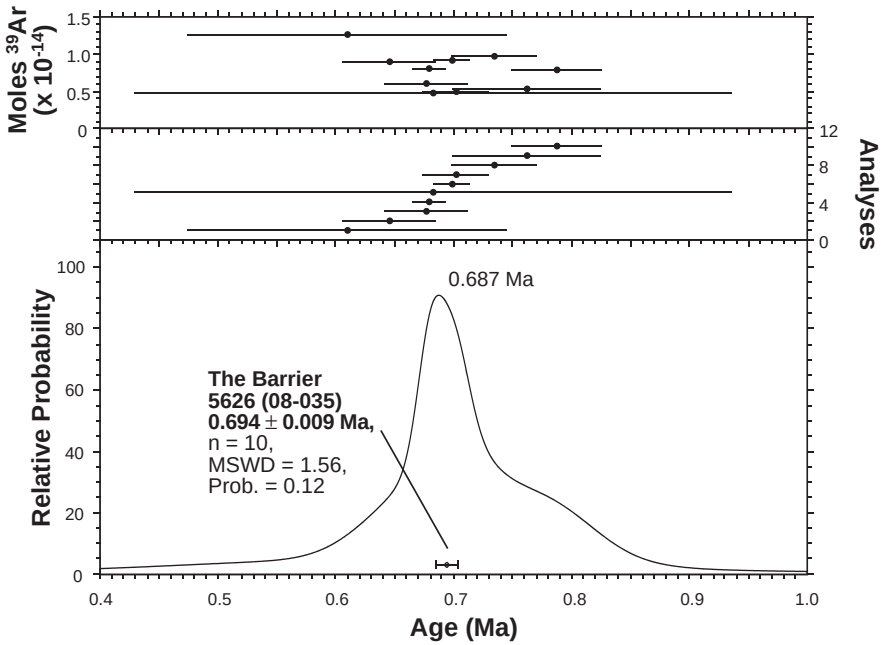
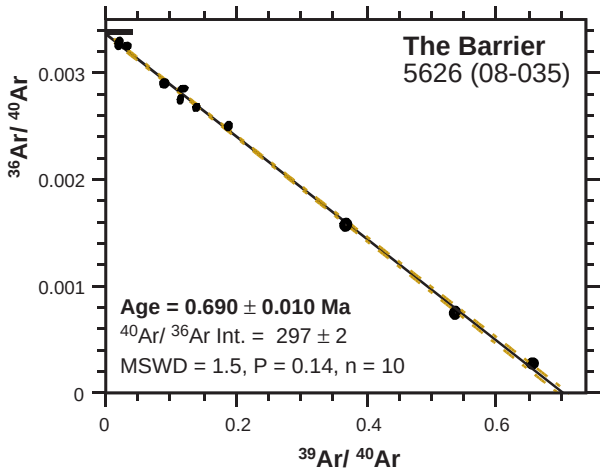
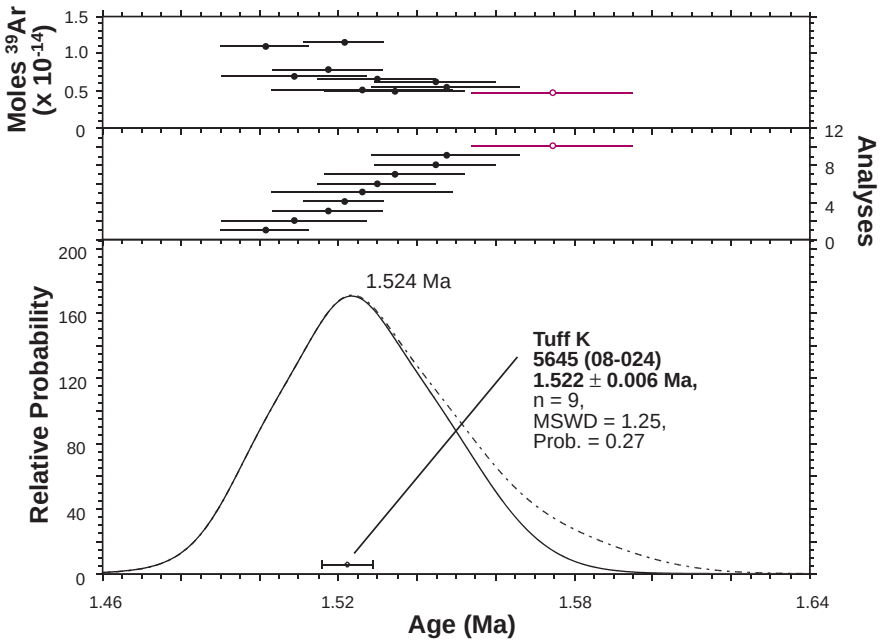
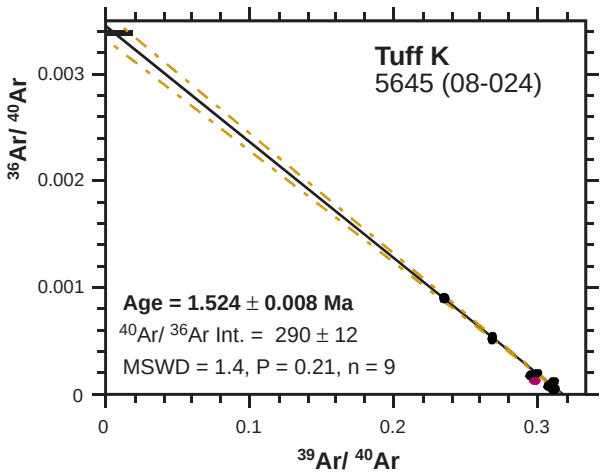
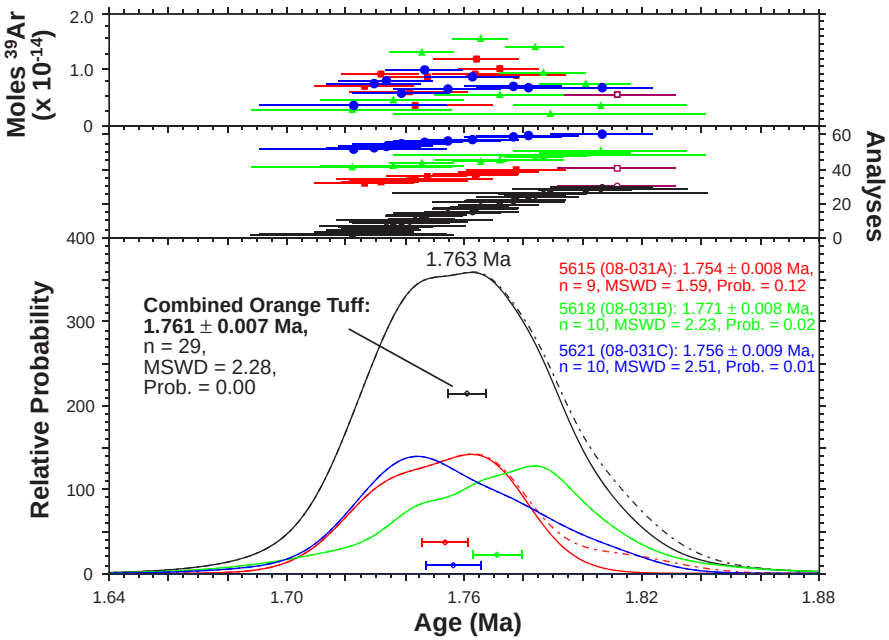
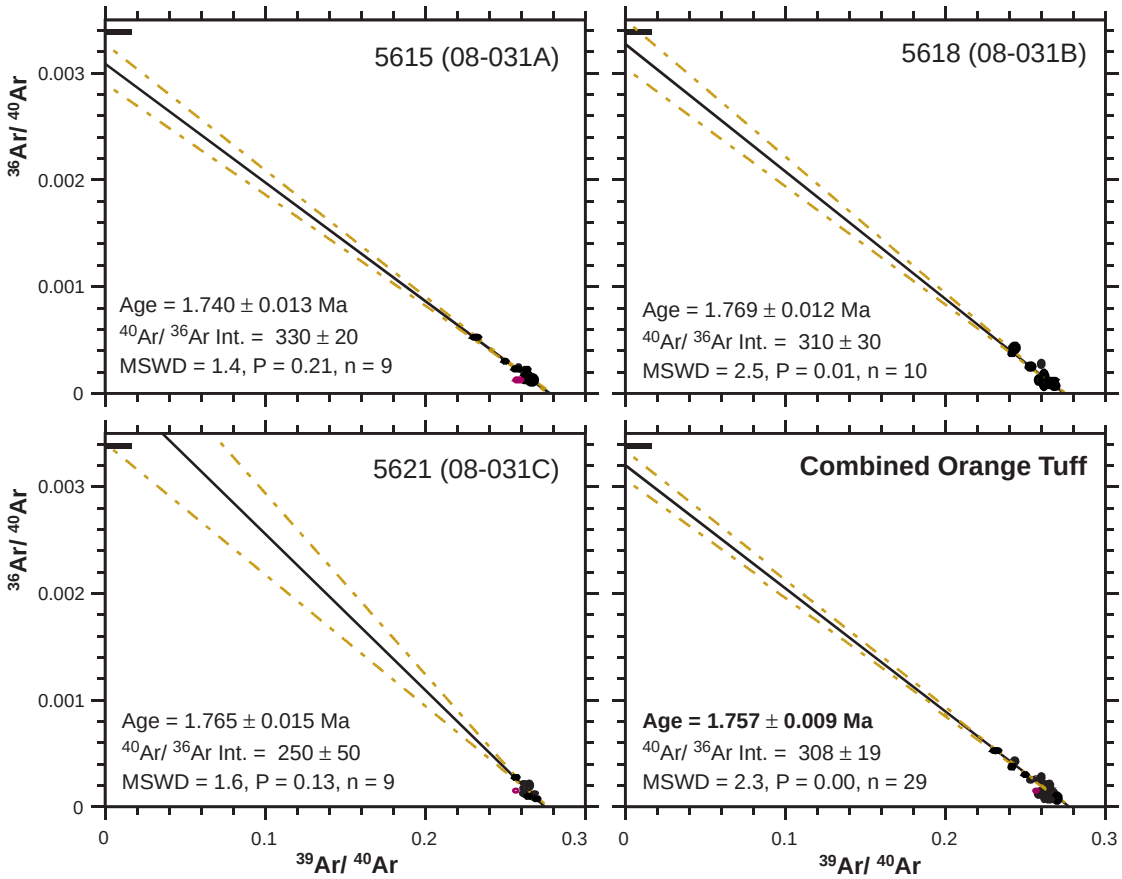

Moles 39Ar (x 10-14)
1.5
1.0
0.5
0
12
8
4
0
Analyses
100
80
60
40
20
0
Relative Probability
0.687 Ma
The Barrier
5626 (08-035)
0.694 ± 0.009 Ma,
n = 10,
MSWD = 1.56,
Prob. = 0.12
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Age (Ma)

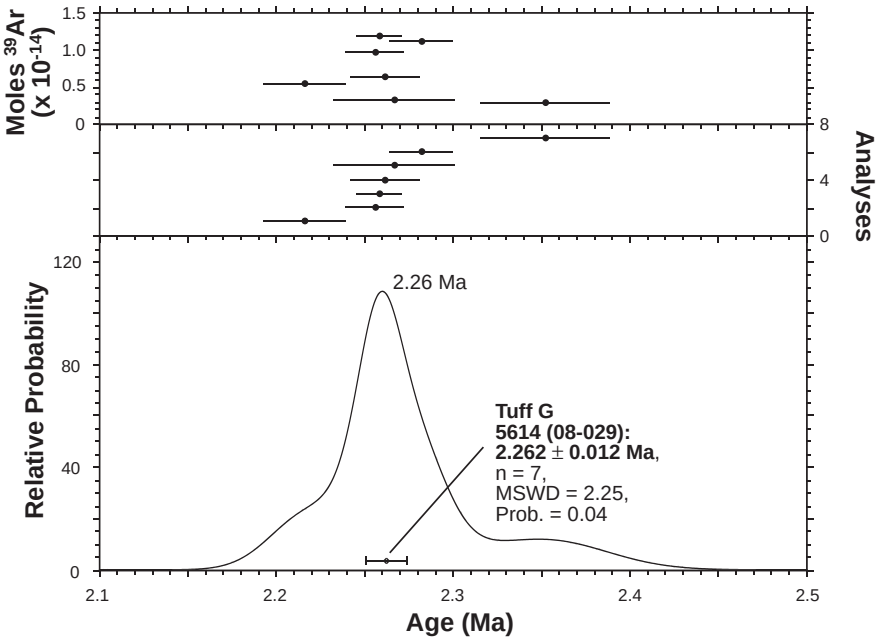

The Barrier
5626 (08-035)
36Ar/ 40Ar
0.003
0.002
0.001
0
Age = 0.690 ± 0.010 Ma
40Ar/ 36Ar Int. = 297 ± 2
MSWD = 1.5, P = 0.14, n = 10
0
0.2
0.4
0.6
39Ar/ 40Ar

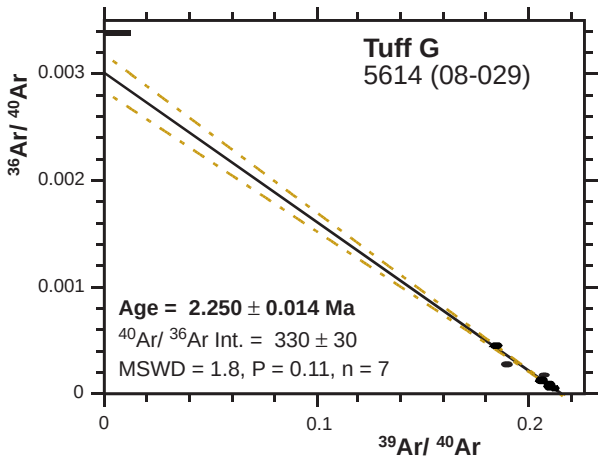

Moles 39Ar (x 10-14)
1.5
1.0
0.5
0
12
8
4
0
Analyses
200
160
120
80
40
0
Relative Probability
1.524 Ma
Tuff K
5645 (08-024)
1.522 ± 0.006 Ma,
n = 9,
MSWD = 1.25,
Prob. = 0.27
1.46
1.52
1.58
1.64
Age (Ma)

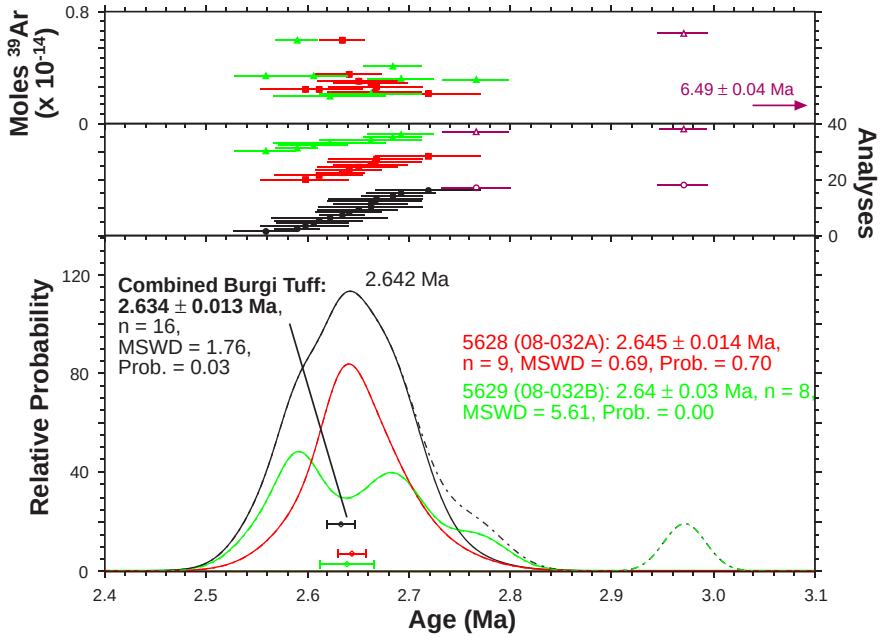

Tuff K
5645 (08-024)
36Ar/ 40Ar
0.003
0.002
0.001
0
Age = 1.524 ± 0.008 Ma
40Ar/ 36Ar Int. = 290 ± 12
MSWD = 1.4, P = 0.21, n = 9
0
0.1
0.2
0.3
39Ar/ 40Ar

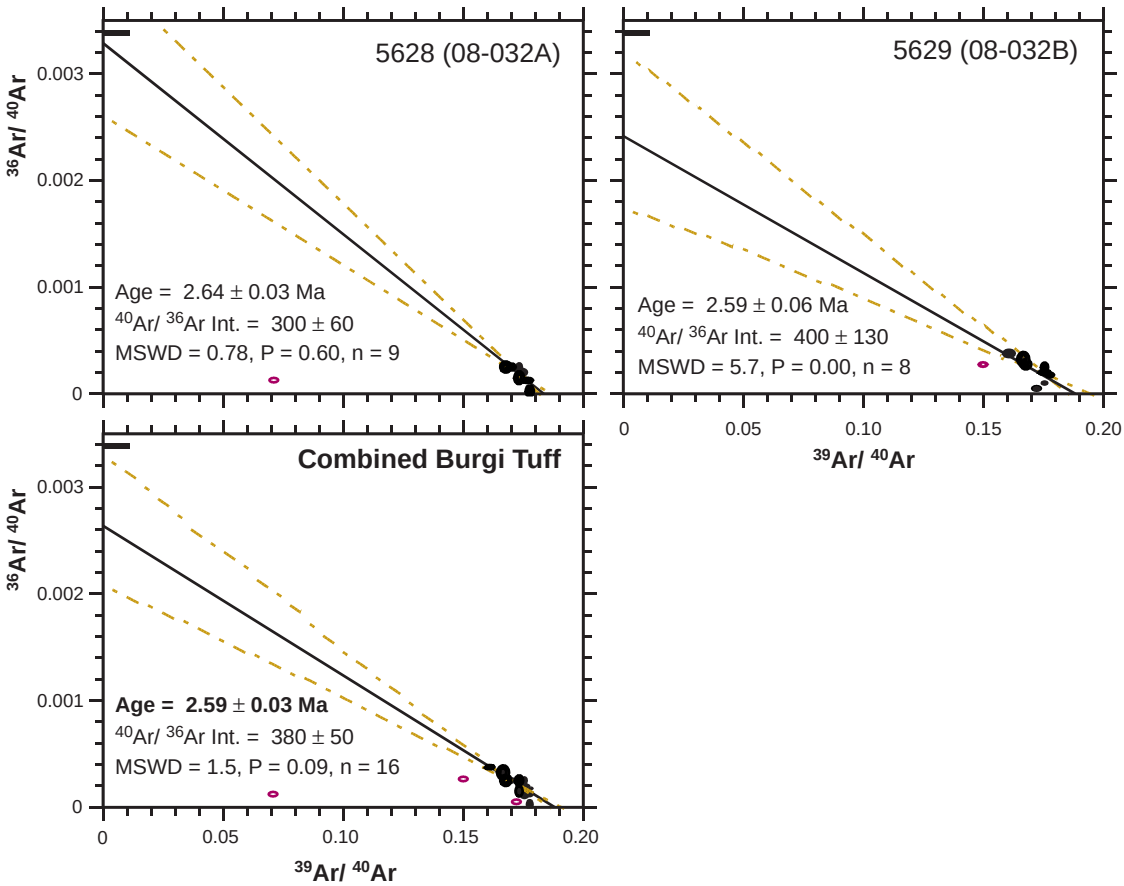

Moles 39Ar (x 10-14)
2.0
1.0
0
Analyses
60
40
20
0
400
300
200
100
0
Relative Probability
1.763 Ma
Combined Orange Tuff:
1.761 ± 0.007 Ma,
n = 29,
MSWD = 2.28,
Prob. = 0.00
5615 (08-031A): 1.754 ± 0.008 Ma,
n = 9, MSWD = 1.59, Prob. = 0.12
5618 (08-031B): 1.771 ± 0.008 Ma,
n = 10, MSWD = 2.23, Prob. = 0.02
5621 (08-031C): 1.756 ± 0.009 Ma,
n = 10, MSWD = 2.51, Prob. = 0.01
1.64
1.70
1.76
1.82
1.88
Age (Ma)

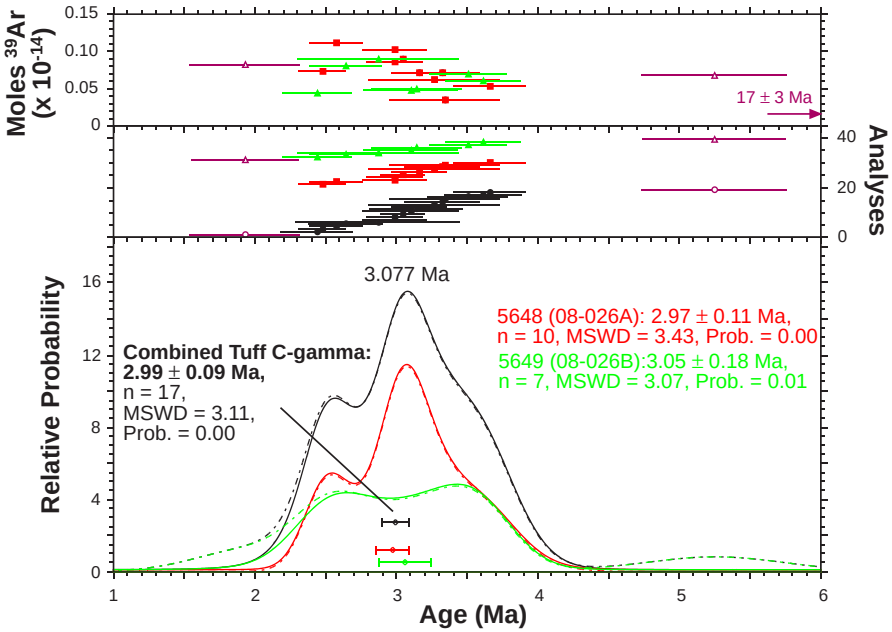

5615 (08-031A)
Age = 1.740 ± 0.013 Ma
40Ar/ 36Ar Int. = 330 ± 20
MSWD = 1.4, P = 0.21, n = 9
5618 (08-031B)
Age = 1.769 ± 0.012 Ma
40Ar/ 36Ar Int. = 310 ± 30
MSWD = 2.5, P = 0.01, n = 10
5621 (08-031C)
Age = 1.765 ± 0.015 Ma
40Ar/ 36Ar Int. = 250 ± 50
MSWD = 1.6, P = 0.13, n = 9
Combined Orange Tuff
Age = 1.757 ± 0.009 Ma
40Ar/ 36Ar Int. = 308 ± 19
MSWD = 2.3, P = 0.00, n = 29
36Ar/ 40Ar
0.003
0.002
0.001
0
0
0.1
0.2
0.3
39Ar/ 40Ar

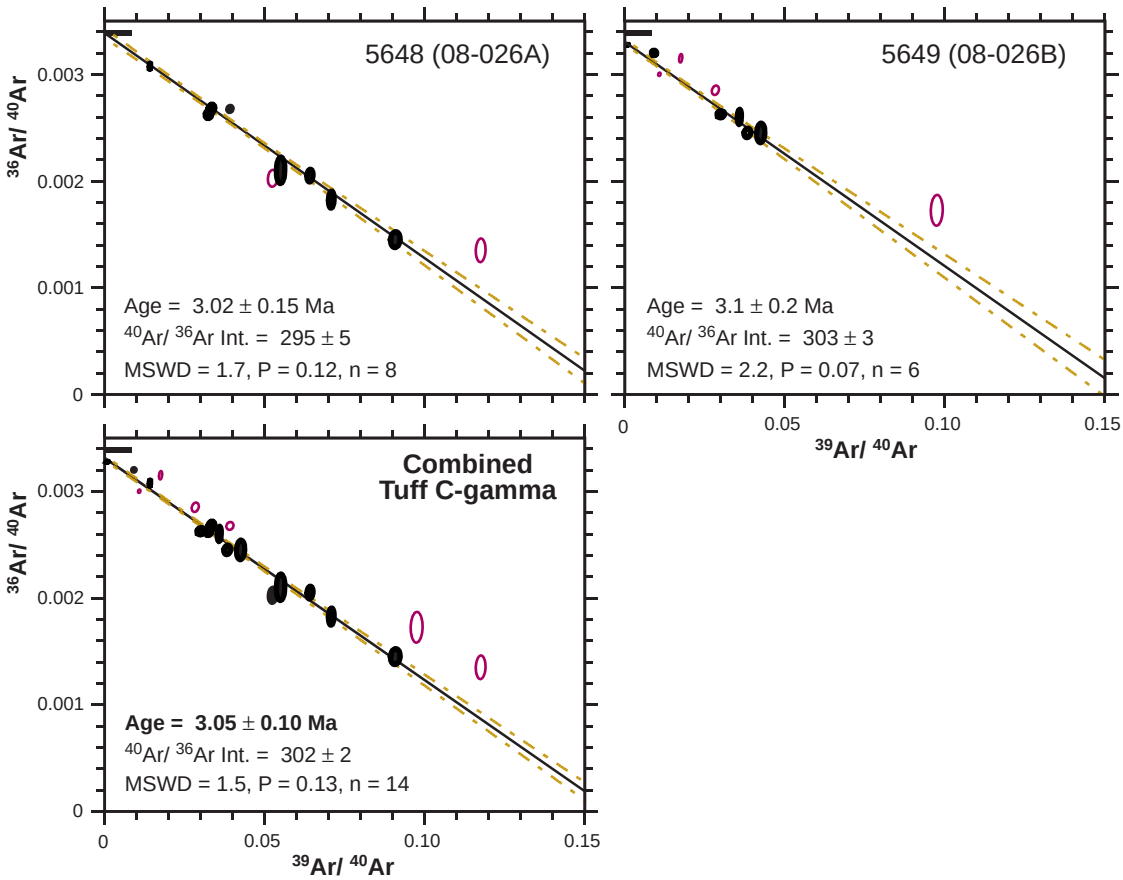

Moles 39Ar (x 10-14)
1.5
1.0
0.5
0
8
4
0
Analyses
120
80
40
0
Relative Probability
2.26 Ma
Tuff G
5614 (08-029):
2.262 ± 0.012 Ma,
n = 7,
MSWD = 2.25,
Prob. = 0.04
2.1
2.2
2.3
2.4
2.5
Age (Ma)

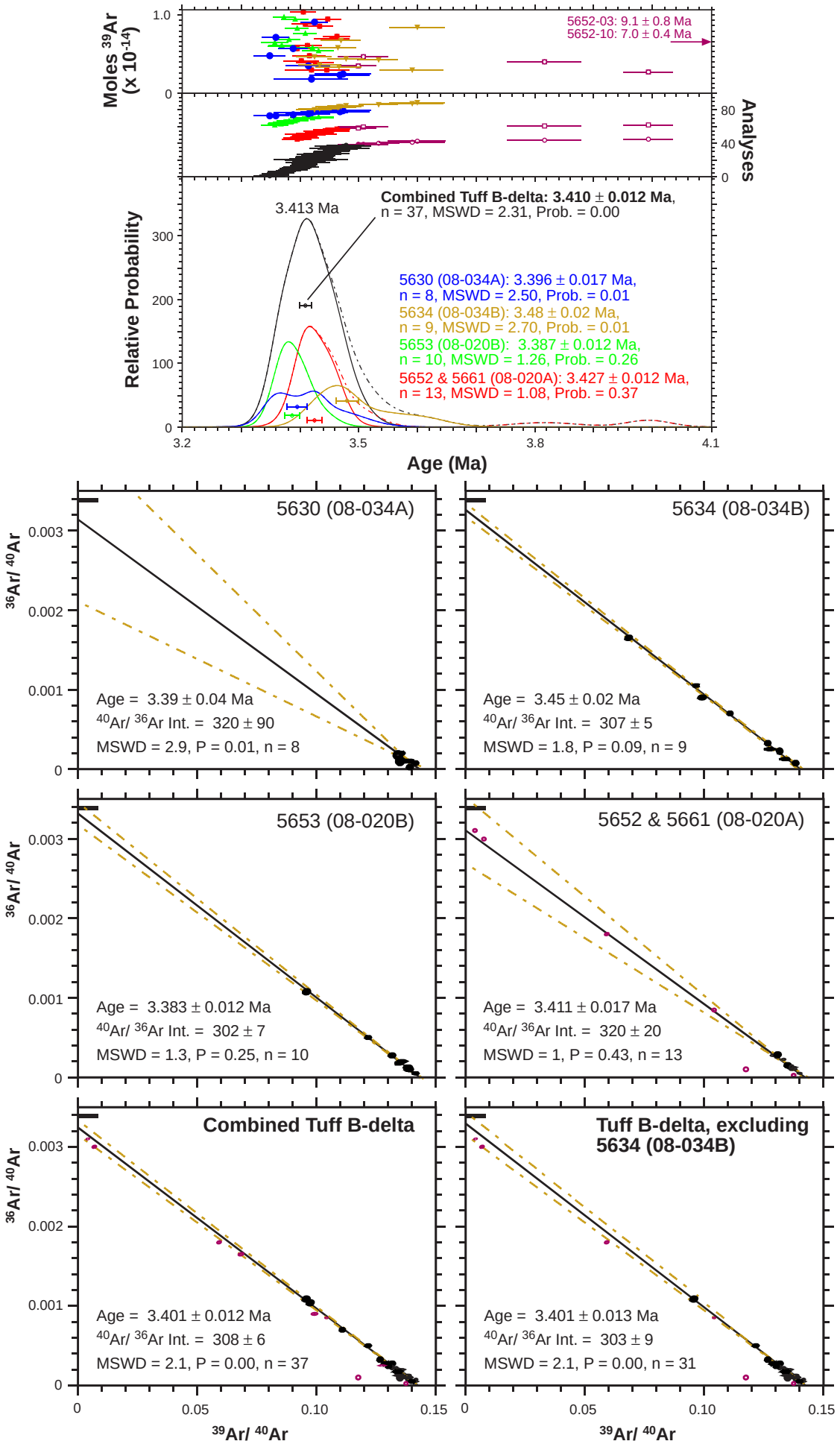

Tuff G
5614 (08-029)
36Ar/ 40Ar
0.003
0.002
0.001
0
Age = 2.250 ± 0.014 Ma
40Ar/ 36Ar Int. = 330 ± 30
MSWD = 1.8, P = 0.11, n = 7
0
0.1
0.2
39Ar/ 40Ar

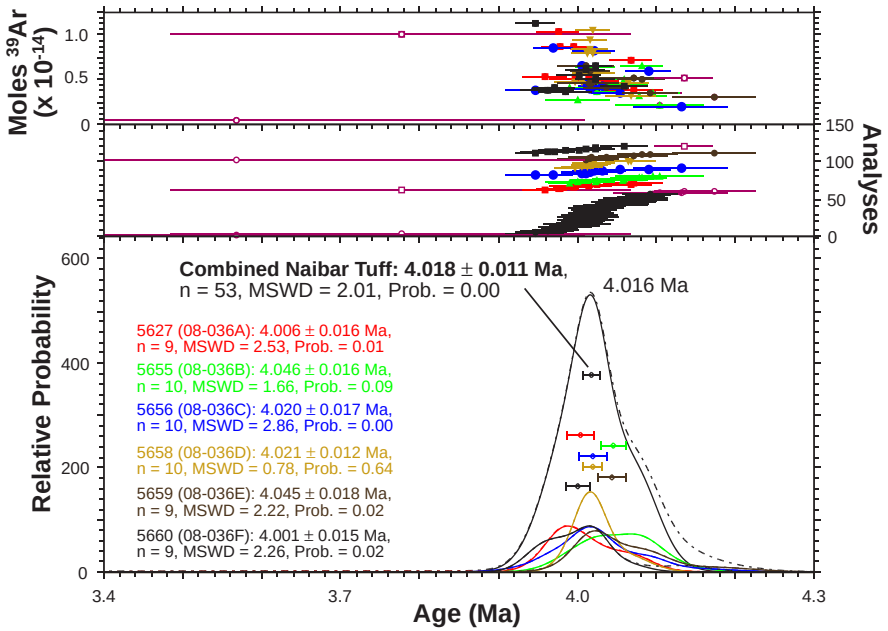

Moles 39Ar (x 10-14)
0.8
0
6.49 ± 0.04 Ma
40
20
0
Analyses
Relative Probability
120
80
40
0
Combined Burgi Tuff:
2.634 ± 0.013 Ma,
n = 16,
MSWD = 1.76,
Prob. = 0.03
2.642 Ma
5628 (08-032A): 2.645 ± 0.014 Ma,
n = 9, MSWD = 0.69, Prob. = 0.70
5629 (08-032B): 2.64 ± 0.03 Ma, n = 8,
MSWD = 5.61, Prob. = 0.00
2.4
2.5
2.6
2.7
2.8
2.9
3.0
3.1
Age (Ma)

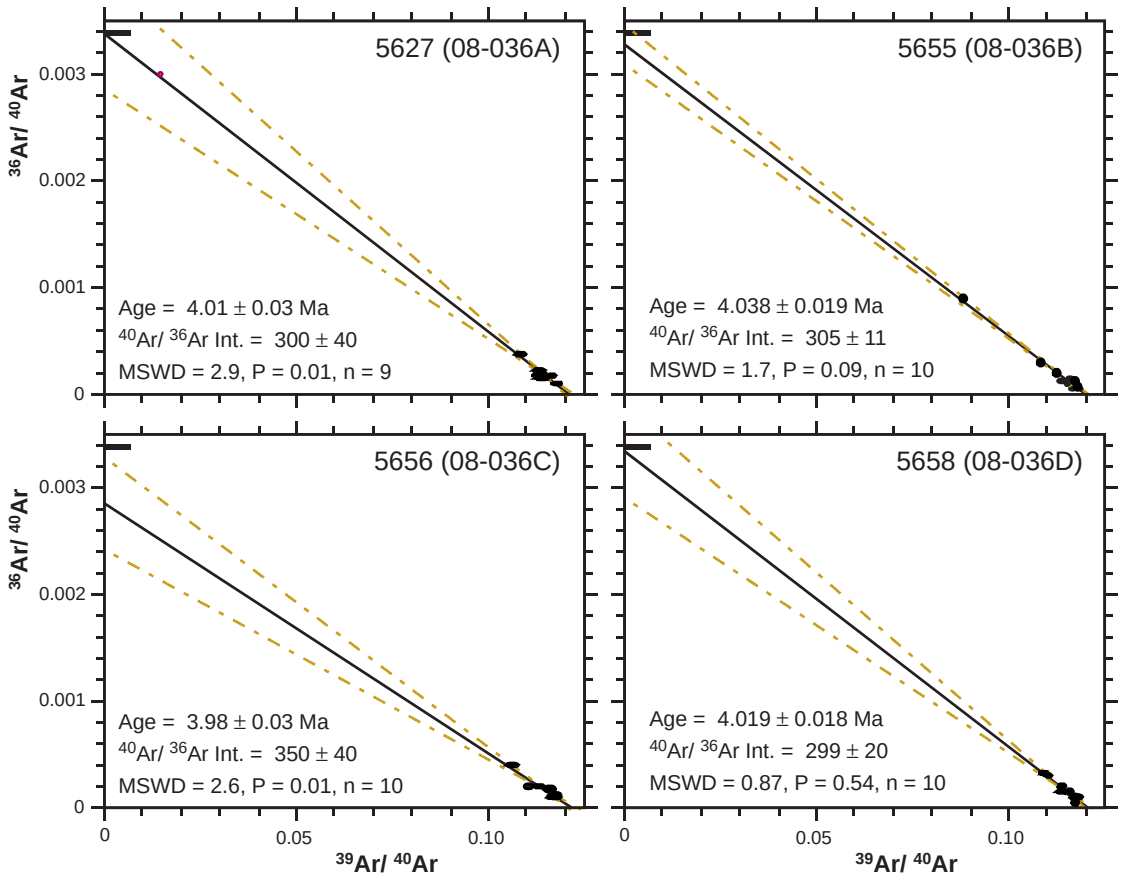

5628 (08-032A)
36Ar/ 40Ar
0.003
0.002
0.001
0
Age = 2.64 ± 0.03 Ma
40Ar/ 36Ar Int. = 300 ± 60
MSWD = 0.78, P = 0.60, n = 9
5629 (08-032B)
Age = 2.59 ± 0.06 Ma
40Ar/ 36Ar Int. = 400 ± 130
MSWD = 5.7, P = 0.00, n = 8
0
0.05
0.10
0.15
0.20
39Ar/ 40Ar
Combined Burgi Tuff
Age = 2.59 ± 0.03 Ma
40Ar/ 36Ar Int. = 380 ± 50
MSWD = 1.5, P = 0.09, n = 16
39Ar/ 40Ar


Moles 39Ar (x 10-14)
0.15
0.10
0.05
0
17 ± 3 Ma
Analyses
40
20
0
Relative Probability
16
12
8
4
0
3.077 Ma
Combined Tuff C-gamma:
2.99 ± 0.09 Ma,
n = 17,
MSWD = 3.11,
Prob. = 0.00
5648 (08-026A): 2.97 ± 0.11 Ma,
n = 10, MSWD = 3.43, Prob. = 0.00
5649 (08-026B):3.05 ± 0.18 Ma,
n = 7, MSWD = 3.07, Prob. = 0.01
1
2
3
4
5
6
Age (Ma)

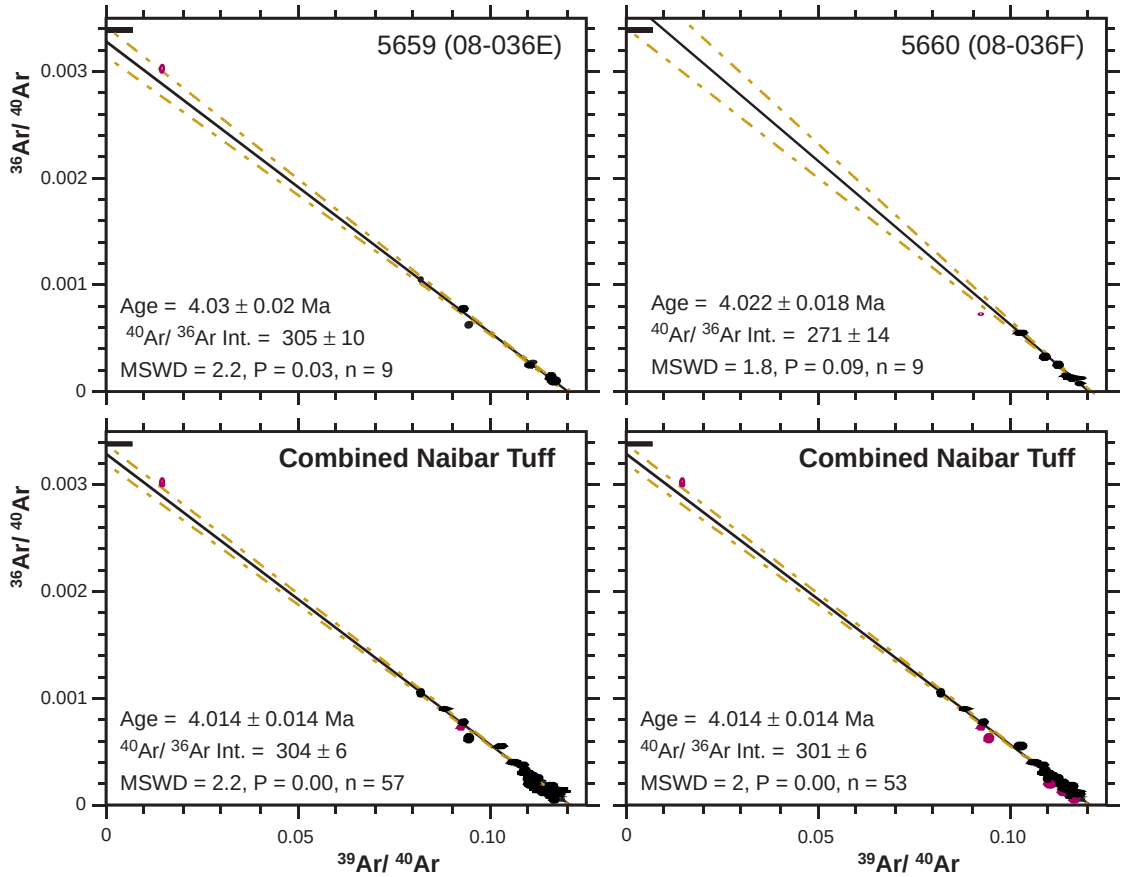

5648 (08-026A)
36Ar/ 40Ar
0.003
0.002
0.001
0
Age = 3.02 ± 0.15 Ma
40Ar/ 36Ar Int. = 295 ± 5
MSWD = 1.7, P = 0.12, n = 8
5649 (08-026B)
Age = 3.1 ± 0.2 Ma
40Ar/ 36Ar Int. = 303 ± 3
MSWD = 2.2, P = 0.07, n = 6
0
0.05
0.10
0.15
39Ar/ 40Ar
Combined
Tuff C-gamma
Age = 3.05 ± 0.10 Ma
40Ar/ 36Ar Int. = 302 ± 2
MSWD = 1.5, P = 0.13, n = 14

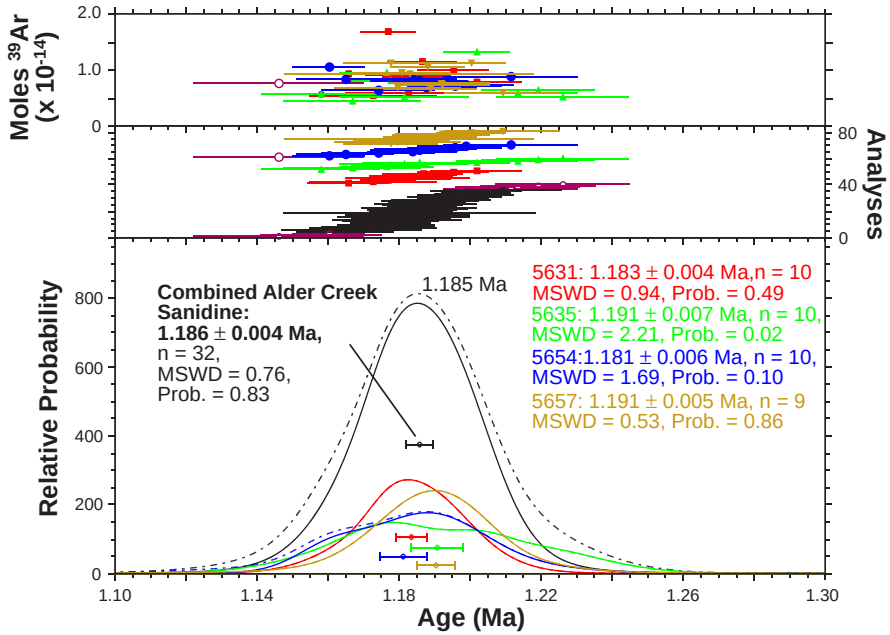

Moles 39Ar (x 10-14)
5652-03: 9.1 ± 0.8 Ma
5652-10: 7.0 ± 0.4 Ma
Analyses
Relative Probability
3.413 Ma
Combined Tuff B-delta: 3.410 ± 0.012 Ma,
n = 37, MSWD = 2.31, Prob. = 0.00
5630 (08-034A): 3.396 ± 0.017 Ma,
n = 8, MSWD = 2.50, Prob. = 0.01
5634 (08-034B): 3.48 ± 0.02 Ma,
n = 9, MSWD = 2.70, Prob. = 0.01
5653 (08-020B): 3.387 ± 0.012 Ma,
n = 10, MSWD = 1.26, Prob. = 0.26
5652 & 5661 (08-020A): 3.427 ± 0.012 Ma,
n = 13, MSWD = 1.08, Prob. = 0.37
Age (Ma)
5630 (08-034A)
Age = 3.39 ± 0.04 Ma
40Ar/ 36Ar Int. = 320 ± 90
MSWD = 2.9, P = 0.01, n = 8
5634 (08-034B)
Age = 3.45 ± 0.02 Ma
40Ar/ 36Ar Int. = 307 ± 5
MSWD = 1.8, P = 0.09, n = 9
5653 (08-020B)
Age = 3.383 ± 0.012 Ma
40Ar/ 36Ar Int. = 302 ± 7
MSWD = 1.3, P = 0.25, n = 10
5652 & 5661 (08-020A)
Age = 3.411 ± 0.017 Ma
40Ar/ 36Ar Int. = 320 ± 20
MSWD = 1, P = 0.43, n = 13
Combined Tuff B-delta
Age = 3.401 ± 0.012 Ma
40Ar/ 36Ar Int. = 308 ± 6
MSWD = 2.1, P = 0.00, n = 37
Tuff B-delta, excluding 5634 (08-034B)
Age = 3.401 ± 0.013 Ma
40Ar/ 36Ar Int. = 303 ± 9
MSWD = 2.1, P = 0.00, n = 31
36Ar/ 40Ar
39Ar/ 40Ar

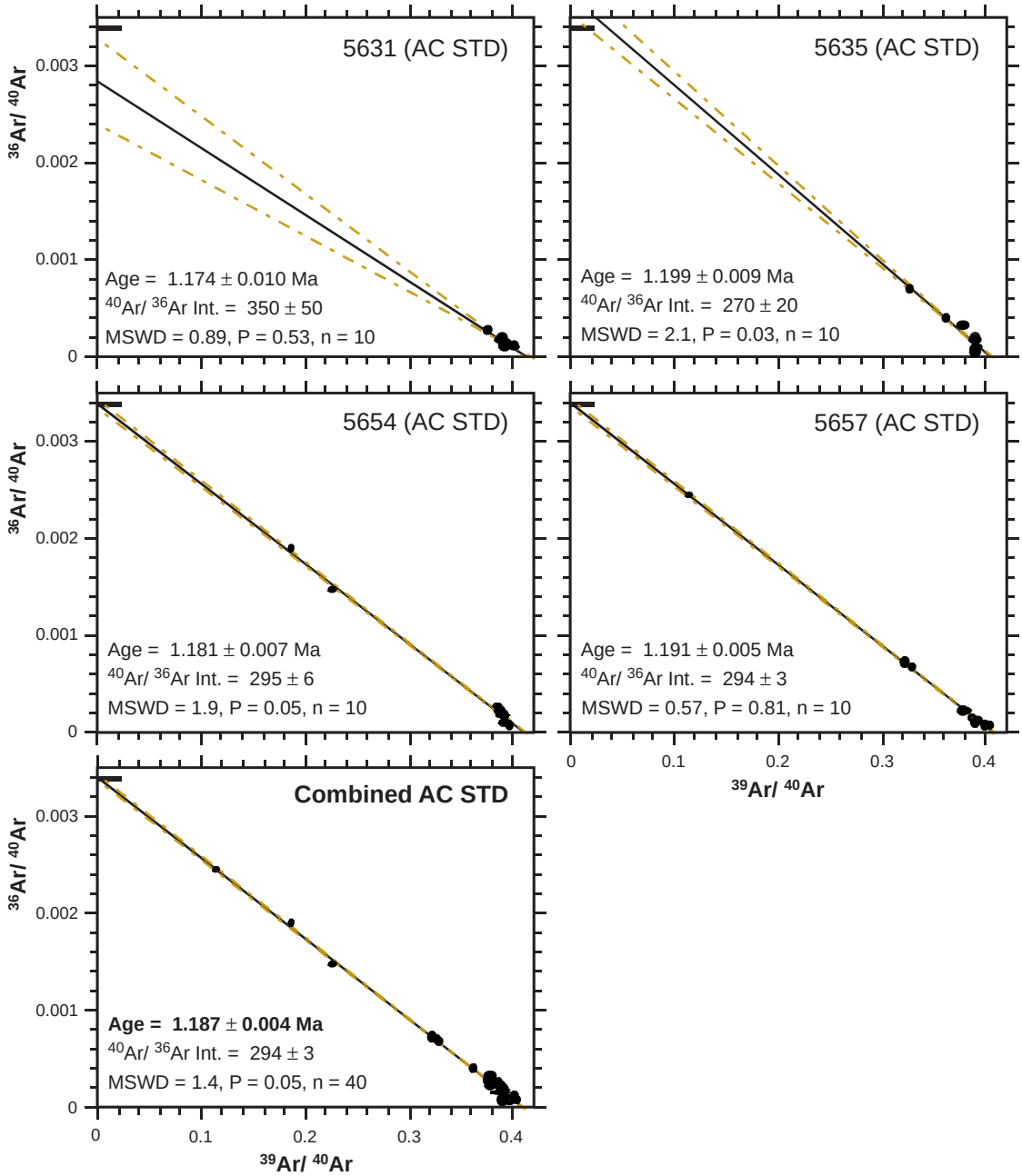




Naibar Tuff isochrons continued on next page.


5659 (08-036E)
Age = 4.03 ± 0.02 Ma
40Ar/ 36Ar Int. = 305 ± 10
MSWD = 2.2, P = 0.03, n = 9
5660 (08-036F)
Age = 4.022 ± 0.018 Ma
40Ar/ 36Ar Int. = 271 ± 14
MSWD = 1.8, P = 0.09, n = 9
Combined Naibar Tuff
Age = 4.014 ± 0.014 Ma
40Ar/ 36Ar Int. = 304 ± 6
MSWD = 2.2, P = 0.00, n = 57
Combined Naibar Tuff
Age = 4.014 ± 0.014 Ma
40Ar/ 36Ar Int. = 301 ± 6
MSWD = 2, P = 0.00, n = 53
36Ar/ 40Ar
39Ar/ 40Ar
0
0.001
0.002
0.003
0.05
0.10


Moles 39Ar (x 10-14)
Analyses
Relative Probability
Combined Alder Creek Sanidine:
1.186 ± 0.004 Ma,
n = 32,
MSWD = 0.76,
Prob. = 0.83
1.185 Ma
5631: 1.183 ± 0.004 Ma,n = 10
MSWD = 0.94, Prob. = 0.49
5635: 1.191 ± 0.007 Ma, n = 10,
MSWD = 2.21, Prob. = 0.02
5654:1.181 ± 0.006 Ma, n = 10,
MSWD = 1.69, Prob. = 0.10
5657: 1.191 ± 0.005 Ma, n = 9
MSWD = 0.53, Prob. = 0.86
Age (Ma)


5631 (AC STD)
Age = 1.174 ± 0.010 Ma
40Ar/ 36Ar Int. = 350 ± 50
MSWD = 0.89, P = 0.53, n = 10
5635 (AC STD)
Age = 1.199 ± 0.009 Ma
40Ar/ 36Ar Int. = 270 ± 20
MSWD = 2.1, P = 0.03, n = 10
5654 (AC STD)
Age = 1.181 ± 0.007 Ma
40Ar/ 36Ar Int. = 295 ± 6
MSWD = 1.9, P = 0.05, n = 10
5657 (AC STD)
Age = 1.191 ± 0.005 Ma
40Ar/ 36Ar Int. = 294 ± 3
MSWD = 0.57, P = 0.81, n = 10
Combined AC STD
Age = 1.187 ± 0.004 Ma
40Ar/ 36Ar Int. = 294 ± 3
MSWD = 1.4, P = 0.05, n = 40
36Ar/ 40Ar
39Ar/ 40Ar