.5912	1.0000	*	
3	9	0	11.820	11.702	11.702	.147	*.117	*.076	1.0000	*	
3	9	1	27.086	26.856	26.854	.354	*.282	*.7956	1.0000	*	
3	9	2	10.066	9.867	9.865	.154	*.159	*.1282	1.0000	*	
3	9	3	20.974	21.218	21.216	-.044	*.2864	*.2036	1.0000	*	
3	9	4	8.515	4.259	4.259	.066	*.661	*.5912	1.0000	*	
3	9	5	14.332	*.317	18.315	*.204	*.026	*.0995	1.0000	*	
3	9	6	1.433	*.607	1.600	-.151	*.174	*.2786	1.0000	*	
3	9	7	5.949	*.802	*.801	.121	*.147	*.2527	1.0000	*	
3	9	8	5.531	4.883	4.882	.104	*.147	*.2979	1.0000	*	
3	9	9	3.036	3.549	3.548	.086	*.116	*.076	1.0000	*	
3	10	0	17.03	*.342	1.339	-.135	*.354	*.3538	1.0000	*	
3	10	1	2.306	*.380	2.380	.007	*.077	*.1815	1.0000	*	
3	10	2	13.650	*.269	-13.267	-.220	*.363	*.363	1.0000	*	
3	10	3	13.823	13.440	-13.438	-.221	*.363	*.363	1.0000	*	
3	10	4	38.026	36.500	36.498	.319	*.319	*.319	1.0000	*	
3	10	5	71.077	73.010	-73.010	.162	*.162	*.162	1.0000	*	
3	10	6	26.198	*.863	25.862	.289	*.289	*.289	1.0000	*	
3	10	7	27.600	*.269	-26.392	-.122	*.122	*.122	1.0000	*	
3	10	8	32.477	30.938	30.938	.011	*.011	*.011	1.0000	*	
3	10	9	36.008	34.390	34.389	.169	*.169	*.169	1.0000	*	
3	10	10	10.154	*.279	*.279	.021	*.021	*.021	1.0000	*	
3	10	11	17.173	*.235	16.234	.113	*.113	*.113	1.0000	*	
3	10	12	16.937	16.802	16.802	.010	*.035	*.1870	1.0000	*	
3	10	13	22.211	21.696	21.696	.182	*.182	*.5115	1.0000	*	
3	10	14	4.594	*.743	*.743	.018	*.018	*.1459	1.0000	*	
3	10	15	2.589	*.632	1.632	.044	*.044	*.037	*.3237	1.0000	*
3	10	16	6.322	*.174	-6.174	.047	*.047	*.4747	*.8909	1.0000	*
3	10	17	10.478	*.999	9.999	.017	*.017	*.479	*.5690	1.0000	*
3	10	18	24.837	4.528	-4.528	.408	-.408	*.331	*.5690	1.0000	*
3	10	19	1.205	*.759	*.759	.014	*.014	*.5167	*.446	1.0000	*
3	10	20	7.237	*.890	*.889	.054	*.054	*.3476	*.6766	1.0000	*
3	10	21	26.484	*.180	-25.788	.180	*.180	*.4946	*.4995	1.0000	*
3	10	22	1.393	*	*.123	.266	*.266	*.2656	*.4955	1.0000	*

2	20	744	-20	613	-213	* 412	-1 * CCC
3	9	779	4	011	4	011	* 232
1	5	2	13	155	-13	154	-1 * 1677
2	1	1	47	* 944	* 944	-109	* 2978
3	8	6	9	* 005	* 005	-109	* 2473
4	6	* 2	51	70	555	-762	-2 * 048
5	1	5	48	2	480	-605	-2 * 305
6	4	3	72	5	298	-312	-1 * 632
7	3	7	29	2	958	-247	-1 * 0314
8	2	2	51	1	933	-002	-1 * 570
9	1	2	51	4	093	-001	-1 * 570
10	0	7	26	4	097	-001	-1 * 570
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12	0	3	65	2	957	-005	-1 * 562
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191	1	0	23	6	75	-053	-1 * 562
192	0	6					

ANALOGUE CHI-SQUARED GEOMETRIES AT 800 DEGREES C. FOR FC TABLE

					STRUCTURE FACTORS		PLOT	E	
4	8	L	F(CALC)	F(CALC)	A(CALC)	S(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
5	0	5	24.751	24.051	-24.050	-14.9	7.06	2.4539	1.0000
5	0	5	7.224	6.947	-6.947	-0.54	2.77	1.9952	1.0000
5	0	5	11.223	10.979	-10.976	-1.43	2.44	1.664	1.0000
5	0	5	43.936	43.353	-43.356	-3.26	5.52	2.877	1.0000
5	0	5	46.211	45.765	-45.762	-4.77	4.46	3.647	1.0000
5	1	5	21.764	21.362	-21.361	-1.19	3.83	6.710	1.0000
5	1	5	95.102	94.644	-94.644	-4.29	4.69	0.0755	1.0000
5	1	5	29.563	27.509	-27.506	-2.02	1.056	30.90	1.0000
5	1	5	36.1568	30.453	-30.456	-1.03	1.119	4.267	1.0000
5	1	5	32.021	32.021	-32.021	-0.06	2.72	8.549	1.0000
5	2	5	15.061	15.226	-15.226	-1.37	4.169	6.424	1.0000
5	2	5	16.67	15.734	-15.732	-1.08	1.359	8.430	1.0000
5	2	5	2.846	2.846	-2.846	.003	1.471	7.986	1.0000
5	3	5	5.3421	5.3420	-5.3420	.215	1.228	6.269	1.0000
5	3	5	5.547	5.547	-5.547	.039	1.232	1.912	1.0000
5	4	5	12.443	12.442	-12.442	.175	0.16	0.632	1.0000
5	4	5	1.779	*	2.055	.040	2.76	5.804	1.0000
5	5	5	24.572	24.572	-24.572	.168	4.15	8.033	1.0000
5	6	5	3.912	3.912	-3.912	.064	1.607	0.358	1.0000
5	7	5	8.829	8.829	-8.829	.076	1.007	3.58	1.0000
5	8	5	9.851	9.206	-9.206	.222	1.16	0.490	1.0000
5	9	5	6.113	6.462	-6.462	.267	1.349	0.060	1.0000
5	10	5	10.059	10.386	-10.386	.169	1.27	3.573	1.0000
5	11	5	31.059	31.596	-31.596	.126	1.76	4.931	1.0000
5	12	5	31.862	31.862	-31.862	.176	1.950	4.946	1.0000
5	13	5	14.587	15.432	-15.432	.080	1.845	3.942	1.0000
5	14	5	17.162	17.042	-17.041	.136	1.120	6.369	1.0000
5	15	5	8.661	8.765	-8.764	.112	1.123	6.302	1.0000
5	16	5	14.266	14.409	-14.408	.190	1.143	6.398	1.0000
5	17	5	7.837	7.807	-7.807	.062	0.930	1.946	1.0000
5	18	5	5.541	5.521	-5.520	.069	0.973	0.973	1.0000
5	19	5	8.828	7.835	-7.834	.144	0.993	0.641	1.0000
5	20	5	7.128	6.543	-6.542	.126	1.577	9.087	1.0000
5	21	5	20.807	20.655	-20.655	.235	1.171	8.329	1.0000
5	22	5	8.776	8.404	-8.403	.136	3.72	9.410	1.0000
5	23	5	7.396	7.464	-7.463	.129	0.616	5.211	1.0000
5	24	5	3.545	3.339	-3.337	.115	2.08	7.690	1.0000
5	25	5	9.066	9.354	-9.352	.196	2.88	0.341	1.0000
5	26	5	8.846	8.607	-8.606	.119	2.356	5.985	1.0000
5	27	5	2.108	1.903	-1.900	.097	2.05	0.098	1.0000
5	28	5	22.283	-22.284	-22.284	.058	0.02	1.4396	1.0000
5	29	5	5.397	5.165	-5.164	.125	2.31	1.4396	1.0000
5	30	5	6.242	6.607	-6.606	.104	3.365	2.3123	1.0000
5	31	5	2.086	* 4.51	-4.442	.049	1.635	5.472	1.0000
5	32	5	11.774	11.671	-11.671	.044	1.04	7.160	1.0000
5	33	5	18.523	18.658	-18.656	.029	1.35	6.609	1.0000
5	34	5	18.870	18.366	-18.364	.275	.504	4.989	1.0000
5	35	5	16.614	16.614	-16.614	.033	1.26	7.192	1.0000
5	36	5	14.718	14.970	-14.970	.266	2.521	1.521	1.0000

ANGULUSITE (MINSK GRANIS) AT 800 DEGREES C

SINGAPORE PLATE 30

卷之三

ANDALUSITE (MAGNETITE) AT 500 DEGREES C

FO-FC TABLE

STRUCTURE FACTORS

PAGE 16

A	K	L	F(FO)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	F(X) * FACTOR
6	6	2	5.919	5.525	5.532	.160	.384	2.6543	1.0000
6	6	3	5.622	4.626	4.626	.020	.396	2.7613	1.0000
6	6	4	11.224	11.206	11.207	.122	.016	.1181	1.0000
6	6	5	3.765	3.657	3.657	.078	.107	.3449	1.0000
6	6	6	1.556	2.518	2.514	.147	.652	.1320	1.0000
6	6	7	2.570	2.275	2.271	.465	.506	2.2470	1.0000
6	6	8	11.169	11.045	11.044	.168	.154	1.0969	1.0000
6	6	9	5.565	8.391	8.390	.112	.474	.3786	1.0000
6	6	10	9.511	10.169	10.167	.152	.357	.2696	1.0000
6	6	11	19.729	20.346	20.340	.358	.665	.3213	1.0000
6	6	12	6.636	6.894	6.892	.145	.256	1.4681	1.0000
6	6	13	1.065	1.498	1.498	.025	.439	.5686	1.0000
6	6	14	5.811	6.137	6.137	.066	.298	.1936	1.0000
6	6	15	2.246	2.368	2.366	.091	.100	.2646	1.0000
6	6	16	3.765	5.162	5.161	.091	.203	.1021	1.0000
6	6	17	2.582	4.681	4.680	.022	.013	.51948	1.0000
6	6	18	3.146	3.746	3.746	.026	.600	.17516	1.0000
6	6	19	17.896	17.535	17.534	.061	.356	.5633	1.0000
6	6	20	11.129	10.909	10.908	.114	.220	.5966	1.0000
6	6	21	23.331	23.234	23.232	.049	.067	.4302	1.0000
6	6	22	9.078	9.601	9.600	.114	.682	.2026	1.0000
6	6	23	13.536	13.309	13.309	.073	.236	.6976	1.0000
6	6	24	17.446	17.344	17.342	.231	.103	.6037	1.0000
6	6	25	6.503	6.216	6.209	.067	.294	.7392	1.0000
6	6	26	4.786	4.729	4.726	.154	.060	.2699	1.0000
6	6	27	4.892	4.702	4.702	.039	.190	.8500	1.0000
6	6	28	19.189	16.612	16.609	.264	.577	.7748	1.0000
6	6	29	5.770	5.358	5.357	.092	.423	.2202	1.0000
6	6	30	2.271	1.103	1.101	.069	.167	.5947	1.0000
6	6	31	13.294	12.787	12.786	.147	.507	.4554	1.0000
6	6	32	10.061	9.509	9.509	.103	.652	.6653	1.0000
6	6	33	9.205	8.979	8.978	.152	.223	.4477	1.0000
6	6	34	10.496	10.756	10.756	.065	.270	.6165	1.0000
6	6	35	19.564	19.289	19.288	.198	.275	.5050	1.0000
6	6	36	26.966	26.044	26.042	.292	.924	.7851	1.0000
6	6	37	13.541	13.558	13.557	.190	.018	.1083	1.0000
6	6	38	6.746	6.973	6.973	.059	.217	.4584	1.0000
6	6	39	13.255	13.176	13.175	.161	.079	.5046	1.0000
6	6	40	15.065	15.246	15.246	.231	.163	.0191	1.0000
6	6	41	10.739	10.087	10.086	.109	.652	.5125	1.0000
6	6	42	1.186	1.066	1.065	.023	.120	.1880	1.0000
6	6	43	4.059	8.467	8.466	.132	.406	.1725	1.0000
6	6	44	1.891	1.773	1.773	.012	.118	.2691	1.0000
6	6	45	7.969	7.968	7.968	.096	.021	.1558	1.0000
6	6	46	8.010	8.010	8.010	.023	.652	.5125	1.0000
6	6	47	3.163	2.972	2.972	.051	.191	.5867	1.0000
6	6	48	4.471	2.490	2.488	.102	.016	.0404	1.0000
6	6	49	4.807	4.912	4.911	.320	.840	.5695	1.0000
6	6	50	18.169	17.812	17.808	.355	.357	.8442	1.0000
6	6	51	1.051	1.731	1.731	.019	.675	.9046	1.0000
6	6	52	18.294	18.126	18.123	.332	.167	.8018	1.0000
6	6	53	34.152	34.686	34.685	.292	.533	.8970	1.0000
6	6	54	11.817	12.197	12.193	.303	.381	.5960	1.0000
6	6	55	2.212	*	*	.064	.148	.3420	1.0000

ANDALUSITE (MIXED FORMS) AT 300 DEGREES C FDT-C TABLE

STRUCTURE FACTORS

PAGE 11

A	B	C	D	E	F (CALS)	F (CALC)	A (CALC)	B (CALC)	DELTA F	DELTA / SIGMA	EXT. FACTOR
9	9	9	9	9	11.117	10.937	-10.937	-0.041	*18C	1.1782	1.0000
7	7	4	6	1	14.747	14.567	-14.566	+.198	*18C	1.2086	1.0000
7	7	4	2	1	14.195	14.617	-14.616	+.009	-421	-.6227	1.0000
7	7	4	3	1	15.621	16.072	-16.071	-.216	-451	-2.6271	1.0000
7	7	4	4	6	16.377	16.971	-16.971	-.036	-115	-.7221	1.0000
7	7	4	1	1	16.454	16.676	-16.675	+.136	-122	-.12426	1.0000
7	7	4	6	6	16.232	16.143	-16.142	+.006	1.069	1.2371	1.0000
7	7	0	0	0	22.906	22.644	-22.643	+.214	.664	.6917	1.0000
7	7	0	0	0	26.085	25.977	-25.974	+.386	.108	.3956	1.0000
7	7	0	0	0	15.676	16.044	-16.044	+.100	-.167	-.1.0381	1.0000
7	7	0	0	0	24.246	24.770	-24.769	-.370	-.526	-.2.5063	1.0000
7	7	0	0	0	16.782	16.719	-16.718	+.191	-.664	-.3691	1.0000
7	7	0	0	0	14.687	14.995	-14.991	+.320	-.308	-.8413	1.0000
7	7	0	0	0	14.406	14.000	-14.000	-.181	-.408	2.4751	1.0000
7	7	0	0	0	9.613	9.676	-9.669	+.124	-.056	-.6419	1.0000
7	7	0	0	0	5.005	3.729	-3.726	-.111	1.276	6.7220	1.0000
7	7	0	0	0	6.679	6.499	-6.499	-.008	0.06	.691	1.0000
7	7	0	0	0	10.236	10.599	-10.597	-.161	-.363	-.1.0363	1.0000
7	7	0	0	0	6.789	7.321	-7.319	+.138	-.532	-.2.5245	1.0000
7	7	0	0	0	15.420	15.152	-15.152	-.016	-.267	1.5460	1.0000
7	7	0	0	0	18.610	18.423	-18.422	-.325	1.187	1.0663	1.0000
7	7	0	0	0	20.988	21.107	-21.105	+.292	-.218	-.6378	1.0000
7	7	0	0	0	13.889	14.117	-14.116	+.206	-.226	-.4724	1.0000
7	7	0	0	0	12.093	11.633	-11.633	+.013	-.460	3.2470	1.0000
7	7	0	0	0	12.177	12.085	-12.085	-.008	.091	.9919	1.0000
7	7	0	0	0	4.190	3.787	-3.786	+.067	.403	.6583	1.0000
7	7	0	0	0	31.221	31.623	-31.623	-.094	-.560	-.0553	1.0000
7	7	0	0	0	2.978	2.705	-2.704	+.157	-.672	.2.022	1.0000
7	7	0	0	0	2.978	2.705	-2.704	+.039	-.273	-.7720	1.0000
7	7	0	0	0	12.486	12.433	-12.432	+.131	-.167	-.1.0069	1.0000
7	7	0	0	0	3.727	2.905	-2.905	+.106	-.622	2.9225	1.0000
7	7	0	0	0	5.672	5.661	-5.660	-.094	-.011	.0553	1.0000
7	7	0	0	0	5.4250	5.3959	-5.3955	-.672	.291	1.2022	1.0000
7	7	0	0	0	9.454	8.835	-8.829	+.338	-.616	4.4299	1.0000
7	7	0	0	0	37.928	36.407	-36.406	+.599	-.479	-.1.6366	1.0000
7	7	0	0	0	4.433	4.705	-4.697	-.268	-.272	-.9930	1.0000
7	7	0	0	0	10.900	10.473	-10.472	+.073	-.427	2.7092	1.0000
7	7	0	0	0	13.973	13.577	-13.576	-.141	-.5111	2.5111	1.0000
7	7	0	0	0	2.872	2.884	-2.882	+.084	-.012	-.6379	1.0000
7	7	0	0	0	15.434	15.291	-15.290	-.163	-.143	-.6849	1.0000
7	7	0	0	0	6.920	6.845	-6.844	+.065	-.073	-.0714	1.0000
7	7	0	0	0	4.782	4.717	-4.716	-.089	-.067	-.2716	1.0000
7	7	0	0	0	2.424	2.526	-2.525	+.067	-.284	-.5525	1.0000
7	7	0	0	0	7.918	7.917	-7.917	-.164	-.090	-.6237	1.0000
7	7	0	0	0	7.355	7.245	-7.244	+.035	-.031	.110	1.0000
7	7	0	0	0	29.909	29.526	-29.522	-.467	-.057	-.717	1.0000
7	7	0	0	0	7.645	7.598	-7.596	-.030	1.047	1.6232	1.0000
7	7	0	0	0	6.464	6.463	-6.463	-.147	-.094	-.8876	1.0000
7	7	0	0	0	3.395	2.352	-2.351	-.031	1.044	3.1683	1.0000
7	7	0	0	0	16.229	16.946	-16.942	+.373	-.057	-.0092	1.0000
7	7	0	0	0	2.569	1.399	-1.398	-.176	1.170	3.55307	1.0000
7	7	0	0	0	16.436	16.808	-16.807	-.218	-.372	-.1051	1.0000
7	7	0	0	0	4.965	3.717	-3.717	-.017	1.248	6.7165	1.0000
7	7	0	0	0	14.071	14.087	-14.086	-.176	-.016	-.1040	1.0000

ANDALUSITE (SINAS GRIPS) AT 600 DEGREES C FDR-FC TABLE

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9	1.176	* 2.CP	- 2.02	- 0.52	* .966	1.1525	1.0000	*	8.94
10	10.616	10.440	10.438	* 2.08	* 17.	1.2111	1.0000	*	8.94
13	13.492	13.022	13.020	* 2.21	* 836	1.057	1.0000	*	8.94
14	1.403	2.125	2.125	* 016	* 224	1.4901	1.0000	*	8.94
4	4.392	4.480	4.480	- 0.072	- 0.CP	4.619	1.0000	*	8.94
4	4.206	* 967	- 967	* 020	* 235	1.206	1.0000	*	8.94
2	10.724	10.911	10.909	* 200	- 1.187	1.724	1.0000	*	8.94
6	1.210	* 086	- 1.086	* 009	* 124	1.210	1.0000	*	8.94
6	2.627	2.355	- 2.358	- 0.010	- 0.202	2.627	1.0000	*	8.94
6	4.742	4.653	- 4.653	* 030	* 068	4.742	1.0000	*	8.94
1	13.192	13.903	13.908	* 049	* 216	1.912	1.0000	*	8.94
5	3.219	3.219	- 3.219	* 001	* 073	3.219	1.0000	*	8.94
3	1.206	1.641	- 1.641	- 1.641	- 0.432	1.206	1.0000	*	8.94
4	2.317	2.725	- 2.725	- 1.641	- 0.467	2.317	1.0000	*	8.94
2	2.948	2.623	- 2.623	- 0.09	- 0.09	2.948	1.0000	*	8.94
5	5.024	- 2.623	- 2.623	- 0.014	* 001	5.024	1.0000	*	8.94
2	21.716	21.669	- 21.669	- 0.265	- 0.265	21.716	1.0000	*	8.94
6	3.231	3.332	- 3.332	- 0.026	- 0.026	3.231	1.0000	*	8.94
2	9.911	1.864	- 1.864	- 0.010	- 0.010	9.911	1.0000	*	8.94
7	7.160	6.964	- 6.964	- 0.081	- 0.081	7.160	1.0000	*	8.94
6	6.577	6.455	- 6.455	- 0.119	- 0.119	6.577	1.0000	*	8.94
7	6.120	* 910	- * 910	- 0.265	- 0.265	6.120	1.0000	*	8.94
6	8.116	8.281	- 8.281	- 0.135	- 0.135	8.116	1.0000	*	8.94
2	23.432	23.662	- 23.662	- 0.010	- 0.010	23.432	1.0000	*	8.94
2	2.973	2.657	- 2.657	- 0.012	- 0.012	2.973	1.0000	*	8.94
4	4.462	3.147	- 3.147	- 0.211	- 0.211	4.462	1.0000	*	8.94
1	19.394	16.935	- 16.935	- 0.265	- 0.265	19.394	1.0000	*	8.94
12	12.536	12.509	- 12.509	- 0.024	- 0.024	12.536	1.0000	*	8.94
13	13.414	13.370	- 13.370	- 0.041	- 0.041	13.414	1.0000	*	8.94
2	2.030	2.044	- 2.044	- 0.012	- 0.012	2.030	1.0000	*	8.94
5	5.164	5.026	- 5.026	- 0.119	- 0.119	5.164	1.0000	*	8.94
5	5.155	5.293	- 5.293	- 0.134	- 0.134	5.155	1.0000	*	8.94
26	26.603	26.545	- 26.545	- 0.213	- 0.213	26.603	1.0000	*	8.94
3	3.725	3.247	- 3.247	- 0.126	- 0.126	3.725	1.0000	*	8.94
2	2.395	2.327	- 2.327	- 0.053	- 0.053	2.395	1.0000	*	8.94
5	5.164	5.526	- 5.526	- 0.117	- 0.117	5.164	1.0000	*	8.94
30	30.019	30.250	- 30.250	- 0.166	- 0.166	30.019	1.0000	*	8.94
2	2.692	2.900	- 2.900	- 0.072	- 0.072	2.692	1.0000	*	8.94
15	15.765	15.245	- 15.245	- 0.135	- 0.135	15.765	1.0000	*	8.94
3	3.632	4.309	- 4.309	- 0.094	- 0.094	3.632	1.0000	*	8.94
21	21.352	21.770	- 21.770	- 0.677	- 0.677	21.352	1.0000	*	8.94
1	1.252	1.080	- 1.080	- 0.037	- 0.037	1.252	1.0000	*	8.94
15	15.792	15.789	- 15.789	- 0.241	- 0.241	15.792	1.0000	*	8.94
23	23.213	23.549	- 23.549	- 0.334	- 0.334	23.213	1.0000	*	8.94
9	9.520	9.282	- 9.282	- 0.025	- 0.025	9.520	1.0000	*	8.94
21	21.212	21.728	- 21.728	- 0.320	- 0.320	21.212	1.0000	*	8.94
11	11.077	11.409	- 11.409	- 0.214	- 0.214	11.077	1.0000	*	8.94
13	13.562	13.963	- 13.963	- 0.279	- 0.279	13.562	1.0000	*	8.94
1	1.850	2.263	- 2.263	- 0.006	- 0.006	1.850	1.0000	*	8.94
7	7.592	7.318	- 7.318	- 0.045	- 0.045	7.592	1.0000	*	8.94
3	3.999	3.494	- 3.494	- 0.054	- 0.054	3.999	1.0000	*	8.94
6	6.233	6.199	- 6.199	- 0.057	- 0.057	6.233	1.0000	*	8.94
1	1.928	1.928	- 1.928	- 0.055	- 0.055	1.928	1.0000	*	8.94
13	13.012	13.012	- 13.012	- 0.121	- 0.121	13.012	1.0000	*	8.94

ANALYTIC (MINUS COORDS) AT 500 DEGREES C FIG-FC TABLE

STRUCTURE FACTORS PAGE 13

L	R	F(CALC)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA SIGMA	F(X) * FACTOR
1	1	-22.577	22.824	-22.521	-22.385	-0.247	-1.0836	1.0000
2	1	1.4568 *	2.970	0.966	0.901	-0.597	-0.5122	1.0000
3	2	20.061	20.923	-20.920	-20.357	-0.262	-1.2694	1.0000
4	3	8.932	9.042	0.041	0.134	-0.111	-0.7411	1.0000
5	4	19.456	19.415	0.414	0.130	-0.411	-0.2026	1.0000
6	5	3.034	2.313	-2.313	0.612	-0.721	-0.6755	1.0000
7	6	14.581	14.365	14.363	0.190	-0.217	-0.3562	1.0000
8	7	3.058	3.142	3.143	-0.011	-0.011	-0.0915	1.0000
9	8	7.158	4.176	4.176	-0.019	-0.267	-0.2359	1.0000
10	9	7.158	7.724	7.722	-0.195	-0.567	-0.0955	1.0000
11	10	16.433	16.365	-16.504	-0.190	-0.672	-0.2790	1.0000
12	11	7.039	7.956	-7.954	-0.170	-0.517	-0.3220	1.0000
13	12	15.968	14.246	-14.184	-0.396	-1.226	-1.3637	1.0000
14	13	6.164	6.565	-6.567	-0.152	-0.425	-0.6259	1.0000
15	14	7.613	6.872	-6.873	-0.086	-0.346	-0.3824	1.0000
16	15	2.860	2.801	-2.801	-0.036	-0.036	-0.1784	1.0000
17	16	5.024	4.537	4.537	-0.005	-0.497	-0.1211	1.0000
18	17	2.267	2.110	-2.110	-0.012	-0.157	-0.2196	1.0000
19	18	5.761	5.457	-5.457	-0.074	-0.101	-0.840	1.0000
20	19	2.860	2.409	-2.409	-0.371	-0.279	-1.2304	1.0000
21	20	3.419	3.409	-3.409	-0.371	-0.279	-1.2304	1.0000
22	21	10.366	10.502	-10.500	-0.187	-0.371	-0.9513	1.0000
23	22	9.469	8.142	-8.142	-0.134	-0.261	-1.7093	1.0000
24	23	7.711	7.762	-7.760	-0.173	-0.311	-0.3016	1.0000
25	24	17.766	18.334	18.332	-0.568	-0.568	-3.3088	1.0000
26	25	1.877	1.066	-1.066	-0.371	-0.279	-1.2304	1.0000
27	26	1.215	1.215	-1.215	-0.047	-0.261	-0.6422	1.0000
28	27	7.364	7.126	-7.126	-0.162	-0.261	-1.5624	1.0000
29	28	2.611	3.062	-3.062	-0.066	-0.261	-0.6422	1.0000
30	29	1.639	1.639	-1.639	-0.115	-0.261	-0.6422	1.0000
31	30	5.203	4.759	-4.759	-0.092	-0.261	-0.6422	1.0000
32	31	4.042	4.358	-4.358	-0.060	-0.261	-0.6422	1.0000
33	32	2.716	2.362	-2.362	-0.030	-0.261	-0.6422	1.0000
34	33	3.523	3.761	-3.760	-0.051	-0.261	-0.6422	1.0000
35	34	1.663	2.337	-2.324	-0.247	-0.674	-1.6312	1.0000
36	35	6.499	6.442	-6.442	-0.030	-0.57	-2.0256	1.0000
37	36	8.624	8.922	-8.920	-0.186	-0.297	-1.9105	1.0000
38	37	9.226	10.063	-9.998	-0.293	-0.771	-1.5431	1.0000
39	38	7.448	7.228	-7.226	-0.142	-0.230	-1.3499	1.0000
40	39	10.214	10.252	-10.250	-0.212	-0.230	-1.2674	1.0000
41	40	9.095	9.093	-9.091	-0.218	-0.230	-0.0131	1.0000
42	41	7.438	7.867	-7.894	-0.200	-0.458	-1.2623	1.0000
43	42	14.647	15.060	-15.057	-0.309	-0.413	-2.4947	1.0000
44	43	3.919	4.077	-4.077	-0.001	-0.157	-0.5087	1.0000
45	44	12.312	12.523	-12.389	-0.293	-0.691	-0.977	1.0000
46	45	7.562	7.306	-7.304	-0.125	-0.236	-1.4748	1.0000
47	46	5.490	5.875	-5.875	-0.094	-0.286	-1.7013	1.0000
48	47	10.723	10.863	-10.862	-0.098	-0.259	-1.3504	1.0000
49	48	1.760	1.919	-1.918	-0.041	-0.342	-0.3797	1.0000
50	49	10.554	11.157	-11.155	-0.175	-0.602	-4.0529	1.0000
51	50	18.399	-18.398	-18.398	-0.224	-0.002	-0.002	1.0000
52	51	5.600	5.715	-5.715	-0.039	-0.116	-0.5196	1.0000
53	52	3.568	*	*	-0.081	-0.035	-0.1087	1.0000

HANDBLISTER (HANUS GERMANY) AT 300 DEGREES C FD-FC TABLE

ALL REFLECTIONS

WEIGHTED R 4.0933.32

UNWEIGHTED R 3.703.08

NUMBER OF OBS

RANGES OF F(OBS)

*0.39

*0.45

*0.26

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RESULTS OF STRUCTURE FACTOR CALCULATIONS

ALL REFLECTIONS

WEIGHTED R

UNWEIGHTED R

RANGE OF F(OBS)

*0.39

*0.45

*0.26

*0.22

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SUM F(OBS)

STANDARD DEV OF UNIT WEIGHT OBS

9.463.12

3.01

The thermal expansion and the high temperature crystal chemistry
of Al_2SiO_5 polymorphs

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and

Sabine Glüge

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University of Washington
Seattle, Washington 98195

Table 10.
Sillimanite, andalusite and kyanite: observed and
calculated structure factors at various temperatures.

Andalusite 1000°C

ANDALUSITE (MINDS GERAIS) AT 1000 DEGREES C FDFC TABLE

STRUCTURE FACTORS

PAGE 1

H	K	L	F(COSSY)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
0	0	2	60.977	62.070	62.069	63.48	-1.093	-8.3623	1.0000
0	0	4	115.835	135.109	135.106	180.4	-19.273	-101.9378	1.0000 *
0	0	6	22.568	22.244	22.242	26.5	-4.226	-2.1647	1.0000
0	0	8	45.300	43.647	43.644	53.8	-6.52	-2.0462	1.0000
0	1	1	45.589	47.270	47.270	47.2	-1.72	-1.12	1.0000
0	1	3	42.714	41.460	41.460	42.1	-1.214	-1.253	1.0000 *
0	1	5	8.957	8.481	8.481	8.91	-0.91	-4.76	3.334
0	1	7	17.553	17.205	17.205	17.2	-1.91	-3.48	1.0347
0	1	9	20.217	19.095	19.095	19.0	-1.33	-1.12	1.0300
0	2	1	63.675	69.961	69.961	69.9	-6.96	-7.5069	1.0000
0	2	3	10.697	10.436	10.436	10.4	-10.435	-1.262	1.0000
0	2	5	34.624	34.624	34.624	34.6	-34.620	-1.2617	1.0000
0	2	7	5.135	5.109	5.109	5.1	-5.108	-0.024	1.0000
0	2	9	38.601	38.905	38.905	38.9	-5.904	-2.78	1.154
0	3	1	30.600	29.511	29.511	29.5	-2.510	-3.03	1.0000
0	3	3	20.664	20.053	20.053	20.0	-20.051	-1.089	1.0000
0	3	5	9.975	10.141	10.141	10.1	-10.141	-1.16	1.0000
0	3	7	47.807	46.850	46.850	46.8	-46.849	-3.62	1.0000
0	3	9	35.889	35.670	35.670	35.6	-35.669	-1.47	1.0000
0	4	1	13.646	13.646	13.646	13.6	-13.642	-3.03	1.0000
0	4	3	13.049	13.436	13.436	13.4	-13.436	-1.06	1.0000
0	4	5	18.284	17.743	17.743	17.7	-17.743	-0.32	1.0000
0	4	7	10.051	10.550	10.550	10.5	-10.550	-0.15	1.0000
0	4	9	7.263	7.150	7.150	7.1	-7.150	-0.13	1.0000
0	5	1	14.543	* 1.229	1.229	1.22	-1.229	-0.46	1.0000
0	5	3	18.103	18.078	18.078	18.0	-18.078	-0.40	1.0000
0	5	5	36.690	39.503	39.503	39.5	-39.501	-3.72	1.013
0	5	7	11.979	12.648	12.648	12.6	-12.648	-0.93	1.013
0	5	9	18.769	18.695	18.695	18.6	-18.695	-0.290	1.0000
0	6	1	9.103	8.669	8.669	8.6	-8.669	-0.134	1.0000
0	6	3	13.249	13.607	13.607	13.6	-13.606	-1.161	1.0000
0	6	5	1.645	* 1.457	1.457	1.45	-1.455	-0.074	1.0000
0	6	7	62.816	66.201	66.201	66.2	-66.279	-0.562	1.0000
0	6	9	17.643	17.506	17.506	17.5	-17.504	-0.213	1.0000
0	7	1	44.179	46.272	46.272	46.2	-46.259	-2.093	1.0000
0	7	3	10.002	9.866	9.866	9.8	-9.865	-0.163	1.0000
0	7	5	7.363	7.347	7.347	7.3	-7.347	-0.046	1.0000
0	7	7	9.096	8.812	8.812	8.8	-8.811	-0.072	1.0000
0	7	9	1.941	* 1.474	1.474	1.47	-1.474	-0.012	1.0000
0	8	1	17.860	17.610	17.610	17.6	-17.608	-0.208	1.0000
0	8	3	23.557	23.481	23.481	23.4	-23.477	-0.452	1.0000
0	8	5	14.508	-14.206	-14.206	-14.2	-14.205	-1.182	1.0000
0	8	7	7.911	7.593	7.593	7.5	-7.590	-0.204	1.0000
0	8	9	11.3	10.0	10.0	10.	-10.0	-0.170	1.0000
0	9	1	25.021	24.277	24.277	24.2	-24.276	-0.402	1.0000
0	9	3	5.637	5.150	5.150	5.1	-5.150	-0.061	1.0000
0	9	5	5.556	5.469	5.469	5.4	-5.469	-0.083	1.0000
0	9	7	56.654	56.380	56.380	56.3	-56.380	-2.727	1.0000
0	9	9	29.769	28.118	28.118	28.1	-28.118	-2.727	1.0000
1	1	1	7.911	7.593	7.593	7.5	-7.590	-0.170	1.0000
1	1	3	6.703	7.105	7.105	7.1	-7.103	-0.170	1.0000
1	1	5	5.637	5.150	5.150	5.1	-5.150	-0.061	1.0000
1	1	7	4.418	4.418	4.418	4.4	-4.418	-0.487	2.5890
1	1	9	34.898	34.625	34.625	34.6	-34.625	-0.540	-5.7710
1	2	1	41.609	-34.625	-34.625	-34.6	-34.625	-0.201	-2.1731
1	2	3	15.368	-15.067	-15.067	-15.0	-15.067	-0.190	-6.9332
1	2	5	1.90	-6.9332	-6.9332	-6.9	-6.9332	-0.190	1.3910

ANDALUSITE CRINAS GERAIS AT 1000 DEGREES C FD-FC TABLE

STRUCTURE FACTORS

PAGE 2

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	F(X) FACTOR
4	1	1	23.749	23.607	23.606	*135	*143	*6444	1.0000
5	1	1	17.572	17.141	-17.140	*170	*434	2.3311	1.0000
6	1	1	18.797	18.151	-18.149	*293	*646	3.1482	1.0000
7	1	1	5.566	4.940	-4.938	*162	*726	3.8582	1.0000
8	1	1	9.655	9.302	-9.301	*093	*353	2.4703	1.0000
9	1	2	36.594	38.461	-38.461	*173	*133	1.0000	
0	2	2	2.922	2.922	*860	*559	*031	2.062	1.0000
1	2	2	47.301	45.332	45.332	*160	*160	1.969	1.0000
2	2	3	6.850	6.426	-6.425	*080	*080	6.1379	1.0000
3	2	3	7.468	7.217	-7.216	*067	*074	2.7023	1.0000
4	4	0	24.911	26.014	26.010	*150	*112	*4906	1.0000
5	6	6	3.169	2.811	*811	*021	*021	2.267	1.0000
6	7	7	6.649	6.136	*136	*119	*513	6.1480	1.0000
7	8	8	5.686	5.960	-5.959	*095	*274	*1.4489	1.0000
8	0	0	2.491	2.614	*814	*421	*103	*71662	1.0000
9	1	1	32.669	33.694	33.691	*028	*028	1.2648	1.0000
0	2	2	30.479	29.593	-29.593	*093	*093	1.969	1.0000
1	3	3	34.279	34.332	34.330	*060	*060	2.7023	1.0000
2	2	1	22.211	21.223	21.220	*367	*367	*2164	1.0000
3	4	4	20.489	20.282	20.279	*350	*350	*1955	1.0000
4	5	5	32.475	32.187	-32.187	*074	*074	1.1506	1.0000
5	6	6	17.776	18.133	18.131	*200	*200	6.1821	1.0000
6	7	7	7.303	7.683	-7.679	*243	*243	*2787	1.0000
7	8	8	10.083	10.665	10.665	*020	*020	*1.025	1.0000
8	0	0	25.605	27.744	-27.743	*074	*074	-6.7074	1.0000
9	1	1	3.171	3.171	*2356	*032	*032	*286	1.0000
0	2	2	24.684	24.524	-24.523	*176	*176	*380	1.0000
1	3	3	6.996	7.856	-7.855	*016	*016	*360	1.0000
2	4	4	8.909	8.657	-8.656	*071	*071	*416	1.0000
3	5	5	2.176	1.459	-1.459	*023	*023	*253	1.0000
4	6	6	10.365	10.565	-10.564	*161	*161	*1.025	1.0000
5	7	7	31.615	31.238	31.237	*277	*277	*6358	1.0000
6	8	8	44.947	44.870	-44.867	*475	*475	*377	1.0000
7	9	9	18.488	17.842	-17.842	*175	*175	*3.6322	1.0000
8	0	0	40.131	41.338	-41.335	*642	*642	*3261	1.0000
9	1	1	19.580	19.520	19.519	*242	*242	*637	1.0000
0	2	2	24.878	24.240	-24.237	*390	*390	*3560	1.0000
1	3	3	10.323	10.618	-10.617	*135	*135	*2.95	1.0000
2	4	4	19.148	19.823	-19.820	*316	*316	*2.0633	1.0000
3	5	5	23.584	22.449	-22.448	*184	*184	*2.675	1.0000
4	6	6	4.042	3.556	-3.555	*089	*089	*3.3042	1.0000
5	7	7	6.527	7.550	-7.547	*195	*195	*5.1797	1.0000
6	8	8	9.933 *	9.468	-9.466	*643	*643	*4.86	1.0000
7	9	9	15.404	15.185	-15.185	*215	*215	*7.283	1.0000
8	0	0	6.108	6.365	-6.365	*106	*106	*1.3098	1.0000
9	1	1	1.595 *	1.150	-1.161	*161	*161	*1.7501	1.0000
0	2	2	1.188 *	0.554	-0.554	*002	*002	*446	1.0000
1	3	3	21.699	21.775	-21.775	*047	*047	*076	1.0000
2	4	4	24.919	25.059	-25.057	*256	*256	*140	1.0000
3	5	5	16.543	15.619	-15.616	*322	*322	*923	1.0000
4	6	6	18.606	18.767	-18.765	*242	*242	*160	1.0000
5	7	7	14.035	14.066	-14.065	*043	*043	*049	1.0000
6	8	8	15.358	15.605	-15.605	*210	*210	*4455	1.0000
7	9	9						*0000	1.0000
8	0	0						*1.4681	1.0000

ANALOGUE MINES GERAISI AT 1000 DEGREES C FOR C TABLE

STRUCTURE FACTORS

PAGE 3

H	K	L	F(HKL)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR	
1	7	6	-8.333	8.501	-8.497	-8.254	-0.256	-1.1908	1.0000	
1	8	0	22.092	21.723	-21.722	-1.172	-0.369	1.4407	1.0000	
1	8	1	10.833	10.492	10.492	-0.109	-0.341	2.6093	1.0000	
1	8	2	5.333	5.704	-5.704	-0.146	-0.620	4.6872	1.0000	
1	8	3	6.294	6.040	6.039	-0.069	-0.254	1.8830	1.0000	
1	8	4	14.357	14.603	-14.603	-0.150	-0.246	-1.6312	1.0000	
1	8	5	7.830	7.787	7.786	-0.117	-0.049	3.015	1.0000	
1	8	6	2.494	2.055	-2.052	-0.112	-0.636	1.0826	1.0000	
1	9	0	10.132	9.576	9.576	-0.158	-0.560	4.1411	1.0000	
1	9	1	3.957	3.923	-3.923	-0.107	-0.633	1.695	1.0000	
1	9	2	14.294	10.974	-10.974	-0.135	-0.319	2.6030	1.0000	
1	9	3	2.251	1.727	1.725	-0.099	-0.223	1.6219	1.0000	
1	9	4	7.716	7.617	7.616	-0.138	-0.101	7.714	1.0000	
1	9	5	4.821	4.989	-4.988	-0.092	-0.166	-7.866	1.0000	
1	9	6	2.461	2.567	-2.567	-0.083	-0.126	-0.3639	1.0000	
1	10	0	3.303	3.403	-3.403	-0.086	-0.201	7.647	1.0000	
1	10	1	7.443	7.365	7.365	-0.015	-0.076	5.592	1.0000	
1	10	2	4.845	4.689	-4.688	-0.105	-0.356	1.6089	1.0000	
1	10	3	1.251	1.507	-1.507	-0.002	-0.256	-0.3413	1.0000	
1	11	0	3.896	3.412	3.412	-0.202	-0.393	1.5900	1.0000	
1	11	1	6.480	6.388	6.388	-0.157	-0.090	6.477	1.0000	
1	11	2	8.356	7.878	-7.878	-0.016	-0.509	1.6640	1.0000	
1	11	3	6.765	6.440	6.438	-0.149	-0.326	1.6951	1.0000	
1	12	0	4.263	4.114	-4.114	-0.004	-0.126	-0.6102	1.0000	
2	1	21.809	19.954	-19.953	-0.095	-1.616	11.9569	1.0000	*	
2	2	3.522	3.522	-3.522	-0.611	-2.413	-3.6769	1.0000	*	
2	3	6.972	6.565	-6.565	-0.084	-0.367	2.1476	1.0000	*	
2	4	15.682	15.045	-15.045	-0.671	-0.637	3.6538	1.0000	*	
2	5	3.598	3.520	-3.520	-0.050	-0.376	1.2011	1.0000	*	
2	6	3.546	3.663	-3.663	-0.190	-5.3491	1.0000	*		
2	7	3.206	3.112	-3.112	-0.030	-0.683	2.1476	1.0000	*	
2	8	4.891	4.476	-4.476	-0.191	-0.694	-5.477	1.0000	*	
2	9	1.482	1.005	-1.005	-0.023	-0.623	-2.2554	1.0000	*	
2	10	23.530	22.526	-22.526	-0.164	-1.004	2.7660	1.0000	*	
2	11	1.011	1.408	-1.407	-0.071	-0.398	-4.4754	1.0000	*	
2	12	18.777	18.546	-18.545	-0.143	-0.613	-3.9507	1.0000	*	
2	13	1.691	1.092	-1.091	-0.655	-0.598	-5.5000	1.0000	*	
2	14	6.640	6.658	-6.658	-0.106	-0.182	1.1907	1.0000	*	
2	15	73.359	61.338	-61.338	-0.605	-7.676	-16.9015	1.0000	*	
2	16	15.843	16.261	-16.259	-0.261	-6.416	-2.3257	1.0000	*	
2	17	5.064	6.407	-6.406	-0.085	-6.677	4.1033	1.0000	*	
2	18	17.234	16.328	-16.326	-0.241	-4.906	4.2087	1.0000	*	
2	19	4.623	4.9661	-4.9658	-0.534	-6.836	-4.0259	1.0000	*	
2	20	15.612	14.877	-14.876	-0.211	-6.535	-3.0325	1.0000	*	
2	21	1.456	1.159	-1.144	-0.068	-1.677	4.207	2.3243	1.0000	*
2	22	6.698	9.123	-9.121	-0.167	-0.226	-1.6205	1.0000	*	
2	23	18.592	19.053	-19.049	-0.361	-0.461	-2.6495	1.0000	*	
2	24	13.558	12.755	-12.755	-0.130	-0.802	4.0266	1.0000	*	
2	25	2.010	0.076	-0.144	-0.068	-1.643	6.0199	1.0000	*	
2	26	20.580	20.087	-20.086	-0.146	-0.494	2.5039	1.0000	*	
2	27	11.407	10.620	-10.620	-0.073	-0.586	3.6903	1.0000	*	
2	28	11.222	11.324	-11.323	-0.112	-0.102	-0.6774	1.0000	*	
2	29	5.057	5.862	-5.862	-0.021	-1.4157	1.0000	*		

ANDALUSITE CHIRAS GERAISI AT 1000 DEGREES C FO-FC TABLE

STRUCTURE FACTORS

PAGE 34

R	K	L	F(OBS)	F(CALC)	S(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
2	2	3	6	11.356	11.329	11.329	-0.029	-2120
2	2	3	7	8.276	8.421	-8.421	-0.089	1.0000
2	2	3	8	5.161	5.539	-5.539	-0.144	1.0000
2	2	3	9	5.378	5.296	-5.296	-0.073	-1.6060
2	2	4	0	10.877	11.439	-11.439	-0.079	1.0000
2	2	4	1	10.877	11.439	-11.439	-0.091	1.0000
2	2	4	2	8.291	9.263	-9.263	-0.536	-2.1671
2	2	4	3	13.482	13.341	-13.341	-10.546	-5.82550
2	2	4	4	13.482	13.341	-13.341	-10.546	1.0000
2	2	4	5	10.025	11.420	-11.420	-0.057	* * *
2	2	4	6	7.570	7.614	-7.614	-0.071	1.0000
2	2	4	7	39.860	40.555	-40.553	-0.082	1.0000
2	2	4	8	3.956	4.349	-4.349	-0.693	-2.6775
2	2	4	9	4.130	4.538	-4.538	-0.693	-1.0000
2	2	4	10	4.130	4.538	-4.538	-0.693	* * *
2	2	4	11	10.543	9.847	-9.847	-0.258	1.0000
2	2	4	12	6.139	6.339	-6.339	-0.059	-6.154
2	2	4	13	1.532	1.455	-1.455	-0.012	1.0000
2	2	4	14	26.314	26.595	-26.595	-0.223	-2.177
2	2	4	15	9.527	9.441	-9.441	-0.066	1.0000
2	2	4	16	18.945	18.687	-18.686	-0.164	-3.667
2	2	4	17	3.432	3.009	-3.009	-0.023	1.0000
2	2	4	18	3.838	3.839	-3.839	-0.012	-3.7367
2	2	4	19	14.017	13.227	-13.226	-0.196	1.0000
2	2	4	20	32.515	33.001	-33.000	-0.061	-3.0168
2	2	4	21	11.917	11.876	-11.877	-0.176	1.0000
2	2	4	22	26.205	26.291	-26.291	-0.086	-2.698
2	2	4	23	6.821	9.126	-9.126	-1.194	1.0000
2	2	4	24	7.173	7.643	-7.643	-0.491	-2.914
2	2	4	25	5.868	6.003	-6.003	-0.196	-5.2020
2	2	4	26	9.343	9.420	-9.420	-0.064	-6.486
2	2	4	27	2.782	2.808	-2.808	-0.027	-0.426
2	2	4	28	2.977	2.952	-2.952	-0.045	-0.290
2	2	4	29	2.520	2.590	-2.590	-0.064	-0.6976
2	2	4	30	2.022	1.206	-1.206	-0.815	-7.7107
2	2	4	31	2.005	1.870	-1.870	-0.006	-0.000
2	2	4	32	1.161	1.039	-1.039	-0.026	-2.2317
2	2	4	33	6.387	6.562	-6.562	-0.090	-1.8727
2	2	4	34	15.755	15.882	-15.882	-0.078	1.0000
2	2	4	35	15.496	15.503	-15.503	-0.023	-6.6976
2	2	4	36	12.357	12.190	-12.190	-0.006	-7.7107
2	2	4	37	4.617	4.795	-4.795	-0.050	-2.914
2	2	4	38	8.284	8.462	-8.462	-0.135	-2.2390
2	2	4	39	8.847	9.121	-9.121	-0.127	2.2351
2	2	4	40	20.057	19.556	-19.557	-0.406	-0.4334
2	2	4	41	2.811	2.918	-2.918	-0.122	-3.1462
2	2	4	42	2.310	2.321	-2.321	-0.080	-1.3532
2	2	4	43	1.002	1.025	-1.025	-0.175	-1.3027
2	2	4	44	1.925	1.924	-1.924	-0.112	-1.7668
2	2	4	45	13.405	13.487	-13.486	-0.135	-1.6127
2	2	4	46	2.006	2.762	-2.760	-0.004	-1.6150
2	2	4	47	2.3085	2.3022	-2.3022	-0.080	-0.4277
2	2	4	48	6.177	5.717	-5.716	-0.083	-1.2277
2	2	4	49	3.028	2.403	-2.401	-0.082	-1.6315
2	2	4	50	4.866	4.649	-4.649	-0.074	-1.0893
2	2	4	51	16.915	16.976	-16.975	-0.074	-0.5743
2	2	4	52	3.833	3.605	-3.605	-0.045	-0.6162
2	2	4	53	2.916	2.917	-2.917	-0.074	-3.9115
2	2	4	54	2.310	2.320	-2.320	-0.074	-1.9106
2	2	4	55	1.002	1.025	-1.025	-0.175	-1.0000
2	2	4	56	1.925	1.924	-1.924	-0.112	-1.2059
2	2	4	57	13.405	13.487	-13.486	-0.135	-1.6150
2	2	4	58	2.006	2.762	-2.760	-0.004	-1.6000
2	2	4	59	2.3085	2.3022	-2.3022	-0.080	-0.4277
2	2	4	60	6.177	5.717	-5.716	-0.083	-1.2277
2	2	4	61	3.028	2.403	-2.401	-0.082	-1.6315
2	2	4	62	4.866	4.649	-4.649	-0.074	-1.0893
2	2	4	63	16.915	16.976	-16.975	-0.074	-0.5743
2	2	4	64	3.833	3.605	-3.605	-0.045	-0.6162
2	2	4	65	2.916	2.917	-2.917	-0.074	-3.9115
2	2	4	66	2.310	2.320	-2.320	-0.074	-1.9106
2	2	4	67	1.002	1.025	-1.025	-0.175	-1.0000
2	2	4	68	1.925	1.924	-1.924	-0.112	-1.2059
2	2	4	69	13.405	13.487	-13.486	-0.135	-1.6150
2	2	4	70	2.006	2.762	-2.760	-0.004	-1.6000
2	2	4	71	2.3085	2.3022	-2.3022	-0.080	-0.4277
2	2	4	72	6.177	5.717	-5.716	-0.083	-1.2277
2	2	4	73	3.028	2.403	-2.401	-0.082	-1.6315
2	2	4	74	4.866	4.649	-4.649	-0.074	-1.0893
2	2	4	75	16.915	16.976	-16.975	-0.074	-0.5743
2	2	4	76	3.833	3.605	-3.605	-0.045	-0.6162
2	2	4	77	2.916	2.917	-2.917	-0.074	-3.9115
2	2	4	78	2.310	2.320	-2.320	-0.074	-1.9106
2	2	4	79	1.002	1.025	-1.025	-0.175	-1.0000
2	2	4	80	1.925	1.924	-1.924	-0.112	-1.2059
2	2	4	81	13.405	13.487	-13.486	-0.135	-1.6150
2	2	4	82	2.006	2.762	-2.760	-0.004	-1.6000
2	2	4	83	2.3085	2.3022	-2.3022	-0.080	-0.4277
2	2	4	84	6.177	5.717	-5.716	-0.083	-1.2277
2	2	4	85	3.028	2.403	-2.401	-0.082	-1.6315
2	2	4	86	4.866	4.649	-4.649	-0.074	-1.0893
2	2	4	87	16.915	16.976	-16.975	-0.074	-0.5743
2	2	4	88	3.833	3.605	-3.605	-0.045	-0.6162
2	2	4	89	2.916	2.917	-2.917	-0.074	-3.9115
2	2	4	90	2.310	2.320	-2.320	-0.074	-1.9106
2	2	4	91	1.002	1.025	-1.025	-0.175	-1.0000
2	2	4	92	1.925	1.924	-1.924	-0.112	-1.2059
2	2	4	93	13.405	13.487	-13.486	-0.135	-1.6150
2	2	4	94	2.006	2.762	-2.760	-0.004	-1.6000
2	2	4	95	2.3085	2.3022	-2.3022	-0.080	-0.4277
2	2	4	96	6.177	5.717	-5.716	-0.083	-1.2277
2	2	4	97	3.028	2.403	-2.401	-0.082	-1.6315
2	2	4	98	4.866	4.649	-4.649	-0.074	-1.0893
2	2	4	99	16.915	16.976	-16.975	-0.074	-0.5743
2	2	4	100	3.833	3.605	-3.605	-0.045	-0.6162
2	2	4	101	2.916	2.917	-2.917	-0.074	-3.9115
2	2	4	102	2.310	2.320	-2.320	-0.074	-1.9106
2	2	4	103	1.002	1.025	-1.025	-0.175	-1.0000
2	2	4	104	1.925	1.924	-1.924	-0.112	-1.2059
2	2	4	105	13.405	13.487	-13.486	-0.135	-1.6150
2	2	4	106	2.006	2.762	-2.760	-0.004	-1.6000
2	2	4	107	2.3085	2.3022	-2.3022	-0.080	-0.4277
2	2	4	108	6.177	5.717	-5.716	-0.083	-1.2277
2	2	4	109	3.028	2.403	-2.401	-0.082	-1.6315
2	2	4	110	4.866	4.649	-4.649	-0.074	-1.0893
2	2	4	111	16.915	16.976	-16.975	-0.074	-0.5743
2	2	4	112	3.833	3.605	-3.605	-0.045	-0.6162
2	2	4	113	2.916	2.917	-2.917	-0.074	-3.9115
2	2	4	114	2.310	2.320	-2.320	-0.074	-1.9106
2	2	4	115	1.002	1.025	-1.025	-0.175	-1.0000
2	2	4	116	1.925	1.924	-1.924	-0.112	-1.2059
2	2	4	117	13.405	13.487	-13.486	-0.135	-1.6150
2	2	4	118	2.006	2.762	-2.760	-0.004	-1.6000
2	2	4	119	2.3085	2.3022	-2.3022	-0.080	-0.4277
2	2	4	120	6.177	5.717	-5.716	-0.083	-1.2277
2	2	4	121	3.028	2.403	-2.401	-0.082	-1.6315
2	2	4	122	4.866	4.649	-4.649	-0.074	-1.0893
2	2	4	123	16.915	16.976	-16.975	-0.074	-0.5743
2	2	4	124	3.833	3.605	-3.605	-0.045	-0.6162
2	2	4	125	2.916	2.917	-2.917	-0.074	-3.9115
2	2	4	126	2.310	2.320	-2.320	-0.074	-1.9106
2	2	4	127	1.002	1.025	-1.025	-0.175	-1.0000
2	2	4	128	1.925	1.924	-1.924	-0.112	-1.2059
2	2	4	129	13.405	13.487	-13.486	-0.135	-1.6150
2	2	4	130	2.006	2.762	-2.760	-0.004	-1.60

ANDALUSITE (MUNAS GERMANY) AT 1000 DEGREES C FD-FC TABLE

STRUCTURE FACTORS

PAGE 5

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
2	2	2	4.919	4.159	-4.159	-0.066	* 760	3.7387	1.0000
2	2	2	2.281 *	2.311	-2.311	-0.011	-0.050	-0.1191	1.0000
2	2	2	6.442	5.944	-5.943	-0.082	* 498	2.6981	* * *
1	1	2	3.491	3.769	-3.769	-0.021	* 321	2.1598	1.0000
0	0	0	29.523	29.223	-29.222	-0.244	* 300	1.6147	1.0000
0	0	0	13.160	12.355	-12.355	-0.126	* 605	5.3028	1.0000
7	7	7	13.556	13.021	-13.019	-0.206	* 537	3.3997	1.0000
0	0	0	13.742	13.424	-13.423	-0.316	2.650	2.3063	1.0000
4	5	5	4.508	4.216	-4.215	-0.502	* 710	-4.0364	1.0000
2	2	2	2.236	1.016	-1.011	-0.122	* 220	4.2411	1.0000
9	6	6	32.463	32.463	-32.463	-0.013	* 670	3.4535	1.0000
6	6	6	32.620	32.618	-32.618	-0.206	* 650	4.6105	1.0000
3	0	0	30.967	30.964	-30.964	-0.222	* 502	-6.6969	1.0000
6	6	6	3.674	3.297	-3.295	-0.095	* 417	1.7442	1.0000
7	7	7	14.821	14.804	-14.805	-0.323	* 178	1.0763	1.0000
1	1	1	11.721	11.462	-11.460	-0.220	* 260	1.9855	1.0000
2	2	2	6.712	6.629	-6.629	-0.206	* 680	6.0376	1.0000
5	6	6	6.006	6.315	-6.315	-0.076	* 490	3.1665	1.0000
2	1	1	5.952	5.534	-5.534	-0.416	* 416	2.7160	1.0000
4	7	7	1.652 *	1.570 *	-1.570	-0.022	* 066	2.3610	1.0000
2	2	2	2.470	2.954	-2.953	-0.176	-1.484	-6.2791	1.0000
5	5	5	7.890	7.826	-7.825	-0.103	* 069	1.0000	1.0000
6	6	6	6.106	5.540	-5.536	-0.134	* 566	3.6061	1.0000
1	6	6	1.652 *	1.659	-1.659	-0.021	* 006	-1.403	1.0000
6	6	6	6.697	6.068	-6.067	-0.117	* 629	3.3441	1.0000
1	1	5	11.565	10.723	-10.723	-0.069	* 842	5.1690	1.0000
3	5	5	3.603	3.635	-3.634	-0.247	* 064	4.744	1.0000
5	6	6	5.627	5.540	-5.536	-0.056	* 566	3.1665	1.0000
1	6	6	1.652 *	1.659	-1.659	-0.021	* 024	2.7160	1.0000
6	6	6	6.697	6.068	-6.067	-0.117	-1.484	-6.2791	1.0000
7	7	7	7.453	7.203	-7.203	-0.062	* 069	1.0000	1.0000
1	5	5	15.330	14.765	-14.764	-0.208	* 250	1.8540	1.0000
2	5	5	24.764	25.226	-25.224	-0.299	* 266	1.5585	1.0000
1	2	2	12.561	12.516	-12.515	-0.167	* 462	-2.2304	1.0000
2	2	2	2.657	1.757	-1.755	-0.084	* 156	-7.7946	1.0000
2	1	1	21.073	20.886	-20.885	-0.155	* 063	-6.063	1.0000
4	4	4	19.474	18.525	-18.525	-0.119	* 186	3.9066	1.0000
4	4	4	11.472	11.517	-11.517	-0.101	* 945	* 900	1.0000
4	4	4	1.985 *	0.933	-0.930	-0.073	* 052	* 9145	1.0000
5	5	5	14.035	14.051	-14.050	-0.164	* 073	3.8244	1.0000
6	6	6	7.353	7.400	-7.407	-0.090	* 056	1.0000	1.0000
1	2	1	1.201 *	1.963	-1.962	-0.036	* 763	-3.765	1.0000
4	4	4	14.015	13.549	-13.549	-0.163	* 466	-6.6600	1.0000
6	6	6	9.040	8.090	-8.088	-0.151	* 656	2.6200	1.0000
6	6	6	29.839	29.368	-29.367	-0.250	* 656	6.6556	1.0000
1	1	1	11.460	11.423	-11.424	-0.147	* 656	2.1491	1.0000
4	4	4	10.413	10.515	-10.514	-0.143	* 656	-3.765	1.0000
4	4	4	3.426	3.455	-3.453	-0.124	* 656	-6.6600	1.0000
6	6	6	13.349	13.660	-13.659	-0.191	* 656	6.6556	1.0000
7	7	7	7.271	7.614	-7.613	-0.114	* 656	-3.765	1.0000
0	0	0	2.9024	3.0648	-3.0648	-0.042	* 656	-6.6600	1.0000
1	1	1	3.902	2.719	-2.718	-0.057	* 656	-3.765	1.0000
2	2	2	3.256	2.738	-2.737	-0.088	* 656	6.6458	1.0000
6	6	6	6.216	5.741	-5.740	-0.090	* 656	2.5517	1.0000
3	2	2	3.2	3.2	-3.2	-0.3958	* 656	2.9358	1.0000

ANDALUSITE CHLORITE GEMATITE AT 1000 DEGREES C FCF-FC TABLE

STRUCTURE FACTORS PAGE 6

K	L	F(OH)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
6	4	17.447	17.778	-17.776	+0.035	+0.331	+1.9585	1.0000
6	5	1.265 *	+0.034	-0.031	-0.012	1.232	1.6639	1.0000
6	6	1.166 *	1.495	1.497	-0.065	+0.333	+0.3999	1.0000
6	7	4.099	4.373	-4.372	+0.091	+0.273	+1.0145	1.0000
7	0	25.313	25.375	-25.373	+0.091	+0.321	+0.8692	1.0000
7	1	14.525	13.843	-13.840	+0.278	+0.682	+0.2147	1.0000
7	2	2.167	1.997	1.996	+0.031	+0.171	+0.5202	1.0000
7	3	31.061	30.857	-30.854	+0.256	+0.181	+1.3504	1.0000
7	4	18.286	18.162	-18.160	+0.279	+0.126	+1.7091	1.0000
7	5	12.003	11.977	-11.975	+0.234	+0.026	+1.065	1.0000
7	6	2.109 *	1.159	1.159	+0.026	+0.956	+0.0977	1.0000
7	7	6.863	6.851	-6.850	+0.064	+0.012	+0.0395	1.0000
7	8	2.600	1.999	1.998	+0.042	+0.001	+0.0074	1.0000
8	0	3.897	3.691	-3.690	+0.059	+0.006	+0.006	1.0000
8	1	11.167	10.818	-10.817	+0.107	+0.006	+0.006	1.0000
8	2	25.399	25.114	-25.114	+0.064	+0.271	+0.271	1.0000
8	3	9.491	9.399	-9.398	+0.130	+0.102	+0.102	1.0000
8	4	19.849	19.640	-19.639	+0.140	+0.012	+0.012	1.0000
8	5	7.626	7.615	-7.614	+0.214	+0.013	+0.013	1.0000
8	6	16.543	16.519	-16.517	+0.266	+0.076	+0.076	1.0000
8	7	1.109 *	0.935	-0.923	+0.148	+0.176	+0.2197	1.0000
8	8	5.6236	5.6253	-5.6252	+0.111	+0.117	+0.6041	1.0000
9	9	4.229	3.929	-3.928	+0.095	+0.006	+0.006	1.0000
9	10	3.198	3.212	-3.211	+0.060	+0.014	+0.0463	1.0000
9	11	1.6179 *	1.6723	-1.6723	+0.130	+0.130	+0.4915	1.0000
9	12	2.663	1.656	-1.656	+0.064	+0.021	+0.021	1.0000
9	13	12.707	12.671	-12.670	+0.049	+0.004	+0.004	1.0000
9	14	12.031	11.6723	-11.6723	+0.179	+0.179	+0.5415	1.0000
9	15	36.808	35.540	-35.538	+0.310	+0.155	+0.155	1.0000
9	16	69.376	71.176	-71.176	+0.155	+0.155	+1.66410	1.0000
9	17	25.610	24.936	-24.934	+0.276	+0.021	+0.021	1.0000
9	18	25.023	24.249	-24.248	+0.112	+0.004	+0.004	1.0000
9	19	31.961	29.928	-29.928	+0.195	+0.004	+0.004	1.0000
9	20	35.889	34.040	-34.040	+0.013	+0.004	+0.004	1.0000
9	21	10.535	9.762	-9.762	+0.165	+0.155	+1.66410	1.0000
9	22	16.505	15.557	-15.556	+0.108	+0.021	+0.021	1.0000
9	23	16.342	16.053	-16.053	+0.011	+0.011	+0.011	1.0000
9	24	20.806	20.534	-20.534	+0.013	+0.013	+0.013	1.0000
9	25	3.826	4.708	-4.708	+0.020	+0.020	+0.020	1.0000
9	26	2.070	1.264	-1.264	+0.040	+0.040	+0.040	1.0000
9	27	7.524	7.005	-7.005	+0.050	+0.050	+0.050	1.0000
9	28	3.194	9.4505	-9.4505	+0.009	+0.009	+0.009	1.0000
9	29	10.452	9.6505	-9.6505	+0.014	+0.014	+0.014	1.0000
9	30	46.892	46.6668	-46.6668	+0.492	+0.246	+0.1301	1.0000
9	31	5.539	5.366	-5.366	+0.192	+0.152	+0.0902	1.0000
9	32	3.523	3.523	-3.523	+0.046	+0.046	+0.046	1.0000
9	33	3.250	-2.350	+2.350	+0.009	+0.052	+0.2146	1.0000
9	34	23.039	-23.410	+23.407	+0.381	+0.371	+1.7300	1.0000
9	35	1.632	* 0.607	+0.607	+0.013	+0.026	+1.2674	1.0000
9	36	6.393	5.479	-5.479	+0.058	+0.114	+0.7163	1.0000
9	37	2.6115	-25.931	+25.931	+0.174	+0.8003	+1.8000	1.0000

ANDALUSITE (MINAS GERAVIS) AT 1000 DEGREES C FOF-C TABLE

STRUCTURE FACTORS

PAGE 7

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
4	3	2	1.003 *	1.141	1.141	-0.020	-0.139	-0.1935	1.0000 * ***
4	3	3	20.564	19.776	-19.775	-0.204	-0.788	3.2939	1.0000
4	3	4	3.742	3.238	-3.238	-0.051	-0.504	2.5296	1.0000
4	3	5	12.291	12.558	-12.558	-0.102	-0.268	-1.785	1.0000 * ***
4	3	6	1.781 *	1.324	1.324	-0.015	-0.457	0.6530	1.0000 * ***
4	3	7	7.875	8.179	-8.179	-0.175	-0.305	-1.6927	1.0000
4	4	0	6.438	6.465	-6.465	-0.737	-2.627	-10.5642	1.0000
4	4	1	2.157	2.247	-2.247	-0.003	-0.090	-0.2744	1.0000
4	4	2	52.607	55.063	-55.062	-0.307	-2.476	-12.0709	1.0000
4	4	3	2.287	1.766	1.766	-0.002	-0.499	1.6685	1.0000
4	4	4	4.6798	4.7575	-4.7575	-0.777	-3.2166	1.0000	
4	4	5	1.819 *	1.861	-1.861	-0.006	-1.758	3.9460	1.0000 * ***
4	4	6	23.775	24.144	-24.143	-0.234	-0.370	-1.6774	1.0000
4	4	7	1.213 *	1.510	-1.510	-0.005	-0.703	0.6118	1.0000 * ***
4	4	0	21.602	22.462	-22.462	-0.015	-0.640	-0.7648	1.0000
4	4	1	18.737	19.011	-19.011	-0.103	-0.274	-1.1416	1.0000
4	4	2	2.727	2.303	-2.302	-0.068	-0.425	1.6825	1.0000
4	4	3	15.516	15.184	-15.184	-0.134	-0.331	2.1262	1.0000
4	4	4	13.876	13.619	-13.619	-0.013	-0.236	1.6760	1.0000
4	4	5	8.153	8.104	-8.104	-0.050	-0.046	3.809	1.0000
4	4	6	1.290 *	1.642	-1.642	-0.052	-0.448	0.5904	1.0000 * ***
4	4	7	5.914 *	6.099	-6.098	-0.124	-0.165	-0.9325	1.0000
4	4	0	4.486	4.064	-4.059	-0.211	-0.422	0.6305	1.0000
4	4	1	4.523	4.353	-4.353	-0.019	-0.170	1.0949	1.0000
4	4	2	6.036 *	4.257	-4.257	-0.555	-0.462	-1.9519	1.0000
4	4	3	2.051 *	2.200	-2.200	-0.011	-0.149	-0.4111	1.0000
4	4	4	5.223	5.616	-5.615	-0.185	-0.205	1.2405	1.0000
4	4	5	2.705	2.633	-2.633	-0.020	-0.073	0.2175	1.0000
4	4	6	24.290	25.224	-25.223	-0.425	-0.934	-3.9519	1.0000
4	4	7	4.531	4.135	-4.134	-0.055	-0.235	1.3349	1.0000
4	4	0	20.050	21.542	-21.542	-0.260	-0.508	-0.6111	1.0000
4	4	1	2.162	2.743	-2.743	-0.009	-0.743	-0.7445	1.0000
4	4	2	12.222	12.005	-12.003	-0.210	-0.419	1.4249	1.0000
4	4	3	3.690	-3.690	-0.649	-0.326	-0.934	-0.2175	1.0000
4	4	4	15.799	15.797	-15.797	-0.239	-0.668	1.3349	1.0000
4	4	5	1.495 *	0.6442	-0.6442	-0.007	-1.053	1.5605	1.0000
4	4	6	19.887	19.301	-19.300	-0.257	-0.585	2.9099	1.0000
4	4	0	1.214 *	1.012	-1.011	-0.032	-0.622	3.2933	1.0000
4	4	1	14.952	15.300	-15.300	-0.037	-0.349	1.8066	1.0000
4	4	2	1.005 *	1.233	-1.233	-0.017	-1.572	3.3830	1.0000
4	4	3	13.967	14.257	-14.256	-0.227	-0.270	1.7604	1.0000
4	4	4	1.416	1.209	-1.209	-0.004	-1.207	1.7604	1.0000
4	4	5	11.057 *	10.317	-10.317	-0.022	-0.740	5.1425	1.0000
4	4	6	1.223	0.630	-0.626	-0.071	-0.039	0.8815	1.0000
4	4	7	0.670	0.358	-0.358	-0.042	-0.312	2.6617	1.0000
4	4	0	4.167	3.387	-3.386	-0.092	-0.760	3.4169	1.0000
4	4	1	0.054	7.574	-7.574	-0.019	-0.479	3.2640	1.0000
4	4	2	2.904	2.713	-2.713	-0.038	-0.192	5.9828	1.0000
4	4	3	1.900 *	0.113	-0.113	-0.002	-0.717	3.7178	1.0000
4	4	4	6.600	0.415	-0.415	-0.183	-0.183	1.3397	1.0000
4	4	5	1.158 *	0.233	-0.233	-0.004	-0.24	1.2369	1.0000
4	4	6	4.282	4.309	-4.308	-0.045	-0.247	1.1094	1.0000
4	4	7	1.476 *	2.230	-2.228	-0.053	-0.247	3.698	1.0000

ANDALUSITE (MINAS GERAIS) AT 1000 DEGREES C FU-FC TABLE

STRUCTURE FACTORS

PAGE 8

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	FXT. FACTOR
4	11	2	1.182 *	1.628	.014	.553	.6559	1.0000	* * *
5	0	4	25.047	24.870	-24.869	.111	.177	.6502	1.0000
5	0	3	23.375	22.515	-22.515	.144	.060	.5775	1.0000
5	0	5	6.989	6.605	-6.604	.052	.384	.7078	1.0000
5	0	4	9.776	9.464	-9.463	.132	.310	.1721	1.0000
5	1	0	42.258	41.055	-41.053	.314	.204	.5038	1.0000
5	1	1	44.446	44.486	-44.483	.465	.037	.1966	1.0000
5	1	2	19.974	19.689	-19.689	.108	.285	.2106	1.0000
5	1	1	33.986	33.102	-33.099	.433	.683	.9762	1.0000
5	1	1	26.04	25.361	-25.369	.274	.611	.4709	1.0000
5	1	1	29.318	29.103	-29.100	.382	.296	.1006	1.0000
5	1	1	11.526	10.961	-10.960	.084	.566	.9890	1.0000
5	1	1	13.910	13.662	-13.658	.310	.646	.3171	1.0000
5	1	1	17.784	14.567	-14.566	.190	.217	.6551	1.0000
5	1	2	3.124	2.631	-2.631	.003	.493	.8640	1.0000
5	2	2	50.618	52.103	-52.102	.212	.265	.3269	1.0000
5	2	2	5.281	5.153	-5.153	.037	.120	.8215	1.0000
5	2	2	12.138	11.516	-11.517	.165	.615	.3984	1.0000
5	2	2	2.643	2.093	-2.092	.037	.556	.7315	1.0000
5	2	2	22.565	22.665	-22.665	.159	.303	.3450	1.0000
5	3	2	3.593	3.479	-3.479	.058	.114	.3599	1.0000
5	3	2	8.215	7.305	-7.305	.068	.073	.5542	1.0000
5	3	2	17.479	17.031	-17.029	.217	.490	.6416	1.0000
5	3	2	16.550	15.449	-15.446	.322	.104	.0474	1.0000
5	3	2	17.703	17.707	-17.706	.209	.004	.0234	1.0000
5	4	2	5.671	5.764	-5.764	.061	.073	.4764	1.0000
5	4	2	9.303	8.601	-8.599	.178	.702	.2871	1.0000
5	4	2	7.949	7.653	-7.650	.243	.096	.6511	1.0000
5	4	2	9.528	9.667	-9.665	.157	.139	.9655	1.0000
5	4	2	11.982	12.912	-12.912	.131	.931	.4751	1.0000
5	4	2	23.526	23.665	-23.665	.182	.138	.5906	1.0000
5	4	2	14.436	14.819	-14.819	.074	.304	.4453	1.0000
5	4	2	15.773	15.928	-15.927	.133	.155	.9604	1.0000
5	4	2	8.382	8.635	-8.634	.114	.452	.3061	1.0000
5	4	2	13.600	13.609	-13.607	.120	.009	.0567	1.0000
5	4	2	7.532	7.129	-7.128	.056	.403	.5693	1.0000
5	4	2	4.946	4.564	-4.564	.065	.343	.4693	1.0000
5	4	2	8.148	8.019	-8.018	.133	.129	.373	1.0000
5	4	2	6.649	6.595	-6.594	.124	.253	.6660	1.0000
5	4	2	19.460	19.443	-19.442	.218	.017	.0946	1.0000
5	4	2	8.531	8.340	-8.340	.111	.191	.5826	1.0000
5	5	2	7.663	7.522	-7.521	.117	.096	.4620	1.0000
5	5	2	3.517	3.276	-3.274	.111	.241	.5270	1.0000
5	5	2	8.206	8.225	-8.223	.167	.016	.1092	1.0000
5	5	2	8.566	8.264	-8.263	.113	.302	.3138	1.0000
5	5	2	2.677	2.296	-2.294	.096	.301	.4091	1.0000
5	6	2	19.751	20.011	-20.011	.042	.260	.3329	1.0000
5	6	2	5.565	5.365	-5.363	.121	.202	.3276	1.0000
5	6	2	5.554	6.247	-6.247	.098	.692	.0290	1.0000
5	6	2	1.151	.920	-6.919	.649	.230	.2805	1.0000
5	6	2	10.023	9.660	-9.660	.030	.143	.0526	1.0000
5	6	2	17.504	17.339	-17.337	.279	.245	.0000	1.0000
5	7	2	17.629	17.492	-17.492	.259	.0073	.0073	1.0000

ANDALUSITE (MINAS GERAIS) AT 1000 DEGREES C FO-FC TABLES

STRUCTURE FACTORS PAGE 9

ANDALUSITE (MINAS GERAIS) AT 1000 DEGREES C FOFc TABLE

STRUCTURE FACTORS

PAGE 10

H	K	L	F(OFS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA SIGNA	EXT. FACTOR
6	6	0	14.971	14.381	-1.24	0.990	3.6002	1.0000	
6	6	1	2.658	1.086	-1.004	0.058	1.572	5.5639	1.0000
6	5	2	6.024	5.919	-5.916	1.08	1.05	7.269	1.0000
6	5	3	4.110	4.157	-4.157	0.24	0.647	2.245	1.0000
6	6	4	9.808	9.065	-9.864	1.07	0.56	4.594	1.0000
6	5	5	3.483	3.623	-3.622	0.75	1.40	4.848	1.0000
6	5	6	2.649	2.649	-2.649	1.38	0.17	0.437	1.0000
6	6	0	2.720	2.201	-2.198	1.069	4.056	5.000	
6	6	2	9.106	8.539	-8.538	1.10	5.66	3.662	1.0000
6	6	3	9.378	9.119	-9.116	1.37	2.56	2.025	1.0000
6	7	4	18.320	18.641	-18.638	3.62	1.22	6.352	1.0000
6	6	5	6.329	6.653	-6.652	1.31	2.25	1.7637	1.0000
6	6	6	2.224	2.409	-2.409	0.14	1.85	5.020	1.0000
6	7	7	5.991	5.855	-5.855	0.64	1.36	8.756	1.0000
6	7	8	3.052	3.376	-3.377	0.90	3.26	1.535	1.0000
6	7	9	4.962	4.677	-4.676	0.86	2.05	1.4523	1.0000
6	7	10	1.772	1.009	-1.009	0.13	7.69	1.4100	1.0000
6	7	11	3.634	3.577	-3.577	0.26	1.33	1.954	1.0000
6	8	12	17.045	16.912	-16.912	0.82	1.36	6.964	1.0000
6	8	13	10.320	10.155	-10.154	1.04	1.66	1.2202	1.0000
6	8	14	21.310	21.349	-21.347	3.17	3.17	2.133	1.0000
6	8	15	8.757	8.937	-8.936	1.04	1.80	4.100	1.0000
6	9	16	13.121	12.436	-12.437	0.73	0.73	2.970	1.0000
6	9	17	16.229	16.045	-16.044	2.12	1.84	6.556	1.0000
6	9	18	6.363	6.130	-6.130	0.64	2.33	1.5469	1.0000
6	9	19	3.842	4.084	-4.084	1.32	1.32	6.674	1.0000
6	9	20	5.032	4.597	-4.597	0.39	4.39	2.0223	1.0000
6	10	21	16.503	16.612	-16.610	2.64	2.26	1.542	1.0000
6	10	22	4.808	4.754	-4.754	0.61	0.54	2.374	1.0000
6	10	23	1.193	1.175	-1.173	0.70	0.16	0.208	1.0000
6	10	24	12.548	11.833	-11.833	1.36	6.65	3.220	1.0000
6	10	25	8.876	8.422	-8.422	0.94	5.54	1.334	1.0000
6	10	26	8.564	8.425	-8.424	1.37	1.39	9.9269	1.0000
6	10	27	9.947	10.418	-10.418	0.53	4.70	6.581	1.0000
6	10	28	18.564	18.604	-18.603	1.78	0.39	0.2122	1.0000
6	10	29	26.329	25.989	-25.988	2.67	3.40	1.3570	1.0000
6	10	30	12.792	12.630	-12.629	1.69	1.62	5.762	1.0000
6	10	31	6.711	6.686	-6.686	0.48	0.25	1.650	1.0000
6	10	32	12.528	12.309	-12.308	1.67	2.16	1.3779	1.0000
6	10	33	13.398	13.506	-13.506	1.10	7.03	0.002	1.0000
6	10	34	9.572	9.571	-9.571	1.01	9.92	6.6663	1.0000
6	10	35	5.615	1.304	-1.304	0.24	3.11	29.1604	1.0000
6	10	36	6.979	7.960	-7.960	1.29	9.81	7.7171	1.0000
6	10	37	1.774	1.347	-1.347	0.69	4.27	0.002	1.0000
6	10	38	7.293	7.550	-7.550	0.67	2.97	2.0768	1.0000
6	10	39	3.078	2.863	-2.862	0.48	2.16	6.466	1.0000
6	10	40	2.247	1.073	-1.073	0.96	3.73	7.714	1.0000
6	10	41	4.605	4.892	-4.892	3.01	2.87	1.2196	1.0000
6	10	42	17.536	16.779	-16.779	3.38	7.57	3.8587	1.0000
6	10	43	2.333	2.154	-2.154	0.12	1.79	.5166	1.0000
6	10	44	17.631	17.172	-17.169	3.12	4.59	2.6692	1.0000
6	10	45	3.026	3.235	-3.235	2.62	2.62	2.135	1.0000
6	10	46	10.752	11.399	-11.399	2.91	2.91	4.423	1.0000

ANDALUSITE CHIMES GERMANY AT 1000 DEGREES C FO-FC TABLE

STRUCTURE FACTORS

PAGE 11

H	K	L	F(OBS)	F(CALC)	RECALC	S(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
7	3	6	1.236 *	1.121	1.121	.115	.1299	1.0000	* * *
7	4	0	11.072	11.168	-11.168	-.044	-.6402	1.0000	
7	4	1	13.504	13.799	-13.799	-.167	-.195	1.0000	
7	4	2	1.065 *	1.292	-1.292	.014	.1.2380	1.0000	
7	4	3	14.129	14.686	-14.686	.203	.225	1.0000	
7	4	4	6.291	6.893	-6.893	.038	.057	1.0000	
7	4	5	6.161	6.520	-6.520	.026	.0603	1.0000	
7	4	6	1.235 *	1.351	-1.351	.012	.084	1.0023	1.0000
7	5	0	20.173	20.060	20.079	.194	.093	.4660	* * *
7	5	1	24.463	24.417	24.416	.365	.046	.1672	1.0000
7	5	2	4.703	4.495	-4.495	.085	.207	1.1090	1.0000
7	5	3	22.717	23.377	23.374	.346	.660	.3026	1.0000
7	5	4	14.463	14.626	14.625	.169	.143	.6767	1.0000
7	5	5	13.850	13.491	13.488	.293	.292	.6999	1.0000
7	5	6	13.730	-13.729	-13.729	.120	.7110	.0000	
7	6	0	8.794	8.626	8.625	.156	.032	.2446	1.0000
7	6	1	8.833	3.973	3.972	.100	.660	.3504	1.0000
7	6	2	6.385	6.000	5.999	.092	.386	.3377	1.0000
7	6	3	10.309	10.253	-10.252	.157	.056	.4206	1.0000
7	6	4	5.778	6.465	6.463	.125	.687	.3323	1.0000
7	6	5	14.244	13.960	-13.960	.021	.263	.4676	1.0000
7	6	6	17.239	17.462	-17.460	.212	.223	.3653	1.0000
7	6	7	18.586	19.023	-19.022	.253	.437	.3003	1.0000
7	6	8	12.625	13.064	-13.063	.191	.459	.1031	1.0000
7	6	9	10.869	10.503	-10.503	.017	.367	.6241	1.0000
7	6	10	11.959	11.471	11.471	.081	.966	.2536	1.0000
7	7	3	3.723	3.312	3.312	.058	.412	.5443	1.0000
7	7	4	11.050	10.813	10.812	.158	.237	.6256	1.0000
7	7	5	3.574	2.173	2.173	.032	.402	.5476	1.0000
7	7	6	6.937	7.012	7.012	.136	.014	.4376	1.0000
7	7	7	3.325	2.675	-2.675	.097	.572	.6105	1.0000
7	7	8	5.627	5.117	-5.116	.077	.310	.5327	1.0000
7	7	9	50.808	50.796	-50.796	.624	.010	.6416	1.0000
7	8	0	10.134	9.395	9.389	.331	.740	.1076	1.0000
7	8	1	35.679	35.339	35.335	.546	.340	.1695	1.0000
7	8	2	4.976	4.951	4.944	.252	.025	.025	1.0000
7	8	3	9.664	9.543	9.543	.067	.121	.7734	1.0000
7	8	4	13.141	12.960	-12.960	.134	.161	.9757	1.0000
7	8	5	2.696	2.257	-2.256	.080	.439	.3636	1.0000
7	8	6	14.307	14.467	-14.466	.152	.160	.9520	1.0000
7	8	7	6.312	6.054	6.054	.059	.258	.4694	1.0000
7	8	8	4.106	4.261	-4.260	.084	.095	.3488	1.0000
7	8	9	2.647	2.149	-2.149	.061	.496	.1270	1.0000
7	9	0	9.201	8.521	-8.520	.168	.680	.5367	1.0000
7	9	1	7.732	6.630	-6.629	.031	.102	.5625	1.0000
7	9	2	27.114	27.061	-26.998	.13	.13	.4164	1.0000
7	9	3	5.167	5.462	-5.462	.026	.275	.4694	1.0000
7	9	4	6.767	6.775	-6.773	.168	.034	.4544	1.0000
7	9	5	3.107	2.120	-2.119	.028	.967	.2819	1.0000
7	9	6	14.775	-15.006	-15.006	.330	.235	.4002	1.0000
7	9	7	1.467	1.199	-1.199	.060	.260	.2323	1.0000
7	9	8	16.034	16.057	-16.057	.207	.025	.1404	1.0000
7	9	9	3.063	-3.063	-3.063	.015		.3976	1.0000

ANDALUSITE (PINAS GERAIS) AT 1000 DEGREES C FD-FC TABLE

STRUCTURE FACTORS

PAGE 12

H	K	L	F(CS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR	
3	3	3	13.580	13.677	13.676	*167	*0229	1.0000		
3	3	4	1.179 *	1.100	-1.099	-0.053	*076	*0930	1.0000 * * *	
3	3	5	9.472	9.434	9.433	*190	*037	*2561	1.0000	
6	6	0	11.496	11.066	11.064	*198	*424	*8503	1.0000	
4	4	1	1.813 *	2.032	-2.032	*013	*160	*3489	1.0000 * * *	
4	4	2	4.533	4.957	4.957	-0.058	-0.626	-2.0408	1.0000	
4	4	3	2.132 *	2.762	-2.762	*016	*356	*0361	1.0000 * **	
4	4	4	9.466	9.303	9.302	*143	*143	*0169	1.0000	
4	4	5	1.235 *	1.973	-1.973	*006	*262	*2991	1.0000 * * *	
4	4	6	2.772	2.271	-2.271	-0.010	*501	*4561	1.0000	
4	4	7	0.035	3.693	3.693	*022	*6130	1.0000		
2	2	9.19	13.099	13.099	*056	*180	-1.1943	1.0000		
3	3	9.1	3.911	2.693	-2.693	*698	*23463	1.0000		
3	3	10	1.216 *	1.593	-1.593	-0.009	*377	*6339	1.0000 * * *	
2	2	17.6	2.176	1.992	1.992	*038	*184	*3674	1.0000 * * *	
2	2	17.9	2.741	2.806	-2.806	*016	*665	*1854	1.0000	
1	1	2.21	1.221 *	2.230	-2.230	*009	*1610	*1.2738	1.0000 * * *	
1	1	5.0	16.500	1.9571	-1.9570	-0.234	*1672	*54929	1.0000	
2	2	3.15	2.315 *	2.633	-2.633	*016	*320	*7211	1.0000	
2	2	7.53	2.010	-2.010	-0.016	*742	*9369	1.0000		
6	6	5.6	6.056	6.263	-6.263	*084	*221	-1.2299	1.0000	
5	5	8.49	5.637	-5.636	-0.164	*212	*1449	1.0000		
2	2	0.60	2.060 *	3.47	-3.47	-0.005	*212	*4900	1.0000 * * *	
7	7	6.52	7.406	-7.405	-0.117	*046	*2878	*3698	1.0000 * * *	
20	20	5.51	2.183	2.180	*390	-1.632	-3.0797	1.0000		
3	3	6.2	3.62	2.684	-2.684	*005	*698	*2607	1.0000	
3	3	7.69	3.042	3.036	*194	*747	*6825	1.0000		
17	17	6.75	1.7611	1.7610	*179	*064	*3698	1.0000		
11	11	7.17	1.866	1.567	*145	*145	*9545	1.0000		
11	11	7.29	1.567	1.042	*163	*163	1.1804	1.0000		
1	1	1.616	5.194	5.143	*617	*561	*6874	1.0000		
23	23	1.126	2.3126	-2.307	-0.127	*051	*2722	1.0000		
3	3	1.52	3.152 *	2.956	-2.953	-0.167	*181	*6395	1.0000	
2	2	2.38	2.238 *	1.609	-1.606	*116	*196	*6000	1.0000	
4	4	5.56	4.556	5.373	-5.372	-0.108	*825	*6648	1.0000 * * *	
27	27	2.76	2.6135	-2.6134	-0.152	*056	-3.1006	1.0000		
2	2	8.05	2.947	-2.946	-0.071	*152	*956	-2.9532	1.0000	
13	13	1.72	3.289	-3.288	-0.119	*056	*142	-1.4293	1.0000	
4	4	0.26	4.026	-4.026	-0.056	*056	*117	-1.7717	1.0000	
19	19	7.76	1.9634	-1.9634	-0.152	*112	*221	-1.2211	1.0000	
2	2	0.44	2.044 *	1.295	-1.294	*039	*112	*5529	1.0000	
14	14	3.59	1.6277	1.6275	*216	*039	*3683	1.0000		
21	21	9.41	2.1790	2.1786	*308	*037	*4718	1.0000		
9	9	3.17	9.269	9.269	*046	*046	*151	*7001	1.0000	
19	19	7.93	2.0058	-2.0056	-0.073	*046	*3323	1.0000		
1	1	9.70	1.0019	1.0017	*180	*063	*4718	1.0000		
2	2	1.56	2.156 *	1.416	-1.416	*042	*7001	*0000	* * *	
7	7	2.23	6.492	-6.492	-0.042	*042	*730	*0000	* * *	
3	3	7.36	3.139	-3.139	-0.059	*059	*5551	*464	1.0000	
6	6	0.15	6.015	-6.015	-0.059	*059	*4299	*1502	1.0000	
1	1	2.20	1.220	-1.220	-0.059	*059	*0250	*5757	1.0000	

ANDALUSITE IRONIC GEMSTONES AT 1000 DEGREES C FDS-FG TABLE

STRUCTURE FACTORS

PAGE 13

H	K	L	F _{POSS}	F _{FG-CALC}	F _{FG-CALC}	SIGCALC	DELTA F	DELTA SIGMA	EXT. FACTOR
0	5	5	21.461	21.343	21.342	+0.124	+0.116	+0.484	1.0000
0	5	5	20.666	20.851	20.856	+0.350	+0.375	+0.9669	1.0000
0	5	5	1.621	-19.080	-19.077	+0.677	+0.254	+2.2179	1.0000
0	5	5	28.666	-7.893	-7.510	+0.321	+0.472	+2.6357	1.0000
0	5	5	17.520	17.676	17.678	+0.106	+0.892	+2.9753	1.0000
0	4	6	2.325	2.112	2.112	+0.114	+0.253	+0.8787	1.0000
0	4	6	13.281	13.161	13.160	+0.012	+0.213	+0.4695	+0.0000
0	4	6	2.056	2.734	2.734	+0.037	+0.100	+0.657	+0.0000
0	4	6	3.362	3.161	3.161	+0.010	+0.161	+1.2737	+0.0000
0	4	6	6.565	6.677	6.675	+0.176	+0.932	+0.4936	+0.0000
0	4	6	13.943	14.171	14.176	+0.162	+0.234	+1.1503	+0.0000
0	4	6	7.325	7.607	7.606	+0.160	+0.166	+1.6168	+0.0000
0	4	6	11.498	11.716	11.706	+0.346	+0.346	+1.3225	+0.0000
0	4	6	5.709	6.656	6.656	+0.146	+0.966	+4.2576	+0.0000
0	4	6	5.530	5.890	5.890	+0.076	+0.372	+0.2666	+0.0000
0	4	6	3.422	2.869	2.869	+0.031	+0.536	+1.7423	1.0000
0	4	6	4.753	4.151	4.150	+0.056	+0.602	+2.4746	+0.0000
0	4	6	2.254	1.792	1.792	+0.172	+0.014	+1.6000	+0.0000
0	4	6	4.563	4.677	4.677	+0.064	+0.145	+4.6269	+0.0000
0	4	6	2.130	2.561	2.561	+0.323	+0.412	+1.7666	+0.0000
0	4	6	9.376	9.600	9.600	+0.239	+0.222	+2.5211	+0.0000
0	4	6	8.276	8.215	8.215	+0.193	+0.662	+3.922	+0.0000
0	4	6	7.246	7.252	7.250	+0.153	+0.066	+2.6356	+0.0000
0	4	6	15.392	15.627	15.625	+0.216	+0.235	+2.6308	+0.0000
0	4	6	2.036	2.619	2.619	+0.150	+0.171	+1.7416	+0.0000
0	4	6	4.214	4.619	4.619	+0.160	+0.162	+2.6077	+0.0000
0	4	6	0.974	-0.067	-0.068	+0.041	+0.041	+0.0000	+0.0000
0	4	6	6.116	6.463	6.463	+0.150	+0.171	+2.6335	+0.0000
0	4	6	2.261	2.619	2.619	+0.150	+0.171	+1.7416	+0.0000
0	4	6	2.040	2.463	2.463	+0.151	+0.171	+2.6335	+0.0000
0	4	6	5.796	5.102	5.102	+0.038	+0.036	+0.0000	+0.0000
0	4	6	3.564	4.076	4.076	+0.076	+0.076	+0.0000	+0.0000
0	4	6	2.018	2.090	2.090	+0.055	+0.055	+0.0000	+0.0000
0	4	6	3.904	3.468	3.468	+0.055	+0.055	+0.0000	+0.0000
0	4	6	2.683	2.968	2.968	+0.229	+0.282	+0.0000	+0.0000
0	4	6	6.379	5.989	5.989	+0.028	+0.028	+0.0000	+0.0000
0	4	6	7.084	6.052	6.052	+0.165	+0.066	+0.0000	+0.0000
0	4	6	6.636	3.072	3.072	+0.010	+0.493	+0.0000	+0.0000
0	4	6	4.596	4.526	4.526	+0.257	+0.260	+0.0000	+0.0000
0	4	6	6.600	6.479	6.479	+0.129	+0.129	+0.0000	+0.0000
0	4	6	9.730	9.796	9.796	+0.096	+0.096	+0.0000	+0.0000
0	4	6	4.650	4.626	4.626	+0.013	+0.013	+0.4460	+0.0000
0	4	6	1.120	0.986	0.986	+0.034	+0.034	+1.0407	+0.0000
0	4	6	7.265	6.237	6.237	+0.117	+0.049	+2.7954	+0.0000
0	4	6	5.116	5.328	5.328	+0.086	+0.212	+0.8974	+0.0000
0	4	6	15.354	13.670	13.667	+0.280	+0.216	+2.6106	+0.0000
0	4	6	3.281	3.634	3.632	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.693	1.693	+0.034	+0.034	+0.6911	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+2.2324	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+0.6714	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+2.2324	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+2.2324	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+2.2324	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+2.2324	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+2.2324	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+2.2324	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+2.2324	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+2.2324	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+2.2324	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+2.2324	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+2.2324	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+2.2324	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+2.2324	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+2.2324	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280	+0.216	+2.2324	+0.0000
0	4	6	3.281	3.670	3.670	+0.193	+0.079	+0.2335	+0.0000
0	4	6	1.859	1.693	1.693	+0.026	+0.026	+0.0000	+0.0000
0	4	6	1.859	1.657	1.657	+0.160	+0.456	+0.6911	+0.0000
0	4	6	15.354	14.596	14.596	+0.280			

ANDALUSITE (PYMAS GERAIS) AT 1000 DEGREES C FD-FC TABLE

STRUCTURE FACTORS PAGE 14

H	K	L	F(OBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
11	4	0	5.465	5.276	5.276	5.276	0.37	0.189	0.8356

ANDALUSITE (MUS) GERMANY 1000 DEGREES C FOUR-C TABLE

RESULTS OF STRUCTURE FACTOR CALCULATIONS

ALL REFLECTIONS

WEIGHTED R

UNWEIGHTED R

NUMBER

R

RANGES OF F(OBS)

4.922+.36	1.227311+.70	.603	.063
1.199+.86	1.455787+.76	1.39	.029
9.42+.14	1.604237+.19	3.6	.024
1.539+.73	1.772171+.86	2.3	.029
2.461+.29	9.75160+.27	6	.050
7.235+.54	5.30604+.65	2	.117
.00	.00	0	.000
1.0391+.31	3.75351+.75	1	.166

RANGES OF CSIN(THETA)/LAMBDA)**2

0.192+.32	3.621667+.15	.50	.052
1.4742+.61	1.670794+.95	6.5	.089
9.80+.13	6.65583+.97	4.1	.038
1.646+.27	7.16763+.60	16.6	.048
3.92+.13	4.69064+.47	9.6	.020
1.896+.69	5.56467+.90	1.10	.058
3.66+.43	3.52816+.99	8.14	.034
4.55+.05	2.64276+.95	1.13	.041

UNESELECTED REFLECTIONS

WEIGHTED R

UNWEIGHTED R

NUMBER

R

6.929+.22	6.617770+.91	.603	.026
2.60+.26	8.5555+.67	5.08	.031

in

RANGES OF F(OBS)

4.708+.35	1.226463+.24	3.08	.062
1.199+.86	1.435767+.76	1.39	.029
9.42+.14	1.604237+.19	3.6	.024
1.539+.73	1.772171+.86	2.3	.029
5.39+.14	9.75160+.27	6	.026
.00	.00	0	.000
.00	.00	0	.000
.00	.00	0	.000

RANGES OF CSIN(THETA)/LAMBDA)**2

2.413+.32	2.500668+.04	3.7	.031
9.51+.00	1.289769+.93	3.6	.027
9.72+.22	6.95562+.98	6.6	.038
1.644+.98	7.16712+.05	6.1	.049
3.56+.79	4.68924+.63	6	.026
1.864+.43	5.56339+.65	9.7	.058
3.12+.22	3.32534+.67	6.6	.031
4.14+.25	2.54059+.37	8.7	.040

SUM FCAL STANDARD DEV OF UNIT WEIGHT OBS

5.984+.55
4.02

The thermal expansion and the high temperature crystal chemistry
of Al_2SiO_5 polymorphs

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and

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¹⁹
Table 1. Silimanite, andalusite and kyanite: observed and
calculated structure factors at various temperatures.

Reprints 25°c

LOAD MAP - REFINER

CYSER LOADER 1.3-460

03/16/78 16:32:35

PAGE 3

FUA OF THE LOAD 111
LWATL OF THE LOAD 74743

TRANSFER ADDRESS -- REFINER 312

REFINER ERROR SUMMARY

REFINER / CBLK BLANK COUNTS TRUNCATED BY 20700 WORDS

PROGRAM AND BLOCK ASSIGNMENTS.

BLOCK	ADDRESS	LENGTH	FILE	DATE	PROCESS VER	LEVEL	HARDWARE	COMMENTS
REFINE		111	REFINE	05/14/76	RUN F	EB	74 E	646X 1
/A/	10706	1351	REFINE	05/14/76	RUN F	EB	74 E	646X 1
/C/	12263	457	REFINE	05/14/76	RUN F	EB	74 E	646X 1
/D/	12742	3244	REFINE	05/14/76	RUN F	EB	74 E	646X 1
/E/	16205	10	REFINE	05/14/76	RUN F	EB	74 E	646X 1
/F/	16216	174	REFINE	05/14/76	RUN F	EB	74 E	646X 1
/G/	16412	2307	REFINE	05/14/76	RUN F	EB	74 E	646X 1
/H/	20721	354	REFINE	05/14/76	RUN F	EB	74 E	646X 1
/I/	21255	6	REFINE	05/14/76	RUN F	EB	74 E	646X 1
/J/	21253	311	REFINE	05/14/76	RUN F	EB	74 E	646X 1
/K/	21576	5726	REFINE	05/14/76	RUN F	EB	74 E	646X 1
/L/	217522	1147	REFINE	05/14/76	RUN F	EB	74 E	646X 1
/M/	30571	1512	REFINE	05/14/76	RUN F	EB	74 E	646X 1
INPUT	32203	241	REFINE	05/14/76	RUN F	EB	74 E	646X 1
MATRIX	32444	231	REFINE	05/14/76	RUN F	EB	74 E	646X 1
MODIFY	32675	145	REFINE	05/14/76	RUN F	EB	74 E	646X 1
RECALC	33012	152	REFINE	05/14/76	RUN F	EB	74 E	646X 1
RESET	33164	73	REFINE	05/14/76	RUN F	EB	74 E	646X 1
SFACT	33257	476	REFINE	05/14/76	RUN F	EB	74 E	646X 1
SYINV	33755	361	REFINE	05/14/76	RUN F	EB	74 E	646X 1
WEIGHT	34336	12	REFINE	05/14/76	RUN F	EB	74 E	646X 1
ASINCOS	34350	136	SL-RUN2P3	02/19/75	COMPASS 3.	74150		
EXP	34506	55	SL-RUN2P3	02/19/75	COMPASS 3.	74150		
SINCOS	34563	72	SL-RUN2P3	02/19/75	COMPASS 3.	74150		
SORT	34655	44	SL-RUN2P3	02/19/75	COMPASS 3.	74150		
ACGDR	34721	12	SL-RUN2P3	02/19/75	COMPASS 3.	74150		
ENDFILE	34733	57	SL-RUN2P3	02/19/75	COMPASS 3.	74150		
GETBA	35012	17	SL-RUN2P3	02/19/75	COMPASS 3.	74150		
INPUTB	35031	256	SL-RUN2P3	02/19/75	COMPASS 3.	74150		
KRAKER	35307	1052	SL-RUN2P3	02/19/75	COMPASS 3.	74150		
OUTPUTB	36361	244	SL-RUN2P3	02/19/75	COMPASS 3.	74150		
SIO\$	36625	1504	SL-RUN2P3	02/19/75	COMPASS 3.	74150		
INPUTC	40331	121	SL-RUN2P3	03/17/75	COMPASS 3.	74150		
RUDER	40452	1310	SL-RUN2P3	02/19/75	COMPASS 3.	74150		
OUTPUTC	41762	71	SL-RUN2P3	02/19/75	COMPASS 3.	74150		
REFINER	42053	63	SL-RUN2P3	02/19/75	COMPASS 3.	74150		
SYSTEM	42136	112	SL-RUN2P3	03/04/75	COMPASS 3.	74150		
	31463							

KRATKIE (DELAWARE) AT 25 DEGREES C F0-FC TABLE

STRUCTURE FACTORS

PAGE 1

M	K	L	F(CBS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
0	0	1	1.321 *	-0.01	-0.01	-0.01	1.240	1.2152	1.0000
0	0	2	16.720	16.339	-16.338	-16.338	-1.140	-1.140	-1.0000
0	0	3	7.800	7.600	-7.599	-7.599	-0.053	-0.053	1.0000
0	0	4	1.190 *	-0.90	-0.90	-0.90	-0.002	-0.002	1.0000
0	0	5	6.887	6.636	-6.636	-6.636	-0.002	-0.002	1.0000
0	0	6	16.423	15.342	-15.340	-15.340	-0.258	-0.258	1.0000
0	0	7	7.076	6.442	-6.442	-6.442	-0.011	-0.011	1.0000
0	0	8	19.776	18.017	-18.016	-18.016	-0.324	-0.324	1.0000
0	0	9	3.828	4.422	-4.422	-4.422	-0.041	-0.041	1.0000
0	0	10	10.719	11.179	-11.174	-11.174	-0.343	-0.343	1.0000
0	0	11	24.011	26.010	-26.008	-26.008	-0.348	-0.348	1.0000
0	0	12	19.093	19.995	-19.995	-19.995	-0.116	-0.116	1.0000
0	0	13	16.639	17.543	-17.543	-17.543	-0.108	-0.108	1.0000
0	0	14	6.601	6.533	-6.533	-6.533	-0.056	-0.056	1.0000
0	0	15	18.299	19.511	-19.511	-19.511	-0.131	-0.131	1.0000
0	0	16	5.082	-1.11	-1.11	-1.11	-0.008	-0.008	1.0000
0	0	17	1.302	*	-0.125	-0.125	-0.009	-0.009	1.0000
0	0	18	27.074	25.853	-25.853	-25.853	-0.095	-0.095	1.0000
0	0	19	59.978	60.431	-60.429	-60.429	-0.496	-0.496	1.0000
0	0	20	22.076	20.055	-20.055	-20.055	-0.039	-0.039	1.0000
0	0	21	4.378	4.113	-4.113	-4.113	-0.024	-0.024	1.0000
0	0	22	35.601	34.621	-34.620	-34.620	-0.005	-0.005	1.0000
0	0	23	18.748	17.421	-17.418	-17.418	-0.303	-0.303	1.0000
0	0	24	24.049	22.802	-22.801	-22.801	-0.262	-0.262	1.0000
0	0	25	6.435	7.676	-7.675	-7.675	-0.148	-0.148	1.0000
0	0	26	10.569	9.113	-9.113	-9.113	-0.190	-0.190	1.0000
0	0	27	2.143	*	-0.658	-0.658	-0.063	-0.063	1.0000
0	0	28	3.356	3.314	-3.313	-3.313	-0.033	-0.033	1.0000
0	0	29	11.647	11.936	-11.935	-11.935	-0.136	-0.136	1.0000
0	0	30	7.607	7.807	-7.807	-7.807	-0.048	-0.048	1.0000
0	0	31	30.984	40.755	-40.755	-40.755	-0.324	-0.324	1.0000
0	0	32	28.337	24.814	-24.810	-24.810	-0.621	-0.621	1.0000
0	0	33	4.6023	5.0117	-5.0117	-5.0117	-0.306	-0.306	1.0000
0	0	34	19.517	19.760	-19.760	-19.760	-0.107	-0.107	1.0000
0	0	35	32.777	32.924	-32.923	-32.923	-0.232	-0.232	1.0000
0	0	36	13.875	13.184	-0.96	-0.96	-0.096	-0.096	1.0000
0	0	37	6.754	6.553	-6.553	-6.553	-0.061	-0.061	1.0000
0	0	38	20.027	19.297	-19.296	-19.296	-0.131	-0.131	1.0000
0	0	39	11.649	11.527	-11.526	-11.526	-0.120	-0.120	1.0000
0	0	40	3.799	3.621	-3.620	-3.620	-0.068	-0.068	1.0000
0	0	41	25.868	23.799	-23.798	-23.798	-0.404	-0.404	1.0000
0	0	42	7.884	7.906	-7.905	-7.905	-0.427	-0.427	1.0000
0	0	43	20.410	22.630	-22.298	-22.298	-0.662	-0.662	1.0000
0	0	44	2.273	2.220	-2.219	-2.219	-0.215	-0.215	1.0000
0	0	45	3.655	4.100	-4.100	-4.100	-0.037	-0.037	1.0000
0	0	46	23.763	25.747	-25.746	-25.746	-0.282	-0.282	1.0000
0	0	47	10.561	11.140	-11.140	-11.140	-0.157	-0.157	1.0000
0	0	48	1.136	1.136	-1.136	-1.136	-0.004	-0.004	1.0000
0	0	49	3.446	3.553	-3.553	-3.553	-0.027	-0.027	1.0000
0	0	50	36.544	36.505	-36.503	-36.503	-0.364	-0.364	1.0000
0	0	51	60.598	61.929	-61.927	-61.927	-0.534	-0.534	1.0000
0	0	52	23.024	24.988	-24.985	-24.985	-0.074	-0.074	1.0000
0	0	53	2.055	*	*	*	*	*	*

KARAYKE (DELAWARE) AT 25 DEGREES C FO-FC RATE

PAGE 2

H	K	L	F(GS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	STRUCTURE FACTORS	PAGE	
0	0	3	23.476	22.668	-22.666	-0.114	*0.06	3.03374	1.0000	*	
0	0	4	27.633	27.915	27.914	0.259	*0.062	-1.0464	1.0000	*	
0	0	5	2.104	0.212	*0.196	-0.064	1.093	5.06772	1.0000	*	
0	0	6	13.581	13.070	13.069	*0.186	*0.211	3.0010	1.0000	*	
0	0	7	1.157	*0.883	*0.883	*0.03	*0.274	*0.3317	1.0000	*	
0	0	8	-7	1.337	*1.256	1.256	*0.063	*0.081	*1.221	1.0000	*
0	0	9	-6	19.748	21.161	21.159	*0.324	-7.0413	-7.02769	1.0000	*
0	0	10	-5	1.669	*1.08	-1.123	-0.142	1.052	3.07925	1.0000	*
0	0	11	-4	61.359	70.076	70.076	*0.206	*0.717	-3.01034	1.0000	*
0	0	12	-3	6.186	6.271	-6.271	*0.084	*0.083	*0.083	1.0000	*
0	0	13	-2	37.073	39.282	39.280	*0.391	*2.026	-10.04919	1.0000	*
0	0	14	-1	2.229	1.622	-1.620	*0.085	*0.074	3.0527	1.0000	*
0	0	15	0	23.525	23.392	-23.391	*0.196	*1.23	*0.6563	1.0000	*
0	0	16	1	11.161	11.337	11.337	*0.096	*1.76	-1.2732	1.0000	*
0	0	17	2	4.179	3.031	-3.031	*0.07	*0.07	*0.07	1.0000	*
0	0	18	3	9.754	9.325	-9.325	*0.083	*0.083	*0.083	1.0000	*
0	0	19	4	5.129	4.612	4.612	*0.143	*0.429	3.05603	1.0000	*
0	0	20	5	12.434	12.195	-12.194	*0.146	*0.147	2.01535	1.0000	*
0	0	21	6	6.5303	6.3026	-6.3022	*0.071	*0.239	2.0245	1.0000	*
0	0	22	7	31.456	31.130	-31.130	*0.06	*0.276	6.09796	1.0000	*
0	0	23	8	9.618	10.469	10.469	*0.108	*0.046	4.0701	1.0000	*
0	0	24	9	38.226	41.775	-17.775	*0.356	*1.377	-6.04100	1.0000	*
0	0	25	10	25.019	26.263	-26.263	*0.027	*0.159	-6.0307	1.0000	*
0	0	11	11	51.130	53.205	-53.203	*0.06	*0.590	*0.570	1.0000	*
0	0	12	12	50.175	51.748	-51.748	*0.06	*0.512	*0.512	1.0000	*
0	0	13	13	1.012	1.013	-1.013	*0.06	*0.06	*0.06	1.0000	*
0	0	14	14	11.812	11.655	-11.655	*0.061	*0.157	*0.091	1.0000	*
0	0	15	15	3.703	19.663	-19.663	*0.074	*0.074	*0.1256	1.0000	*
0	0	16	16	25.675	25.291	-25.291	*0.034	*0.034	*0.1428	1.0000	*
0	0	17	17	1.205	*0.934	-0.934	*0.01	*0.01	*0.1428	1.0000	*
0	0	18	18	11.467	11.045	-11.043	*0.054	*0.054	*0.1428	1.0000	*
0	0	19	19	3.703	19.733	-19.733	*0.083	*0.083	*0.1428	1.0000	*
0	0	20	20	2.577	1.695	-1.695	*0.204	*0.204	*0.1428	1.0000	*
0	0	21	21	5.075	5.254	-5.254	*0.267	*0.267	*0.1428	1.0000	*
0	0	22	22	8.478	8.789	-8.789	*0.250	*0.311	*0.4108	1.0000	*
0	0	23	23	14.460	16.222	-16.222	*0.250	*0.311	*0.4108	1.0000	*
0	0	24	24	4.171	3.641	-3.641	*0.246	*0.246	*0.422	1.0000	*
0	0	25	25	9.220	9.018	-9.018	*0.124	*0.124	*0.422	1.0000	*
0	0	26	26	11.502	12.055	-12.055	*0.194	*0.194	*0.422	1.0000	*
0	0	27	27	11.064	12.150	-12.055	*0.127	*0.127	*0.422	1.0000	*
0	0	28	28	20.469	20.472	-20.472	*0.081	*0.081	*0.422	1.0000	*
0	0	29	29	5.343	2.043	-2.043	*0.306	*0.306	*0.4159	1.0000	*
0	0	30	30	15.255	15.004	-15.004	*0.089	*0.089	*0.4159	1.0000	*
0	0	31	31	7.511	7.398	-7.398	*0.164	*0.164	*0.4159	1.0000	*
0	0	32	32	13.362	12.719	-12.719	*0.419	*0.419	*0.4159	1.0000	*
0	0	33	33	8.334	8.196	-8.196	*0.107	*0.107	*0.4093	1.0000	*
0	0	34	34	5.067	5.938	-5.938	*0.156	*0.156	*0.4093	1.0000	*
0	0	35	35	9.116	7.553	-7.553	*0.031	*0.031	*0.4093	1.0000	*
0	0	36	36	3.074	2.836	-2.836	*0.084	*0.084	*0.4093	1.0000	*

KYANITE (DELAWARE) AT 25 DEGREES C FD-FC TABLE

STRUCTURE FACTORS PAGE 3

H	K	L	F(OH)	F(CALC)	F(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	FXT. FACTOR
0	7	-2	35.767	37.627	37.622	.560	-1.839	-6.6074	1.0000
0	7	-3	13.736	13.642	13.840	.216	-1.106	-7.7723	1.0000
0	7	0	7.174	7.238	7.235	.173	-0.064	-5.5289	1.0000
0	7	1	16.352	15.970	15.967	.205	-0.382	2.5346	1.0000
0	7	2	19.704	19.521	19.521	.293	-0.180	1.0281	1.0000
0	7	3	4.466	4.459	4.468	.046	-0.033	-1.1715	1.0000
0	7	4	8.705	8.647	8.546	.168	-1.156	1.1730	1.0000
0	7	5	9.217	8.692	8.690	.180	-0.525	3.6792	1.0000
0	7	6	23.460	22.635	22.029	-2.226	-0.528	0.624	1.0000
0	7	7	1.646	1.620	1.620	-1.205	-0.069	1.0246	1.0000
0	7	8	7.797	6.281	6.281	.076	-1.174	3.1340	1.0000
0	8	-2	5.456	6.339	6.339	-0.034	-1.783	-4.3474	1.0000
0	8	-3	9.185	9.503	9.503	.122	-0.345	-3.2764	1.0000
0	8	-2	13.91	13.993	13.992	.202	-0.602	-6.2557	1.0000
0	8	-1	10.664	10.807	10.806	-1.082	-0.143	-1.1641	1.0000
0	8	0	36.515	37.551	37.551	-3.7649	-1.036	-3.5016	1.0000
0	8	1	12.261	12.350	12.350	-1.2500	-0.045	-2.4057	1.0000
0	8	2	31.243	31.472	31.472	-0.076	-0.076	-7.244	1.0000
0	8	3	19.242	19.159	19.159	-1.912	-0.042	-4.632	1.0000
0	8	4	25.610	25.104	25.104	-2.5102	-0.377	2.4416	1.0000
0	8	5	2.158	* *	-2.433	-0.079	-0.276	-5.5774	1.0000
0	9	5	5.530	6.410	6.410	-0.156	-0.830	-4.2340	1.0000
0	9	6	15.172	16.434	16.434	-1.6762	-0.193	-10.2502	1.0000
0	9	7	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	8	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	9	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	0	12.017	16.424	16.424	-1.6424	-0.196	-6.672	1.0000
0	9	1	15.172	16.743	16.743	-1.6742	-0.195	-10.2502	1.0000
0	9	2	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	3	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	4	5.530	6.410	6.410	-0.156	-0.830	-4.2340	1.0000
0	9	5	15.172	16.434	16.434	-1.6762	-0.193	-10.2502	1.0000
0	9	6	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	7	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	8	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	9	12.017	16.424	16.424	-1.6424	-0.196	-6.672	1.0000
0	9	0	15.172	16.743	16.743	-1.6742	-0.195	-10.2502	1.0000
0	9	1	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	2	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	3	5.530	6.410	6.410	-0.156	-0.830	-4.2340	1.0000
0	9	4	15.172	16.434	16.434	-1.6762	-0.193	-10.2502	1.0000
0	9	5	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	6	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	7	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	8	12.017	16.424	16.424	-1.6424	-0.196	-6.672	1.0000
0	9	9	15.172	16.743	16.743	-1.6742	-0.195	-10.2502	1.0000
0	9	0	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	1	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	2	5.530	6.410	6.410	-0.156	-0.830	-4.2340	1.0000
0	9	3	15.172	16.434	16.434	-1.6762	-0.193	-10.2502	1.0000
0	9	4	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	5	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	6	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	7	12.017	16.424	16.424	-1.6424	-0.196	-6.672	1.0000
0	9	8	15.172	16.743	16.743	-1.6742	-0.195	-10.2502	1.0000
0	9	9	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	0	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	1	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	2	5.530	6.410	6.410	-0.156	-0.830	-4.2340	1.0000
0	9	3	15.172	16.434	16.434	-1.6762	-0.193	-10.2502	1.0000
0	9	4	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	5	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	6	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	7	12.017	16.424	16.424	-1.6424	-0.196	-6.672	1.0000
0	9	8	15.172	16.743	16.743	-1.6742	-0.195	-10.2502	1.0000
0	9	9	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	0	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	1	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	2	5.530	6.410	6.410	-0.156	-0.830	-4.2340	1.0000
0	9	3	15.172	16.434	16.434	-1.6762	-0.193	-10.2502	1.0000
0	9	4	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	5	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	6	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	7	12.017	16.424	16.424	-1.6424	-0.196	-6.672	1.0000
0	9	8	15.172	16.743	16.743	-1.6742	-0.195	-10.2502	1.0000
0	9	9	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	0	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	1	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	2	5.530	6.410	6.410	-0.156	-0.830	-4.2340	1.0000
0	9	3	15.172	16.434	16.434	-1.6762	-0.193	-10.2502	1.0000
0	9	4	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	5	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	6	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	7	12.017	16.424	16.424	-1.6424	-0.196	-6.672	1.0000
0	9	8	15.172	16.743	16.743	-1.6742	-0.195	-10.2502	1.0000
0	9	9	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	0	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	1	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	2	5.530	6.410	6.410	-0.156	-0.830	-4.2340	1.0000
0	9	3	15.172	16.434	16.434	-1.6762	-0.193	-10.2502	1.0000
0	9	4	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	5	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	6	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	7	12.017	16.424	16.424	-1.6424	-0.196	-6.672	1.0000
0	9	8	15.172	16.743	16.743	-1.6742	-0.195	-10.2502	1.0000
0	9	9	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	0	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	1	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	2	5.530	6.410	6.410	-0.156	-0.830	-4.2340	1.0000
0	9	3	15.172	16.434	16.434	-1.6762	-0.193	-10.2502	1.0000
0	9	4	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	5	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	6	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	7	12.017	16.424	16.424	-1.6424	-0.196	-6.672	1.0000
0	9	8	15.172	16.743	16.743	-1.6742	-0.195	-10.2502	1.0000
0	9	9	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	0	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	1	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	2	5.530	6.410	6.410	-0.156	-0.830	-4.2340	1.0000
0	9	3	15.172	16.434	16.434	-1.6762	-0.193	-10.2502	1.0000
0	9	4	21.862	23.412	23.412	-23.409	-0.583	-7.9265	1.0000
0	9	5	3.138	3.639	3.639	-1.2438	-0.691	-8.263	1.0000
0	9	6	26.985	27.915	27.915	-1.913	-0.349	-9.930	1.0000
0	9	7	12.017	16.424	16.424	-1.6424			

Kyanite (Delaware) at 25 Degrees C FUL-FC Table

Structure Factors

Page 4

H	K	L	F(COR)	F(CALC)	A(FCALC)	B(FCALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
1	-10	0	9.902	9.697	-114	-204	1.5058	1.0000	
1	-10	2	10.539	10.637	-163	-169	-0.09	-0.09	
1	-10	4	13.946	11.520	-520	-520	-0.014	-0.24	
1	-10	6	14.832	13.992	-15.991	-15.991	-0.176	-0.640	
1	-10	8	8.197	7.067	-7.066	-7.066	-0.060	-0.6081	1.0000
1	-9	-5	3.133	3.484	-3.483	-3.483	-0.059	-0.352	1.0000
1	-9	-6	17.209	17.323	-17.322	-17.322	-0.207	-0.118	1.0000
1	-9	-8	21.209	21.513	-21.511	-21.511	-0.273	-0.304	1.0000
1	-9	-10	21.204	21.763	-21.763	-21.763	-0.110	-1.081	1.0000
1	-9	-12	30.629	29.604	-29.602	-29.602	-0.361	-1.021	1.0000
1	-9	-14	16.436	15.854	-15.853	-15.853	-0.371	-0.283	1.0000
1	-9	-16	1.093	1.253	-1.253	-1.253	-1.176	-1.100	1.0000
2	-9	-18	21.433	21.706	-21.706	-21.706	-0.401	-0.304	1.0000
2	-9	-20	7.029	6.581	-6.581	-6.581	-0.001	-0.562	1.0000
1	-7	-1	13.714	14.691	-14.691	-14.691	-0.012	-0.840	1.0000
1	-7	-3	1.270	1.260	-1.260	-1.260	-0.009	-0.450	1.0000
1	-7	-5	8.961	9.353	-9.353	-9.353	-0.110	-0.392	1.0000
1	-7	-7	27.566	27.916	-27.911	-27.911	-0.413	-0.347	1.0000
1	-7	-9	9.064	9.063	-9.063	-9.063	-0.166	-0.177	1.0000
1	-7	-11	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-13	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-15	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-17	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-19	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-21	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-23	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-25	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-27	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-29	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-31	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-33	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-35	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-37	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-39	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-41	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-43	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-45	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-47	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-49	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-51	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-53	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-55	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-57	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-59	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-61	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-63	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-65	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-67	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-69	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-71	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-73	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-75	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-77	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-79	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-81	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-83	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-85	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-87	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-89	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-91	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-93	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-95	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-97	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-99	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-101	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-103	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-105	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-107	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-109	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-111	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-113	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-115	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-117	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-119	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-121	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-123	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-125	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-127	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-129	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-131	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-133	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-135	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-137	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-139	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-141	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-143	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-145	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-147	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-149	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-151	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-153	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-155	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-157	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-159	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-161	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-163	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-165	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-167	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-169	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-171	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-173	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-175	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-177	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-179	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-181	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-183	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-185	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-187	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-189	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-191	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7	-193	9.262	9.064	-9.063	-9.063	-0.163	-0.4134	1.0000
1	-7	-195	7.894	7.601	-7.598	-7.598	-0.167	-0.177	1.0000
1	-7	-197	13.278	12.893	-12.892	-12.892	-0.177	-0.269	1.0000
1	-7	-199	1.021	1.356	-1.356	-1.356	-0.314	-0.635	1.0000
1	-7</td								

KYANITE (DELAWARE) AT 25 DEGREES C FUSION TABLE

KYANITE (DELAWARE) AT 25 DEGREES C FO-FC TABLE

STRUCTURE FACTORS PAGE 6

H	K	L	F(OBS)	F(CALC)	A(CALC)	S(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR
1	-2	-4	16.148	16.731	16.731	1.162	-0.584	-3.8305	1.0000
1	-2	-3	27.785	26.857	26.856	1.241	-1.074	-5.0891	1.0000
1	-2	-2	34.117	29.267	29.267	1.537	-4.650	27.2266	1.0000
1	-2	-1	44.736	44.884	44.883	1.208	-1.146	-0.9903	1.0000
0	-2	0	26.629	20.470	20.477	1.110	-1.151	0.6194	1.0000
1	-2	1	29.186	28.935	28.935	1.187	-1.261	1.5234	1.0000
2	-2	2	9.528	8.426	8.426	1.010	-1.102	6.4118	1.0000
2	-2	3	2.219	1.221	1.221	0.065	-1.559	5.6175	1.0000
2	-2	4	23.191	22.172	22.171	1.220	-1.618	3.9565	1.0000
2	-2	5	14.735	13.683	13.683	1.258	-1.653	6.9662	1.0000
1	-2	6	12.587	11.727	11.725	1.226	-1.900	6.8957	1.0000
6	-2	7	6.276	5.659	5.659	1.167	-1.614	3.5698	1.0000
6	-2	8	4.812	3.810	3.803	1.233	-1.559	4.2213	1.0000
6	-2	9	1.849	* 1.986	-1.985	0.057	-1.137	-1.2660	1.0000
13	-2	11	13.231	14.202	14.202	0.001	-1.672	-6.9819	1.0000
3	-3	12	34.291	36.953	36.950	1.512	-2.662	-0.8565	1.0000
14	-3	13	14.432	15.528	15.528	0.048	-1.297	3.5698	1.0000
9	-3	14	9.160	9.249	9.249	0.071	-1.002	4.6213	1.0000
9	-3	15	* 9.45	* 1.172	-1.172	0.008	-1.260	3.9565	1.0000
23	-3	16	23.195	23.880	23.879	0.198	-1.696	4.6629	1.0000
27	-3	17	27.005	26.104	26.104	0.096	-1.616	-3.357	1.0000
8	-3	18	6.639	8.078	8.078	0.004	-1.227	-6.9819	1.0000
11	-3	19	11.747	10.939	10.939	0.059	-1.696	-3.277	1.0000
15	-3	20	15.9642	16.615	16.613	0.071	-1.227	6.6158	1.0000
31	-3	21	31.035	29.613	29.611	0.071	-1.627	5.8006	1.0000
11	-4	22	11.617	11.207	11.207	0.052	-1.231	1.4527	1.0000
29	-4	23	29.672	26.183	26.183	0.052	-1.646	1.4527	1.0000
16	-4	24	16.884	16.139	16.139	0.043	-1.646	5.4629	1.0000
6	-4	25	6.134	5.619	5.618	0.006	-1.713	6.4629	1.0000
2	-4	26	2.886	2.886	2.886	0.078	-1.163	1.2593	1.0000
2	-4	27	2.632	3.801	3.801	0.026	-1.163	3.8016	1.0000
5	-4	28	5.004	5.136	5.137	0.096	-1.613	-7.349	1.0000
6	-4	29	6.290	6.604	6.603	0.103	-1.323	-2.4048	1.0000
3	-5	30	* 8.98	* 2.89	-2.89	0.008	-0.603	0.9500	* * *
12	-5	31	12.9004	14.1783	-14.1783	-0.035	-1.277	-5.8109	1.0000
1	-5	32	1.915	*	1.6465	0.009	-0.026	1.43123	1.0000
16	-5	33	16.051	16.746	16.747	0.162	-0.697	-3.3684	1.0000
3	-5	34	3.144	3.556	3.556	0.003	-0.323	-2.4048	1.0000
6	-5	35	6.741	6.187	6.187	0.016	-0.554	0.9500	* * *
4	-5	36	4.700	4.260	4.260	0.000	-0.420	9.9969	1.0000
33	-6	37	3.718	3.611	-3.609	-0.308	-1.07	-6.118	1.0000
9	-6	38	9.864	9.357	9.357	0.026	-0.507	3.1198	1.0000
42	-6	39	42.695	42.336	42.336	0.009	-0.359	1.5059	1.0000
14	-6	40	14.618	13.795	13.792	0.191	-0.264	6.0213	1.0000
41	-6	41	41.532	41.531	41.531	0.161	-0.265	7.5266	1.0000
12	-6	42	12.380	-12.164	-12.164	-0.215	-0.215	1.7819	1.0000
11	-6	43	11.614	11.630	11.626	-0.296	-0.261	7.2560	1.0000
21	-7	44	21.726	-11.724	-11.724	-0.170	-0.370	-2.7751	1.0000
2	-7	45	2.096	-2.079	-2.079	-0.006	-0.020	-0.5506	1.0000
5	-6	46	5.624	-6.056	-6.056	-0.057	-0.462	-3.0231	1.0000
2	-5	47	2.013	* 6.919	* 6.919	-0.008	-0.244	-4.5835	1.0000
10	-6	48	10.681	-0.681	-0.681	-0.062	-0.595	-4.0095	1.0000
8	-6	49	8.729	-8.729	-8.729	-0.074	-0.219	-1.5131	1.0000

KINETICS (DELAWARE) AT 25 DEGREES C FO-FC TABLE

STRUCTURE FACTORS

PAGE 7

R	I	F(OAS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA SIGMA	EXT. FACTOR
1	1	-2	45.565	48.694	48.492	-2.029	-1.60139	1.00000
1	1	-1	30.622	30.645	-10.445	-0.086	-0.023	1.00000
1	1	0	18.326	15.486	15.465	0.300	2.0643	15.06636
1	1	1	58.414	57.876	57.875	0.368	0.535	3.07393
1	2	2	36.668	36.651	36.650	0.371	0.017	*C917
1	3	3	51.716	51.140	-53.158	-0.384	0.577	2.07689
1	4	4	13.422	12.645	12.642	0.340	0.265	32.653
1	5	5	20.821	21.669	-21.667	-0.649	0.362	2.0717
1	6	6	1.034	1.765	-1.762	-0.672	0.265	*3914
1	7	7	12.632	12.642	12.621	0.194	0.406	3.0656
1	8	8	2.076	1.655	1.655	0.004	0.424	0.6925
1	9	9	20.934	21.669	-21.667	-0.629	0.352	2.0717
1	10	10	12.494	12.695	12.662	0.583	0.203	1.06086
1	11	11	27.667	28.715	28.714	0.512	0.164	1.00000
1	12	12	7.272	7.446	7.446	0.046	0.274	1.00000
1	13	13	22.917	23.971	-23.971	-0.200	0.305	1.00000
1	14	14	10.291	10.395	-10.395	-1.020	0.304	1.00000
1	15	15	4.621	4.574	4.574	0.000	0.000	1.00000
1	16	16	28.746	28.974	28.973	0.176	0.218	1.00000
1	17	17	16.591	17.059	17.059	0.163	0.496	1.00000
1	18	18	5.040	5.617	-5.617	-0.200	0.305	1.00000
1	19	19	36.991	38.595	38.595	0.131	0.774	1.00000
1	20	20	4.811	4.811	-4.811	-0.649	0.396	1.00000
1	21	21	26.342	27.052	-27.052	-0.509	0.236	1.00000
1	22	22	3.042	3.042	-3.042	-0.618	0.279	1.00000
1	23	23	3.042	3.042	-3.042	-0.618	0.279	1.00000
1	24	24	2.072	2.062	-2.062	-0.046	0.096	1.00000
1	25	25	3.292	3.617	-3.617	-0.616	0.461	1.00000
1	26	26	1.095	1.034	-1.034	-0.016	0.135	1.00000
1	27	27	1.718	1.718	-1.718	-0.979	0.979	1.00000
1	28	28	2.440	2.407	-2.407	-0.205	0.258	1.00000
1	29	29	36.710	39.276	-39.276	-3.958	-2.566	-1.03483
1	30	30	35.357	37.015	-37.015	-3.313	-3.056	-1.75802
1	31	31	4.701	3.834	-3.834	-0.033	0.667	6.04432
1	32	32	3.263	3.608	-3.608	-0.046	0.365	-1.0511
1	33	33	45.966	46.112	-46.111	-0.367	-0.146	-0.2745
1	34	34	10.277	10.738	-10.737	-0.153	-0.661	-0.2566
1	35	35	10.275	10.360	-10.359	-0.150	-0.085	-0.2306
1	36	36	3.256	2.749	-2.749	-0.000	0.108	-0.2306
1	37	37	7.309	7.239	-7.239	-0.049	0.070	-0.2144
1	38	38	6.354	6.212	-6.212	-0.072	0.142	-1.0200
1	39	39	10.634	10.182	-10.180	-0.151	-0.552	-0.00000
1	40	40	20.337	19.184	-19.183	-0.108	1.153	3.07537
1	41	41	3.957	4.654	-4.654	-0.451	-0.697	-0.6152
1	42	42	19.754	21.086	-21.083	-0.319	-1.332	-0.20249
1	43	43	2.6420	1.651	-1.651	-0.092	0.710	-0.8177
1	44	44	19.395	20.623	-20.622	-0.204	-1.256	-2.0857
1	45	45	2.136	1.958	-1.957	-0.026	0.776	-0.4806
1	46	46	4.633	4.610	-4.610	-0.028	0.224	-1.6340
1	47	47	1.6310	1.770	-1.770	-0.009	0.46	1.00000
1	48	48	4.943	4.579	-4.579	-0.152	0.364	0.5395
1	49	49	26.764	28.565	-28.565	-0.167	-0.199	-0.9036
1	50	50	131.511	134.924	-134.924	-0.619	-3.013	-3.0687
1	51	51	25.371	26.175	-26.175	-0.159	-0.604	-3.00000

KYANITE (DELAWARE) AT 25 DEGREES C F0-FC TABLE

				STRUCTURE FACTORS	PAGE	E
				DELTA F	DELTA SIGMA	FACTR.
				DELCA	DELCA	DELCA
L	K	M	N	F0CALC	F0CALC	F0CALC
				FACTS)	FACTS)	FACTS)
1	4	4	4	6.586	8.544	-6.543
1	4	4	5	1.026	* 107	-6.071
1	4	4	6	5.811	5.695	-5.695
1	4	4	7	2.910	3.110	-3.117
1	4	4	7	18.773	19.977	-19.974
1	5	5	6	11.064	11.590	-11.589
1	5	5	7	22.936	24.756	-24.752
1	5	5	7	31.274	33.242	-33.240
1	5	5	8	11.972	12.612	-12.611
1	5	5	8	3.206	2.995	-2.995
1	5	5	9	19.317	20.257	-20.257
1	5	5	9	1.059	* 126	-102
1	5	5	10	1.509	* 126	-102
1	5	5	10	45.001	44.651	-44.648
1	5	5	11	14.244	13.678	-13.678
1	5	5	11	1.188	* 126	-102
1	5	5	12	1.166	* 126	-102
1	5	5	12	6.064	6.738	-6.738
1	5	5	13	4.366	3.587	-3.587
1	5	5	13	4.521	4.935	-4.934
1	5	5	14	20.664	21.008	-21.009
1	5	5	14	4.460	5.424	-5.424
1	5	5	15	24.619	25.362	-25.362
1	5	5	15	10.493	6.906	-6.899
1	5	5	16	23.654	24.741	-24.740
1	5	5	16	10.686	10.734	-10.735
1	5	5	17	24.617	24.036	-24.036
1	5	5	17	2.018	* 126	-102
1	5	5	18	8.555	6.572	-6.572
1	5	5	19	23.634	21.783	-21.783
1	5	5	20	21.938	23.164	-23.158
1	5	5	21	4.337	4.644	-4.644
1	5	5	22	11.660	12.369	-12.369
1	5	5	23	7.800	7.803	-7.802
1	5	5	24	17.639	18.607	-18.604
1	5	5	25	17.549	18.235	-18.233
1	5	5	26	10.037	10.307	-10.305
1	5	5	27	12.390	12.620	-12.618
1	5	5	28	37.659	37.650	-37.645
1	5	5	29	4.859	4.878	-4.868
1	5	5	30	2.377	* 126	-102
1	5	5	31	12.650	12.125	-12.124
1	5	5	32	10.053	* 126	-102
1	5	5	33	17.613	17.702	-17.700
1	5	5	34	2.642	2.789	-2.787
1	5	5	35	8.201	6.674	-6.674
1	5	5	36	40.205	40.205	-40.205
1	5	5	37	16.183	17.614	-17.614
1	5	5	38	25.739	26.150	-26.147
1	5	5	39	1.600	0.766	-0.756
1	5	5	40	4.075	4.221	-4.221
1	5	5	41	*	*	*
1	5	5	42	1.000	1.000	1.000
1	5	5	43	1.000	1.000	1.000
1	5	5	44	1.000	1.000	1.000
1	5	5	45	1.000	1.000	1.000
1	5	5	46	1.000	1.000	1.000
1	5	5	47	1.000	1.000	1.000
1	5	5	48	1.000	1.000	1.000
1	5	5	49	1.000	1.000	1.000
1	5	5	50	1.000	1.000	1.000
1	5	5	51	1.000	1.000	1.000
1	5	5	52	1.000	1.000	1.000
1	5	5	53	1.000	1.000	1.000
1	5	5	54	1.000	1.000	1.000
1	5	5	55	1.000	1.000	1.000
1	5	5	56	1.000	1.000	1.000
1	5	5	57	1.000	1.000	1.000
1	5	5	58	1.000	1.000	1.000
1	5	5	59	1.000	1.000	1.000
1	5	5	60	1.000	1.000	1.000
1	5	5	61	1.000	1.000	1.000
1	5	5	62	1.000	1.000	1.000
1	5	5	63	1.000	1.000	1.000
1	5	5	64	1.000	1.000	1.000
1	5	5	65	1.000	1.000	1.000
1	5	5	66	1.000	1.000	1.000
1	5	5	67	1.000	1.000	1.000
1	5	5	68	1.000	1.000	1.000
1	5	5	69	1.000	1.000	1.000
1	5	5	70	1.000	1.000	1.000
1	5	5	71	1.000	1.000	1.000
1	5	5	72	1.000	1.000	1.000
1	5	5	73	1.000	1.000	1.000
1	5	5	74	1.000	1.000	1.000
1	5	5	75	1.000	1.000	1.000
1	5	5	76	1.000	1.000	1.000
1	5	5	77	1.000	1.000	1.000
1	5	5	78	1.000	1.000	1.000
1	5	5	79	1.000	1.000	1.000
1	5	5	80	1.000	1.000	1.000
1	5	5	81	1.000	1.000	1.000
1	5	5	82	1.000	1.000	1.000
1	5	5	83	1.000	1.000	1.000
1	5	5	84	1.000	1.000	1.000
1	5	5	85	1.000	1.000	1.000
1	5	5	86	1.000	1.000	1.000
1	5	5	87	1.000	1.000	1.000
1	5	5	88	1.000	1.000	1.000
1	5	5	89	1.000	1.000	1.000
1	5	5	90	1.000	1.000	1.000
1	5	5	91	1.000	1.000	1.000
1	5	5	92	1.000	1.000	1.000
1	5	5	93	1.000	1.000	1.000
1	5	5	94	1.000	1.000	1.000
1	5	5	95	1.000	1.000	1.000
1	5	5	96	1.000	1.000	1.000
1	5	5	97	1.000	1.000	1.000
1	5	5	98	1.000	1.000	1.000
1	5	5	99	1.000	1.000	1.000
1	5	5	100	1.000	1.000	1.000
1	5	5	101	1.000	1.000	1.000
1	5	5	102	1.000	1.000	1.000
1	5	5	103	1.000	1.000	1.000
1	5	5	104	1.000	1.000	1.000
1	5	5	105	1.000	1.000	1.000
1	5	5	106	1.000	1.000	1.000
1	5	5	107	1.000	1.000	1.000
1	5	5	108	1.000	1.000	1.000
1	5	5	109	1.000	1.000	1.000
1	5	5	110	1.000	1.000	1.000
1	5	5	111	1.000	1.000	1.000
1	5	5	112	1.000	1.000	1.000
1	5	5	113	1.000	1.000	1.000
1	5	5	114	1.000	1.000	1.000
1	5	5	115	1.000	1.000	1.000
1	5	5	116	1.000	1.000	1.000
1	5	5	117	1.000	1.000	1.000
1	5	5	118	1.000	1.000	1.000
1	5	5	119	1.000	1.000	1.000
1	5	5	120	1.000	1.000	1.000
1	5	5	121	1.000	1.000	1.000
1	5	5	122	1.000	1.000	1.000
1	5	5	123	1.000	1.000	1.000
1	5	5	124	1.000	1.000	1.000
1	5	5	125	1.000	1.000	1.000
1	5	5	126	1.000	1.000	1.000
1	5	5	127	1.000	1.000	1.000
1	5	5	128	1.000	1.000	1.000
1	5	5	129	1.000	1.000	1.000
1	5	5	130	1.000	1.000	1.000
1	5	5	131	1.000	1.000	1.000
1	5	5	132	1.000	1.000	1.000
1	5	5	133	1.000	1.000	1.000
1	5	5	134	1.000	1.000	1.000
1	5	5	135	1.000	1.000	1.000
1	5	5	136	1.000	1.000	1.000
1	5	5	137	1.000	1.000	1.000
1	5	5	138	1.000	1.000	1.000
1	5	5	139	1.000	1.000	1.000
1	5	5	140	1.000	1.000	1.000
1	5	5	141	1.000	1.000	1.000
1	5	5	142	1.000	1.000	1.000
1	5	5	143	1.000	1.000	1.000
1	5	5	144	1.000	1.000	1.000
1	5	5	145	1.000	1.000	1.000
1	5	5	146	1.000	1.000	1.000
1	5	5	147	1.000	1.000	1.000
1	5	5	148	1.000	1.000	1.000
1	5	5	149	1.000	1.000	1.000
1	5	5	150	1.000	1.000	1.000
1	5	5	151	1.000	1.000	1.000
1	5	5	152	1.000	1.000	1.000
1	5	5	153	1.000	1.000	1.000
1	5	5	154	1.000	1.000	1.000
1	5	5	155	1.000	1.000	1.000
1	5	5	156	1.000	1.000	1.000
1	5	5	157	1.000	1.000	1.000
1	5	5	158	1.000	1.000	1.000
1	5	5	159	1.000	1.000	1.000
1	5	5	160	1.000	1.000	1.000
1	5	5	161	1.000	1.000	1.000
1	5	5	162	1.000	1.000	1.000
1	5	5	163	1.000	1.000	1.000
1	5	5	164	1.000	1.000	1.000
1	5	5	165	1.000	1.000	1.000
1	5	5	166	1.000	1.000	1.000
1	5	5	167	1.000	1.000	1.000
1	5	5	168	1.000	1.000	1.000
1	5	5	169	1.000	1.000	1.000
1	5	5	170	1.000	1.000	1.000

Kyanite (Delaware) at 25 degrees C F0-Fc Table

STRUCTURE FACTORS Page 9

H	K	L	F(OFS)	F(CALC)	A(CALC)	B(CALC)	DELTA F	DELTA/SIGMA	EXT. FACTOR	
1	0	3	4.0296	4.512	-0.510	-0.216	-0.898	1.0000		
1	0	4	11.409	11.000	-11.000	-0.070	+0.09	3.0956	1.0000	
1	0	5	7.0313	7.225	-7.225	-0.145	+0.08	4.777	1.0000	
1	0	6	18.100	19.254	-19.254	-0.350	-1.154	-6.7599	1.0000	
1	0	7	10.022	10.477	-10.477	-0.154	-0.655	-3.2701	1.0000	
1	0	8	2.311	1.917	-1.917	-0.047	+0.395	0.9558	1.0000	
1	0	9	-2	2.372	-1.612	-1.612	+0.05	-0.760	1.9640	* * *
1	0	10	21.902	22.637	-22.637	+0.309	+0.735	-3.6136	1.0000	
1	0	11	27.231	27.405	-27.404	-0.266	+0.174	-7.7344	1.0000	
1	0	12	30.325	30.099	-30.097	+0.416	+0.226	-6.7337	1.0000	
1	0	13	19.515	19.717	-19.715	+0.316	+0.103	-5.600	1.0000	
1	0	14	6.114	6.212	-6.206	+0.201	+0.098	-0.5025	1.0000	
1	0	15	10.461	9.925	-9.924	+0.094	+0.5356	3.5506	1.0000	
1	0	16	6.073	6.681	-6.677	+0.184	+0.392	6.6396	1.0000	
1	0	17	6.927	7.648	-7.660	+0.358	+0.721	-4.0046	1.0000	
1	0	18	11.445	12.583	-12.561	+0.257	+0.430	-3.2876	1.0000	
1	0	19	4.0307	5.0939	-5.0939	+0.054	+0.507	1.5397	1.0000	
1	0	20	3.0736	3.633	-3.633	+0.012	+0.302	0.0052	1.0000	
1	0	21	13.055	13.795	-13.794	+0.190	+0.241	5.6236	1.0000	
1	0	22	6.0418	6.369	-6.369	+0.001	+0.060	-0.2431	1.0000	
1	0	23	5.005	5.617	-5.617	+0.058	+0.486	2.2605	1.0000	
1	0	24	21.638	21.001	-21.000	+0.467	+0.353	-1.7530	1.0000	
1	0	25	6.755	5.816	-5.816	+0.012	+0.274	1.0582	1.0000	
1	0	26	3.0949	2.403	-2.403	+0.190	+0.241	-1.7166	1.0000	
1	0	27	2.6467	2.5920	-2.5920	+0.046	+0.047	-0.0596	1.0000	
1	0	28	4.0265	4.289	-4.289	+0.158	+0.224	-0.896	1.0000	
1	0	29	2.113	2.02	-2.02	+0.110	+0.098	-0.980	1.0000	
1	0	30	1.0	1.026	-1.026	+0.017	+0.066	1.3177	1.0000	
1	0	31	-1.1	0	-1	+0.049	+0.247	-1.4567	1.0000	
1	0	32	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	33	-1.1	-1.2	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	34	-1.0	-1.1	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	35	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	36	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	37	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	38	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	39	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	40	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	41	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	42	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	43	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	44	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	45	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	46	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	47	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	48	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	49	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	50	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	51	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	52	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	53	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	54	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	55	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	56	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	57	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	58	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	59	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	60	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	61	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	62	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	63	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	64	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	65	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	66	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	67	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	68	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	69	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	70	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	71	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	72	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	73	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	74	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	75	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	76	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	77	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	78	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	79	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	80	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	81	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	82	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	83	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	84	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	85	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	86	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	87	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	88	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	89	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	90	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	91	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	92	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	93	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	94	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	95	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	96	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	97	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	98	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	99	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	100	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	101	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	102	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	103	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	104	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	
1	0	105	-1.0	-1.0	-1	+0.049	+0.024	-0.0597	1.0000	

KYNARITE (ULLVANSE) AT 25 DEGREES C. FOF-C TABLE

STRUCTURE FACTORS

PAGE 16

H K L

FOFSI

FCALCI

ACALCI

DELTA F

DELTA/SIGMA

EXT. FACTOR

H	K	L	FOFSI	FCALCI	ACALCI	DELTA F	DELTA/SIGMA	EXT. FACTOR	PAGE 16
2	-8	-2	3.6+937	-35+128	-35+127	-2.69	-2.29	-1.0014	1.0000
-6	6	2	8.9+810	8.8+803	8.8+800	.752	1.607	3.6176	1.0000
-8	4	2	3.4+806	3.3+630	3.3+629	.278	1.170	4.0505	1.0000
-6	2	2	1.9+76 *	1.9+137	1.9+135	.074	.636	2.1652	1.0000
-8	6	2	11+292	10+960	10+959	.074	.332	2.4034	1.0000
-6	4	4	3+745	3+591	3+591	.001	.253	3.004	1.0000
-5	5	5	9+361	8+959	8+959	.123	.5099	2.5099	1.0000
-6	6	6	16+170	15+148	15+146	.244	.6725	6.6725	1.0000
-7	6	6	21+085	22+386	22+382	.620	.530	-6.6555	1.0000
-7	5	5	19+053	19+162	19+162	.091	.316	-5.506	1.0000
-7	4	4	6+746	6+746	6+746	.001	.746	6.676	1.0000
-7	3	4	1+726	1+726	1+726	.045	.726	-1.0261	1.0000
-7	2	3	8+193	8+990	8+990	.045	.926	-6.651	1.0000
-7	1	0	26+369	16+034	16+034	.016	.214	-2.14	1.0000
-7	0	0	7+678	7+578	7+578	.016	.636	-3.098	1.0000
-7	-1	-1	7+515	7+515	7+515	.016	.636	-1.2030	1.0000
-7	-2	-2	12+132	12+132	12+132	.016	.636	-9.63	1.0000
-7	-3	-3	23+308	23+308	23+308	.016	.636	-3.970	1.0000
-7	-4	-4	11+674	11+674	11+674	.016	.636	-6.674	1.0000
-7	-5	-5	4+253	4+253	4+253	.016	.636	-2.1776	1.0000
-7	-6	-6	1+379 *	1+379 *	1+379 *	.016	.636	-6.6216	1.0000
-7	-7	-7	7+217	7+217	7+217	.016	.636	-1.1845	1.0000
-7	-8	-8	25+742	25+742	25+742	.016	.636	-6.258	1.0000
-7	-9	-9	6+632	6+632	6+632	.016	.636	-3.546	1.0000
-7	-10	-10	1+239	1+239	1+239	.016	.636	-1.3173	1.0000
-7	-11	-11	7+216	7+216	7+216	.016	.636	-4.5664	1.0000
-7	-12	-12	-25+740	-25+740	-25+740	.016	.636	-1.3310	1.0000
-7	-13	-13	-22+295	-22+295	-22+295	.016	.636	-2.1656	1.0000
-7	-14	-14	-16+832	-16+832	-16+832	.016	.636	-0.0169	1.0000
-7	-15	-15	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-16	-16	-13+973	-13+973	-13+973	.016	.636	-0.0164	1.0000
-7	-17	-17	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-18	-18	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-19	-19	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-20	-20	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-21	-21	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-22	-22	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-23	-23	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-24	-24	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-25	-25	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-26	-26	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-27	-27	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-28	-28	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-29	-29	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-30	-30	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-31	-31	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-32	-32	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-33	-33	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-34	-34	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-35	-35	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-36	-36	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-37	-37	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-38	-38	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-39	-39	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-40	-40	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-41	-41	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-42	-42	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-43	-43	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-44	-44	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-45	-45	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-46	-46	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-47	-47	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-48	-48	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-49	-49	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-50	-50	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-51	-51	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-52	-52	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-53	-53	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-54	-54	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-55	-55	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-56	-56	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-57	-57	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-58	-58	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-59	-59	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-60	-60	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-61	-61	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-62	-62	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-63	-63	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-64	-64	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-65	-65	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-66	-66	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-67	-67	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-68	-68	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-69	-69	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-70	-70	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-71	-71	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-72	-72	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-73	-73	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-74	-74	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-75	-75	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-76	-76	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-77	-77	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-78	-78	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-79	-79	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-80	-80	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-81	-81	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-82	-82	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-83	-83	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-84	-84	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-85	-85	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-86	-86	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-87	-87	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-88	-88	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-89	-89	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-90	-90	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-91	-91	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-92	-92	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-93	-93	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-94	-94	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-95	-95	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-96	-96	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-97	-97	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7	-98	-98	-12+973	-12+973	-12+973	.016	.636	-0.0164	1.0000
-7									

KYANITE (DELAWARE) AT 25 DEGREES C FD-FC TABLE

STRUCTURE FACTORS

PAGE 11

H	K	L	F(OBS)	F(CALC)	ACCALC	R(CALC)	DELTA F	DELTA SIGMA	EXT. FACTOR
2	2	-4	-15	17.838	18.582	-10.582	-1.136	-0.744	1.0000
2	2	-4	-14	53.326	55.983	-12.7	-2.656	-10.4704	1.0000
2	2	-4	-13	17.429	16.995	-17.994	-0.081	-0.434	1.0000
2	2	-4	-12	42.506	42.596	-42.596	-0.028	-0.093	1.0000
2	2	-3	-11	2.132	1.601	-1.601	-1.652	-0.4539	1.0000
2	2	-3	-10	23.019	21.926	-21.927	-1.190	-1.6302	1.0000
2	2	-4	-9	15.301	13.618	-13.018	-1.096	-1.2971	1.0000
2	2	-4	-8	10.217	9.505	-9.505	-0.263	-1.597	1.0000
2	2	-4	-7	16.647	16.526	-16.526	-1.122	-4.793	1.0000
2	2	-4	-6	2.646	2.503	-2.503	-0.076	-3.928	1.0000
2	2	-3	-5	14.263	13.720	-13.720	-1.146	-3.741	1.0000
2	2	-3	-4	7.4713	7.159	-7.159	-0.194	-5.187	1.0000
2	2	-3	-3	13.093	11.943	-11.943	-0.633	-6.731	1.0000
2	2	-3	-2	19.455	20.199	-20.199	-0.114	-6.621	1.0000
2	2	-3	-1	12.317	12.565	-12.564	-1.263	-2.316	1.0000
2	2	-3	0	2.890	2.640	-2.640	-0.079	-2.615	1.0000
2	2	-2	-5	1.245	-1.124	-1.124	-0.065	-1.214	1.0000
2	2	-2	-4	19.878	19.896	-19.897	-0.225	-1.616	1.0000
2	2	-2	-3	6.0503	6.072	-6.070	-0.570	-1.407	1.0000
2	2	-2	-2	2.6604	2.6330	-2.6320	-0.014	-1.224	1.0000
2	2	-2	-1	4.6142	5.015	-5.014	-0.165	-1.616	1.0000
2	2	-1	0	2.4578	2.6173	-2.6173	-0.377	-1.292	1.0000
2	2	-1	-1	2.6621	2.527	-2.527	-0.029	-1.260	1.0000
2	2	-1	-2	1.941	2.114	-2.114	-0.119	-1.717	1.0000
2	2	-1	-3	2.495	2.704	-2.704	-0.213	-1.942	1.0000
2	2	-1	-4	15.699	14.739	-14.736	-0.214	-1.877	1.0000
2	2	-1	-5	1.887	2.105	-2.105	-0.074	-1.616	1.0000
2	2	-1	-6	2.670	2.821	-2.821	-0.174	-1.246	1.0000
2	2	-1	-7	6.774	7.141	-7.141	-0.319	-1.532	1.0000
2	2	-1	-8	9.682	9.764	-9.764	-0.079	-1.632	1.0000
2	2	-1	-7	9.645	9.908	-9.906	-0.214	-1.616	1.0000
2	2	-1	-6	3.623	4.094	-4.094	-0.377	-1.307	1.0000
2	2	-1	-5	15.445	15.145	-15.145	-0.174	-1.616	1.0000
2	2	-1	-4	6.774	6.523	-6.523	-0.163	-1.616	1.0000
2	2	-1	-3	2.670	2.736	-2.736	-0.074	-1.246	1.0000
2	2	-1	-2	1.679	1.426	-1.426	-0.368	-1.616	1.0000
2	2	-1	-1	6.038	7.322	-7.322	-0.704	-1.716	1.0000
2	2	-1	0	30.619	30.949	-30.948	-0.196	-1.256	1.0000
2	2	-1	-2	24.670	24.246	-24.245	-0.263	-1.227	1.0000
2	2	-1	-3	20.712	20.816	-20.815	-0.210	-1.192	1.0000
2	2	-1	-4	14.679	14.236	-14.236	-0.104	-1.4671	1.0000
2	2	-1	-5	6.038	7.322	-7.322	-0.704	-1.716	1.0000
2	2	-1	-6	30.619	30.949	-30.948	-0.196	-1.256	1.0000
2	2	-1	-7	24.670	24.246	-24.245	-0.263	-1.227	1.0000
2	2	-1	-8	21.397	21.804	-21.803	-0.198	-1.130	1.0000
2	2	-1	-7	8.563	11.313	-11.313	-0.198	-1.000	1.0000
2	2	-1	-6	6.464	17.822	-17.822	-0.273	-1.000	1.0000
2	2	-1	-5	10.523	10.531	-10.524	-0.362	-1.670	1.0000
2	2	-1	-4	9.628	9.912	-9.912	-0.099	-1.070	1.0000
2	2	-1	-3	8.669	8.669	-8.668	-0.028	-1.275	1.0000
2	2	-1	-2	21.397	20.526	-20.527	-0.221	-1.000	1.0000
2	2	-1	-1	8.520	-16.534	-16.534	-0.091	-1.226	1.0000
2	2	-1	0	6.477	6.797	-6.797	-0.099	-1.923	1.0000
2	2	-1	-1	1.929	*	*	*	*	1.0000
2	2	-1	-2	14.776	15.659	-15.657	-0.225	-1.485	1.0000
2	2	-1	-3	16.161	16.851	-16.651	-0.160	-1.904	1.0000
2	2	-1	-4	7.445	7.534	-7.534	-0.091	-1.226	1.0000
2	2	-1	-5	18.705	18.081	-18.081	-0.052	-1.923	1.0000
2	2	-1	-6	6.692	6.517	-6.517	-0.266	-1.027	1.0000
2	2	-1	-7	6.519	6.519	-6.519	-0.386	-2.2761	1.0000
2	2	-1	-8	6.024	6.024	-6.024	-0.386	-3.2761	1.0000