The following material did not appear in the original publication.

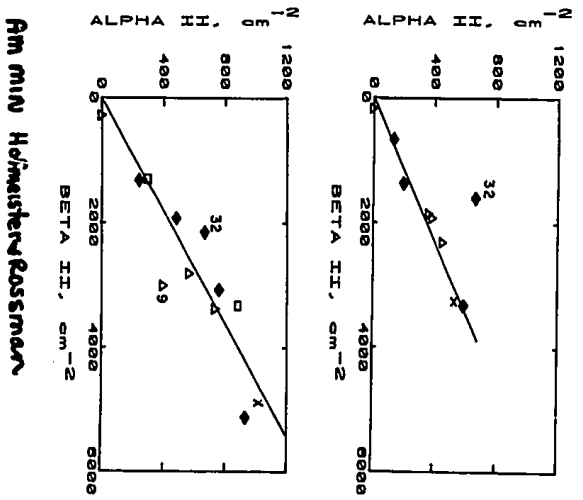

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Fig. 2 100%

Figure 2 Comparison of integrated intensities (II) between the alpha and beta polarizations of amazonites. Triangle = type B. Diamond = type D. Square = type G. X = type T. The upper graph is of the 385 nm peak, the lower is for the sum of 630 and 720 nm peaks. The few exceptions to the trends (labeled with their sample numbers) are due to scattering induced by turbidity.

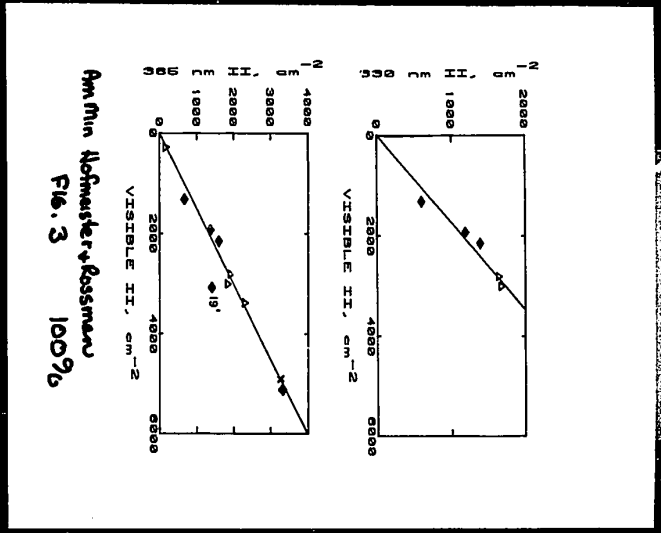

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Fig. 3 100%

Figure 3 Comparison of integrated intensities of the UV peaks to that of the sum of the 630 and 720 nm peaks. 330 nm, top. 385 nm, bottom. Only one sample deviates from trend (#19') but its 385 nm peak area is poorly determined due to scattering.

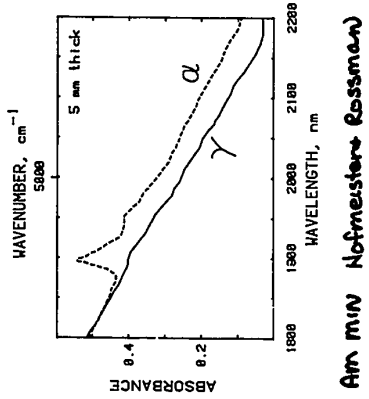

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Fig. 9 100%

Figure 9 Polarized near-infrared spectra of a gemmy area of white microcline #7, Elizabeth R Mine, Pala, CA. The bending and stretching combination mode of water molecules is present as bands at 5250 cm-1 (1900 nm) and 5100 cm-1 (1950 nm). The weak bands at 3400 and 3050 cm-1 are probably due to XOH species similar to sanidine. The 2 combination modes and the 4 bands in the IR are due to two different types of water molecules.

Table 3. Optical Parameters* of the Visible Peak of Natural and Irradiated Amazonites

		Natural Color				Color after Irradiation				
Sample Number	Type	$1/\lambda$ cm-1	$W_{1/2}$ cm-1	I cm-1	II cm-1	Dose MRads	$1/\lambda$ cm-1	$W_{1/2}$ cm-1	I cm-1	II cm-2
8	B	16000	>2500	1.13	>2820	ND	-	-	-	-
14	B	16103	3165	10.74	33980	10	15970	3175	9.34	29650
15	B	15880	>2500	0.7	1750	ND	-	-	-	-
16	B	16100	3170	3.83	12140	ND	-	-	-	-
23	D	15700	3760	3.50	13160	66	14810	~4600	3.24	~14910
4	B	15900	3280	5.95	19520	35	15900	3300	4.68	15440
5	B	16050	3350	8.40	28140	11	16000	3260	8.7	28360
12	B	16000	3350	10.1	33840	28	16000	3330	11.2	37300
18	B	15900	>3200	1.4	4480	ND	-	-	-	-
22	D	14840	4380	4.40	19270	18.3	14810	~4700	2.93	~13800
19	D	14530	~4700	5.09	~23920	51	14000	4550	4.65	21160
19'	D	14840	4500	6.84	30800	76	14840	5000	9.36	46800
9	B	16000	3450	8.72	30080	77	16000	3470	4.78	16600
21	T	15530	3760	13.16	49480	91	15625	3900	11.2	43680
20	D	14640	4650	7.35	34180	37	13950	4550	6.69	38440
32	D	14180	4090	5.26	21510	ND	-	-	-	-
6	D	14840	4230	12.1	51180	17.8†	14900	4410	10.9	48070
26	G	13710	3100	4.2	13020	69.1	13710	3300	4.45	14690
3	G	13900	~4000	2.06	~8240	17.8	13780	3120	5.44	16970
3'	G	13920	~3600	6.3	~22680	51.0	13610	3370	6.25	21060
3"	G	13700	3000	11.1	33300	94	13700	3000	13.4	40200

* Peak position, full width at half-height, intensity, and integrated intensity

† Data taken 2 months after irradiation when the peak was symmetric. Spectra taken immediately after irradiation were slightly assymetric with more 720 nm component

Am Min Hofmeister + Rossman Table 3 1990 499

Table 5. EPR Parameters for Amazonite Signal at 77K

Sample Number		Optical II,* cm-2	EPR g_{eff}	DII¶	g_{eff}	DII	g_{eff}	DII	ν GHz
12	B	41210	1.829	0.0663	1.564	0.38	1.390	0.20	9.194
9	B	34050	1.837	0.0428	1.560	0.186	1.383	§	9.194
			1.815	0.010	1.62	0.11	1.376		
				0.0528		0.297		0.167	
21	T	59740	1.336	0.076	1.562	0.330	1.387	0.163	9.194
			1.826	0.012	1.540	0.136	1.381	0.062	
			1.802	0.008	1.526	0.06	1.377	0.062	
				0.098		0.526		0.287	
19'	Dt	56700	1.835	0.088	1.562	0.620	1.380	0.381	9.165
Uncertainty		200	0.002	0.002	0.002	0.002	0.002	0.01	0.001

* Integrated intensity of beta and alpha polarizations summed together
¶ Doubly integrated intensity calculated for x100 gain, 100 mg sample, 1 mw power, 1 Gauss modulation
§ Two signals were not resolvable
† Sample 19' received a 28 MRad dose of gamma radiation

Am MIN Hofmeister + Rossman Table 5 190 52%

Table 7. Dehydration and Decoloration of Amazonite*

Sample Number	Temp °C	I(Color) cm-1	I(3620)¶ cm-1	Structural H_2O, ppm	I(3440)§ cm-1	Fluid Inclusion H_2O, ppm
12	-	10.9	0.34	19	4.44	1450
	250	10.4	0.196	11	2.82	930
	300	10.0	0.429	25	5.0	1600
	350	9.23	0.173	10	2.39	790
	400	6.30	0.130	7.5	1.56	520
	500	3.80	0.087	5.0	1.11	370
	550	4.11	0.100	5.8	1.78	590
	650	5.2	0.130	7.5	0.87	290
	700	1.9	0.082	4.7	0.48	160
	750	1.6	0.089	5.0	0.50	170
	800	0.6	0.06	3.3	0.47	160
3"	-	10.0	0.64	37	2.0	670
	100	7.8	0.8	46	1.6	530
	200	7.4	0.75	43	1.5	500
	300	3.1	0.66	38	1.6	530
	450	1.8	0.60	34	1.5	500
	600	1.0	0.12	7	1.0	330
	800	0.2	0	0	0.7	230

* All samples were heated 1/2 hour. #12 was irradiated 40 MRads. #3" was irradiated 30 MRads.

¶ Absorptions due to fluid inclusions and clays were subtracted. Intensities were taken from the alpha polarization on (010).

§ Only intensity due to fluid inclusions is included from the alpha polarization on (010).

Am MIN Hofmeister & Rossman Table 7 190 529

AM-85-271

End of supplemental material.