

Table 7: The Thorium-Argon spectrum at high dispersion

Line	Symbol	Line	Symbol	Line	Symbol	Line	Symbol
3925.719	ArII	4259.362	ArI	4598.763	ArII	5050.784	ThI
3928.623	ArII	4266.286	ArI	4609.567	ArII	5054.178	ArI
3932.547	ArII	4272.169	ArI	4628.441	ArI	5060.079	ArI
3946.097	ArII	4277.528	ArII	4637.233	ArII	5062.037	ArII
3947.505	ArI	4282.041	ThI	4657.901	ArII	5064.80	ThI b
3948.979	ArI	4282.898	ArII	4673.660	ThI	5067.973	ThI
3967.392	ThI	4300.101	ArI	4686.194	ThI	5090.495	ArII
3979.356	ArII	4309.239	ArII	4695.038	ThI	5096.484	ThI
3994.792	ArII	4312.997	ThI	4702.316	ArI	5100.621	ThI
4012.495	ThI	4331.200	ArII	4703.989	ThI	5115.043	ThI
4013.857	ArII	4333.561	ArI	4723.438	ThI	5118.202	ArI
4019.129	ThII	4335.338	ArI	4726.868	ArII	5125.765	ArII w
4030.842	ThI	4337.277	ThI	4732.053	ArII	5141.783	ArII
4033.809	ArII	4345.168	ArI	4735.906	ArII	5145.308	ArII
4036.048	ThI	4348.064	ArII	4740.529	ThI	5151.391	ArI
4042.894	ArII	4352.205	ArII	4764.865	ArII	5154.243	ThI
4044.418	ArI	4362.066	ArII	4778.294	ThI	5158.604	ThI
4045.965	ArI	4367.832	ArII	4789.386	ThI	5162.285	ArI
4052.921	ArII	4370.753	ArII	4806.021	ArII	5163.458	ThI
4072.11	ArII	4374.124	ThI	4808.133	ThI	5165.773	ArII
4076.72	ArII	4375.954	ArII	4822.854	ThI	5176.229	ArII w
4079.574	ArII	4378.176	ThI	4831.121	ThI	5176.961	ThI
4080.645	ArII	4379.667	ArII	4840.843	ThI	5187.746	ArI
4082.387	ArII	4381.860	ThII	4847.810	ArII	5195.813	ThI
4094.747	ThI	4385.057	ArII	4863.172	ThI	5199.163	ThI
4097.14	ArII	4391.110	ThII	4865.477	ThI	5211.230	ThI
4100.341	ThI	4400.097	ArII	4872.917	ThI	5213.349	ThI
4103.912	ArII	4400.986	ArII	4876.261	ArI	5216.597	ThII
4112.815	ArII	4408.883	ThI	4878.733	ThI	5219.108	ThI
4131.724	ArII	4420.912	ArII	4879.864	ArII	5221.271	ArI
4156.086	ArII	4426.001	ArII	4888.261	ArII	5231.159	ThI
4158.591	ArI	4430.189	ArII	4889.042	ArII	5238.813	ThI
4164.180	ArI	4430.996	ArII	4894.955	ThI	5241.091	ArI
4179.297	ArII	4433.838	ArII	4904.752	ArII	5247.654	ThII
4181.884	ArI	4439.461	ArII	4919.815	ThI	5252.788	ArI
4190.87	ArI b	4448.879	ArII	4933.209	ArII	5254.465	ArI
4198.317	ArI	4474.759	ArII	4939.642	ThI	5258.360	ThI
4200.675	ArI	4481.811	ArII	4943.064	ThI	5264.782	ArII
4210.923	ThI	4490.982	ArII	4945.458	ThI	5266.710	ThI
4217.431	ArII	4493.333	ThI	4965.080	ArII	5296.227	ThI
4218.665	ArII	4502.927	ArII	4972.160	ArII	5297.92	ThI b
4222.637	ArII	4510.733	ArI	4985.372	ThI	5312.18	ThI b
4226.988	ArII	4515.118	ThI	5002.097	ThI	5317.494	ThI
4228.158	ArII	4522.323	ArI	5009.334	ArII	5326.975	ThI
4229.870	ArII	4530.552	ArII	5017.163	ArII	5343.581	ThI
4235.463	ThI	4545.052	ArII	5028.655	ThI	5358.363	ArII
4237.220	ArII	4563.743	ArII	5039.230	ThI	5373.494	ArI
4250.314	ThI	4579.350	ArII	5044.719	ThI	5379.110	ThI
4251.185	ArI	4589.899	ArII	5047.043	ThI	5386.610	ThI
4257.496	ThI	4595.77	ThI b	5048.813	ThI	5390.440	ThI

Table 7: The Thorium-Argon spectrum at high dispersion (continued)

Line	Symbol	Line	Symbol	Line	Symbol	Line	Symbol
5393.971	ArI	5610.231	ThI	5860.310	ArI	6090.785	ArI
5394.760	ThI	5612.068	ThI	5863.718	ThI	6098.803	ArI
5397.516	ArII	5615.319	ThI	5882.624	ArI	6101.162	ArI
5398.701	ThI	5618.010	ArII	5885.701	ThI	6104.590	ArI
5402.605	ArII	5623.778	ArII	5888.584	ArI	6105.635	ArI
5407.51	ArII	5625.678	ArII	5891.451	ThI	6112.837	ThII
5410.60	ArI b	5635.575	ArI w	5905.570	ThI	6114.923	ArII
5415.491	ThI	5637.32	ArI	5908.935	ThI	6119.657	ArI
5417.485	ThI	5639.746	ThI b	5912.085	ArI	6123.362	ArII
5421.352	ArI	5641.375	ArI	5914.671	ThI	6124.480	ThI
5431.112	ThI	5645.668	ThI	5916.599	ArI	6127.416	ArI
5439.989	ArI	5648.686	ArI	5926.236	ThI	6128.723	ArI
5442.248	ArI	5650.704	ArI	5927.126	ArI	6138.656	ArII
5443.118	ThI	5654.457	ArII	5928.813	ArI	6145.441	ArI
5451.652	ArI	5659.127	ArI	5938.825	ThI	6151.993	ThI
3454.307	ArII	5665.180	ThI	5940.855	ArI	6155.35	ThI b
5457.416	ArI	5672.952	ArII	5942.669	ArI	6164.479	ThI b
5464.205	ThI	5677.053	ThI	5944.647	ThI	6170.00	ThI b
5473.452	ArI	5681.900	ArI	5949.258	ArI	6172.278	ArII
5492.643	ThI	5689.91	ArI	5968.320	ArI	6173.096	ArI
5495.874	ArI	5691.661	ArII	5971.601	ArI	6178.431	ThI
5499.255	ThI	5700.917	ThII w	5973.664	ThI	6182.621	ThI
5504.301	ThI	5707.103	ThII	5975.064	ThI	6188.125	ThI
5506.113	ArI	5712.48	ArI	5986.266	ThI	6191.905	ThI
5509.993	ThI	5720.183	ThI	5987.302	ArI	6198.222	ThI
5514.673	ThI	5725.388	ThI	5989.044	ThI	6201.100	ArII
5524.957	ArI	5738.387	ArI	5991.007	ThI	6203.492	ThI
5534.45	ArI	5739.520	ArI	5994.128	ThI	6207.220	ThI
5539.262	ThI	5741.829	ThI	5998.999	ArI	6212.503	ArI
5542.890	ThI	5748.741	ThI	6001.165	ThI	6215.938	ArI
5548.175	ThI	5749.388	ThII	6005.165	ThI	6224.527	ThI
5551.372	ThII	5753.026	ThI	6007.072	ThI	6226.369	ThI
5554.050	ArII	5760.550	ThI	6010.166	ThI	6234.855	ThI
5557.045	ThI	5763.529	ThI	6013.678	ArI	6243.120	ArII
5558.702	ArI	5768.181	ThI	6021.035	ThI	6248.406	ArI
5559.891	ThI	5772.114	ArI	6025.150	ArI	6257.423	ThI
5571.191	ThI	5773.946	ThI	6030.445	ThI	6261.418	ThI
5572.541	ArI	5783.536	ArI	6032.127	ArI	6274.164	ThI
5573.353	ThI	5789.56	ThI b	6037.697	ThI	6293.242	ThI
5576.204	ThI	5792.430	ThI	6043.223	ArI	6295.446	ArII
5577.685	ArII	5796.068	ThI	6044.432	ThII	6296.872	ArI
5579.358	ThI	5798.478	ThI	6046.898	ArII	6307.657	ArI
5581.871	ArI	5800.829	ThI	6049.051	ThI	6309.160	ArI
5587.026	ThI	5802.080	ArI	6052.723	ArI	6324.416	ArII
5588.720	ArI	5804.141	ThI	6059.373	ArI	6327.277	ThI
5595.063	ThI	5812.84	Ar b	6064.751	ArI	6337.620	ThI
5597.476	ArI	5834.263	ArI	6073.103	ThII	6339.668	ThI
5601.603	ThI	5843.778	ArII	6081.243	ArI	6342.859	ThI
5604.515	ThI	5852.680	ThI	6085.374	ThI w	6348.737	ThI
5606.733	ArI	5853.471	ThI	6088.030	ThI	6355.910	ThI

Table 7: The Thorium-Argon spectrum at high dispersion (continued)

Line	Symbol	Line	Symbol	Line	Symbol	Line	Symbol
6364.894	ArI	6619.946	ThII	6965.431	ArI	8046.117	ArI
6369.575	ArI	6632.084	ArI	6989.655	ThI	8053.309	ArI
6371.943	ThI	6638.221	ArII	6992.213	ArI	8103.693	ArI
6376.930	ThI	6639.740	ArII	7018.567	ThI	8115.311	ArI
6384.717	ArI	6643.698	ArII	7030.251	ArI	8264.522	ArI
6387.395	ThI	6644.663	ThI	7067.218	ArI	8384.724	ArI
6393.797	ArII	6656.939	ArI	7068.734	ArI	8408.210	ArI
6396.610	ArII	6658.677	ThI	7084.169	ThI	8416.727	ThI
6399.207	ArII	6660.676	ArI	7086.704	ArI	8424.647	ArI
6403.013	ArII	6662.268	ThI	7107.478	ArI	8521.442	ArI
6406.446	ThI	6664.051	ArI	7124.560	ThI	8554.944	ThI
6408.904	ArII	6666.359	ArII	7125.820	ArI	8605.776	ArI
6411.899	ThI	6674.697	ThI	7147.042	ArI	8620.460	ArI
6413.614	ThI	6677.282	ArI	7158.839	ArI	8667.944	ArI
6416.307	ArI	6678.706	ThI	7168.895	ThI	8678.408	ArI
6418.370	ArII	6683.367	ThI	7206.980	ArI	8736.63	ArI
6422.897	ArII	6684.293	ArII	7265.172	ArI	8748.031	ThI
6431.555	ArI	6698.876	ArI	7270.664	ArI	8758.287	ThI
6437.600	ArII w	6713.970	ThI	7272.936	ArI	8761.686	ArI
6439.070	ThI	6719.218	ArI	7284.903	ThI	8771.860	ArII
6441.900	ArII	6727.458	ThI	7311.716	ArI	8784.59	ArI
6443.860	ArII	6752.834	ArI	7316.005	ArI	8799.088	ArI
6457.282	ThI	6754.30	ArI	7353.293	ArI	8840.82	ArI
6462.595	ThI	6756.31	ThI b	7372.118	ArI	8849.97	ArI
6466.553	ArI	6766.612	ArI	7383.981	ArI	8851.791	ThI
6468.048	ArII	6778.312	ThI	7392.980	ArI	8868.833	ThI
6481.145	ArII	6780.125	ThI	7412.337	ArI	8874.84	ArI
6483.083	ArII	6788.840	ThI	7425.294	ArI	8905.658	ArII
6490.737	ThI	6791.235	ThI	7435.368	ArI	8931.326	ArII
6493.197	ThI	6818.291	ArI	7471.164	ArI	8962.147	ArI
6493.969	ArI	6824.677	ThI	7484.327	ArI	8967.640	ThI
6499.106	ArI	6827.249	ArI	7500.656	ArI	8986.615	ArII
6506.986	ThI	6829.035	ThI	7503.869	ArI	9008.455	ArII
6512.364	ThI	6834.924	ThI	7510.408	ArI	9017.596	ArII
6513.846	ArI	6851.884	ArI	7514.652	ArI	9048.250	ThI
6522.043	ThI	6861.269	ArII	7618.33	ArI	9057.23	ArI
6531.341	ThI	6163.535	ArII	7628.86	ArI	9073.34	ArI
6538.112	ArI	6866.366	ThI	7635.106	ArI	9075.395	ArI
6554.160	ThI	6868.450	ThI	7670.04	ArI	9122.967	ArI
6558.875	ThI	6871.289	ArI	7723.98	ArI b	9194.639	ArI
6577.214	ThI	6874.753	ThI	7798.55	ArI	9198.61	ArI
6583.906	ThI	6879.582	ArI	7814.33	ArI	9219.003	ArII
6588.539	ThI	6887.088	ArI	7861.91	ArI	9224.499	ArI
6591.484	ThI	6888.174	ArI	7868.195	ArI	9291.531	ArI
6593.939	ThI	6911.226	ThI	7891.075	ArI	9354.220	ArI
6596.114	ArI	6937.664	ArI	7948.176	ArI	9402.69	ArI
6598.678	ArI	6943.60	ThI	7978.917	ArI	9459.09	ArI
6604.853	ArI	6951.478	ArI	8006.157	ArI	9657.786	ArI
6613.374	ThI	6960.250	ArI	8014.786	ArI	9784.503	ArI

Notes to table 7

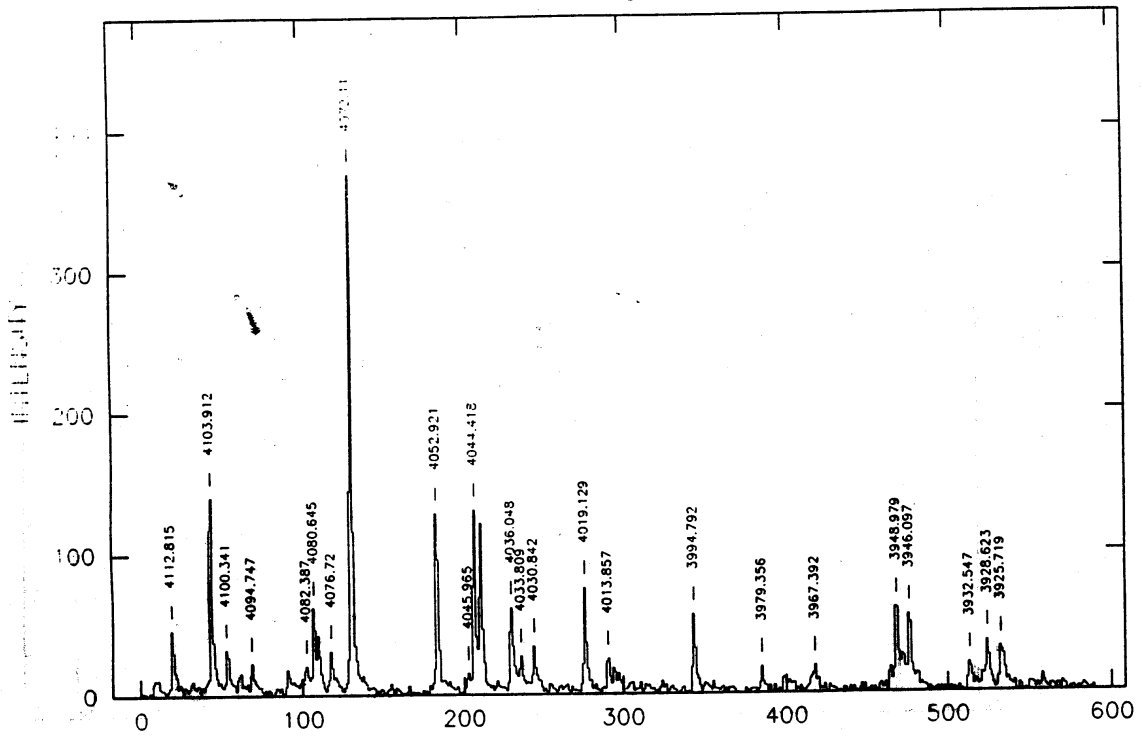
Line	Symbol	
4072.11	ArII	blend of 4072.005 (3) and 4072.385 (1)
4076.72	ArII	blend of 4076.628 (2) and 4076.943 (1)
4190.87	ArI	blend of 4190.714 (1) and 4191.029 (1)
4595.77	ThI+ArI	blend of ThI 4595.420 and ArI 4596.097
5064.80	ThI	blend 5064.602 and 5064.945
5125.765	ArII	weak ThI at 5125.950
5176.229	ArII	weak ArI at 5177.540
5297.92	ThI	blend of 5297.743 (2) and 5298.282 (1)
5312.18	ThI	blend of 5312.002 (1) and 5312.528 (0.5)
5407.51	ArII+ThI	ArII 5407.344 and ThI 5407.653
5410.60	ArI+ThI	ArI 5410.473 and ThI 5410.768
5635.575	ArI	weak ArII at 5635.882
5639.746	ThI	blended with ArI 5639.140
5700.917	ThII	weak ArI at 5700.873
5789.56	ThI	blend of ThI 5789.645 & ArI 5789.474 & ArII 5789.555
5812.84	Ar	blend of ArII 5812.84 & ArI 5812.760 & ThI 5812.972
6085.374	ThI	weak ArI at 6085.880
6155.35	ThI+ArI	ThI 6155.581 & ArI 6155.239
6164.479	ThI	weak ArI at 6165.123
6170.00	ThI+ArI	ThI 6169.822 and ArI 6170.174
6437.600	ArII	weak ThI at 6437.761
6756.31	ThI+ArI	ThI 6756.453 and ArI 6756.163
7723.98	ArI	blend of 7723.7611 and 7724.2072 at equal intensities

Figure 7 : Thorium-Argon spectrum between 3900 and 7200

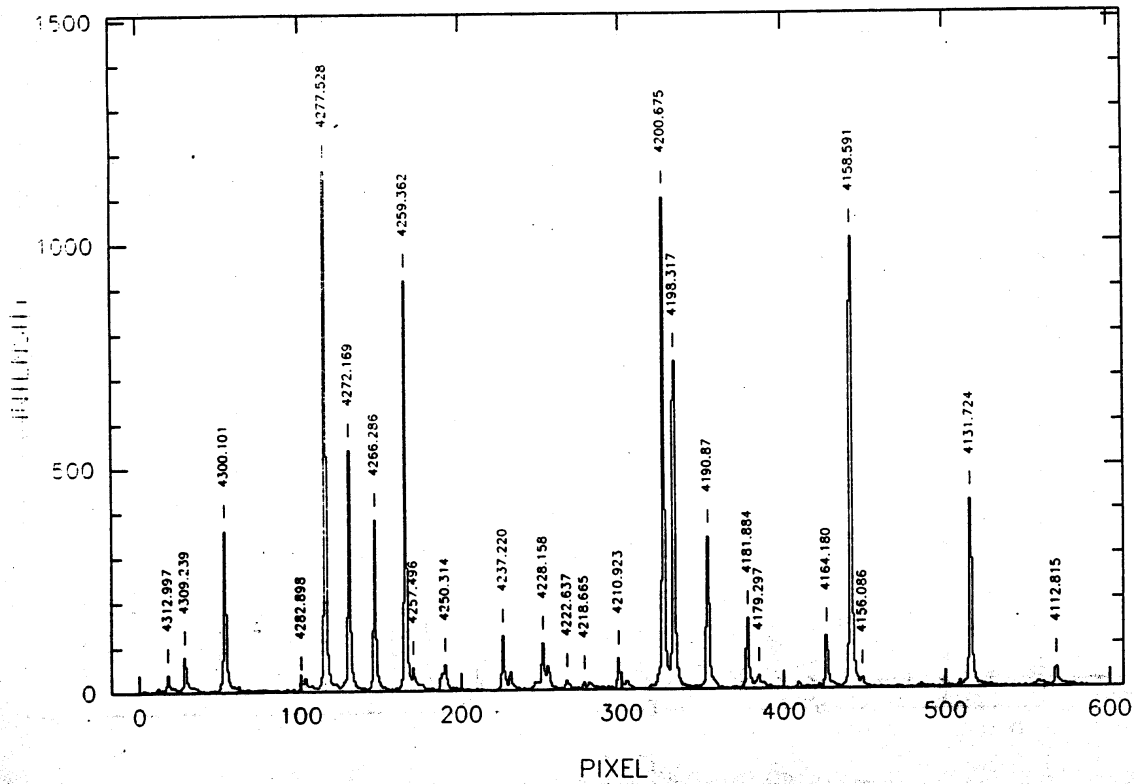
Notes to figure 7

Spectrum	ThAr from 3900 A to 7300 A at high dispersion	
Camera	IDS 500mm	
Detector	GEC 3 "GEC BLUE"	
Gratings	R1200Y for the region 3900 A - 5200 A R1200V for the region 5200 A - 7300 A	
Collimator	Al Wide	
Dispersion	16.5 A/mm or 2.75 pixel/A	
Exposure times	4000 - 6800 A	600 s
	7000 & 7200 A	60 s

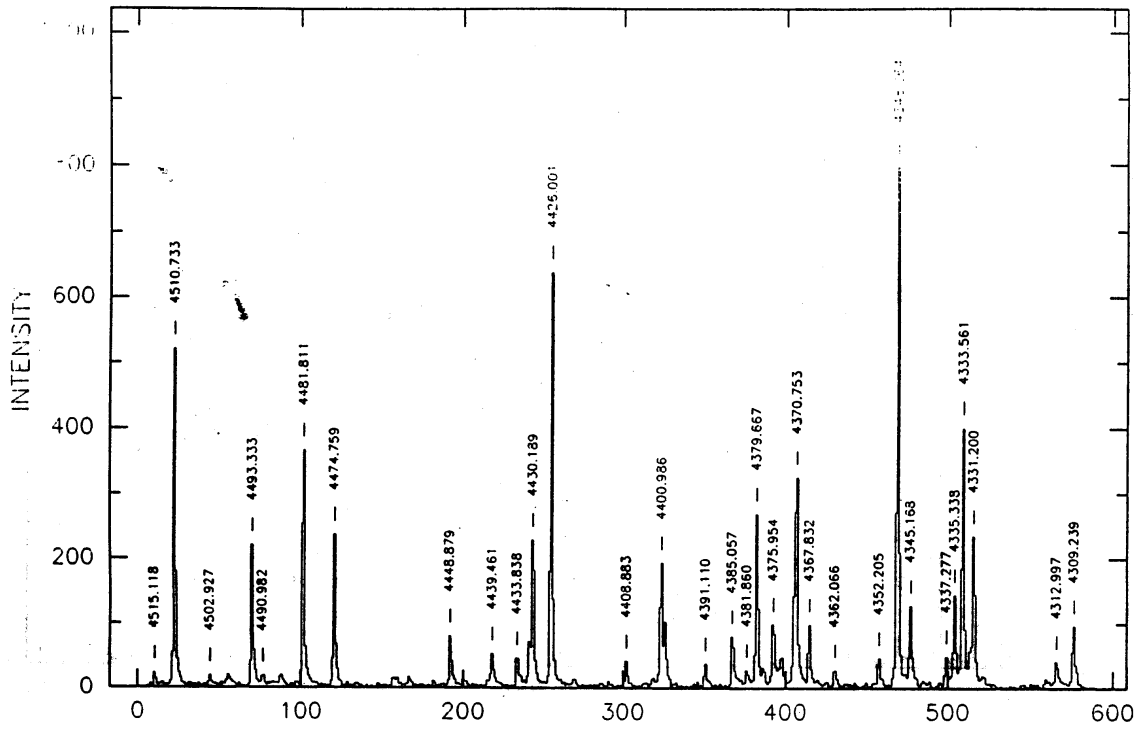
ARC THAR R1200B 4000



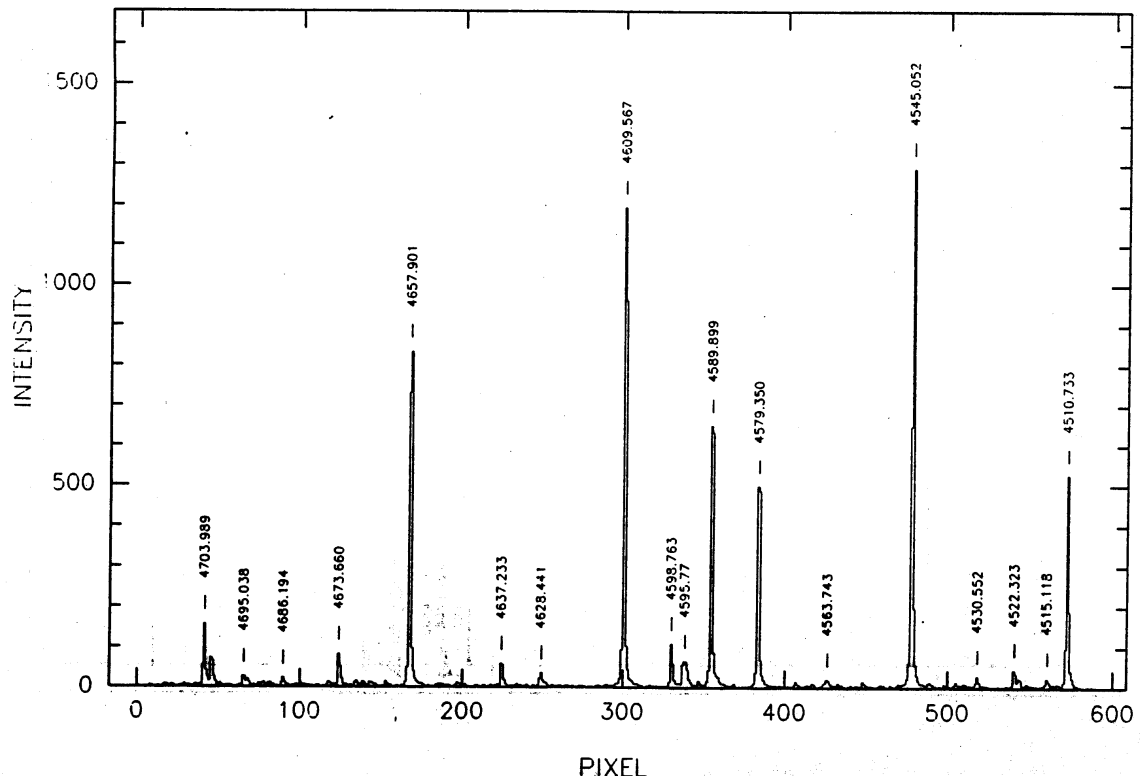
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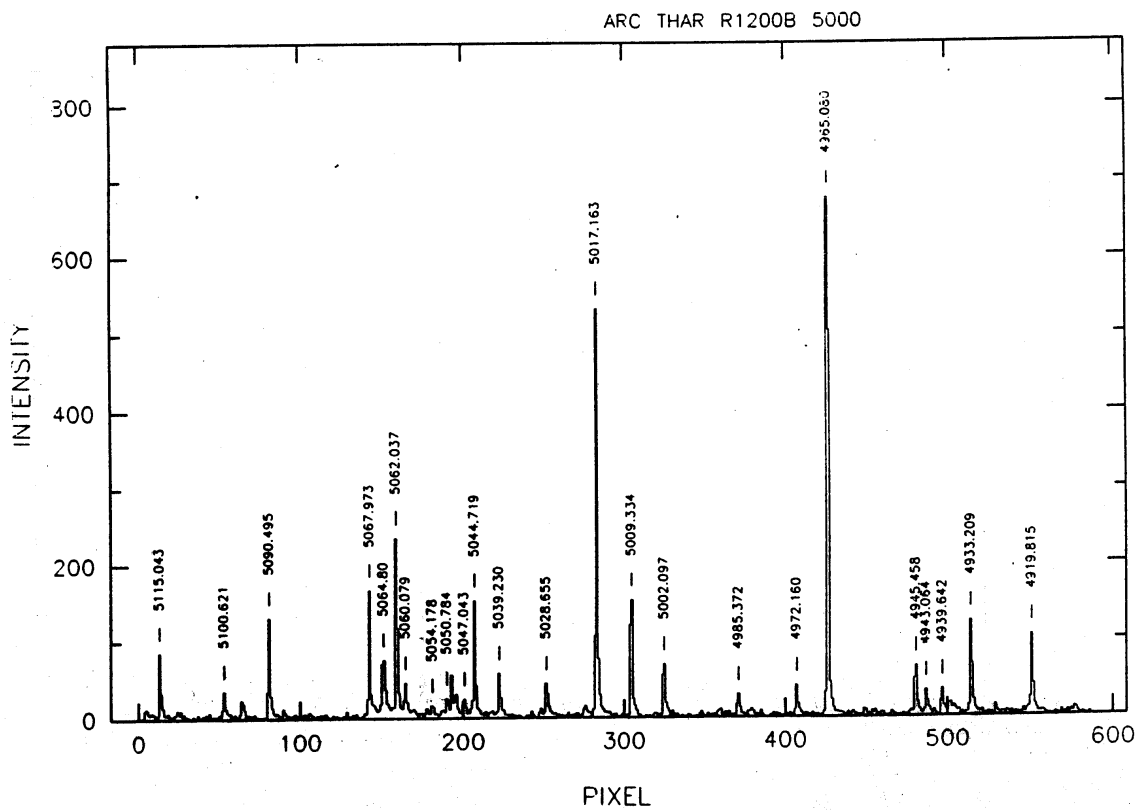
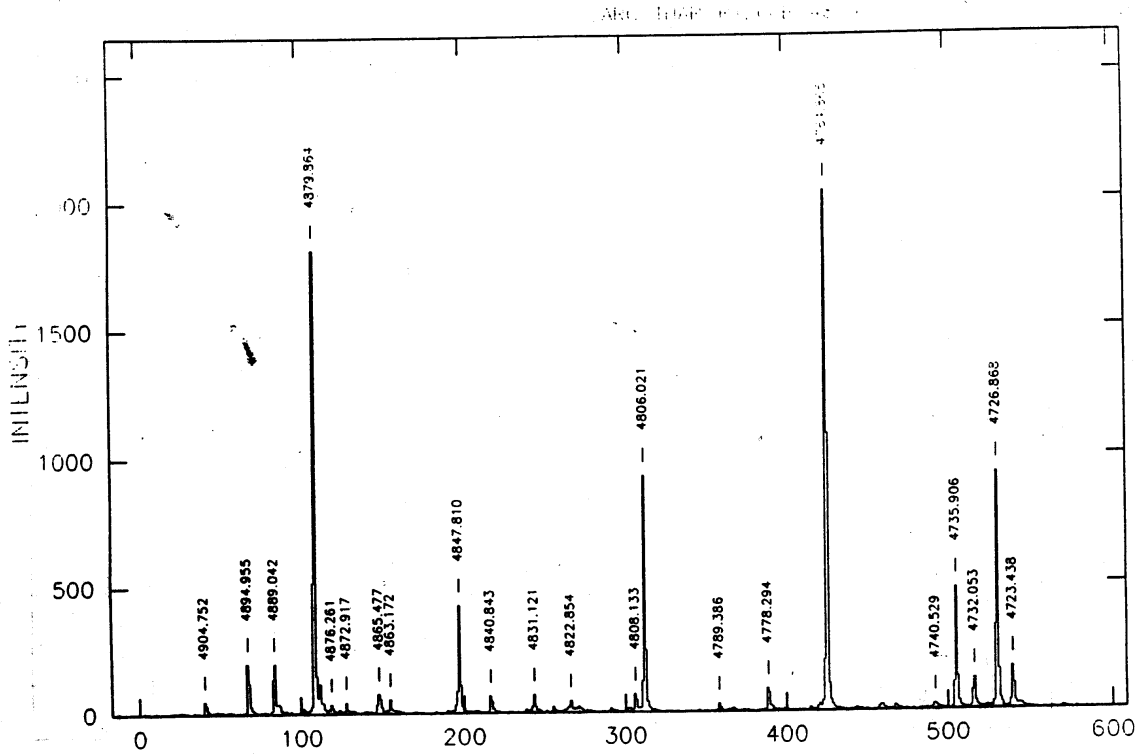


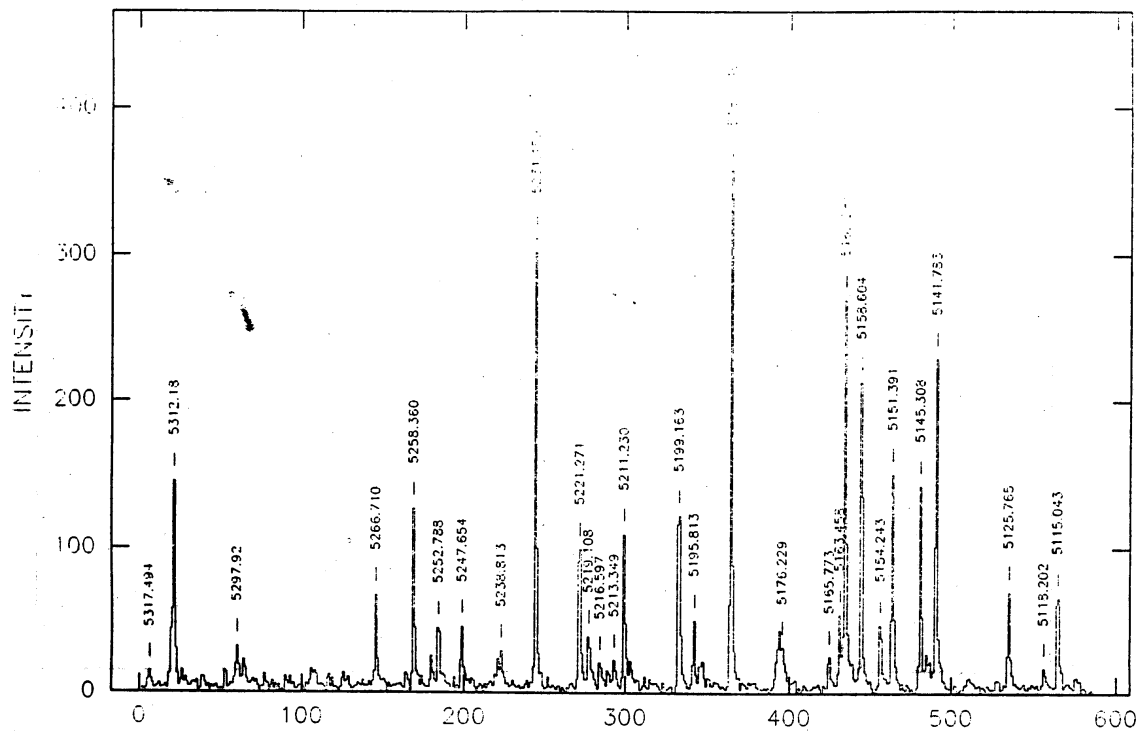
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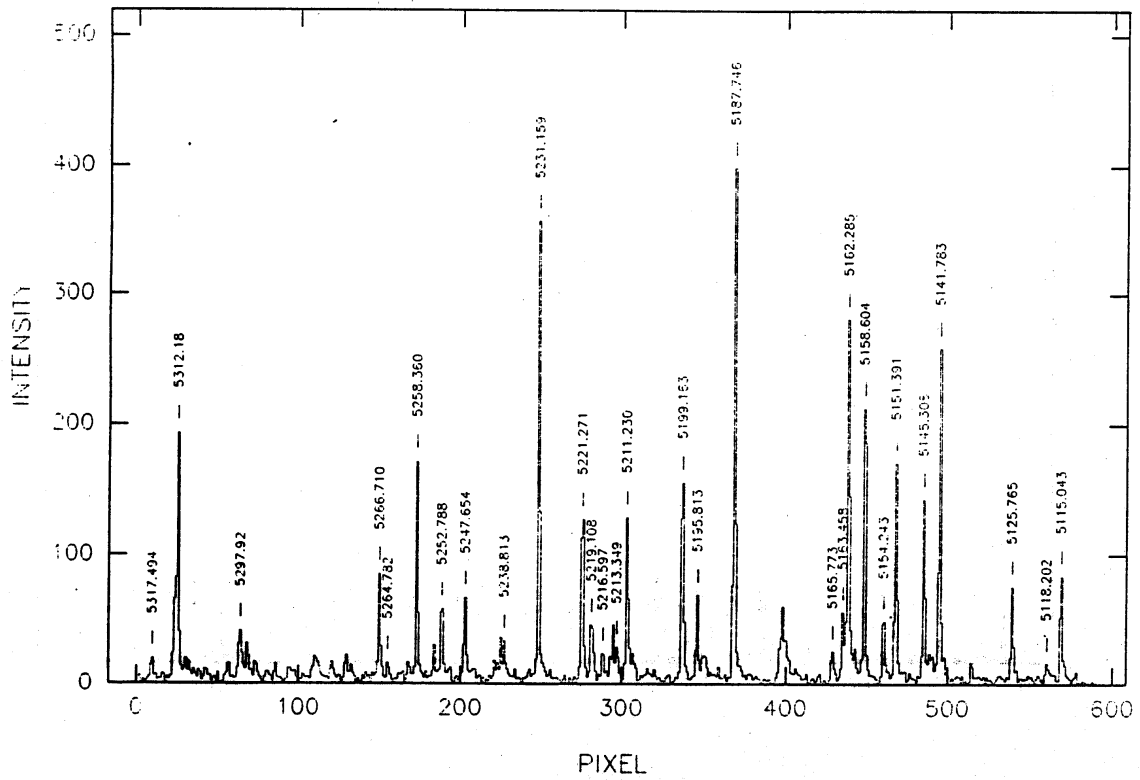
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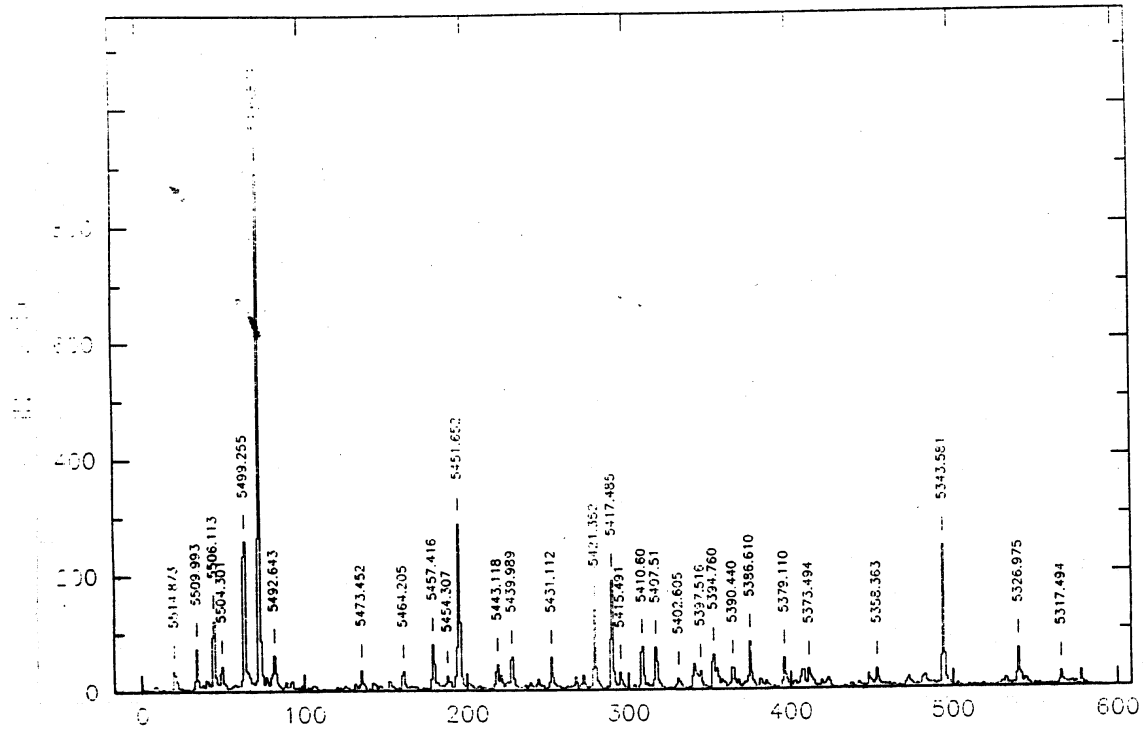




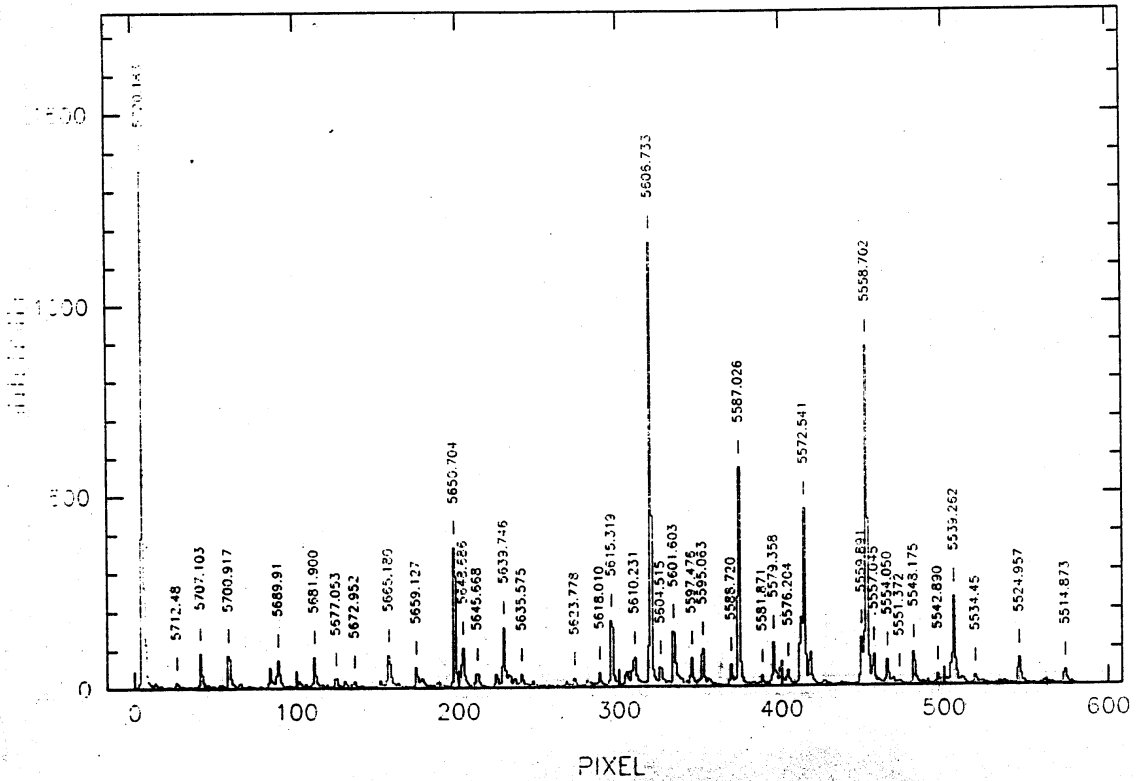


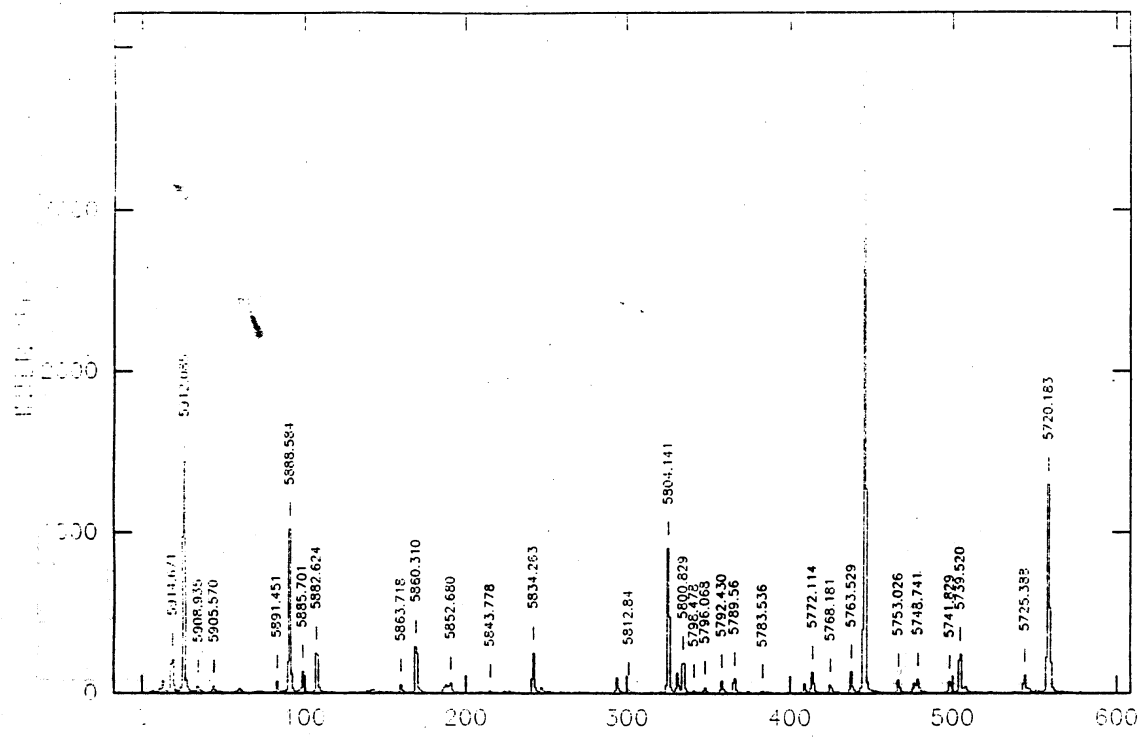
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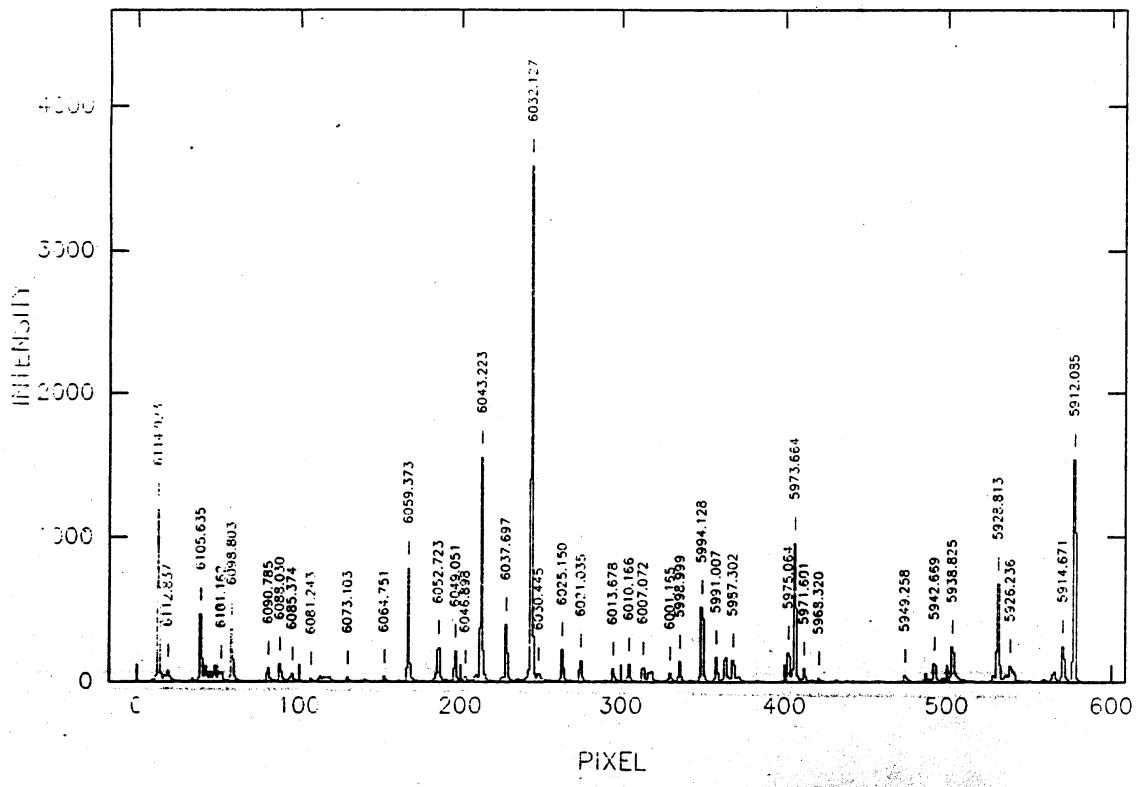


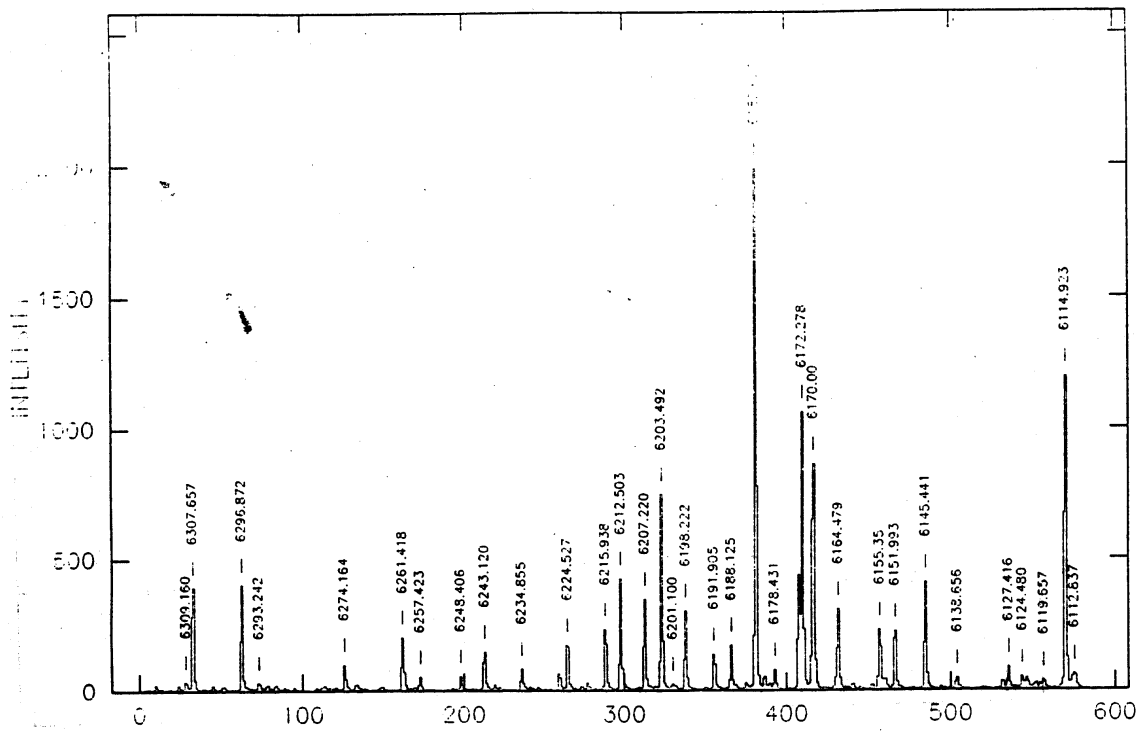
ARC THAR R1200Y 5600





ARC THAR R1200Y 6000





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