

Craddock Affinati, S., Hoisch, T.D., Wells, M.L., and Vervoort, J.D., 2019, Pressure-temperature-time paths from the Funeral Mountains, California, reveal Jurassic retroarc underthrusting during early Sevier orogenesis: GSA Bulletin, <https://doi.org/10.1130/B35095.1>.

Data Repository

Table DR1. Locations of samples analyzed.

Table DR2. Mineral compositions, mineral modes and calculated bulk compositions used for P-T path modeling.

Table DR3. Output files produced by the modeling of P-T paths using the method of Moynihan and Pattison (2013).

Table DR1. Locations of samples analyzed

Sample	Easting	Northing
SCFM315-17A	511401	4060918
SCFM315-12C	511835	4060717
SCFM314-1MW	510683	4061819
SCFM315-16B	511030	4600595
SSFM307-7G	511172	4061138
SSFM307-7H	511172	4061138
SSFM307-8C	513736	4057569
UTM Zone	11S	
Datum	NAD83	

Table DR2. Mineral compositions, mineral modes and calculated bulk compositions used for *P-T* path modeling

SCFM314-1MW																					
	Weight Percent Oxide									Normalization ¹	Normalized Formula									Mineral Modes Used (%)	Point counted Mineral Modes (%)
	Na ₂ O	MgO	Al ₂ O ₃	K ₂ O	CaO	TiO ₂	FeO	SiO ₂	MnO		Na	Mg	Al	K	Ca	Ti ²	Fe	Si	Mn		
Plagioclase	6.920	0.017	26.528	0.057	7.638	0.003	0.070	58.293	0.000	8	0.601	0.001	1.401	0.003	0.367	0.000	0.005	2.612	0.000	5.657	5.657
Muscovite	1.216	0.622	35.459	9.438	0.023	0.342	1.048	45.295	0.013	11	0.132	0.063	2.827	0.809	0.002	0.017	0.059	3.064	0.001	30.303	30.303
Biotite	0.360	11.295	18.895	8.345	0.015	1.740	18.005	37.145	0.030	11	0.043	1.253	1.657	0.787	0.001	0.097	1.120	2.764	0.002	4.242	13.737
Quartz	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100.000	0.000	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	29.495	29.495
Garnet	0.000	2.261	20.651	0.000	3.778	0.000	32.707	36.596	3.951	12	0.000	0.306	2.000	0.000	0.353	0.000	2.268	3.000	0.073	2.626	2.626
Staurolite	0.026	1.578	55.297	0.005	0.004	0.461	12.612	27.735	0.048	46	0.014	0.648	17.964	0.002	0.001	0.096	2.907	7.644	0.011	12.525	12.525
Chlorite	0.003	16.316	23.439	0.023	0.016	0.071	21.241	24.615	0.030	14	0.000	2.562	2.910	0.003	0.002	0.006	1.871	2.593	0.003	15.152	5.657
Bulk Composition ³	0.734	3.458	25.643	3.140	0.553	0.259	7.498	54.041	0.057	10	0.140	0.506	2.970	0.394	0.058	0.000	0.616	5.311	0.005		
G1 Core ⁴	0.000	0.933	29.145	0.000	1.619	0.000	15.136	51.525	1.642		0.000	0.081	2.000	0.000	0.101	0.000	0.737	3.000	0.081		
G3 Core ⁴	0.000	0.934	29.163	0.000	1.845	0.000	15.083	51.556	1.420		0.000	0.081	2.000	0.000	0.115	0.000	0.734	3.000	0.070		

SCFM315-12C																					
	Weight Percent Oxide									Normalization ¹	Normalized Formula									Mineral Modes Used (%)	Point counted Mineral Modes (%)
	Na ₂ O	MgO	Al ₂ O ₃	K ₂ O	CaO	TiO ₂	FeO	SiO ₂	MnO		Na	Mg	Al	K	Ca	Ti ²	Fe	Si	Mn		
Plagioclase	8.997	0.003	23.544	0.060	4.314	0.011	0.021	62.910	0.002	8	0.772	0.000	1.227	0.003	0.204	0.000	0.002	2.783	0.000	14.526	not altered
Muscovite	2.136	0.365	37.002	7.971	0.013	0.289	0.735	45.540	0.020	11	0.229	0.036	2.910	0.674	0.000	0.014	0.041	3.038	0.001	36.421	
Biotite	0.169	10.274	19.379	8.083	0.198	1.517	17.485	36.077	0.000	11	0.021	1.169	1.743	0.782	0.016	0.087	1.116	2.754	0.000	4.211	
Quartz	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100.000	0.000	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	16.211	
Garnet	0.000	2.141	21.052	0.000	3.835	0.000	34.698	37.217	1.059	12	0.000	0.257	2.000	0.000	0.331	0.000	2.339	3.000	0.072	6.947	
Staurolite	0.003	1.724	55.763	0.010	0.001	0.617	13.746	28.779	0.057	46	0.002	0.690	17.660	0.003	0.000	0.125	3.089	7.733	0.013	10.105	
Chlorite	0.006	16.327	24.278	0.007	0.000	0.094	23.072	25.577	0.008	14	0.001	2.472	2.906	0.001	0.000	0.007	1.959	2.597	0.001	11.579	
Bulk Composition ³	1.893	2.805	28.928	3.092	0.924	0.251	8.586	49.948	0.116	10	0.353	0.402	3.275	0.379	0.095	0.000	0.690	4.798	0.009		
G1 Core ⁴	0.000	0.805	29.089	0.000	1.280	0.000	15.680	51.425	1.720		0.000	0.070	2.000	0.000	0.080	0.000	0.765	3.000	0.085		
G3 Core ⁴	0.000	0.805	29.095	0.000	1.280	0.000	15.581	51.437	1.892		0.000	0.070	2.000	0.000	0.080	0.000	0.760	3.000	0.089		

SCFM315-17A																					
	Weight Percent Oxide									Normalization ¹	Normalized Formula									Mineral Modes Used (%)	Point counted Mineral Modes (%)
	Na ₂ O	MgO	Al ₂ O ₃	K ₂ O	CaO	TiO ₂	FeO	SiO ₂	MnO		Na	Mg	Al	K	Ca	Ti ²	Fe	Si	Mn		
Plagioclase	8.914	0.010	23.403	0.079	3.988	0.000	0.021	62.858	0.000	8	0.768	0.001	1.225	0.004	0.190	0.000	0.002	2.792	0.000	26.155	20.204
Muscovite	2.011	0.530	36.306	8.091	0.005	0.419	0.861	45.210	0.009	11	0.217	0.053	2.879	0.690	0.000	0.021	0.048	3.042	0.000	6.341	4.898
Biotite	0.261	11.541	18.063	8.346	1.545	1.361	15.795	34.935	0.019	11	0.033	1.338	1.656	0.823	0.129	0.080	1.027	2.717	0.001	23.513	18.163
Quartz	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100.000	0.000	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	33.816	26.122
Garnet	0.000	3.000	21.131	0.000	2.760	0.000	33.711	37.357	2.043	12	0.000	0.359	2.000	0.000	0.237	0.000	2.264	3.000	0.139	3.306	25.306
Staurolite	0.001	1.704	55.357	0.011	0.001	0.624	12.600	27.819	0.095	46	0.000	0.697	17.907	0.004	0.000	0.129	2.892	7.635	0.022	6.869	5.306
Bulk Composition ³	2.345	3.141	18.299	2.564	1.472	0.414	6.633	62.291	0.111	10	0.439	0.452	2.082	0.316	0.152	0.000	0.536	6.014	0.009		
G3 Core ⁴	0.000	1.304	29.192	0.000	1.172	0.000	15.181	51.608	1.511		0.000	0.113	2.000	0.000	0.073	0.000	0.738	3.000	0.076		

SSFM307-7G																					
	Weight Percent Oxide									Normalization ¹	Normalized Formula									Mineral Modes Used (%)	Point counted Mineral Modes (%)
	Na ₂ O	MgO	Al ₂ O ₃	K ₂ O	CaO	TiO ₂	FeO	SiO ₂	MnO		Na	Mg	Al	K	Ca	Ti ²	Fe	Si	Mn		
Plagioclase	9.096	0.000	23.483	0.112	4.184	0.093	0.118	63.779	0.065	8	0.772	0.000	1.212	0.006	0.196	0.003	0.004	2.792	0.002	27.505	23.153
Muscovite	2.134	0.433	36.678	7.977	0.085	0.665	1.169	46.400	0.139	11	0.272	0.042	2.837	0.668	0.006	0.033	0.064	3.045	0.008	7.608	6.404
Biotite	0.365	12.311	19.205	8.724	0.057	1.898	16.659	36.736	0.114	11	0.052	1.358	1.675	0.824	0.004	0.106	1.031	2.719	0.007	38.623	32.512
Quartz	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100.000	0.000	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	7.900	6.650
Garnet	0.000	3.038	21.203	0.000	3.881	0.000	32.254	37.483	2.142	12	0.000	0.363	2.000	0.000	0.333	0.000	2.159	3.000	0.145	5.197	20.197
Staurolite	0.055	1.661	54.978	0.050	0.057	0.804	12.970	27.924	0.203	46	0.030	0.682	17.841	0.018	0.017	0.166	2.987	7.689	0.047	10.534	8.867
Chlorite	0.000	1.965	49.993	0.000	0.000	0.711	12.738	24.129	0.079	14	0.000	0.271	5.450	0.000	0.000	0.049	0.985	2.232	0.006	2.633	2.217
Bulk Composition ³	2.530	5.233	25.801	3.963	1.337	0.922	10.827	47.120	0.252	10	0.463	0.736	2.869	0.477	0.135	0.000	0.854	4.446	0.020		
G1 Core ⁴	0.000	0.726	29.164	0.000	2.310	0.000	13.481	51.559	2.760		0.000	0.063	2.000	0.000	0.144	0.000	0.656	3.000	0.136		
G3 Core ⁴	0.000	0.761	29.174	0.000	2.439	0.000	13.979	51.576	2.070		0.000	0.066	2.000	0.000	0.152	0.000	0.680	3.000	0.102		
G4 Core ⁴	0.000	0.842	29.180	0.000	2.263	0.000	13.632	51.586	2.497		0.000	0.073	2.000	0.000	0.141	0.000	0.663	3.000	0.123		
G5 Core ⁴	0.000	0.727	29.172	0.000	2.407	0.000	13.546	51.572	2.578		0.000	0.063	2.000	0.000	0.150	0.000	0.659	3.000	0.127		

SSFM307-7H																					
	Weight Percent Oxide										Normalized Formula										
	Na ₂ O	MgO	Al ₂ O ₃	K ₂ O	CaO	TiO ₂	FeO	SiO ₂	MnO	Normalization ¹	Na	Mg	Al	K	Ca	Ti ²	Fe	Si	Mn	Mineral Modes Used (%)	Point counted Mineral Modes (%)
Plagioclase	8.860	0.000	23.571	0.060	4.768	0.000	0.000	63.180	0.003	8	0.756	0.000	1.223	0.003	0.225	0.000	0.000	2.781	0.000	18.097	15.211
Muscovite	2.228	0.560	36.608	8.427	0.005	0.393	0.795	46.478	0.004	11	0.284	0.055	2.837	0.707	0.000	0.019	0.044	3.056	0.000	9.719	8.169
Biotite	0.333	12.082	18.667	9.247	0.020	1.777	16.738	36.441	0.048	11	0.048	1.349	1.648	0.884	0.002	0.100	1.049	2.730	0.003	41.220	34.648
Quartz	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100.000	0.000	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	12.735	10.704
Garnet	0.000	2.982	21.177	0.000	3.605	0.000	32.636	37.437	2.165	12	0.000	0.356	2.000	0.000	0.310	0.000	2.187	3.000	0.147	12.197	26.197
Staurolite	0.028	1.851	55.070	0.000	0.002	0.643	12.852	27.969	0.062	46	0.015	0.758	17.842	0.000	0.001	0.133	2.954	7.688	0.015	1.341	1.127
Chlorite	0.006	17.700	22.910	0.000	0.024	1.124	21.217	25.012	0.057	14	0.001	2.707	2.771	0.000	0.003	0.087	1.821	2.567	0.005	4.692	3.944
Bulk Composition ³	1.756	6.295	20.227	4.551	1.369	0.821	13.483	48.309	0.384	10	0.328	0.904	2.296	0.559	0.141	0.000	1.086	4.645	0.031		
G1 Core ⁴	0.000	0.807	29.165	0.000	2.182	0.000	13.974	51.559	2.131		0.000	0.070	2.000	0.000	0.136	0.000	0.680	3.000	0.114		
G5 Core ⁴	0.000	0.831	29.178	0.000	2.279	0.000	13.426	51.585	2.700		0.000	0.072	2.000	0.000	0.142	0.000	0.653	3.000	0.133		

SSFM307-8D																					
	Weight Percent Oxide										Normalized Formula										
Mineral	Na ₂ O	MgO	Al ₂ O ₃	K ₂ O	CaO	TiO ₂	FeO	SiO ₂	MnO	Normalization ¹	Na	Mg	Al	K	Ca	Ti ²	Fe	Si	Mn	Mineral Modes Used (%)	Point counted Mineral Modes (%)
Plagioclase	8.873	0.000	23.753	0.073	4.675	0.000	0.061	62.584	0.000	8	0.761	0.000	1.238	0.004	0.222	0.000	0.002	2.768	0.000	1.503	1.440
Muscovite	1.997	0.393	37.078	7.790	0.000	0.209	0.758	46.572	0.005	11	0.284	0.055	2.837	0.707	0.000	0.019	0.044	3.056	0.000	44.660	42.798
Quartz	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100.000	0.000	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	36.071	34.568
Garnet	0.000	2.057	21.096	0.000	4.862	0.000	34.051	37.296	0.638	12	0.000	0.247	2.000	0.000	0.419	0.000	2.291	3.000	0.043	4.025	8.025
Staurolite	0.001	1.761	55.115	0.005	0.000	0.605	12.787	28.456	0.062	46	0.000	0.717	17.753	0.002	0.000	0.124	2.923	7.777	0.012	1.074	1.029
Chlorite	0.000	12.587	22.407	0.095	0.025	0.028	26.283	25.899	0.008	14	0.000	1.985	2.795	0.013	0.003	0.002	2.326	2.741	0.001	12.668	12.140
Bulk Composition ³	1.018	1.973	21.866	3.503	0.348	0.106	5.934	61.203	0.041	10	0.194	0.289	2.533	0.439	0.037	0.000	0.488	6.016	0.003		
G2 Core ⁴	0.000	0.773	29.178	0.000	2.504	0.000	14.865	51.584	1.096		0.000	0.067	2.000	0.000	0.156	0.000	0.723	3.000	0.054		

Annotations

- ¹ Normalization factor for each mineral, based on the number of anhydrous oxygens in the chemical formula. The total bulk composition was normalized to 10 cations.
- ² Ti was analyzed but set to zero in the bulk composition as the modeled system excluded Ti.
- ³ See text for explanation of the bulk composition calculation from the mineral compositions and modes dreported in this table.
- ⁴ Composition of garnet core used for first point of P-T path and for garnet isopleth calculations.