APPENDIX A. $^{40}Ar/^{39}Ar$ incremental heating data for plagioclase and biotite from the Comanja Granite. Both biotite samples are aliquots from the same rock sample. Minerals were separated at Centro de Geociencias using magnetic and heavy-liquid procedures. Final selection of grains under the binocular microscope from fractions that ranged from 40-60 to 60-80 mesh. $^{40}Ar/^{39}Ar$ analysis was done by Amabel Ortega at the Geochronology Research Laboratory of Queen's University, Kingston, Ontario, Canada. Analytical procedures employed are described at Aranda-Gómez et al. (2007)

Reference:

Aranda-Gómez, J.J., Molina-Garza, R.S., McDowell, F.W., Vassallo-Morlaes, L.F., Ortega-Rivera, M.A., Solorio-Munguía, J.G., and Aguillón-Robles, A., 2007, The relationships between volcanism and extensión in the Mesa Central: the case of Pinos, Zacatecas, México: Revista Mexicana de Ciencias Geológicas, v. 24, n.2, p. 216-233.

AOR-191: MC-20 Felspr hp

Run date: 2002/03/14 **Can/Pos:** 165/P10 **J Value:** 0.001955
Printed: 2012/01/17 **Mass:** 275.0 mg ± 0.000012

Volume 39K: 80.78 x 1E-10 cm3 NTP **Approx.** 5.80% K
Integrated Age: 51.47 ± 0.69 Ma 2.71% Ca

Initial 40/36: 234.20 ± 567.27 (MSWD = 0.04, isochron between -0.41 and 3.83)
Correlation Age: 52.37 ± 7.79 Ma (96.7% of 39Ar, steps marked by >)

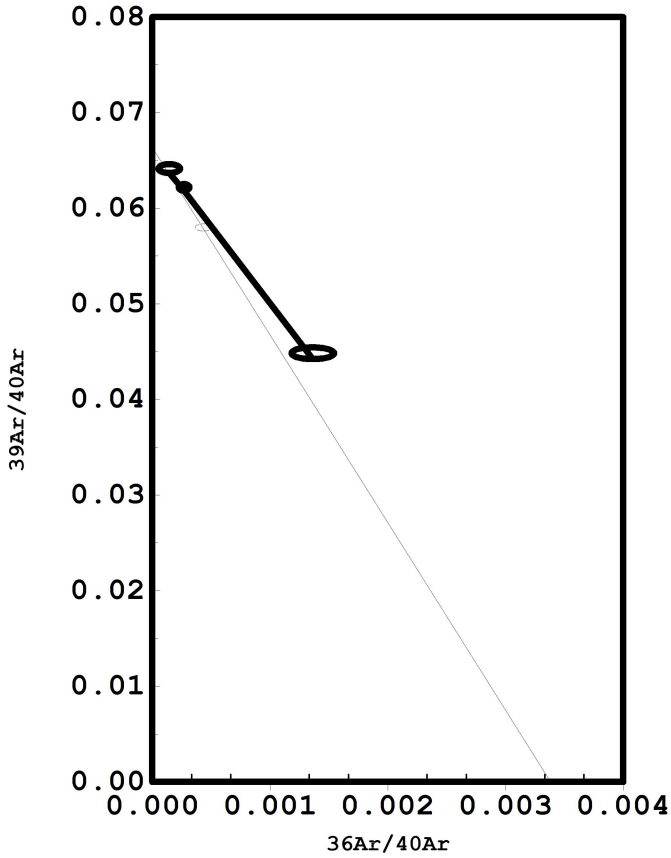
Plateau Age: 51.50 ± 0.69 Ma (99.4% of 39Ar, steps marked by <)

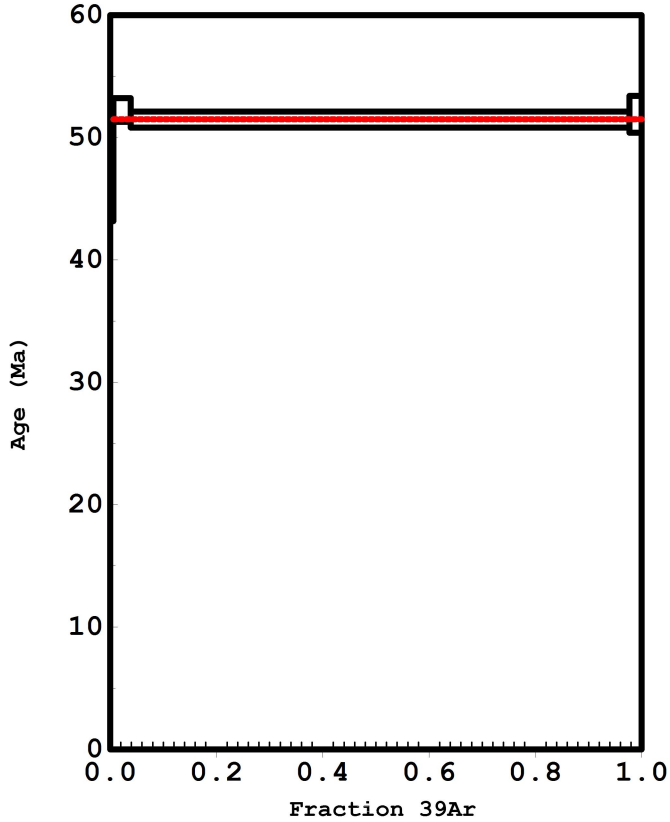
Power	36Ar/40Ar	39Ar/40Ar	r	Ca/K	%40Atm	%39Ar	40Ar*/39K	Age
3.00>	0.001363±0.000218	0.044831±0.000598	0.530	3.297	40.15	0.59	13.338±0.953	46.44±3.28
< 6.00	0.000435 0.000074	0.057987 0.000368	0.253	0.014	12.80	3.25	15.034 0.284	52.26 0.97
< 9.00>	0.000269 0.000046	0.062190 0.000344	0.132	0.475	7.94	93.84	14.801 0.191	51.46 0.65
<10.00>	0.000144 0.000091	0.064143 0.000464	0.001	0.100	4.23	2.32	14.930 0.436	51.90 1.49

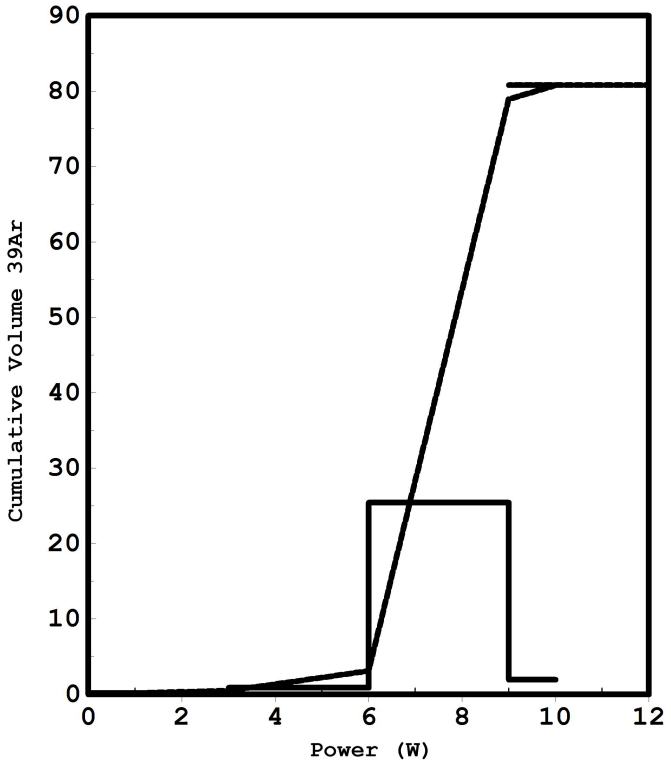
Power	40Ar	39Ar	38Ar	37Ar	36Ar	Blank 40Ar	Atmos 40/36
3.00>	10.918±0.019	0.509±0.004	0.070±0.003	0.011±0.002	0.020±0.000	0.244	286.044
< 6.00	45.857 0.059	2.688 0.015	0.124 0.008	0.009 0.003	0.027 0.000	0.468	286.044
< 9.00>	1221.303 1.346	76.325 0.400	2.069 0.129	0.130 0.047	0.351 0.000	0.349	286.044
<10.00>	29.805 0.083	1.962 0.012	0.066 0.007	0.017 0.000	0.013 0.000	0.566	286.044

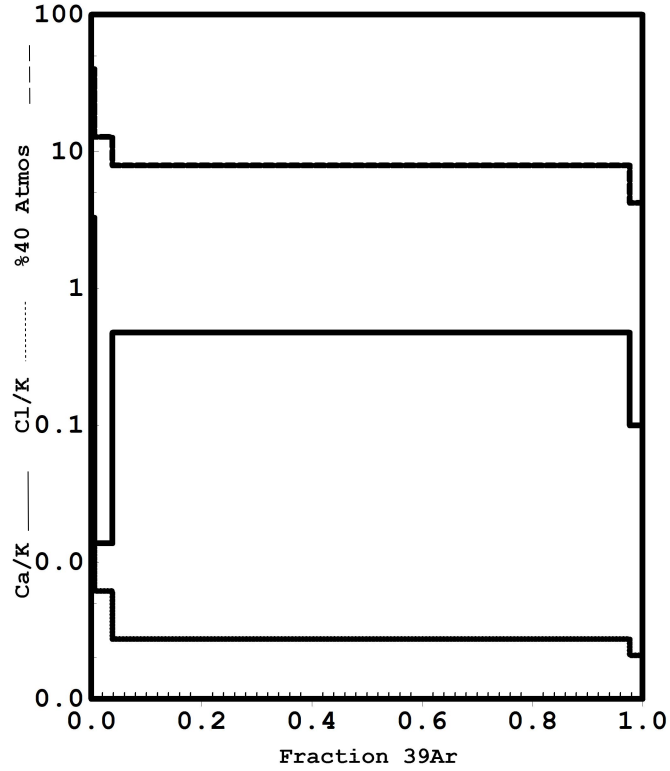
Measured volumes are x 1E-10 cm3 NTP. All errors are 2 x standard error. Intrim11 10-Jul-01

AOR-191: MC-20 Felspr hp









Measured volumes are x 1E-10 cm3 NTP. All errors are 2 x standard error. Intrim11 10-Jul-01

AOR-193: MC-20 Bio hp

Run date: 2002/03/14 **Can/Pos:** 165/P12 **J Value:** 0.001955
Printed: 2012/01/17 **Mass:** 18.0 mg ± 0.000012

Volume 39K: 7.67 x 1E-10 cm3 NTP **Approx.** 8.41% K
Integrated Age: 52.06 ± 0.65 Ma 4.90% Ca

Initial 40/36: 226.30 ± 152.29 (MSWD = 0.39, isochron between 0.29 and 2.41)
Correlation Age: 53.15 ± 1.84 Ma (100.0% of 39Ar, steps marked by >)

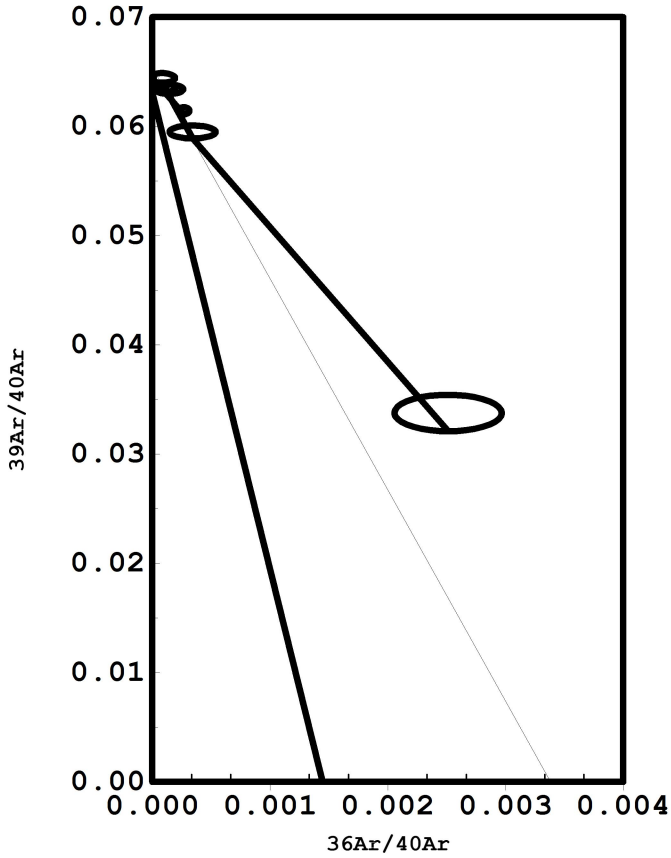
Plateau Age: 52.48 ± 0.63 Ma (98.3% of 39Ar, steps marked by <)

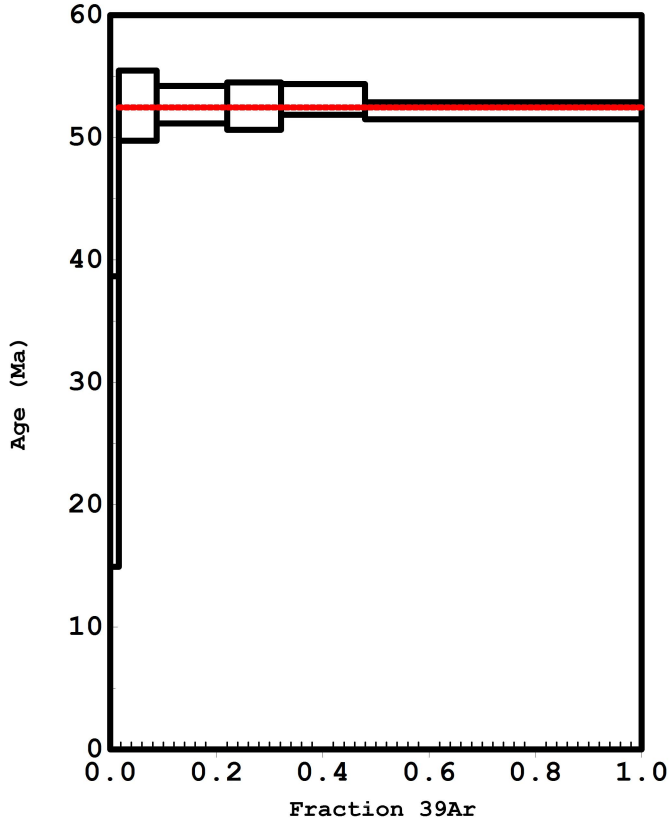
Power	36Ar/40Ar	39Ar/40Ar	r	Ca/K	%40Atm	%39Ar	40Ar*/39K	Age
2.00	0.002513±0.000666	0.033763±0.001595	0.699	9.645	74.08	1.66	7.654±3.414	26.79±11.86
< 3.00	0.000341 0.000210	0.059482 0.000594	0.334	0.241	9.93	7.07	15.139 0.837	52.62 2.87
< 4.00	0.000083 0.000112	0.064423 0.000438	0.184	0.057	2.32	13.31	15.162 0.448	52.70 1.53
< 5.00	0.000144 0.000119	0.063392 0.000434	0.000	0.001	4.11	10.10	15.125 0.566	52.57 1.94
< 7.00	0.000103 0.000097	0.063519 0.000383	0.246	0.556	2.88	15.82	15.288 0.367	53.13 1.26
< 9.00	0.000268 0.000046	0.061424 0.000327	0.115	0.597	7.78	52.05	15.012 0.201	52.18 0.69

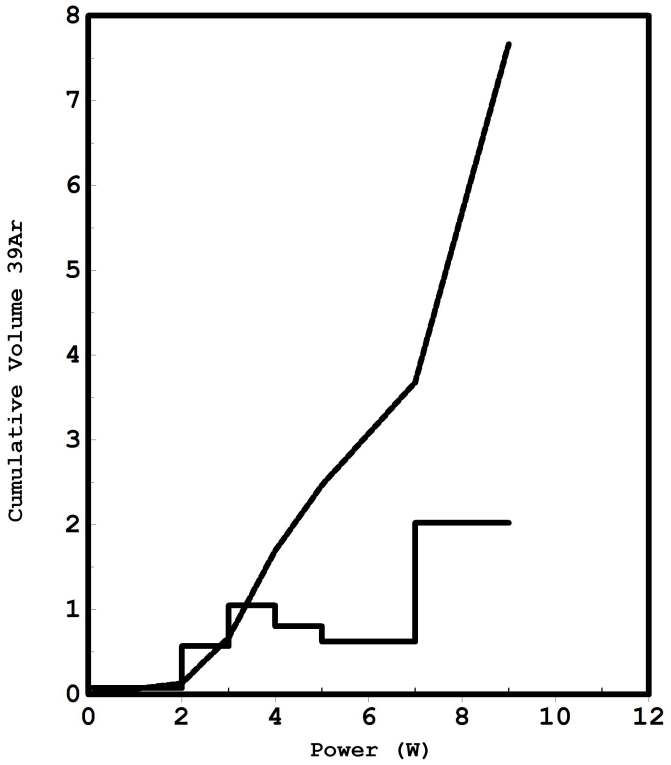
Power	40Ar	39Ar	38Ar	37Ar	36Ar	Blank 40Ar	Atmos 40/36
2.00	3.871±0.017	0.149±0.003	0.031±0.002	0.008±0.001	0.013±0.000	0.109	286.044
< 3.00	9.241 0.018	0.569 0.004	0.095 0.003	0.005 0.001	0.006 0.000	0.116	286.044
< 4.00	15.987 0.027	1.050 0.006	0.165 0.005	0.005 0.001	0.005 0.000	0.114	286.044
< 5.00	12.352 0.021	0.802 0.005	0.129 0.004	0.005 0.000	0.005 0.000	0.116	286.044
< 7.00	19.238 0.021	1.243 0.007	0.218 0.004	0.007 0.002	0.005 0.000	0.113	286.044
< 9.00	65.231 0.070	4.045 0.020	0.658 0.016	0.013 0.002	0.021 0.000	0.158	286.044

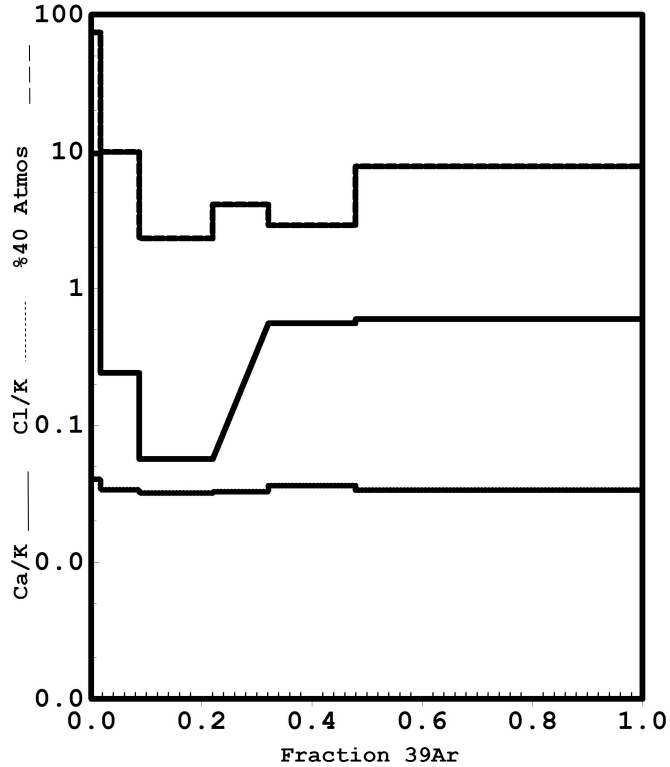
Measured volumes are x 1E-10 cm3 NTP. All errors are 2 x standard error. Intrim11 10-Jul-01

AOR-193: MC-20 Bio hp









Measured volumes are x 1E-10 cm3 NTP. All errors are 2 x standard error. Intrim11 10-Jul-01

AOR-L544: MC-20 Bio hp

Run date: 2004/04/17 **Can/Pos:** 0/P12 **J Value:** 0.001968
Printed: 2012/01/17 **Mass:** 9.9 mg ± 0.000014

Volume 39K: 4.71 x 1E-10 cm3 NTP **Approx.** 9.32% K
Integrated Age: 52.10 ± 0.49 Ma 0.18% Ca

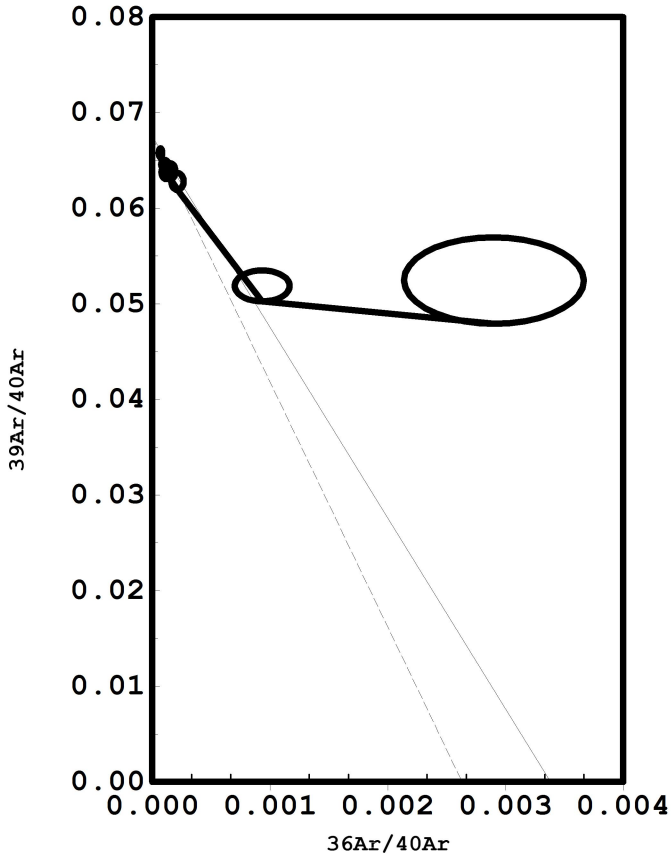
Initial 40/36: 379.91 ± 408.33 (MSWD = 7.84, isochron between 0.37 and 2.26)
Correlation Age: 51.85 ± 2.29 Ma (100.0% of 39Ar, steps marked by >)

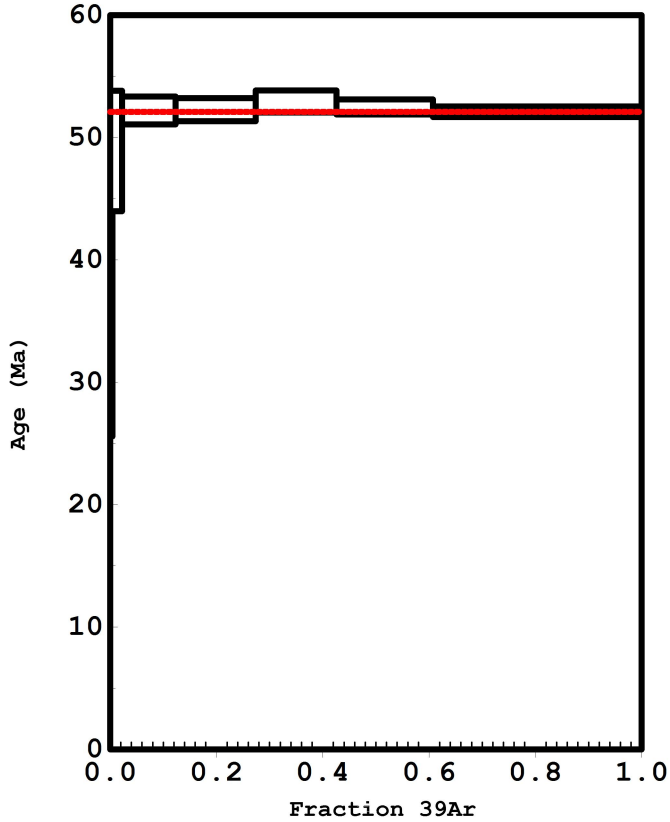
Power	36Ar/40Ar	39Ar/40Ar	r	Ca/K	%40Atm	%39Ar	40Ar*/39K	Age
0.75	0.002901±0.000789	0.052447±0.004518	0.250	0.165	85.59	0.45	2.721±4.514	9.64±15.94
2.00	0.000933 0.000234	0.051877 0.001621	0.038	0.099	27.52	1.76	13.964 1.423	48.91 4.92
2.50	0.000213 0.000052	0.062807 0.000895	0.029	0.042	6.27	10.10	14.921 0.331	52.21 1.14
3.50	0.000155 0.000041	0.063875 0.000828	0.021	0.036	4.56	15.10	14.941 0.274	52.28 0.95
5.00	0.000119 0.000042	0.063768 0.000715	0.013	0.026	3.48	15.17	15.135 0.259	52.95 0.89
6.00	0.000106 0.000030	0.064571 0.000498	0.003	0.004	3.10	18.16	15.006 0.181	52.51 0.62
7.00	0.000069 0.000015	0.065792 0.000468	0.014	0.006	2.01	39.27	14.893 0.126	52.12 0.44

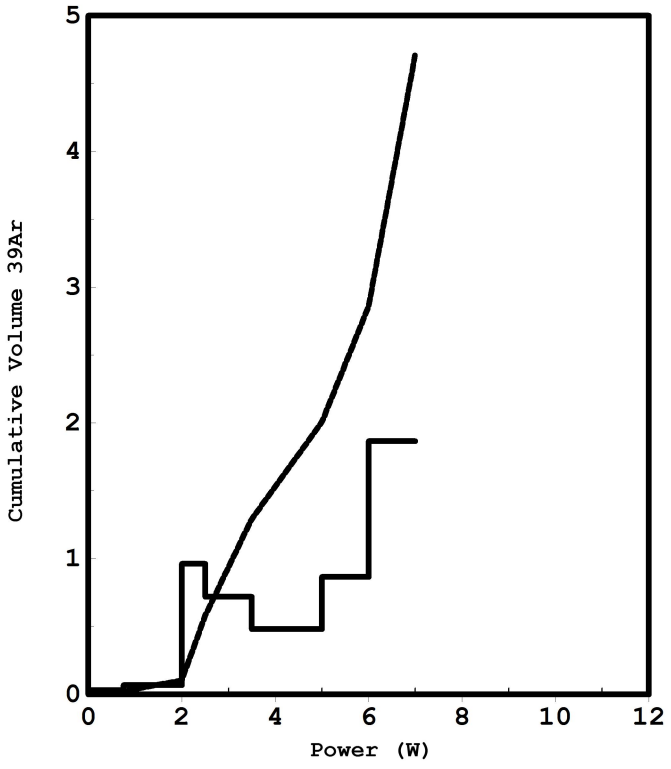
Power	40Ar	39Ar	38Ar	37Ar	36Ar	Blank 40Ar	Atmos 40/36
0.75	0.462±0.031	0.023±0.001	0.005±0.001	0.002±0.000	0.002±0.000	0.057	286.103
2.00	1.650 0.028	0.085 0.002	0.016 0.001	0.003 0.001	0.002 0.000	0.053	286.103
2.50	7.632 0.077	0.481 0.005	0.081 0.002	0.007 0.002	0.002 0.000	0.052	286.103
3.50	11.199 0.096	0.719 0.007	0.119 0.003	0.009 0.002	0.002 0.000	0.053	286.103
5.00	11.278 0.081	0.723 0.006	0.120 0.003	0.007 0.002	0.002 0.000	0.058	286.103
6.00	13.315 0.036	0.864 0.006	0.138 0.003	0.002 0.001	0.002 0.000	0.054	286.103
7.00	28.198 0.130	1.865 0.010	0.303 0.004	0.004 0.002	0.003 0.000	0.050	286.103

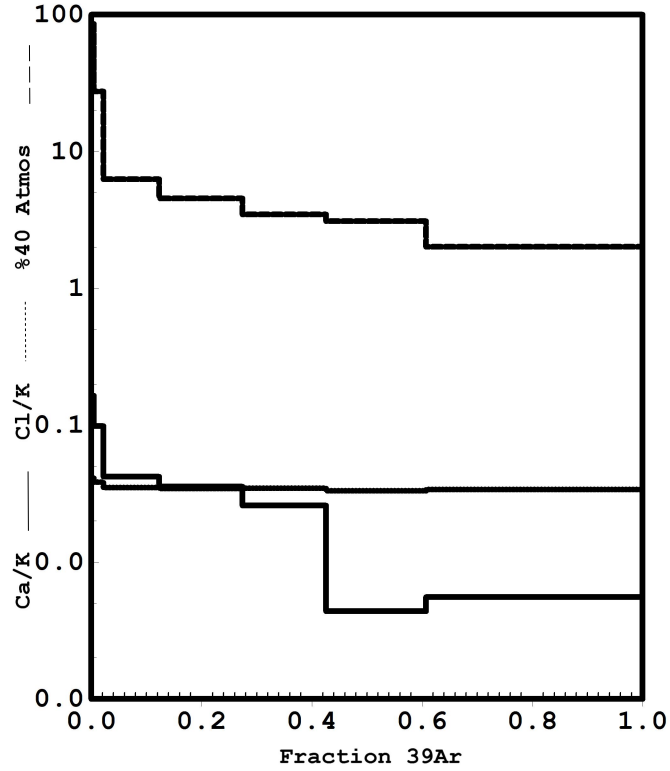
Measured volumes are x 1E-10 cm3 NTP. All errors are 2 x standard error. Intrim11 10-Jul-01

AOR-L544: MC-20 Bio hp









Measured volumes are x 1E-10 cm3 NTP. All errors are 2 x standard error. Intrim11 10-Jul-01