Fig. S1

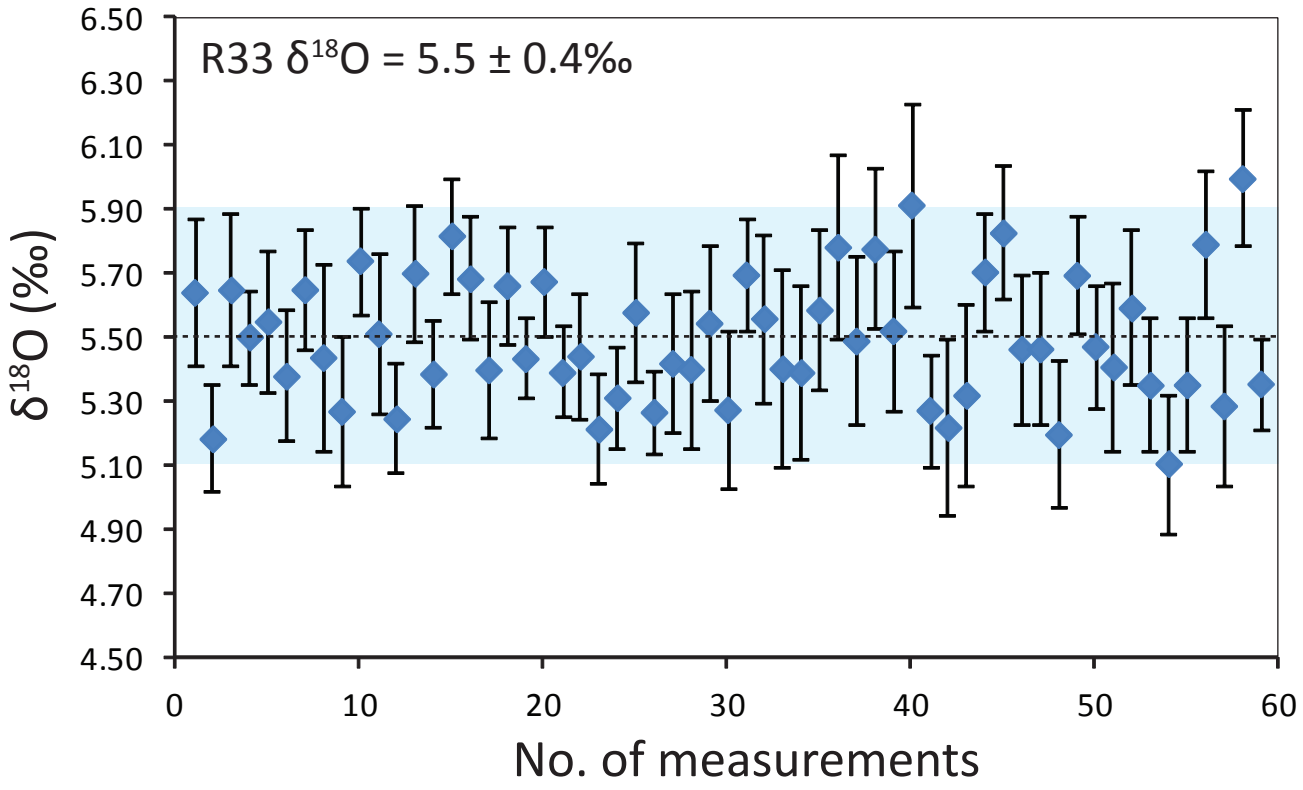

R33 δ18O = 5.5 ± 0.4‰
δ18O (‰)
6.50
6.30
6.10
5.90
5.70
5.50
5.30
5.10
4.90
4.70
4.50
0
10
20
30
40
50
60
No. of measurements

Fig. S2

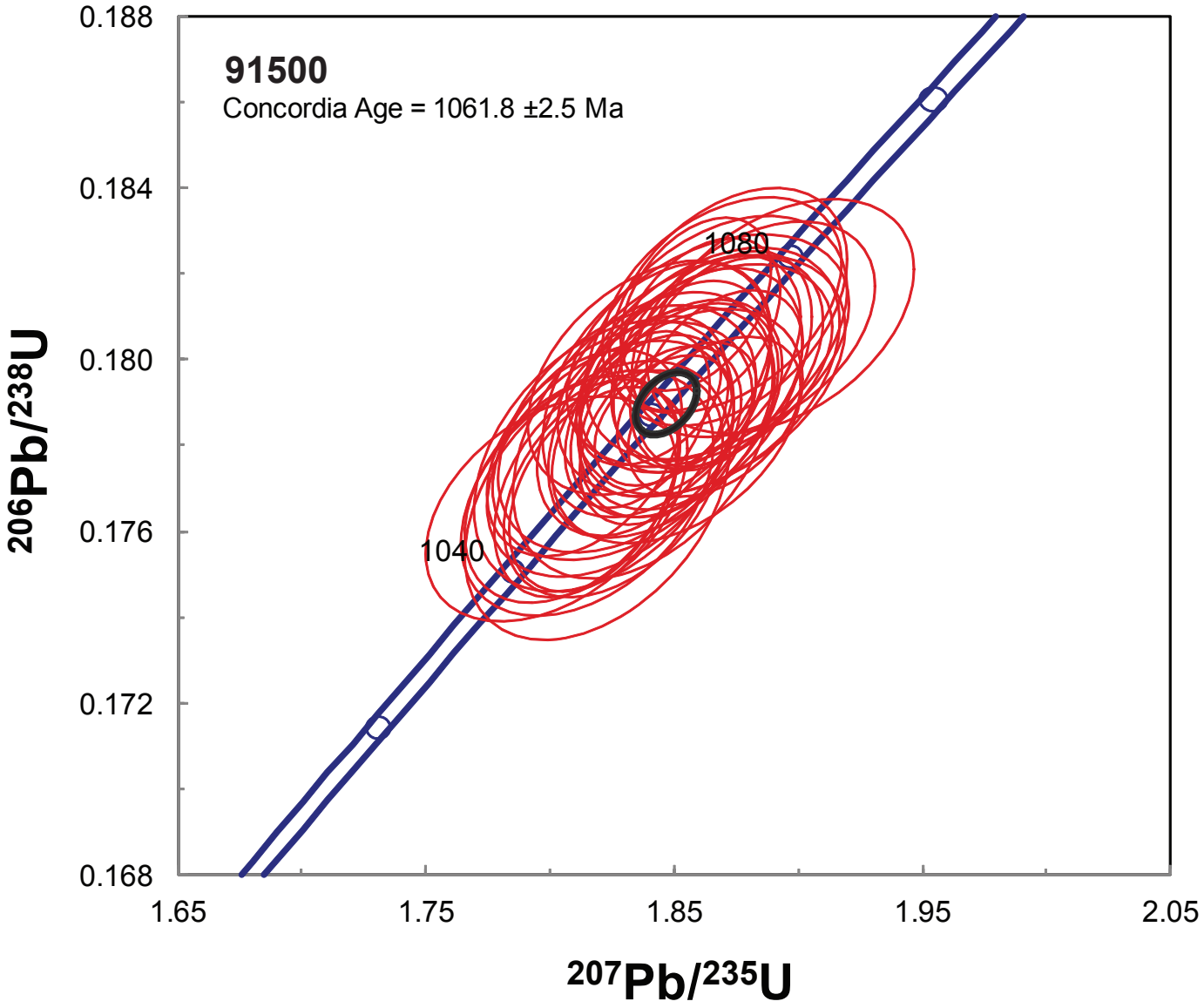

91500
Concordia Age = 1061.8 ±2.5 Ma
1080
1040
0.188
0.184
0.180
0.176
0.172
0.168
1.65
1.75
1.85
1.95
2.05
206Pb/238U
207Pb/235U

Fig. S3

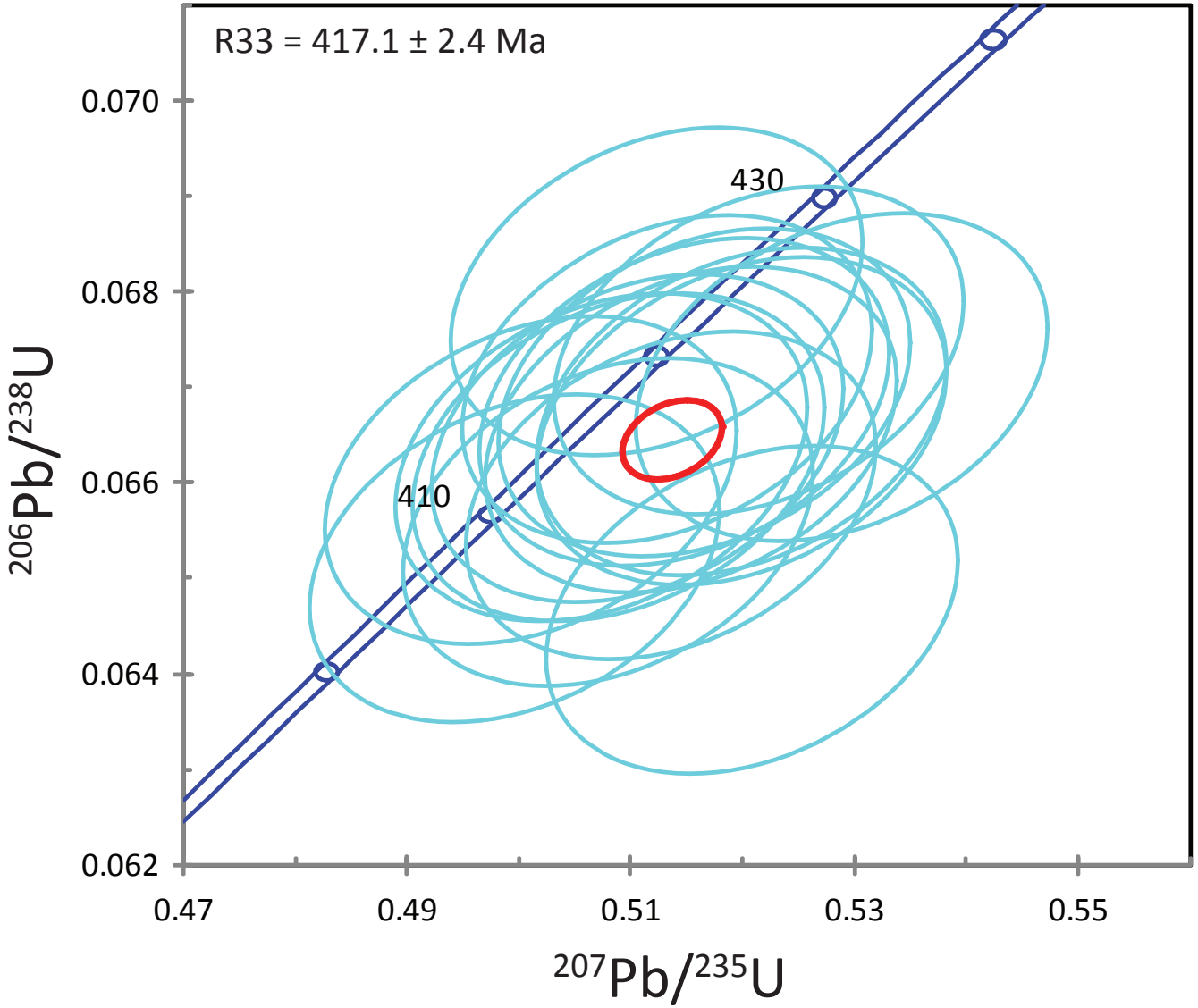

R33 = 417.1 ± 2.4 Ma
0.070
0.068
0.066
0.064
0.062
430
410
0.47
0.49
0.51
0.53
0.55
$^{206}Pb/^{238}U$
$^{207}Pb/^{235}U$

Fig. S4

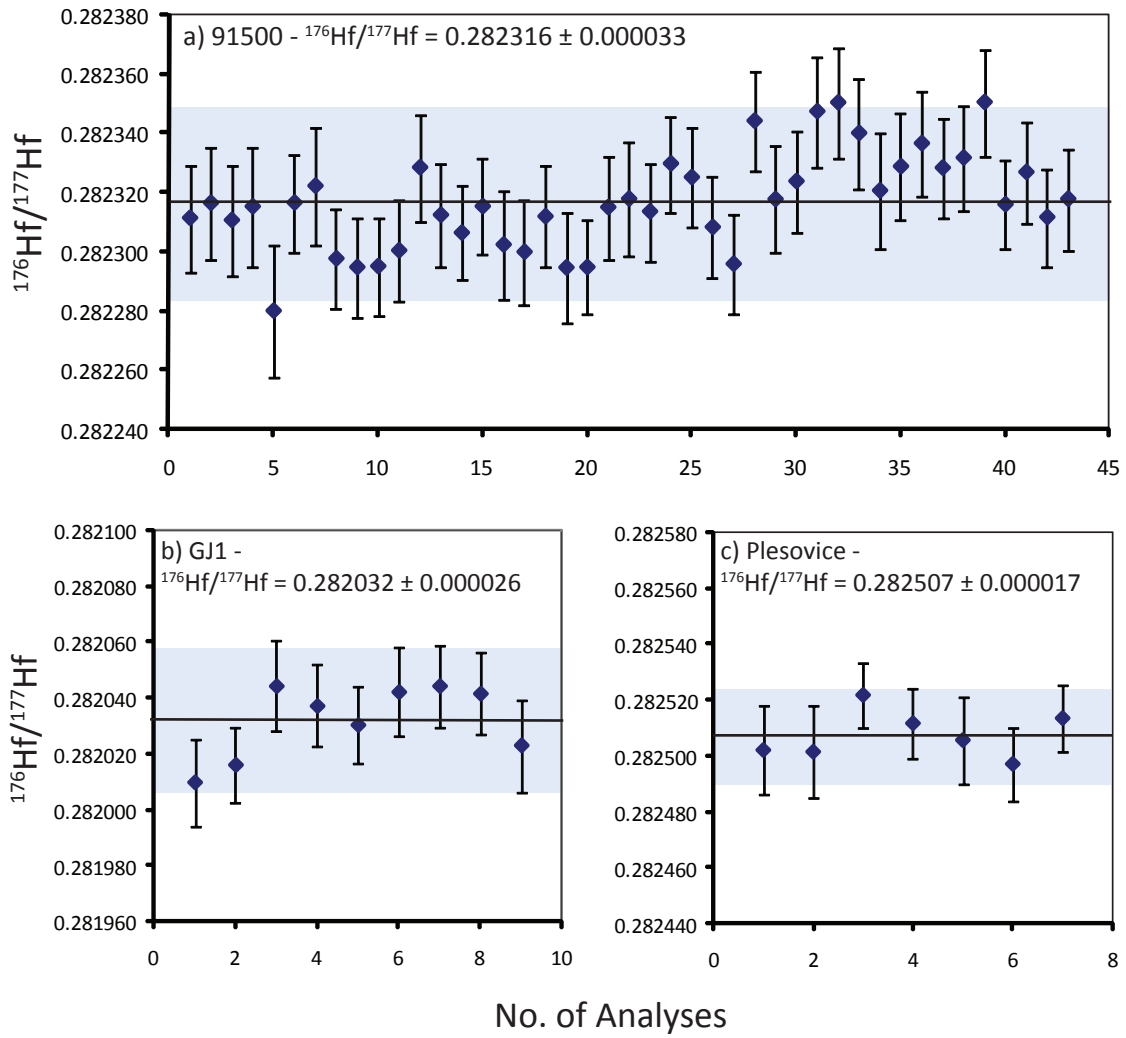

a) 91500 - 176Hf/177Hf = 0.282316 ± 0.000033
b) GJ1 - 176Hf/177Hf = 0.282032 ± 0.000026
c) Plesovice - 176Hf/177Hf = 0.282507 ± 0.000017
176Hf/177Hf
No. of Analyses

Fig. S5 a

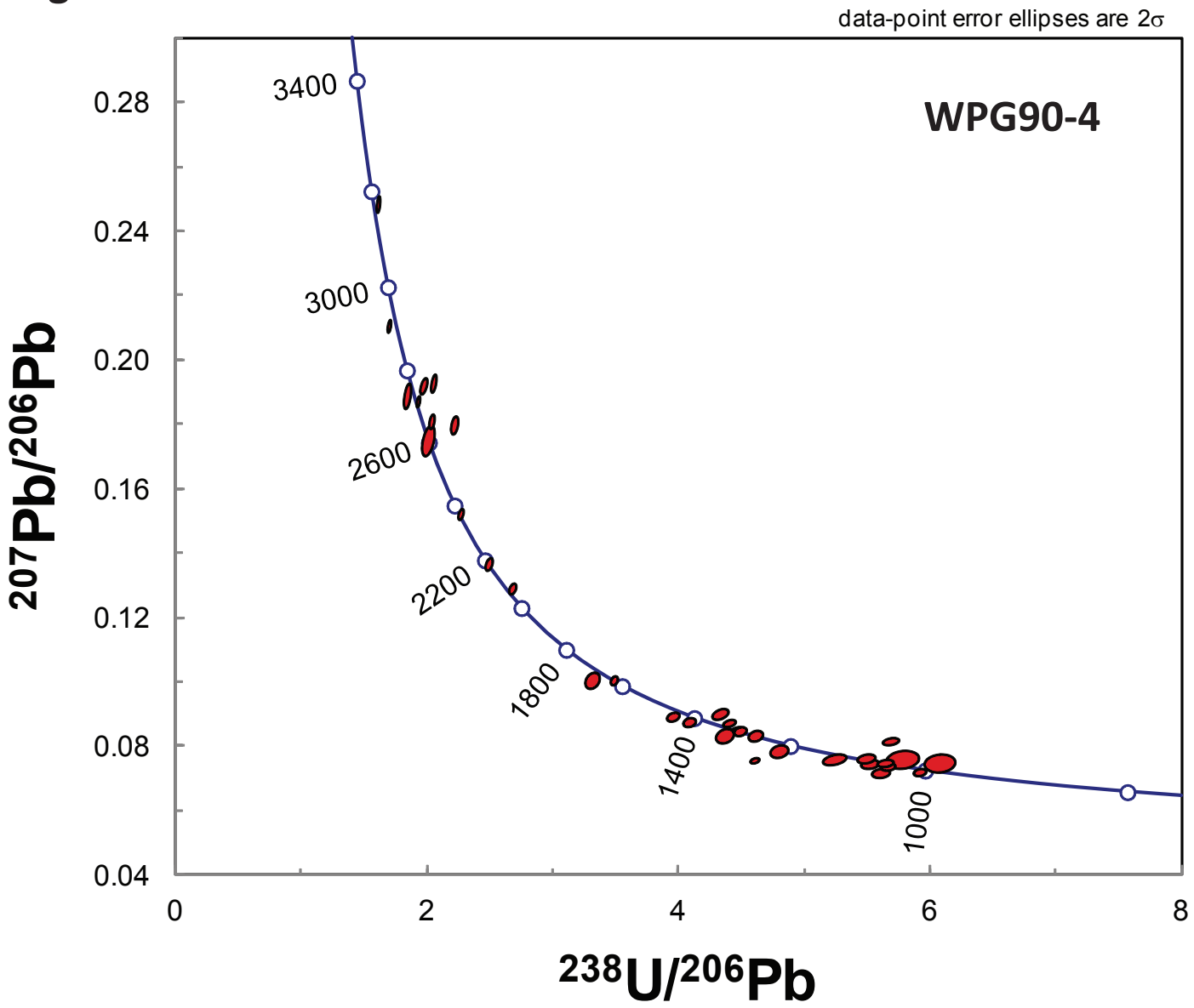

data-point error ellipses are 2σ
WPG90-4
3400
3000
2600
2200
1800
1400
1000
0.28
0.24
0.20
0.16
0.12
0.08
0.04
0
2
4
6
8
207Pb/206Pb
238U/206Pb

Fig. S5 b

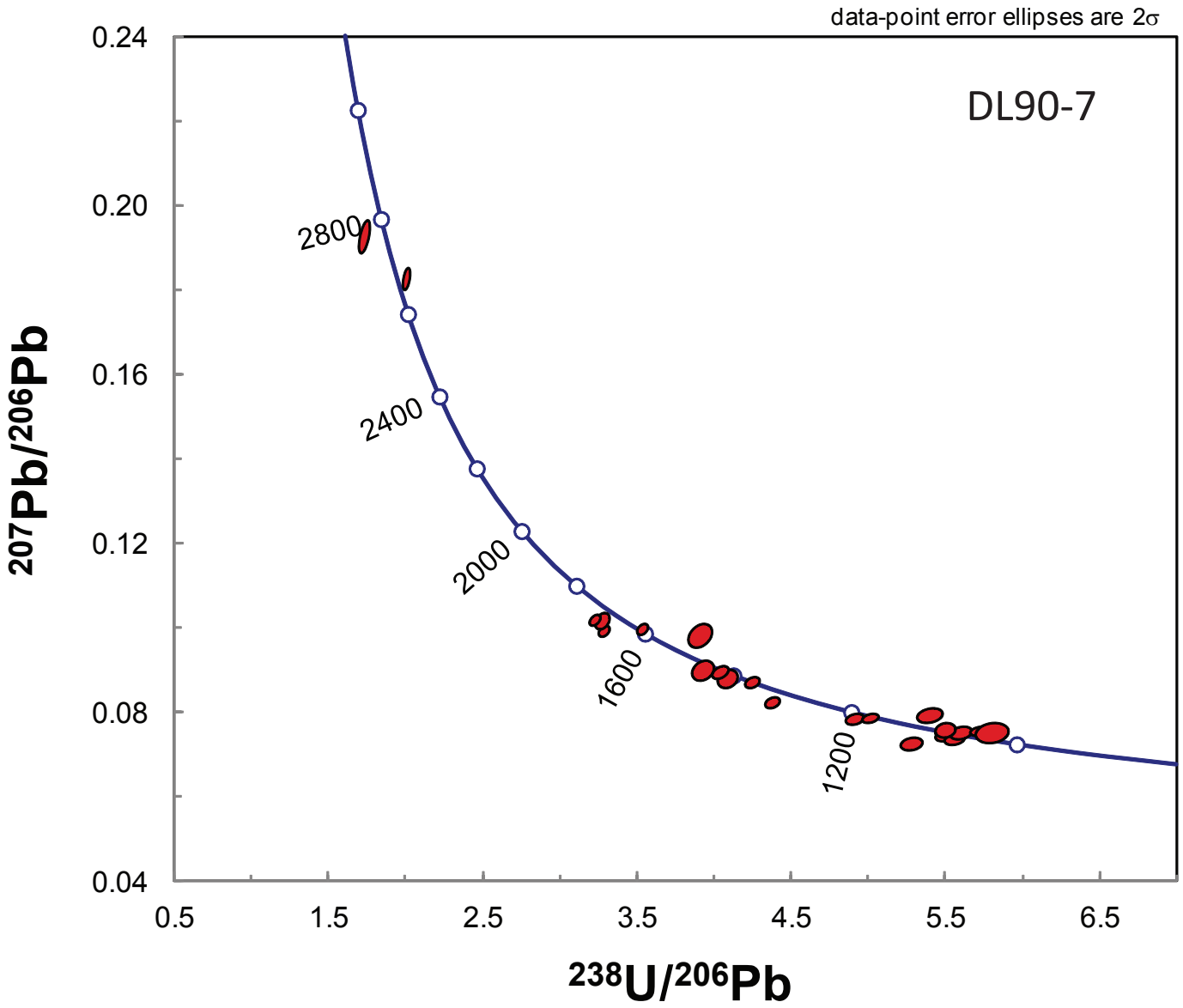

data-point error ellipses are 2σ
DL90-7
0.24
0.20
0.16
0.12
0.08
0.04
0.5
1.5
2.5
3.5
4.5
5.5
6.5
2800
2400
2000
1600
1200
207Pb/206Pb
238U/206Pb

Fig. S5 c

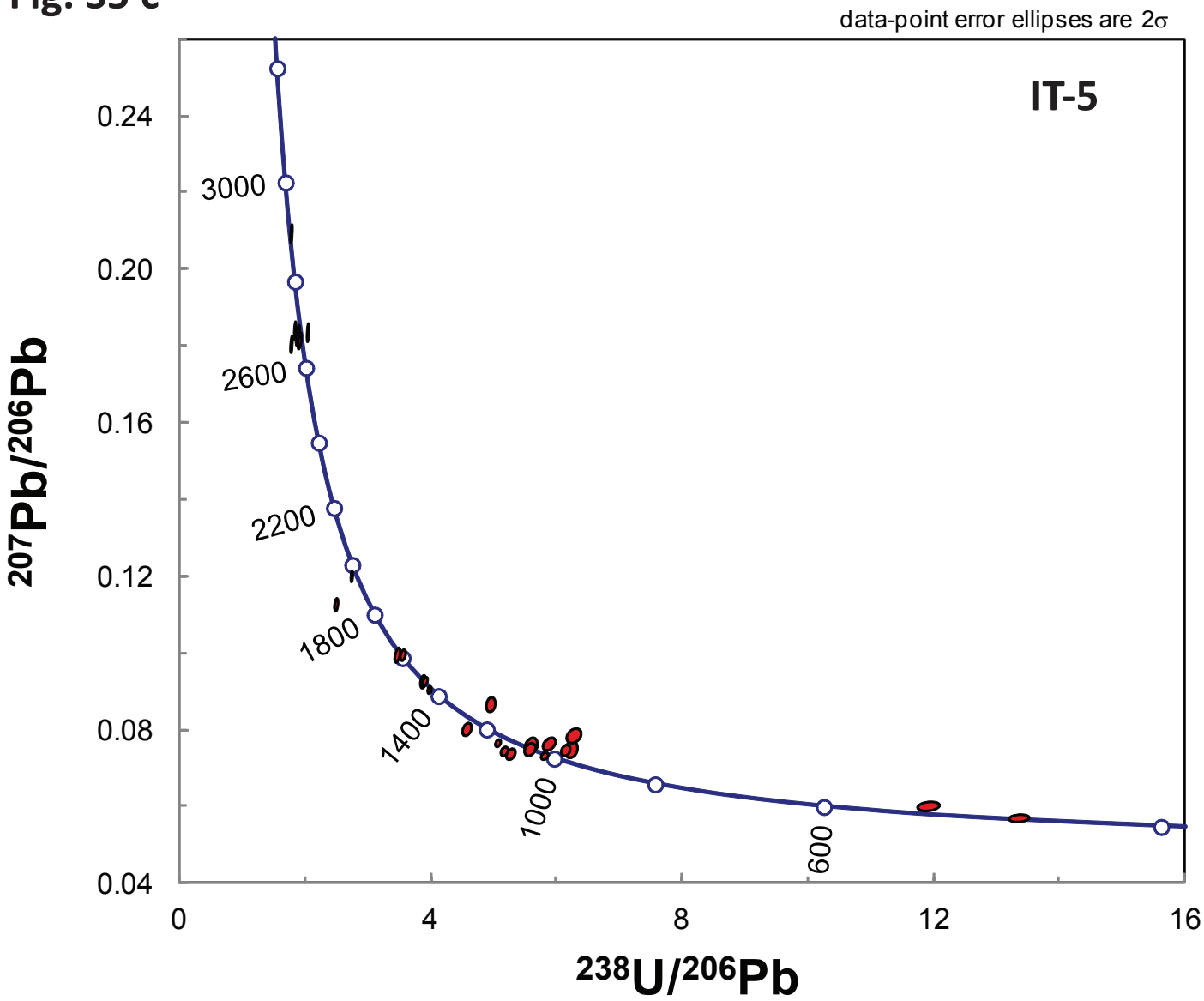

data-point error ellipses are 2σ
IT-5
0.24
0.20
0.16
0.12
0.08
0.04
$^{207}Pb/^{206}Pb$
3000
2600
2200
1800
1400
1000
600
0
4
8
12
16
$^{238}U/^{206}Pb$

Fig. S5 d

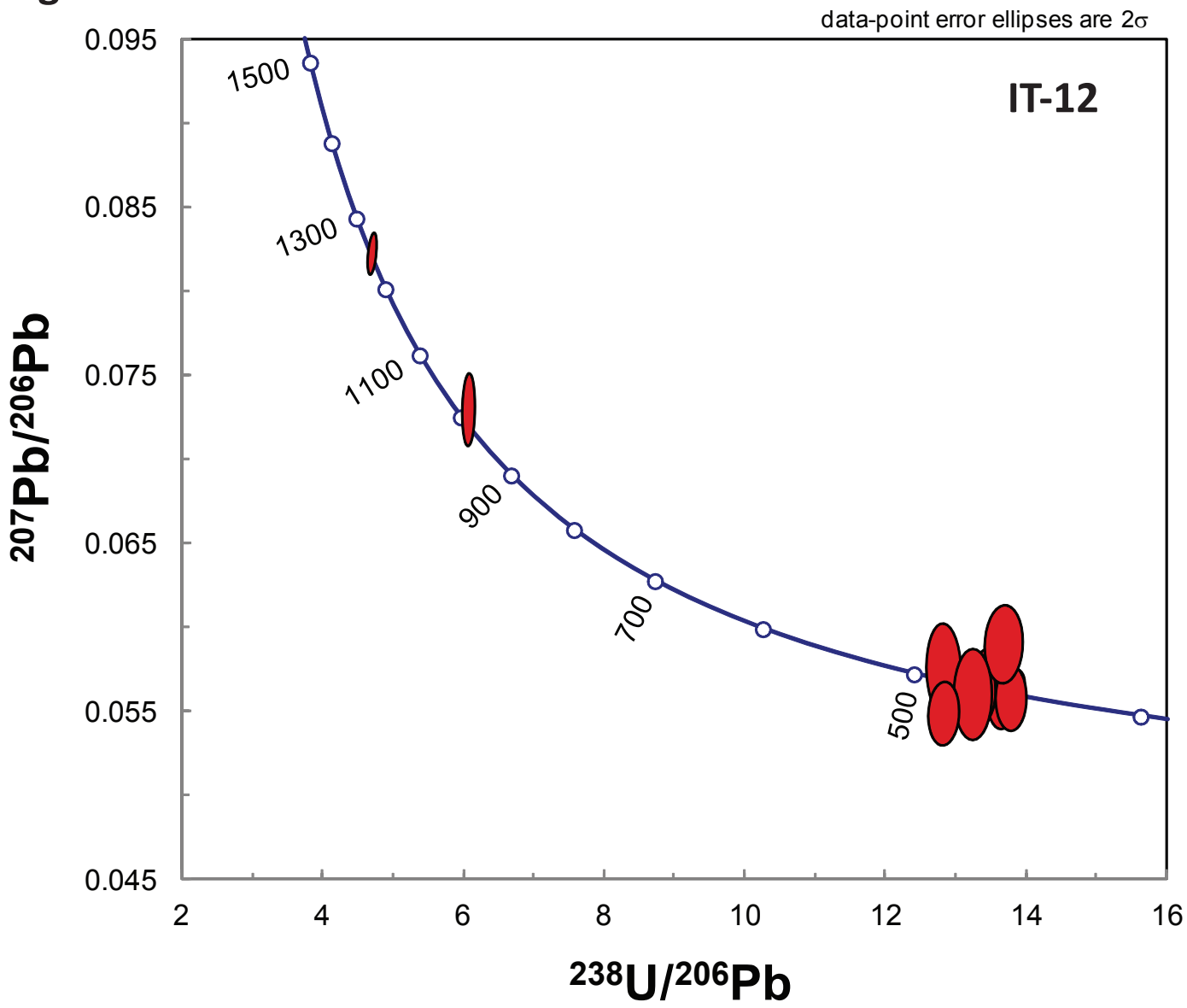

data-point error ellipses are 2σ
IT-12
0.095
0.085
0.075
0.065
0.055
0.045
$^{207}Pb/^{206}Pb$
1500
1300
1100
900
700
500
2
4
6
8
10
12
14
16
$^{238}U/^{206}Pb$

Fig. S5 e

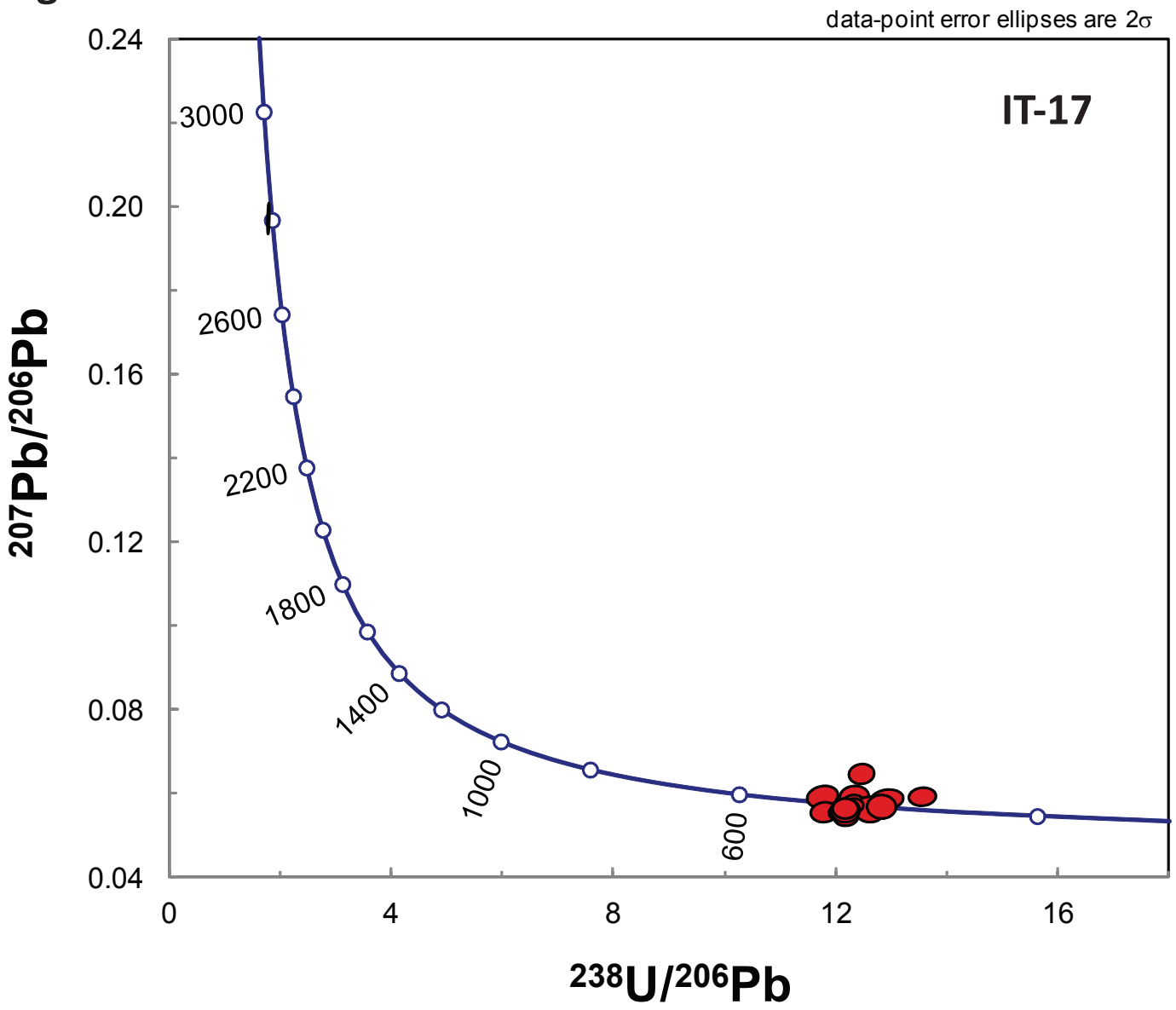
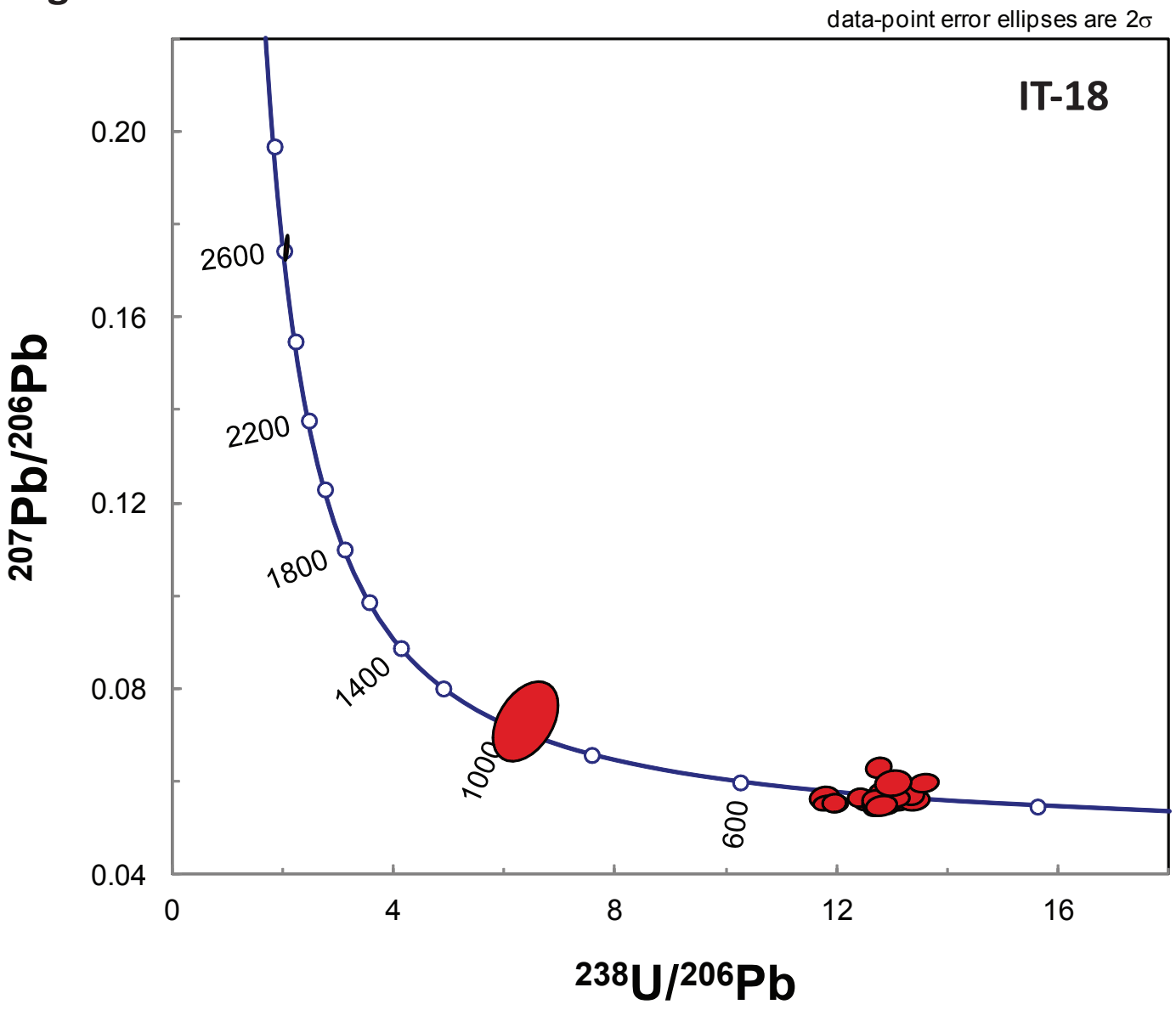

data-point error ellipses are 2σ
IT-17
0.24
0.20
0.16
0.12
0.08
0.04
0
4
8
12
16
3000
2600
2200
1800
1400
1000
600
207Pb/206Pb
238U/206Pb

Fig. S5 f


data-point error ellipses are 2σ
IT-18
0.20
0.16
0.12
0.08
0.04
207Pb/206Pb
2600
2200
1800
1400
1000
600
0
4
8
12
16
238U/206Pb