

Hames, Cheney, and Tracy, 2007, 40Ar/39Ar Age Variation in Muscovite of the Gassetts Schist and Associated Gneiss, Vermont Appalachians
Supplementary Data Set for data Repository: ~ 100 analyses determined for muscovite of two thin sections on the MIT JEOL733 Electron Microprobe.
Operator, W. Hames. Beam characteristics, 10 nA, 10 kV, 5 µm diameter; 20 sec. counting time for Na, K; Bence-Albee data reduction for standards and sample data.
Analyses in bold are presented in Table 1 of the publication; data were obtained with automated line traverses; no attempt was made to distinguish relative position (i.e., core vs. rim) among these data.
Other muscovite compositional data of this study were determined by J. Cheney at the University of Massachusetts Electron Microprobe facility and may be obtained through J. Cheney.

Thin Section Gassetts-1A, Potassic Gneiss (#1-56)

Wt.% Ox.	4	8	12	14	15	16	17	18	39	44	1	2	3	5	6	7	9	10	11	13	19	20	21	22	23	24
SiO2	46.57	47.35	47.28	47.89	47.81	47.91	49.09	48.34	48.40	48.15	52.28	51.08	49.45	36.00	36.19	36.04	47.06	46.85	46.50	46.30	44.77	47.14	48.20	47.74	48.19	47.81
TiO2	1.41	1.31	1.43	1.26	1.31	1.25	1.18	1.30	1.40	1.38	1.38	1.51	1.47	3.36	3.46	3.50	1.60	1.50	1.37	1.38	6.13	1.53	1.39	1.40	1.31	1.34
Al2O3	28.46	29.31	29.41	28.54	29.26	29.21	27.27	27.92	28.18	29.32	29.69	30.06	29.87	16.09	16.27	15.98	29.41	29.54	30.13	29.52	25.30	29.50	29.00	29.34	28.46	28.69
FeO	3.61	3.53	3.86	3.86	3.72	3.79	3.67	3.87	4.09	3.56	3.97	4.03	3.71	23.12	23.89	23.55	3.98	3.83	3.57	3.69	3.92	4.10	3.73	3.78	3.67	3.57
MnO	0.05	0.00	0.00	0.08	0.00	0.04	0.05	0.06	0.00	0.06	0.00	0.00	0.00	0.15	0.09	0.13	0.04	0.09	0.00	0.01	0.05	0.00	0.01	0.00	0.01	0.00
MgO	1.34	1.76	1.69	1.94	1.70	1.75	2.38	2.12	1.85	1.74	1.97	1.53	1.56	7.72	7.93	7.88	1.55	1.48	1.44	1.51	1.57	1.60	1.89	1.69	1.90	1.85
CaO	0.01	0.05	0.00	0.00	0.00	0.05	0.04	0.02	0.02	0.00	0.00	0.00	0.00	0.04	0.07	0.00	0.00	0.00	0.00	0.00	4.41	0.03	0.00	0.00	0.00	0.00
Na2O	0.21	0.31	0.18	0.07	0.30	0.26	0.21	0.18	0.19	0.31	0.22	0.19	0.12	0.00	0.00	0.07	0.22	0.25	0.28	0.20	0.17	0.26	0.23	0.17	0.28	0.22
K2O	10.26	10.77	10.99	10.89	11.06	10.68	10.71	10.88	10.94	10.15	9.45	9.72	7.13	9.69	9.81	9.81	10.99	10.90	10.86	10.67	9.27	10.93	11.07	10.95	11.01	10.96
TOTAL	91.91	94.39	94.83	94.53	95.14	94.92	94.59	94.69	95.06	94.68	98.95	98.12	93.31	96.16	97.70	96.96	94.84	94.43	94.14	93.30	95.58	95.08	95.53	95.07	94.83	94.43
Atoms																										
Si	6.51	6.46	6.44	6.53	6.48	6.50	6.67	6.58	6.57	6.52	6.70	6.63	6.63	5.56	5.51	5.53	6.42	6.41	6.37	6.40	6.16	6.41	6.51	6.47	6.55	6.52
Ti	0.15	0.13	0.15	0.13	0.13	0.13	0.12	0.13	0.14	0.14	0.13	0.15	0.15	0.39	0.40	0.40	0.16	0.15	0.14	0.14	0.63	0.16	0.14	0.14	0.13	0.14
Al	4.69	4.71	4.72	4.59	4.67	4.67	4.37	4.48	4.51	4.68	4.48	4.59	4.72	2.93	2.92	2.89	4.72	4.76	4.86	4.81	4.10	4.73	4.61	4.69	4.56	4.61
Fe	0.42	0.40	0.44	0.44	0.42	0.43	0.42	0.44	0.46	0.40	0.43	0.44	0.42	2.98	3.04	3.02	0.45	0.44	0.41	0.43	0.45	0.47	0.42	0.43	0.42	0.41
Mg	0.28	0.36	0.34	0.39	0.34	0.35	0.48	0.43	0.37	0.35	0.38	0.30	0.31	1.78	1.80	1.80	0.31	0.30	0.29	0.31	0.32	0.32	0.38	0.34	0.39	0.38
Ca	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00	0.00
Na	0.06	0.08	0.05	0.02	0.08	0.07	0.06	0.05	0.05	0.08	0.06	0.05	0.03	0.00	0.00	0.02	0.06	0.07	0.07	0.05	0.04	0.07	0.06	0.05	0.07	0.06
K	1.83	1.87	1.91	1.90	1.91	1.85	1.86	1.89	1.89	1.75	1.54	1.61	1.22	1.91	1.90	1.92	1.91	1.90	1.90	1.88	1.63	1.90	1.91	1.89	1.91	1.91
IV Al	1.49	1.54	1.56	1.47	1.52	1.50	1.33	1.42	1.43	1.48	1.30	1.37	1.37	2.44	2.49	2.47	1.58	1.59	1.63	1.60	1.84	1.59	1.49	1.53	1.45	1.48
VI Al	3.20	3.17	3.15	3.12	3.16	3.17	3.04	3.07	3.08	3.19	3.19	3.22	3.36	0.48	0.43	0.42	3.14	3.17	3.23	3.21	2.26	3.14	3.12	3.16	3.11	3.13
X Site	1.89	1.96	1.95	1.91	1.99	1.92	1.92	1.94	1.95	1.83	1.60	1.66	1.25	1.91	1.92	1.94	1.97	1.97	1.97	1.94	2.32	1.97	1.97	1.94	1.98	1.96
X Par	0.03	0.04	0.02	0.01	0.04	0.04	0.03	0.03	0.03	0.04	0.03	0.03	0.02	0.00	0.00	0.01	0.03	0.03	0.04	0.03	0.02	0.03	0.03	0.02	0.04	0.03
X Mus	0.97	0.95	0.98	0.99	0.96	0.96	0.97	0.97	0.97	0.96	0.97	0.97	0.98	1.00	0.99	0.99	0.97	0.97	0.96	0.97	0.70	0.96	0.97	0.98	0.96	0.97
S(Fe+Mg)	0.70	0.76	0.78	0.83	0.76	0.78	0.90	0.87	0.84	0.75	0.80	0.73	0.73	4.76	4.84	4.82	0.77	0.74	0.70	0.74	0.77	0.79	0.80	0.77	0.80	0.78

Thin Section Gassetts-7A, Aluminous Schist (#57-100)																											
56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
47.49	46.79	46.89	46.48	46.32	46.37	46.92	47.73	47.47	46.42	46.43	45.98	47.38	46.29	47.47	46.49	46.05	46.09	45.02	45.91	45.88	45.14	44.87	45.94	45.23	45.63	45.30	44.37
1.57	0.60	0.53	0.45	0.50	0.49	0.49	0.67	0.62	0.55	0.41	0.42	0.65	0.55	0.50	0.44	0.51	0.42	0.36	0.43	0.54	0.34	0.35	0.41	0.38	0.38	0.35	0.27
30.56	32.91	32.57	33.95	33.70	34.24	33.53	32.11	31.45	33.92	34.50	33.04	30.44	30.93	33.06	31.73	28.38	29.34	29.36	29.94	30.06	24.80	24.99	24.53	25.30	24.20	23.08	22.67
3.96	2.40	2.45	2.48	2.50	2.67	2.32	3.17	2.88	2.65	2.54	2.63	2.81	2.93	2.46	2.72	2.83	2.40	2.69	2.49	2.60	1.79	2.14	2.27	2.19	2.28	2.57	2.07
0.05	0.09	0.01	0.05	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.05	0.00	0.03	0.00	0.00	0.06	0.05	0.00	0.00	0.01	0.01	0.04
1.56	0.97	1.03	0.91	0.88	0.83	0.95	1.62	1.46	0.99	0.79	0.78	1.47	1.13	0.76	1.01	0.96	0.91	0.66	0.86	0.91	0.68	0.70	0.90	0.68	0.79	0.84	0.61
0.01	0.00	0.03	0.00	0.00	0.00	0.05	0.02	0.00	0.03	0.02	0.02	0.00	0.00	0.04	0.06	0.00	0.02	0.00	0.01	0.00	0.00	0.05	0.01	0.05	0.01	0.02	0.00
0.30	1.92	1.90	2.15	2.29	2.22	2.03	1.75	1.53	2.19	2.31	2.42	1.59	2.01	2.16	2.32	2.37	2.26	1.93	2.28	2.33	1.86	1.99	2.08	2.08	2.07	2.19	2.11
10.48	8.33	8.46	8.11	8.15	8.06	8.28	8.53	8.49	7.92	7.84	8.14	8.86	8.33	8.35	8.16	8.05	8.09	8.22	7.98	8.01	7.51	7.12	7.26	7.24	7.04	6.60	6.36
95.99	94.01	93.87	94.57	94.34	94.87	94.57	95.64	93.90	94.67	94.85	93.42	93.21	92.17	94.83	92.94	89.21	89.50	88.27	89.90	90.32	82.19	82.25	83.42	83.14	82.40	80.94	78.49
6.37	6.30	6.33	6.22	6.22	6.19	6.28	6.35	6.41	6.21	6.19	6.25	6.46	6.39	6.34	6.35	6.57	6.53	6.48	6.47	6.45	6.91	6.87	6.93	6.85	6.96	7.04	7.08
0.16	0.06	0.05	0.05	0.05	0.05	0.05	0.07	0.06	0.06	0.04	0.04	0.07	0.06	0.05	0.05	0.05	0.04	0.04	0.05	0.06	0.04	0.04	0.05	0.04	0.04	0.04	0.03
4.83	5.22	5.18	5.36	5.33	5.39	5.28	5.03	5.00	5.34	5.42	5.29	4.89	5.03	5.20	5.11	4.77	4.89	4.98	4.97	4.98	4.47	4.50	4.36	4.51	4.35	4.22	4.26
0.44	0.27	0.28	0.28	0.28	0.30	0.26	0.35	0.33	0.30	0.28	0.30	0.32	0.34	0.27	0.31	0.34	0.28	0.32	0.29	0.30	0.23	0.27	0.29	0.28	0.29	0.33	0.28
0.31	0.20	0.21	0.18	0.18	0.16	0.19	0.32	0.29	0.20	0.16	0.16	0.30	0.23	0.15	0.21	0.20	0.19	0.14	0.18	0.19	0.16	0.16	0.20	0.15	0.18	0.19	0.14
0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00
0.08	0.50	0.50	0.56	0.60	0.57	0.53	0.45	0.40	0.57	0.60	0.64	0.42	0.54	0.56	0.61	0.65	0.62	0.54	0.62	0.63	0.55	0.59	0.61	0.61	0.61	0.66	0.65
1.79	1.43	1.46	1.38	1.40	1.37	1.41	1.45	1.46	1.35	1.33	1.41	1.54	1.47	1.42	1.42	1.46	1.46	1.51	1.43	1.44	1.47	1.39	1.40	1.40	1.37	1.31	1.29
1.63	1.70	1.67	1.78	1.78	1.81	1.72	1.65	1.59	1.79	1.81	1.75	1.54	1.61	1.66	1.65	1.43	1.47	1.52	1.53	1.55	1.09	1.13	1.07	1.15	1.04	0.96	0.92
3.20	3.53	3.51	3.58	3.56	3.58	3.56	3.38	3.41	3.55	3.61	3.54	3.36	3.41	3.54	3.46	3.34	3.42	3.46	3.44	3.42	3.38	3.37	3.30	3.36	3.31	3.26	3.34
1.87	1.93	1.96	1.94	1.99	1.95	1.95	1.90	1.86	1.92	1.93	2.05	1.96	2.00	1.99	2.04	2.12	2.08	2.05	2.06	2.07	2.02	1.99	2.01	2.02	1.98	1.97	1.95
0.04	0.26	0.25	0.29	0.30	0.30	0.27	0.24	0.22	0.30	0.31	0.31	0.21	0.27	0.28	0.30	0.31	0.30	0.26	0.30	0.31	0.27	0.30	0.30	0.30	0.31	0.33	0.34
0.96	0.74	0.74	0.71	0.70	0.70	0.73	0.76	0.78	0.70	0.69	0.69	0.79	0.73	0.72	0.70	0.69	0.70	0.74	0.70	0.69	0.73	0.70	0.70	0.69	0.69	0.66	0.66
0.76	0.47	0.48	0.46	0.46	0.46	0.45	0.67	0.62	0.49	0.44	0.46	0.62	0.57	0.43	0.52	0.54	0.48	0.47	0.47	0.49	0.39	0.43	0.49	0.43	0.47	0.53	0.42

