

## Table legends for Annex 1

### TABLE 1

Apatite fission track results. Nb of grains is the number of crystals analyzed.  $\rho_d$  is the density of induced fission track density (per  $\text{cm}^2$ ) that would be obtained in each individual sample if its U concentration was equal to the U concentration of the CN5 glass dosimeter. Number in brackets is the total number of tracks counted.  $\rho_s$  and  $\rho_i$  represent sample spontaneous and induced track densities per  $\text{cm}^2$ . Number in brackets is the total number of tracks counted. [U] is the calculated uranium density.  $P(\chi^2)$  is the probability in % of  $\chi^2$  for  $\nu$  degrees of freedom (where  $\nu = \text{number of crystals} - 1$ ).  $D_{\text{par}}$  is the mean fission-track pit diameter in  $\mu\text{m}$  corrected following Sobel and Seward (2010) using a correction factor of 0.825. Ages have been calculated using the Trackkey software (Dunkl, 2002). Samples indicated # are from Meresse (2010).

### TABLE 2

Apatite (U–Th)/He results. Nb of grains is the number of crystals analyzed into an aliquot; FT, geometric correction factor for age calculation; corrected age is the age corrected with the FT factor; the uncertainty of  $1\sigma$  was fixed at 8% of the age; mean age, the pondered mean of the aliquot ages in each sample.

### TABLE 3

Zircon (U–Th)/He results. FT, geometric correction factor for age calculation; eU, effective uranium concentration; corrected age, age corrected with the FT factor; the uncertainty of  $1\sigma$  was fixed at 8% of the age; mean age, the pondered mean of the aliquot ages in each sample.

Sample	Latitude (North)	Longitude (East)	Altitude [m]	Nb	$\rho_d \times 10^4$ cm <sup>-2</sup>	$\rho_s \times 10^4$ cm <sup>-2</sup>	$\rho_i \times 10^4$ cm <sup>-2</sup>	[U] [ppm]	P( $\chi^2$ ) [%]	Dpar [ $\mu$ m]	Mean track length [ $\mu$ m] ( $\pm 1 \sigma$ ) (counted)	Central age [Ma] ( $\pm 2\sigma$ )
<i>Balaitous</i>												
GPY15	42°53ø1.2ö	00°16ø1.00ö	1417	24	94.36 (10038)	22.64 (294)	180.2 (2340)	21.96	0	1.4	--	22.23 $\pm$ 2.1
#BA1	42°50ø20.0ö	00°17ø25.7ö	3137	20	141.4 (8282)	22.4 (136)	185.2 (1123)	14.9	42	2.1	13.5 $\pm$ 1.9 (56)	29.3 $\pm$ 2.7
#BA5	42°51ø29.1ö	00°17ø22.2ö	2080	20	134.7 (8282)	18.2 (74)	150.8 (611)	13.87	100	1.9	13.9 $\pm$ 1.7 (66)	27.9 $\pm$ 3.5
#BA8	42°45ø15.3ö	00°14ø22.0ö	1614	20	138.7 (8282)	24.3 (156)	281.3 (1806)	24.51	98	2.1	13.8 $\pm$ 1.9 (114)	20.5 $\pm$ 1.8
<i>Eaux-Chaudes</i>												
GPY09	42°53ø14.5ö	00°25ø28.0ö	1066	15	99.04 (10038)	12.46 (37)	182.24 (541)	21.66	10	1.1	--	12.2 $\pm$ 2.2
GPY11	42°54ø34.2ö	00°24ø36.9ö	1208	22	102.4 (10038)	24.18 (121)	190.27 (952)	21.41	15	1.2	13.1 $\pm$ 1.6 (20)	22.3 $\pm$ 2.3
GPY12	42°57ø11.5ö	00°26ø24.1ö	677	13	104.4 (1044)	16.74 (52)	136.82 (425)	14.92	89	1.1	--	22.0 $\pm$ 3.2
#JA2	42°47ø45.5ö	00°31ø26.8ö	1632	20	109.2 (7145)	19.5 (91)	135.8 (634)	17.72	93	--	--	26.8 $\pm$ 3.1
#JA3	42°47ø59.7ö	00°31ø14.6ö	1641	16	112.7 (7373)	41.8 (156)	291 (1087)	32.67	2	--	--	30.0 $\pm$ 3.5

**Table 1**

Sample	Latitude (North)	Longitude (East)	Altitude (m)	Nb	<sup>238</sup> U ( $\mu$ mol)	<sup>232</sup> Th ( $\mu$ mol)	<sup>4</sup> He ( $\mu$ mol)	Ft	Raw age (Ma) $\pm 1\sigma$	Corrected age (Ma) $\pm 1\sigma$	Mean age (Ma) $\pm 1\sigma$
<i>Balaïtous</i>											
GPY15 1	42°53'11.2"	00°16'1.00"	1417	1	0.42531	0.53135	0.00718	0.727	10.21 $\pm$ 0.12	14.04 $\pm$ 0.16	9.4 $\pm$ 4.2 (9.3 $\pm$ 5.6)
GPY15 3				1	0.32811	0.31242	0.00312	0.676	6.08 $\pm$ 0.06	8.99 $\pm$ 0.07	
GPY15 4				1	0.13658	0.20121	0.00139	0.765	5.92 $\pm$ 0.1	7.74 $\pm$ 0.11	
GPY15 5				1	0.11808	0.18527	0.00290	0.669	14.04 $\pm$ 0.32	20.98 $\pm$ 0.46	
BA1 1-3-4	42°50'20.0"	00°17'25.7"	3137	3	0.37182	0.35352	0.00533	0.570	10.4 $\pm$ 0.11	18.23 $\pm$ 0.17	15.0 $\pm$ 3.4
BA1 2-5				2	0.17384	0.21111	0.00225	0.611	7.88 $\pm$ 0.11	12.9 $\pm$ 0.15	
BA5 6-3	42°51'29.1"	00°17'22.2"	2080	2	1.85155	2.15826	0.01671	0.688	4.22 $\pm$ 0.05	6.13 $\pm$ 0.06	6.3 $\pm$ 1.0
BA5 10-8				2	0.79015	0.89596	0.00540	0.702	4.02 $\pm$ 0.04	5.73 $\pm$ 0.05	
BA5 5-7				2	0.91906	1.05174	0.00665	0.731	4.46 $\pm$ 0.04	6.1 $\pm$ 0.05	
BA5 1-9				2	0.64933	0.68147	0.00416	0.772	5.54 $\pm$ 0.14	7.18 $\pm$ 0.05	
BA8 1-3-4	42°45'15.3"	00°14'22.0"	1614	2	0.58653	0.63138	0.00337	0.563	3.59 $\pm$ 0.04	6.37 $\pm$ 0.07	6.27 $\pm$ 0.22
BA85-7-8				2	0.64510	0.65350	0.00405	0.633	3.97 $\pm$ 0.04	6.26 $\pm$ 0.05	
BA8 9				3	0.33613	0.35925	0.00216	0.651	4.02 $\pm$ 0.05	6.17 $\pm$ 0.07	
<i>Eaux-Chaudes</i>											
GPY09 1	42°53'14.5"	00°25'28.0"	1066	1	0.35513	0.22046	0.00388	0.630	7.44 $\pm$ 0.1	11.81 $\pm$ 0.15	10.2 $\pm$ 6.1 (9.4 $\pm$ 5.0)
GPY09 2				1	0.25566	0.34676	0.00316	0.685	7.33 $\pm$ 0.11	10.69 $\pm$ 0.15	
GPY09 5-3				2	0.28581	0.21926	0.00468	0.522	10.84 $\pm$ 0.14	20.75 $\pm$ 0.25	
GPY09 6-4				2	0.40587	0.25853	0.00246	0.514	4.12 $\pm$ 0.06	8.01 $\pm$ 0.09	
GPY11 1	42°54'34.2"	00°24'36.9"	1208	1	0.33130	0.25048	0.00287	0.603	5.74 $\pm$ 0.08	9.52 $\pm$ 0.11	10.4 $\pm$ 3.0
GPY11 2				1	0.18611	0.19256	0.00163	0.522	5.51 $\pm$ 0.09	9.88 $\pm$ 0.13	
GPY11 3				1	0.21665	0.32194	0.00290	0.539	7.76 $\pm$ 0.11	14.39 $\pm$ 0.18	
GPY11 4				1	0.23296	0.21372	0.00173	0.472	4.78 $\pm$ 0.09	10.11 $\pm$ 0.16	
GPY12 1	42°57'11.5"	00°26'24.1"	677	1	0.41991	1.12264	0.00424	0.735	4.86 $\pm$ 0.05	6.61 $\pm$ 0.06	6.56 $\pm$ 0.78
GPY12 2				1	0.16894	0.40008	0.00140	0.673	4.17 $\pm$ 0.07	6.19 $\pm$ 0.08	
GPY12 3				1	0.16281	0.39808	0.00141	0.675	4.43 $\pm$ 0.08	6.39 $\pm$ 0.09	
GPY12 4				1	0.08278	0.27371	0.00079	0.538	4.22 $\pm$ 0.12	7.84 $\pm$ 0.14	
<i>Western Axial Zone</i>											
GPY14 1-2-6	42°53'57.4"	00°42'57.7"	1594	3	1.22745	1.79027	0.03435	0.691	15.87 $\pm$ 0.14	22.94 $\pm$ 0.19	20.3 $\pm$ 4.3
GPY14 3-4-5				3	1.63647	3.63252	0.04931	0.882	15.51 $\pm$ 0.11	17.58 $\pm$ 0.12	
GPY14 7-8				2	0.15968	0.41246	0.00557	0.829	17.01 $\pm$ 0.19	20.5 $\pm$ 0.22	

TABLE 2

Sample	Latitude (North)	Longitude (East)	Altitude (m)	<sup>238</sup> U (ppm)	<sup>232</sup> Th (ppm)	<sup>147</sup> Sm (ppm)	<sup>4</sup> He (nmol/g)	Ft	Ue	Raw age (Ma) ± 1σ	Corrected age (Ma) ± 1σ	Mean age (Ma) ± 1σ
<i>Balaitous</i>												
GPY15 1	42°53'11.2"	00°16'1.00"	1417	564.3	230.2	18.8	45.9	0.75	617.4	13.75 ± 0.69	18.4 ± 1.47	25.7 ± 6.5
GPY15 2				403.0	47.5	0.5	44.4	0.80	413.9	19.86 ± 0.99	25.0 ± 2.00	
GPY15 3				252.3	51.1	0.9	40.9	0.79	264.1	28.67 ± 1.43	36.2 ± 2.89	
GPY15 4				506.6	88.0	0.5	52.8	0.80	526.9	18.56 ± 0.93	23.2 ± 1.86	
BA1 1	42°50'20.0"	00°17'25.7"	3137	679.2	106.7	0.5	71.5	0.80	703.7	18.82 ± 0.94	23.6 ± 1.89	22.1 ± 1.2
BA1 2				590.8	118.7	0.8	55.4	0.80	618.1	16.59 ± 0.83	20.7 ± 1.66	
BA1 3				1040.4	121.1	0.5	102.1	0.81	1068.3	17.71 ± 0.89	21.8 ± 1.75	
BA5 1	42°51'29.1"	00°17'22.2"	2080	667.9	143.8	0.7	73.2	0.79	701.0	19.31 ± 0.97	24.6 ± 1.96	22.2 ± 1.7
BA5 2				318.1	50.7	0.3	30.1	0.79	329.8	16.92 ± 0.85	21.3 ± 1.70	
BA5 3				1125.8	120.3	0.5	103.5	0.80	1153.5	16.61 ± 0.83	20.8 ± 1.66	
BA8 1	42°45'15.3"	00°14'22.0"	1614	302.6	67.3	0.5	30.1	0.82	318.1	17.53 ± 0.87	21.4 ± 1.71	23.7 ± 2.3
BA8 3				163.4	54.3	0.5	21.0	0.85	176.0	22.03 ± 1.10	26.0 ± 2.08	
<i>Eaux-Chaudes</i>												
GPY09 1	42°53'14.5"	00°25'28.0"	1066	768.6	157.5	1.4	87.2	0.82	804.9	20.04 ± 1.0	24.3 ± 1.9	25.8 ± 2.0
GPY09 2				821.6	175.2	1.0	94.7	0.83	862.0	20.32 ± 1.0	24.4 ± 1.9	
GPY09 4	42°54'34.2"	00°24'36.9"	1208	573.7	157.0	3.1	77.6	0.82	609.9	23.52 ± 1.2	28.6 ± 2.3	23.1 ± 1.8
GPY11 1				456.0	106.3	1.1	46.7	0.80	480.4	17.99 ± 0.9	22.6 ± 1.8	
GPY11 2				995.8	258.7	0.8	96.1	0.80	1055.4	16.86 ± 0.8	21.2 ± 1.7	
GPY11 3				428.8	109.3	0.7	49.0	0.79	454.0	19.96 ± 1.0	25.4 ± 2.0	
GPY12 1	42°57'11.5"	00°26'24.1"	677	334.3	91.4	1.0	33.9	0.83	355.4	17.67 ± 0.9	21.4 ± 1.7	21.9 ± 0.6
GPY12 2				615.0	143.4	1.9	63.3	0.84	648.0	10.08 ± 0.9	21.5 ± 1.7	
GPY12 3				343.3	112.9	0.6	37.8	0.83	369.3	18.95 ± 0.9	22.7 ± 1.8	
JA3 1	42°47'59.7"	00°31'14.6"	1641	551.2	100.0	1.4	71.8	0.79	574.2	23.16 ± 1.16	29.4 ± 2.3	196.5 ± 19.1
JA3 2				124.4	31.2	0.6	14.8	0.78	131.6	20.74 ± 1.04	26.6 ± 2.1	
<i>Western Axial Zone</i>												
GPY01 1	43°02'17.6"	00°44'51.9"	510	131.3	99.9	1.1	17.8	0.70	154.3	21.26 ± 1.16	30.4 ± 2.4	32.0 ± 1.2
GPY01 2				202.4	102.2	0.8	29.7	0.73	226.0	24.29 ± 1.04	33.2 ± 2.7	
GPY01 3				128.9	63.0	8.7	18.3	0.73	143.4	23.56 ± 2.15	32.3 ± 2.6	
GPY03 1	43°02'29.1"	00°53'50.4"	312	234.8	71.7	0.6	27.1	0.69	251.3	19.94 ± 1.00	28.8 ± 2.3	28.3 ± 0.8
GPY03 2				125.5	98.9	6.8	15.5	0.67	148.3	19.32 ± 0.97	28.9 ± 2.3	
GPY03 3				83.2	89.7	1.1	10.5	0.69	103.9	18.63 ± 0.93	27.1 ± 2.2	

Table 3

Table 3 continued

Sample	Latitude (North)	Longitude (East)	Altitude (m)	<sup>238</sup> U (ppm)	<sup>232</sup> Th (ppm)	<sup>147</sup> Sm (ppm)	<sup>4</sup> He (nmol/g)	Ft	Ue	Raw age (Ma) ± 1σ	Corrected age (Ma) ± 1σ	Mean age (Ma) ± 1σ
<i>Western Axial Zone</i>												
GPY04 1	42°57'08.8"	00°49'57.1"	1800	66.3	52.8	0.3	10.4	0.81	78.5	24.48± 1.22	30.2 ± 2.4	32.6 ± 2.2
GPY04 2				30.3	34.5	0.4	5.2	0.78	38.2	25.04± 1.25	31.9 ± 2.6	
GPY04 3				145.4	107.8	0.5	25.9	0.79	170.2	28.10± 1.41	35.5 ± 2.8	
GPY05 1	42°51'05.4"	00°42'03.9"	1194	156.9	44.2	0.8	38.9	0.78	167.0	43.05± 2.15	55.0 ± 4.4	36.7 ± 13.2
GPY05 2				838.5	583.5	3.4	96.7	0.76	972.8	18.36± 0.92	24.3 ± 1.9	
GPY05 3				552.9	185.4	1.1	72.7	0.73	595.6	22.58± 1.13	30.9 ± 2.5	
GPY06 2	42°49'33.7"	00°42'40.2"	1097	32.6	32.2	0.5	4.1	0.78	40.0	35.24± 0.95	24.2 ± 1.9	25.5 ± 1.3
GPY06 3				58.8	40.2	0.6	8.0	0.81	68.1	18.94± 1.08	26.8 ± 2.1	
GPY07 1	42°56'55.8"	00°50'11.1"	1579	93.9	28.6	2.8	15.4	0.78	100.5	28.30± 1.41	36.3 ± 2.9	34.0 ± 2.3
GPY07 2				88.1	13.0	1.0	11.9	0.76	91.1	24.26± 1.21	31.8 ± 2.5	
GPY08 1	42°54'11.68"	00°48'53.61"	1810	56.9	26.8	0.5	10.2	0.80	63.0	29.97± 1.50	37.5 ± 3.0	61.6 ± 17.7
GPY08 2				110.3	77.2	0.6	40.0	0.72	128.1	57.48± 2.87	79.4 ± 6.3	
GPY08 3				45.5	18.2	1.0	14.5	0.79	49.7	53.82± 2.69	67.9 ± 5.4	
GPY14 1	42°53'57.4"	00°42'57.7"	1594	268.4	274.5	2.2	73.5	0.78	331.6	40.79± 2.03	52.4 ± 4.2	33.8 ± 14.2
GPY14 2				961.9	384.9	67.3	62.0	0.78	1050.8	10.92± 0.55	14.1 ± 1.1	
GPY14 3				925.9	290.9	5.4	120.4	0.80	992.9	22.44± 1.12	28.1 ± 2.2	
GPY14 4				441.1	112.9	1.5	81.1	0.79	467.1	32.11± 1.61	40.7 ± 3.2	
<i>North Pyrenean Zone</i>												
CTH1 1	43°06'15,9"	00°16'52,0"	439	344.9	124.1	1.3	63.8	0.77	373.5	31.55± 1.58	41.1 ± 3.3	43.9 ± 4.1
CTH1 2				362.9	111.7	0.6	67.9	0.79	388.6	32.29± 1.61	40.9 ± 3.3	
CTH1 3				22.6	66.8	0.5	52.5	0.82	237.0	40.93± 2.05	49.7 ± 4.0	
ASS1 1	43°09'10,5"	00°15'09,5"	317	44.6	49.6	1.0	37.6	0.78	56.1	122.51± 6.13	156.7 ± 12.5	219.7 ± 45.1
ASS1 2				148.3	43.6	1.3	180.3	0.80	158.4	206.51± 10.35	2596 ± 20.8	
ASS1 3				298.5	192.7	3.9	343.4	0.75	342.9	182.28± 9.11	242.9 ± 19.4	
MCT7 1	43°04'12,9"	00°19'22,7"	778	185.7	78.7	3.1	34.5	0.80	203.8	31.28± 1.56	39.1 ± 3.1	35.8 ± 2.4
MCT7 2				194.4	150.3	4.9	32.5	0.78	229.0	26.19± 1.31	33.4 ± 2.7	
MCT7 3				157.7	21.5	0.6	24.0	0.79	162.7	27.35± 1.37	34.8 ± 2.8	
LBT2 1	43°07'15,6"	00°14'05,7"	367	82.9	46.2	0.8	15.0	0.79	93.5	29.61± 1.48	37.6 ± 3.0	38.4 ± 3.3
LBT2 2				181.6	54.8	0.4	36.6	0.81	194.2	34.82± 1.74	42.8 ± 3.4	
LBT2 3				378.7	98.7	1.4	58.3	0.77	401.4	26.88± 1.34	34.8 ± 2.8	

Table 3 continued

Sample	Latitude (North)	Longitude (East)	Altitude (m)	<sup>238</sup> U (ppm)	<sup>232</sup> Th (ppm)	<sup>147</sup> Sm (ppm)	<sup>4</sup> He (nmol/g)	Ft	Ue	Raw age (Ma) ± 1σ	Corrected age (Ma) ± 1σ	Mean age (Ma) ± 1σ
<i>North Pyrenean Zone</i>												
NAY3 1	43°10'29,4"	00°17'20,1"	266	130.3	10.6	0.4	87.0	0.81	132.7	120.33± 6.02	148.9 ± 11.9	205.1 ± 49.2
NAY3 2				141.6	32.1	0.9	176.8	0.80	149.0	215.49± 10.77	268.7 ± 21.5	
NAY3 3				113.9	29.2	0.8	103.6	0.79	120.6	157.01± 7.85	197.9 ± 15.8	
GPY17 1	43°01'05.2"	00°24'47.5"	559	174.8	79.4	0.5	22.5	0.75	193.1	21.59± 1.08	28.8 ± 2.3	27.8 ± 1.1
GPY17 3				166.9	57.3	0.6	19.7	0.76	180.1	20.23± 1.01	26.7 ± 2.1	