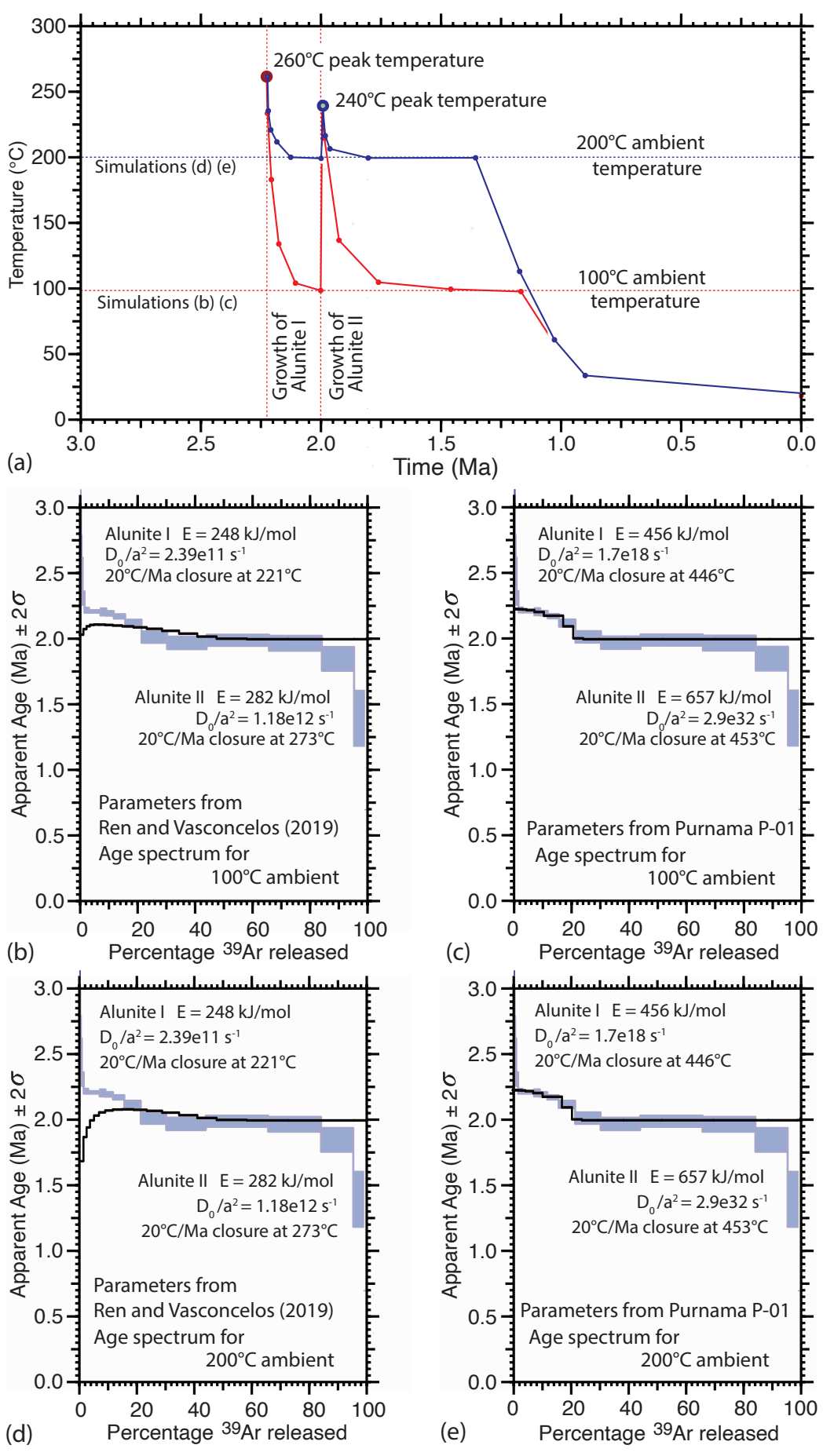
260°C peak temperature
240°C peak temperature
200°C ambient temperature
100°C ambient temperature
Simulations (d) (e)
Simulations (b) (c)
Growth of Alunite I
Growth of Alunite II
Temperature (°C)
Time (Ma)
(a)
Alunite I E = 248 kJ/mol
D0/a2 = 2.39e11 s-1
20°C/Ma closure at 221°C
Alunite II E = 282 kJ/mol
D0/a2 = 1.18e12 s-1
20°C/Ma closure at 273°C
Parameters from Ren and Vasconcelos (2019)
Age spectrum for 100°C ambient
(b)
Alunite I E = 456 kJ/mol
D0/a2 = 1.7e18 s-1
20°C/Ma closure at 446°C
Alunite II E = 657 kJ/mol
D0/a2 = 2.9e32 s-1
20°C/Ma closure at 453°C
Parameters from Purnama P-01
Age spectrum for 100°C ambient
(c)
Alunite I E = 248 kJ/mol
D0/a2 = 2.39e11 s-1
20°C/Ma closure at 221°C
Alunite II E = 282 kJ/mol
D0/a2 = 1.18e12 s-1
20°C/Ma closure at 273°C
Parameters from Ren and Vasconcelos (2019)
Age spectrum for 200°C ambient
(d)
Alunite I E = 456 kJ/mol
D0/a2 = 1.7e18 s-1
20°C/Ma closure at 446°C
Alunite II E = 657 kJ/mol
D0/a2 = 2.9e32 s-1
20°C/Ma closure at 453°C
Parameters from Purnama P-01
Age spectrum for 200°C ambient
(e)
Apparent Age (Ma) ± 2σ
Percentage 39Ar released