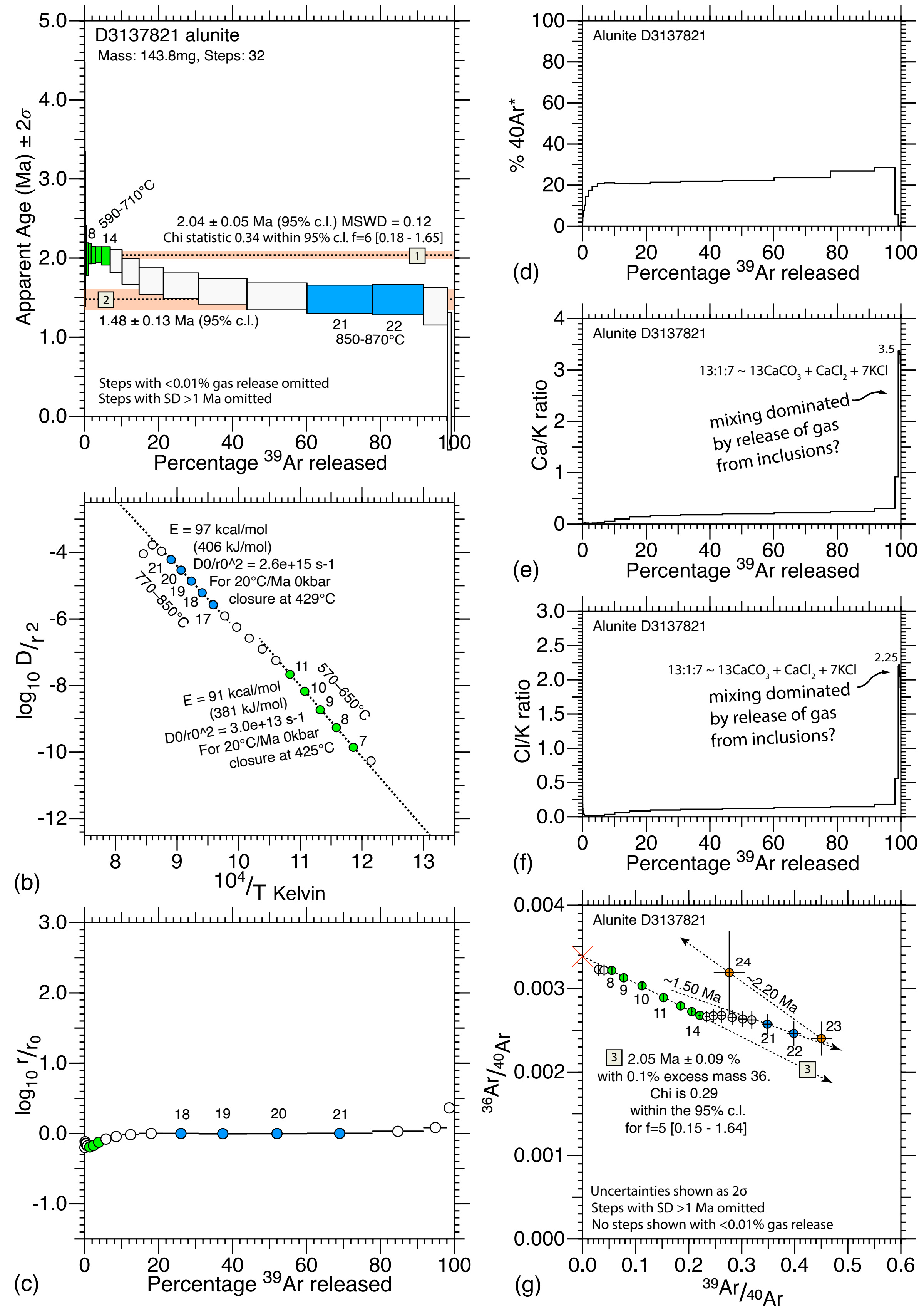
D3137821 alunite
Mass: 143.8mg, Steps: 32
Apparent Age (Ma) ± 2σ
590-710°C
2.04 ± 0.05 Ma (95% c.l.) MSWD = 0.12
Chi statistic 0.34 within 95% c.l. f=6 [0.18 - 1.65]
1.48 ± 0.13 Ma (95% c.l.)
850-870°C
Steps with <0.01% gas release omitted
Steps with SD >1 Ma omitted
Percentage 39Ar released
(d)
Alunite D3137821
% 40Ar*
Percentage 39Ar released
(e)
Alunite D3137821
Ca/K ratio
13:1:7 ~ 13CaCO3 + CaCl2 + 7KCl
mixing dominated by release of gas from inclusions?
Percentage 39Ar released
(f)
Alunite D3137821
Cl/K ratio
13:1:7 ~ 13CaCO3 + CaCl2 + 7KCl
mixing dominated by release of gas from inclusions?
Percentage 39Ar released
E = 97 kcal/mol
(406 kJ/mol)
D0/r0^2 = 2.6e+15 s-1
For 20°C/Ma 0kbar
closure at 429°C
770-850°C
E = 91 kcal/mol
(381 kJ/mol)
D0/r0^2 = 3.0e+13 s-1
For 20°C/Ma 0kbar
closure at 425°C
570-650°C
log10 D/r2
10^4/T Kelvin
(b)
log10 r/r0
Percentage 39Ar released
(c)
Alunite D3137821
~1.50 Ma
~2.20 Ma
3 2.05 Ma ± 0.09 %
with 0.1% excess mass 36.
Chi is 0.29
within the 95% c.l.
for f=5 [0.15 - 1.64]
Uncertainties shown as 2σ
Steps with SD >1 Ma omitted
No steps shown with <0.01% gas release
36Ar/40Ar
39Ar/40Ar
(g)