

SUPPLEMENTARY MATERIAL

APATITE FISSION TRACK THERMOCHRONOLOGY

Apatite Fission Track thermochronology provides information on the timing and rates of cooling occurring at temperature (T) between ca. 60-120°C, defined as the Partial Annealing Zone (PAZ). The exact T of the upper (hotter) boundary depends on the kinetic characteristics of the apatites and the cooling rate; the former can be quantified by measuring the diameter of track etch pits, known as D_{par} (Donelick et al., 1999; Gallagher et al., 1998; Ketcham et al., 1999). In general, smaller D_{par} are typical of flourine-rich apatites and are characterized by lower temperatures of the upper boundary. Fission track-lengths provide information on the proportion of the cooling history that the sample experienced within the PAZ, and hence how quickly the apatite passed through the PAZ. Samples were prepared and analyzed following the procedure described by Sobel and Strecker (2003).

An average of twenty grains for each cobble was analyzed for three samples (Table 1). Confined track-lengths were measured when available. All samples pass the χ^2 test (Galbraith and Green, 1990; Green, 1981); therefore, pooled ages are reported in Table 1.

References

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Nuclear tracks and radiation measurements, v. 17, p. 197-206.

Gallagher, K., Brown, R., and Johnson, C., 1998, Fission track analysis and its
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track annealing kinetics: III. Extrapolation to geological time scales: American
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Table DR1. AFT data

LONG	LAT	Age	Error	Reference	Location	extra info
-70.166667	-22.000000	122.0	16.0	Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	118.0	13.0	Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	132.0	15.0	Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	145.0	16.0	Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	128.0	15.0	Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	128.0	15.0	Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	119.0	13.0	Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	118.0	7.0	Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	135.0	18.0	Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.4278	-23.9342	119.0	13.0	Andriessen and Reutter (1994)	Chile-Cordillera de Domeyko	CHI-1
-70.4278	-23.9342	85.0	13.0	Andriessen and Reutter (1994)	Chile-Cordillera de Domeyko	CHI-5
-70.2222	-23.8417	78.7	11.6	Andriessen and Reutter (1994)	Chile-Cordillera de Domeyko	CHI-7
-70.0522	-23.7246	69.2	7.0	Andriessen and Reutter (1994)	Chile-Cordillera de Domeyko	CHI-8
-69.5139	-23.3778	59.2	7.5	Andriessen and Reutter (1994)	Chile-Cordillera de Domeyko	CHI-2
-69.0325	-23.5322	50.8	7.6	Andriessen and Reutter (1994)	Chile-Cordillera de Domeyko	CHI-6
-68.6525	-23.1075	64.5	7.9	Andriessen and Reutter (1994)	Chile-Cordillera de Domeyko	CHI-4
-68.2711	-23.7936	38.6	5.6	Andriessen and Reutter (1994)	Chile-Cordillera de Domeyko	CHI-3
-68.6861	-21.0694	45.3	6.2	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.7583	-21.1625	43.4	4.8	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.8139	-21.5083	36.4	4.4	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.8083	-21.5417	43.5	6.6	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.7375	-22.0517	39.8	7.0	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.7986	-22.0667	41.6	5.8	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.7708	-22.0806	39.9	5.4	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.7389	-22.0917	36.7	8.0	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.8333	-22.1167	39.8	7.0	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.8278	-22.1194	38.9	8.6	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.8278	-22.1194	39.7	6.2	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.8278	-22.1319	39.6	4.4	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.9806	-22.2306	34.4	5.0	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.9250	-22.2361	30.1	3.2	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.8778	-22.2694	32.7	4.4	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.8958	-22.2792	30.2	4.4	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-69.1917	-22.2875	47.4	5.4	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.9639	-22.2875	37.1	3.6	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.9764	-22.3139	32.0	3.8	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-69.1917	-22.3153	55.6	6.0	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-69.0806	-22.3250	58.9	6.0	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.8542	-22.3311	35.4	5.2	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-69.0972	-22.3333	62.4	7.4	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-68.9667	-22.3464	30.3	3.6	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-69.1486	-22.3486	58.2	5.6	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-69.2542	-26.3417	43.7	4.6	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-69.2847	-26.3583	45.9	8.8	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-69.2722	-26.3667	44.4	4.4	Maksaev and Zentilli (1999)	Chile-Cordillera de Domeyko	
-70.367134	-24.23458	50.80	3.40	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL1
-69.1128	-24.245817	23.70	3.50	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL6
-70.50699	-23.099619	43.50	3.30	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL7
-70.33236	-23.09185	80.20	7.10	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL8
-70.260254	-22.627453	58.20	5.10	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL9
-70.25423	-22.458052	98.50	12.30	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL10
-70.17482	-22.082664	87.80	6.40	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL11
-70.205414	-23.461185	62.10	14.00	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL12
-69.963715	-23.319435	15.30	2.70	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL13
-69.51684	-23.403782	33.10	3.50	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL14
-69.35845	-22.873102	29.10	3.80	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL15
-69.784584	-22.044035	46.20	8.20	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL17
-68.838295	-22.365126	25.10	3.00	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL18
-68.922585	-23.040968	43.70	3.40	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL20
-68.7582	-23.668657	30.30	7.80	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL21
-68.33968	-23.667439	23.20	2.30	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL22
-68.320274	-22.846033	29.40	4.00	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL23
-68.47902	-23.099585	27.40	3.40	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL27
-68.63281	-23.66815	32.90	2.20	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL28
-69.03474	-23.537252	49.60	7.10	Reiners et al. (this volume)	Chile-Cordillera de Domeyko	CL29

LONG	LAT	Age	Error	Reference	Location	extra info
-68.0871	-24.8031	68.7	4.6	this paper	Puna-Arizaro	A09-FT1
-68.0871	-24.8031	37.3	4.8	this paper	Puna-Arizaro	A09-FT2
-67.2535	-24.7238	173.0	14.7	this paper	Puna-Arizaro	ARB09-15
-67.2540	-24.9118	106.9	13.4	this paper	Puna-Arizaro	ARB09-13
-67.7237	-25.2920	143.7	13.0	this paper	Puna-Arizaro	A09-gr1
-67.3190	-24.5570	107.6	7.6	Carrapa et al. (2009)	Puna-Arizaro	TG 41
-67.3213	-24.5574	109.5	7.7	Carrapa et al. (2009)	Puna-Arizaro	TG190
-67.3252	-24.5595	46.2	3.9	Carrapa et al. (2009)	Puna-Arizaro	TG408
-66.2701	-23.427050	37.0	2.8	Deeken et al. (in prep.)	Puna	SUS1
-66.2663	-23.430700	32.1	2.1	Deeken et al. (in prep.)	Puna	SUS2
-66.2581	-23.437517	36.4	2.4	Deeken et al. (in prep.)	Puna	SUS3
-66.2465	-23.440167	31.4	3.2	Deeken et al. (in prep.)	Puna	SUS4
-66.2989	-23.629350	24.5	1.3	Deeken et al. (in prep.)	Puna	COBS
-66.2920	-23.637300	22.7	1.3	Deeken et al. (in prep.)	Puna	COB3
-66.2924	-23.640917	21.3	2.4	Deeken et al. (in prep.)	Puna	COB2
-66.2934	-23.643717	20.8	1.1	Deeken et al. (in prep.)	Puna	COB1
-67.4527	-26.1356	28.5	1.8	Carrapa et al. (2005)	Puna-Antofalla	
-67.4215	-26.1436	25.8	1.6	Carrapa et al. (2005)	Puna-Antofalla	
-67.4609	-26.1501	26.5	2.2	Carrapa et al. (2005)	Puna-Antofalla	
-67.4606	-26.1526	29.0	2.0	Carrapa et al. (2005)	Puna-Antofalla	
-67.4819	-26.1618	27.7	3.9	Carrapa et al. (2005)	Puna-Antofalla	
-67.4516	-26.1356	23.9	3.1	Carrapa et al. (2005)	Puna-Antofalla	
-67.3232	-24.5959	189.4	22.4	Deeken et al. (2006)	Puna Plateau	
-67.3308	-24.5972	198.4	24.0	Deeken et al. (2006)	Puna Plateau	
-65.9222	-24.4806	30.3	3.0	Andriessen and Reutter (1994)	Eastern Cordillera	ARG1
-66.1749	-26.1250	54.0	3.4	Carrapa et al. (2013)	Eastern Cordillera-Laguna Brava	
-66.1032	-26.1386	84.0	6.6	Carrapa et al. (2013)	Eastern Cordillera-Laguna Brava	
-66.0673	-26.1250	72.0	3.9	Carrapa et al. (2013)	Eastern Cordillera-Laguna Brava	
-66.0567	-26.1131	84.0	5.0	Carrapa et al. (2013)	Eastern Cordillera-Laguna Brava	
-66.0457	-26.1141	58.2	3.5	Carrapa et al. (2013)	Eastern Cordillera-Laguna Brava	
-66.0375	-26.1143	52.7	4.0	Carrapa et al. (2013)	Eastern Cordillera-Laguna Brava	
-66.3911	-24.9329	28.2	3.6	Carrapa et al. (2013)	Eastern Cordillera, Cachi	
-66.6125	-24.9798	56.4	4.0	Deeken et al. (2006)	Eastern Cordillera	
-66.6184	-24.9810	20.3	1.8	Deeken et al. (2006)	Eastern Cordillera	
-66.6281	-24.9842	18.7	1.8	Deeken et al. (2006)	Eastern Cordillera	
-66.6726	-24.9871	25.8	3.2	Deeken et al. (2006)	Eastern Cordillera	
-66.7046	-25.0093	19.1	1.6	Deeken et al. (2006)	Eastern Cordillera	
-66.3406	-25.0209	15.0	3.4	Deeken et al. (2006)	Eastern Cordillera	
-66.4257	-25.2492	15.6	1.4	Deeken et al. (2006)	Eastern Cordillera	
-66.4920	-25.3118	16.0	1.4	Deeken et al. (2006)	Eastern Cordillera	
-66.4941	-25.3153	16.0	1.4	Deeken et al. (2006)	Eastern Cordillera	
-66.5047	-25.3201	16.3	1.4	Deeken et al. (2006)	Eastern Cordillera	
-66.5103	-25.3324	18.2	1.2	Deeken et al. (2006)	Eastern Cordillera	
-66.4236	-25.5708	16.9	1.8	Deeken et al. (2006)	Eastern Cordillera	
-66.3495	-25.6549	69.0	4.8	Deeken et al. (2006)	Eastern Cordillera	
-66.3521	-25.6570	91.7	5.6	Deeken et al. (2006)	Eastern Cordillera	
-65.6888	-23.192400	23.0	3.0	Deeken et al. (in prep.)	Eastern Cordillera	GA7
-65.6934	-23.214317	16.8	1.2	Deeken et al. (in prep.)	Eastern Cordillera	GA6
-65.4597	-23.383133	64.0	2.7	Deeken et al. (in prep.)	Eastern Cordillera	GF6
-65.4550	-23.382883	13.5	1.2	Deeken et al. (in prep.)	Eastern Cordillera	GF5
-65.4532	-23.380783	15.0	1.2	Deeken et al. (in prep.)	Eastern Cordillera	GF4
-65.4489	-23.378967	12.5	0.8	Deeken et al. (in prep.)	Eastern Cordillera	GF3
-65.4478	-23.378917	12.5	0.9	Deeken et al. (in prep.)	Eastern Cordillera	GF2
-65.4416	-23.380900	11.9	0.8	Deeken et al. (in prep.)	Eastern Cordillera	GF1
-65.5838	-23.666017	11.5	0.9	Deeken et al. (in prep.)	Eastern Cordillera	EC5
-65.6293	-23.680867	28.3	1.9	Deeken et al. (in prep.)	Eastern Cordillera	EC3
-66.0124	-26.0941	76.5	3.4	Carrapa (this volume)	Eastern Cordillera	Laguna Brava (modern river), detrital P
-66.0124	-26.0941	104.3	6.0	Carrapa (this volume)	Eastern Cordillera	Laguna Brava (modern river), detrital P

LONG	LAT	Age	Error	Reference	Location	extra info
-67.5416	-27.070167	23.1	1.2	Carrapa et al. (2006)	N Sierras Pampeanas	Fiambala 041
-67.5594	-27.080250	22.0	5.0	Carrapa et al. (2006)	N Sierras Pampeanas	Fiambala 042
-67.5681	-27.076633	18.9	1.7	Carrapa et al. (2006)	N Sierras Pampeanas	Fiambala 043
-67.5913	-27.080033	19.0	3.0	Carrapa et al. (2006)	N Sierras Pampeanas	Fiambala 044
-67.6053	-27.078067	18.4	0.8	Carrapa et al. (2006)	N Sierras Pampeanas	Fiambala 045
-67.6281	-27.101350	14.8	0.7	Carrapa et al. (2006)	N Sierras Pampeanas	Fiambala 046
-67.6629	-27.129217	17.1	1.3	Carrapa et al. (2006)	N Sierras Pampeanas	Fiambala 048
-67.8915	-27.281000	34.6	4.2	Carrapa et al. (2006)	N Sierras Pampeanas	Fiambala 149
-68.4875	-27.595341	43.9	4.4	Carrapa et al. (2006)	N Sierras Pampeanas	Fiambala 116
-67.5241	-27.735583	13.1	1.7	Carrapa et al. (2006)	N Sierras Pampeanas	Fiambala 161
-67.9465	-27.550267	81.3	3.4	Carrapa et al. (2006)	N Sierras Pampeanas	Fiambala 177
-65.7160	-26.26900	184.7	17.4	Löbens et al. (2013)	N Sierras Pampeanas	
-65.7318	-26.24350	131.5	12.5	Löbens et al. (2013)	N Sierras Pampeanas	
-65.7373	-26.25867	170.5	17.4	Löbens et al. (2013)	N Sierras Pampeanas	
-66.0419	-27.13708	5.9	0.8	Löbens et al. (2013)	N Sierras Pampeanas	
-66.0387	-27.13233	5.3	0.5	Löbens et al. (2013)	N Sierras Pampeanas	
-66.0278	-27.13598	4.6	0.5	Löbens et al. (2013)	N Sierras Pampeanas	
-66.0140	-27.14985	4.8	0.4	Löbens et al. (2013)	N Sierras Pampeanas	
-66.0055	-27.16203	4.5	0.5	Löbens et al. (2013)	N Sierras Pampeanas	
-65.9932	-27.17185	3.2	0.4	Löbens et al. (2013)	N Sierras Pampeanas	
-65.9828	-27.17353	3.3	0.4	Löbens et al. (2013)	N Sierras Pampeanas	
-65.9765	-27.17125	2.6	0.3	Löbens et al. (2013)	N Sierras Pampeanas	
-65.9734	-27.17357	2.8	0.4	Löbens et al. (2013)	N Sierras Pampeanas	
-65.9601	-27.18837	118.8	4.6	Löbens et al. (2013)	N Sierras Pampeanas	
-65.4617	-26.38927	51.8	4.3	Löbens et al. (2013)	N Sierras Pampeanas	
-65.0447	-26.44437	218.8	6.9	Löbens et al. (2013)	N Sierras Pampeanas	
-66.1328	-27.14450	5.1	0.6	Löbens et al. (2013)	N Sierras Pampeanas	
-66.1583	-27.1500	4.8	0.6	Löbens et al. (2013)	N Sierras Pampeanas	
-65.7750	-26.4642	79.7	4.3	Sobel and Strecker (2003)	N Sierras Pampeanas	Cumbres Calchaqui
-65.7653	-26.4657	78.2	4.0	Sobel and Strecker (2003)	N Sierras Pampeanas	Cumbres Calchaqui
-65.7532	-26.4771	74.0	5.3	Sobel and Strecker (2003)	N Sierras Pampeanas	Cumbres Calchaqui
-65.7967	-26.4774	83.2	4.9	Sobel and Strecker (2003)	N Sierras Pampeanas	Cumbres Calchaqui
-65.8119	-26.4774	81.6	3.8	Sobel and Strecker (2003)	N Sierras Pampeanas	Cumbres Calchaqui
-65.7394	-26.5089	74.8	3.3	Sobel and Strecker (2003)	N Sierras Pampeanas	Cumbres Calchaqui
-65.7327	-26.5129	73.9	3.5	Sobel and Strecker (2003)	N Sierras Pampeanas	Cumbres Calchaqui
-65.7242	-26.5175	82.2	3.6	Sobel and Strecker (2003)	N Sierras Pampeanas	Cumbres Calchaqui
-65.7189	-26.5312	65.2	3.2	Sobel and Strecker (2003)	N Sierras Pampeanas	Cumbres Calchaqui
-65.7211	-26.5346	59.7	2.7	Sobel and Strecker (2003)	N Sierras Pampeanas	Cumbres Calchaqui
-66.1583	-27.1500	4.8	0.6	Sobel and Strecker (2003)	N Sierras Pampeanas	Aconcagua ACB1
-66.1328	-27.144500	5.0	0.6	Sobel and Strecker (2003)	N Sierras Pampeanas	Aconcagua ACON1
-66.1308	-27.150400	5.0	0.7	Sobel and Strecker (2003)	N Sierras Pampeanas	Aconcagua ACON2
-66.1293	-27.157583	4.9	0.6	Sobel and Strecker (2003)	N Sierras Pampeanas	Aconcagua ACON3
-66.1205	-27.165450	4.2	0.7	Sobel and Strecker (2003)	N Sierras Pampeanas	Aconcagua ACON4
-66.1098	-27.172927	6.0	0.7	Sobel and Strecker (2003)	N Sierras Pampeanas	Aconcagua ACON5
-66.1153	-27.177250	5.8	0.5	Sobel and Strecker (2003)	N Sierras Pampeanas	Aconcagua ACON6
-66.1181	-27.181783	5.8	0.5	Sobel and Strecker (2003)	N Sierras Pampeanas	Aconcagua ACON7
-66.1133	-27.189867	5.6	0.5	Sobel and Strecker (2003)	N Sierras Pampeanas	Aconcagua ACON9
-66.1134	-27.193917	5.1	0.7	Sobel and Strecker (2003)	N Sierras Pampeanas	Aconcagua ACON10
-66.1084	-27.201733	3.6	0.6	Sobel and Strecker (2003)	N Sierras Pampeanas	Aconcagua ACON11
-66.3686	-26.5374	55.4	3.8	Mortimer et al. (2007)	N Sierras Pampeanas	Sierra de Quilmes
-66.3032	-26.6257	81.9	5.6	Mortimer et al. (2007)	N Sierras Pampeanas	Sierra de Quilmes
-66.7567	-26.8517	38.0	3.0	Coutand et al. (2001)	N Sierras Pampeanas	
-66.7400	-26.8867	30.0	2.0	Coutand et al. (2001)	N Sierras Pampeanas	
-66.4635	-26.6824	62.6	2.4	Carrapa (this volume)	N Sierras Pampeanas	La Quebrada (modern river), detrital P
-66.4635	-26.6824	86.7	4.0	Carrapa (this volume)	N Sierras Pampeanas	La Quebrada (modern river), detrital P
-66.5022	-26.6944	78.9	4.3	Carrapa et al. (2013)	N Sierras Pampeanas	La Quebrada, vertical profile
-66.6944	-66.5022	115.8	5.8	Carrapa et al. (2013)	N Sierras Pampeanas	La Quebrada, vertical profile
-66.4815	-26.6931	76.1	4.2	Carrapa et al. (2013)	N Sierras Pampeanas	La Quebrada, vertical profile
-66.4668	-26.6876	93.6	4.9	Carrapa et al. (2013)	N Sierras Pampeanas	La Quebrada, vertical profile

LONG	LAT	Age	Error	Reference	Location	extra info
-66.88	-19.7	43.5		Barnes et al. (2008)	Bolivia	
-66.39	-20.09	30.3		Barnes et al. (2008)	Bolivia	
-66.21	-20.07	13.2		Barnes et al. (2008)	Bolivia	
-66.17	-20.04	19.9		Barnes et al. (2008)	Bolivia	
-66.17	-20	27.6		Barnes et al. (2008)	Bolivia	
-66.14	-19.86	13.8		Barnes et al. (2008)	Bolivia	
-65.42	-19.58	21.8		Barnes et al. (2008)	Bolivia	
-65.36	-19.62	61.6		Barnes et al. (2008)	Bolivia	
-65.27	-19.58	19		Barnes et al. (2008)	Bolivia	
-64.82	-19.08	26.9		Barnes et al. (2008)	Bolivia	
-65.16	-19.34	35.6		Barnes et al. (2008)	Bolivia	
-64.99	-19.15	88		Barnes et al. (2008)	Bolivia	
-64.77	-19.06	19.4		Barnes et al. (2008)	Bolivia	
-64.47	-19.18	17.8		Barnes et al. (2008)	Bolivia	
-64.34	-19.3	55.1		Barnes et al. (2008)	Bolivia	
-64.17	-19.51	48.3		Barnes et al. (2008)	Bolivia	
-64.02	-19.8	41.9		Barnes et al. (2008)	Bolivia	
-63.73	-19.85	264.3		Barnes et al. (2008)	Bolivia	
-63.72	-19.81	117		Barnes et al. (2008)	Bolivia	
-63.48	-19.84	103.9		Barnes et al. (2008)	Bolivia	
-63.25	-19.78	246.7		Barnes et al. (2008)	Bolivia	
-66.29	-19.94	11.9		Barnes et al. (2008)	Bolivia	
-66.25	-19.95	14.2		Barnes et al. (2008)	Bolivia	
-67.41	-21.01	27.6		Ege et al. (2007)	Bolivia	
-67.18	-20.99	21.1		Ege et al. (2007)	Bolivia	
-67.04	-20.79	31.4		Ege et al. (2007)	Bolivia	
-67.03	-20.78	33.8		Ege et al. (2007)	Bolivia	
-66.92	-20.76	32.7		Ege et al. (2007)	Bolivia	
-66.74	-20.42	30.1		Ege et al. (2007)	Bolivia	
-66.28	-21.35	27.7		Ege et al. (2007)	Bolivia	
-66.02	-21.11	224.3		Ege et al. (2007)	Bolivia	
-65.97	-21.13	25.8		Ege et al. (2007)	Bolivia	
-65.92	-21.17	21.5		Ege et al. (2007)	Bolivia	
-65.91	-21.43	26.7		Ege et al. (2007)	Bolivia	
-65.74	-21.41	31.5		Ege et al. (2007)	Bolivia	
-65.4	-21.43	34.2		Ege et al. (2007)	Bolivia	
-65.32	-21.39	36.7		Ege et al. (2007)	Bolivia	
-65.16	-21.27	20.1		Ege et al. (2007)	Bolivia	
-65.12	-21.3	22.4		Ege et al. (2007)	Bolivia	
-65.05	-21.36	28.2		Ege et al. (2007)	Bolivia	
-65.03	-21.37	29.3		Ege et al. (2007)	Bolivia	
-65.004	-21.36	24.5		Ege et al. (2007)	Bolivia	
-64.92	-21.48	23.8		Ege et al. (2007)	Bolivia	
-64.903	-21.49	23.9		Ege et al. (2007)	Bolivia	
-64.88	-21.46	26.1		Ege et al. (2007)	Bolivia	
-64.84	-21.46	28.8		Ege et al. (2007)	Bolivia	
-64.78	-21.43	29.3		Ege et al. (2007)	Bolivia	
-66.95	-18	17.7		Barnes et al. (2012)	Bolivia	
-67.02	-17.88	40.3		Barnes et al. (2012)	Bolivia	
-66.66	-17.71	43		Barnes et al. (2012)	Bolivia	
-66.45	-17.66	57.1		Barnes et al. (2012)	Bolivia	
-66.43	-17.66	20.7		Barnes et al. (2012)	Bolivia	
-66.36	-17.6	7.3		Barnes et al. (2012)	Bolivia	
-65.89	-17.23	0.5		Barnes et al. (2012)	Bolivia	
-65.9	-17.17	126		Barnes et al. (2012)	Bolivia	
-65.82	-17.19	8.1		Barnes et al. (2012)	Bolivia	
-65.74	-17.165	5.6		Barnes et al. (2012)	Bolivia	
-65.68	-17.1	4.1		Barnes et al. (2012)	Bolivia	
-65.65	-17.06	1.8		Barnes et al. (2012)	Bolivia	
-65.55	-17.02	3		Barnes et al. (2012)	Bolivia	
-68.67	-18.49	83.5		Barnes et al. (2012)	Bolivia	
-68.67	-18.48	43.2		Barnes et al. (2012)	Bolivia	
-66.61	-17.72	68.9		Barnes et al. (2012)	Bolivia	
-66.51	-17.69	28		Barnes et al. (2012)	Bolivia	

In gray samples used in Figure 4.

Table DR2. Apatite He data

LONG	LAT	Age	Error Reference	Location	sample
-70.1333	-20.9833	46	9 Juez-Larre et al. (2010) #	Coastal Cordillera	
-70.1333	-20.9833	38	2 Juez-Larre et al. (2010) #	Coastal Cordillera	
-70.1333	-20.9833	48	4 Juez-Larre et al. (2010) #	Coastal Cordillera	
-70.1333	-20.9833	52	6 Juez-Larre et al. (2010) #	Coastal Cordillera	
-70.1333	-20.9833	39	4 Juez-Larre et al. (2010) #	Coastal Cordillera	
-70.1333	-20.9833	44	3 Juez-Larre et al. (2010) #	Coastal Cordillera	
-70.1333	-20.9833	65	16 Juez-Larre et al. (2010) #	Coastal Cordillera	
-70.1333	-20.9833	74	3 Juez-Larre et al. (2010) #	Coastal Cordillera	
-70.1333	-20.9833	83	7 Juez-Larre et al. (2010) #	Coastal Cordillera	
-70.166667	-22.000000	76	7 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	78	7 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	84	5 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	65	17 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	71	7 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	72	6 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	63	14 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	47	14 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	43	3 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	51	5 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	48	6 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	40	4 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	52	9 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	39	11 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	45	4 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	48	7 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	38	4 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	42	12 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-70.166667	-22.000000	42	3 Juez-Larre et al. (2010) #	Coastal Cordillera	Tocopilla vertical profile
-67.2921	-23.6171	11.59	0.83 Reiners et al. (this volume)	Atacama-Cordillera Domi Aguada de la Perdiz Fm, marine Ordovician sandston	09AA31
-67.2921	-23.6171	16.71	0.41 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-70.2603	-22.6275	35.98	1.20 Reiners et al. (this volume)	Atacama-Cordillera Dom Kg Jurassic granodiorite	CL09
-70.2603	-22.6275	34.27	0.94 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.3585	-22.8731	47.18	1.12 Reiners et al. (this volume)	Atacama-Cordillera Dom Kg Cretaceous granodiorite	CL15
-69.3585	-22.8731	40.51	1.32 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.3397	-23.6674	28.28	0.66 Reiners et al. (this volume)	Atacama-Cordillera Dom Kgd Late K-Early Pg granodiorite	CL22
-68.3397	-23.6674	25.19	0.66 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.0347	-23.5373	47.01	5.29 Reiners et al. (this volume)	Atacama-Cordillera Dom Ktg Paleocene granite	CL29
-69.0347	-23.5373	50.70	2.23 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.4657	-23.3574	50.19	2.92 Reiners et al. (this volume)	Atacama-Cordillera Dom Kssb(a) El Buitre K-Pg granodiorite	09PRAD12
-69.4657	-23.3574	54.47	2.59 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.4629	-23.3588	47.23	1.37 Reiners et al. (this volume)	Atacama-Cordillera Dom Kssb(a) El Buitre K-Pg granodiorite	09PRAD13
-69.4629	-23.3583	46.79	1.12 Reiners et al. (this volume)	Atacama-Cordillera Dom Kssb(a) El Buitre K-Pg granodiorite	09PRAD14
-69.4629	-23.3583	40.33	1.01 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.4629	-23.3574	45.22	1.41 Reiners et al. (this volume)	Atacama-Cordillera Dom Kssb(a) El Buitre K-Pg granodiorite	09PRAD15
-69.4629	-23.3574	48.79	1.27 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.4629	-23.3574	42.93	1.47 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.4657	-23.3425	43.72	1.79 Reiners et al. (this volume)	Atacama-Cordillera Dom Kssb(a) El Buitre K-Pg granodiorite	09PRAD16
-69.4657	-23.3425	49.64	1.21 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.4657	-23.3425	46.17	3.02 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.4657	-23.3538	52.96	1.73 Reiners et al. (this volume)	Atacama-Cordillera Dom Kssb(a) El Buitre K-Pg granodiorite	09PRAD17
-69.4657	-23.3538	51.82	1.75 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.4610	-23.3863	43.02	1.26 Reiners et al. (this volume)	Atacama-Cordillera Dom Kssb(a) El Buitre K-Pg granodiorite	09PRAD18
-69.4610	-23.3863	38.67	1.17 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.4634	-23.3873	43.96	1.79 Reiners et al. (this volume)	Atacama-Cordillera Dom Kssb(a) El Buitre K-Pg granodiorite	09PRAD19
-69.4634	-23.3873	40.87	2.22 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.4660	-23.3893	53.15	1.50 Reiners et al. (this volume)	Atacama-Cordillera Dom Kssb(a) El Buitre K-Pg granodiorite	09PRAD20
-69.4672	-23.3914	41.89	1.58 Reiners et al. (this volume)	Atacama-Cordillera Dom Kssb(a) El Buitre K-Pg granodiorite	09PRAD21
-69.4672	-23.3914	44.29	1.87 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.4672	-23.3914	42.49	2.10 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.4672	-23.3914	46.15	1.49 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.4672	-23.3914	43.65	1.21 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6248	-23.6904	44.44	1.30 Reiners et al. (this volume)	Atacama-Cordillera Dom Loma Amarilla	KMAD06
-68.6248	-23.6904	34.45	4.18 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6714	-23.6989	42.34	0.78 Reiners et al. (this volume)	Atacama-Cordillera Dom Loma Amarilla	KMAD08
-68.6714	-23.6989	54.94	1.15 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6714	-23.6989	55.35	0.89 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6503	-23.6989	38.02	1.00 Reiners et al. (this volume)	Atacama-Cordillera Dom Loma Amarilla	KMAD09
-68.6503	-23.6989	48.23	1.13 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6503	-23.6989	33.19	1.26 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6424	-23.6976	26.71	0.86 Reiners et al. (this volume)	Atacama-Cordillera Dom Loma Amarilla	KMAD11
-68.6424	-23.6976	47.54	1.26 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6424	-23.6976	29.88	1.46 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6336	-23.6969	25.44	0.70 Reiners et al. (this volume)	Atacama-Cordillera Dom Loma Amarilla	KMAD13
-68.6336	-23.6969	31.69	1.63 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6252	-23.6023	20.39	3.50 Reiners et al. (this volume)	Atacama-Cordillera Dom Loma Amarilla	KMAD14
-68.6252	-23.6023	22.31	0.88 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.0812	-21.7097	55.62	1.30 Reiners et al. (this volume)	Atacama-Cordillera Dom Paleoziic migmatite/granitoid de Sierra Moreno	09AA01
-69.0812	-21.7097	60.84	1.43 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-69.0812	-21.7097	61.66	1.45 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6753	-21.8420	53.43	0.90 Reiners et al. (this volume)	Atacama-Cordillera Dom Cretaceous porphyry dike (Ksg)	09AA13
-68.6753	-21.8420	50.42	0.83 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6753	-21.8420	48.37	0.80 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6786	-21.8397	49.87	0.85 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	09AA14
-68.6786	-21.8397	50.00	0.84 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6855	-21.8381	40.62	0.70 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	09AA15
-68.6855	-21.8381	45.21	0.82 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6926	-21.8380	43.02	0.70 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	09AA17
-68.6926	-21.8380	51.01	0.87 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6926	-21.8380	44.67	0.73 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6944	-21.8338	45.83	0.79 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	09AA18
-68.6944	-21.8338	38.56	0.60 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	
-68.6944	-21.8338	37.03	0.59 Reiners et al. (this volume)	Atacama-Cordillera Domeyko	

LONG	LAT	Age	Error Reference	Location	sample	
-67.3284	-24.6229	35.58	1.09 Reiners et al. (this volume)	Puna	Macon East of Arizaro Salar	08AA32
-67.3284	-24.6229	36.72	0.97 Reiners et al. (this volume)	Puna		
-67.3284	-24.6229	37.94	1.02 Reiners et al. (this volume)	Puna		
-67.3284	-24.6337	44.27	1.33 Reiners et al. (this volume)	Puna	Macon East of Arizaro Salar	08AA33
-67.3284	-24.6337	39.36	1.23 Reiners et al. (this volume)	Puna		
-67.3284	-24.6350	49.89	2.63 Reiners et al. (this volume)	Puna	Macon East of Arizaro Salar	08AA36
-67.3284	-24.6350	46.20	2.95 Reiners et al. (this volume)	Puna		
-66.7508	-24.6575	20.0	0.7 Carrapa et al. (2009)	Puna, Pastos Grande	2SP38-Y2*	
-66.7508	-24.6575	13.4	0.5 Carrapa et al. (2009)	Puna, Pastos Grande	2SP38-R46*	
-66.7508	-24.6575	8.0	0.3 Carrapa et al. (2009)	Puna, Pastos Grande	2SP38-Y31*	
-66.7508	-24.6575	14.0	0.3 Carrapa et al. (2009)	Puna, Pastos Grande	2SP38-R44*	
-66.7508	-24.6575	16.0	1.9 Carrapa et al. (2009)	Puna, Pastos Grande	2SP38-Y22*	
-66.7508	-24.6575	11.9	0.4 Carrapa et al. (2009)	Puna, Pastos Grande	2SP38-R50*	
-66.7508	-24.6575	9.6	0.6 Carrapa et al. (2009)	Puna, Pastos Grande	2SP38-V29*	
-66.7508	-24.6575	20.9	2.5 Carrapa et al. (2009)	Puna, Pastos Grande	2SP38-Y16*	
-66.7508	-24.6575	18.1	1.0 Carrapa et al. (2009)	Puna, Pastos Grande	2SP38-R45*	
-66.2820	-25.7940	13.2	0.8 Carrapa et al (2011)	Eastern Cordillera	AngPuc06*	
-66.2820	-25.7940	13.3	0.8 Carrapa et al (2011)	Eastern Cordillera	AngPuc06*	
-66.1750	-25.7140	9.9	0.6 Carrapa et al (2011)	Eastern Cordillera	Ang ZEB*	
-66.1750	-25.7140	10.6	0.6 Carrapa et al (2011)	Eastern Cordillera	Ang ZEB*	
-66.1780	-25.7150	8.4	0.5 Carrapa et al (2011)	Eastern Cordillera	QC1EB080*	
-66.1780	-25.7150	14.6	0.9 Carrapa et al (2011)	Eastern Cordillera	QC1EB080*	
-66.1780	-25.7150	11.9	0.7 Carrapa et al (2011)	Eastern Cordillera	QC1EB080*	
-65.9910	-25.6240	5.7	0.3 Carrapa et al (2011)	Eastern Cordillera	04-29-08 Pingu*	
-65.9910	-25.6240	8.7	0.5 Carrapa et al (2011)	Eastern Cordillera	04-29-08 Pingu*	
-65.9910	-25.6240	9.9	0.6 Carrapa et al (2011)	Eastern Cordillera	04-29-08 Pingu*	
-65.9910	-25.6240	9.4	0.6 Carrapa et al (2011)	Eastern Cordillera	04-29-08 Pingu*	
-65.9670	-25.7250	26.6	1.6 Carrapa et al (2011)	Eastern Cordillera	04-14-08-Pingu*	
-65.9670	-25.7250	2.4	0.1 Carrapa et al (2011)	Eastern Cordillera	04-14-08-Pingu*	
-65.9670	-25.7250	6.1	0.4 Carrapa et al (2011)	Eastern Cordillera	04-14-08-Pingu*	
-65.9670	-25.7250	24.8	1.5 Carrapa et al (2011)	Eastern Cordillera	04-14-08-Pingu*	
-65.9670	-25.7250	21.0	1.3 Carrapa et al (2011)	Eastern Cordillera	04-14-08-Pingu*	
-65.7510	-25.9620	6.0	0.4 Carrapa et al (2011)	Eastern Cordillera	La Yasera Fm*	
-65.7510	-25.9620	4.3	0.3 Carrapa et al (2011)	Eastern Cordillera	La Yasera Fm*	
-65.7510	-25.9620	4.7	0.3 Carrapa et al (2011)	Eastern Cordillera	La Yasera Fm*	
-65.7510	-25.9620	3.4	0.2 Carrapa et al (2011)	Eastern Cordillera	La Yasera Fm*	
-65.6290	-25.6320	4.5	0.8 Carrapa et al (2011)	Eastern Cordillera	Los Banquitos Fm*	
-65.6290	-25.6320	4.2	0.3 Carrapa et al (2011)	Eastern Cordillera	Los Banquitos Fm*	
-65.6290	-25.6320	4.0	0.2 Carrapa et al (2011)	Eastern Cordillera	Los Banquitos Fm*	
-65.6290	-25.6320	3.0	0.2 Carrapa et al (2011)	Eastern Cordillera	Los Banquitos Fm*	
-65.6290	-25.6320	4.8	0.3 Carrapa et al (2011)	Eastern Cordillera	Los Banquitos Fm*	
-65.6290	-25.6320	5.7	0.3 Carrapa et al (2011)	Eastern Cordillera	Los Banquitos Fm*	
-66.1200	-25.2540	27.7	1.7 Carrapa et al (2011)	Eastern Cordillera	QCTin250*, Quebrada de los Colorados Fm.	
-66.1200	-25.2540	27.3	1.6 Carrapa et al (2011)	Eastern Cordillera	QCTin250*, Quebrada de los Colorados Fm.	
-66.0050	-25.1130	11.9	0.7 Carrapa et al (2011)	Eastern Cordillera	1TT18FT*, Pingu Subgroup	
-66.0050	-25.1130	5.7	0.3 Carrapa et al (2011)	Eastern Cordillera	1TT18FT*, Pingu Subgroup	
-66.0050	-25.1130	7.4	0.4 Carrapa et al (2011)	Eastern Cordillera	1TT18FT*, Pingu Subgroup	
-66.2963	-24.6445	15.0	0.6 Pearson et al. (2013)	Eastern Cordillera	09DP37, Ordovician granitoid	
-66.2963	-24.6445	13.8	0.5 Pearson et al. (2013)	Eastern Cordillera	09DP37, Ordovician granitoid	
-66.2963	-24.6445	7.5	0.6 Pearson et al. (2013)	Eastern Cordillera	09DP37, Ordovician granitoid	
-66.2963	-24.6445	23.2	0.8 Pearson et al. (2013)	Eastern Cordillera	09DP37, Ordovician granitoid	
-66.1517	-24.8044	37.9	1.3 Pearson et al. (2013)	Eastern Cordillera	09DP44, granitoid of likely Cambrian age	
-66.1517	-24.8044	53.5	2.0 Pearson et al. (2013)	Eastern Cordillera	09DP44, granitoid of likely Cambrian age	
-66.1517	-24.8044	53.1	2.9 Pearson et al. (2013)	Eastern Cordillera	09DP44; granitoid of likely Cambrian age	
-66.1517	-24.8044	49.4	2.6 Pearson et al. (2013)	Eastern Cordillera	09DP44; granitoid of likely Cambrian age	
-66.0488	-24.7146	7.9	1.0 Pearson et al. (2013)	Eastern Cordillera	09DP45, Lower Cambrian Puncoviscana Formation	
-66.0488	-24.7146	9.0	0.4 Pearson et al. (2013)	Eastern Cordillera	09DP45, Lower Cambrian Puncoviscana Formation	
-66.0488	-24.7146	7.3	0.5 Pearson et al. (2013)	Eastern Cordillera	09DP45, Lower Cambrian Puncoviscana Formation	
-66.0488	-24.7146	5.2	0.5 Pearson et al. (2013)	Eastern Cordillera	09DP45, Lower Cambrian Puncoviscana Formation	
-66.0488	-24.7146	6.6	1.0 Pearson et al. (2013)	Eastern Cordillera	09DP45, Lower Cambrian Puncoviscana Formation	
-65.8095	-24.8038	4.2	0.1 Pearson et al. (2013)	Eastern Cordillera	09DP47, Lower Cambrian Puncoviscana Formation	
-65.8095	-24.8038	14.3	0.6 Pearson et al. (2013)	Eastern Cordillera	09DP47, Lower Cambrian Puncoviscana Formation	
-65.8095	-24.8038	4.7	0.2 Pearson et al. (2013)	Eastern Cordillera	09DP47, Lower Cambrian Puncoviscana Formation	
-65.8095	-24.8038	42.2	1.8 Pearson et al. (2013)	Eastern Cordillera	09DP47, Lower Cambrian Puncoviscana Formation	
-65.7562	-24.5366	7.2	0.3 Pearson et al. (2013)	Eastern Cordillera	10DP07, Ordovician Santa Victoria Group	
-65.7562	-24.5366	6.2	0.5 Pearson et al. (2013)	Eastern Cordillera	10DP07, Ordovician Santa Victoria Group	
-65.7562	-24.5366	8.2	0.3 Pearson et al. (2013)	Eastern Cordillera	10DP07, Ordovician Santa Victoria Group	
-65.7562	-24.5366	4.7	0.2 Pearson et al. (2013)	Eastern Cordillera	10DP07, Ordovician Santa Victoria Group	
-65.6711	-24.5526	10.6	0.5 Pearson et al. (2013)	Eastern Cordillera	10DP08, Ordovician Santa Victoria Group	
-65.6711	-24.5526	12.3	0.6 Pearson et al. (2013)	Eastern Cordillera	10DP08, Ordovician Santa Victoria Group	
-65.6711	-24.5526	9.1	0.5 Pearson et al. (2013)	Eastern Cordillera	10DP08, Ordovician Santa Victoria Group	
-65.6711	-24.5526	9.1	0.5 Pearson et al. (2013)	Eastern Cordillera	10DP08, Ordovician Santa Victoria Group	
-65.6711	-24.5526	8.5	0.4 Pearson et al. (2013)	Eastern Cordillera	10DP08, Ordovician Santa Victoria Group	
-65.6412	-24.6704	5.2	0.3 Pearson et al. (2013)	Eastern Cordillera	10DP15, Ordovician Santa Victoria Group	
-65.6412	-24.6704	15.0	0.4 Pearson et al. (2013)	Eastern Cordillera	10DP15, Ordovician Santa Victoria Group	
-65.6412	-24.6704	14.1	0.5 Pearson et al. (2013)	Eastern Cordillera	10DP15, Ordovician Santa Victoria Group	
-65.6022	-24.7663	8.5	0.3 Pearson et al. (2013)	Eastern Cordillera	10DP16, Lower Cambrian Puncoviscana Formation	
-65.6022	-24.7663	13.6	0.5 Pearson et al. (2013)	Eastern Cordillera	10DP16, Lower Cambrian Puncoviscana Formation	
-65.6022	-24.7663	10.6	0.4 Pearson et al. (2013)	Eastern Cordillera	10DP16, Lower Cambrian Puncoviscana Formation	
-65.6022	-24.7663	7.1	0.2 Pearson et al. (2013)	Eastern Cordillera	10DP16, Lower Cambrian Puncoviscana Formation	
-65.6022	-24.7663	15.4	0.6 Pearson et al. (2013)	Eastern Cordillera	10DP16, Lower Cambrian Puncoviscana Formation	
-65.5631	-24.8002	12.1	0.4 Pearson et al. (2013)	Eastern Cordillera	10DP15, Lower Cambrian Puncoviscana Formation	
-65.5631	-24.8002	24.8	0.9 Pearson et al. (2013)	Eastern Cordillera	10DP15, Lower Cambrian Puncoviscana Formation	
-65.5631	-24.8002	12.7	0.3 Pearson et al. (2013)	Eastern Cordillera	10DP15, Lower Cambrian Puncoviscana Formation	
-65.5631	-24.8002	33.0	1.2 Pearson et al. (2013)	Eastern Cordillera	10DP15, Lower Cambrian Puncoviscana Formation	
-65.5631	-24.8002	16.4	0.7 Pearson et al. (2013)	Eastern Cordillera	10DP15, Lower Cambrian Puncoviscana Formation	
-65.3593	-24.7961	20.8	0.6 Pearson et al. (2013)	Eastern Cordillera	11DP01, Cambrian granitoid	
-65.3593	-24.7961	58.2	1.7 Pearson et al. (2013)	Eastern Cordillera	11DP01, Cambrian granitoid	
-65.3593	-24.7961	52.5	1.5 Pearson et al. (2013)	Eastern Cordillera	11DP01, Cambrian granitoid	
-65.3593	-24.7961	73.6	2.1 Pearson et al. (2013)	Eastern Cordillera	11DP01, Cambrian granitoid	
-65.3593	-24.7961	35.2	1.3 Pearson et al. (2013)	Eastern Cordillera	11DP01, Cambrian granitoid	
-65.3593	-24.7961	9.3	0.3 Pearson et al. (2013)	Eastern Cordillera	10DP17, Lower Cambrian Puncoviscana Formation	
-65.3395	-24.7199	11.3	0.3 Pearson et al. (2013)	Eastern Cordillera	10DP17, Lower Cambrian Puncoviscana Formation	
-65.3395	-24.7199	18.9	0.7 Pearson et al. (2013)	Eastern Cordillera	10DP17, Lower Cambrian Puncoviscana Formation	
-65.3395	-24.7199	10.8	0.5 Pearson et al. (2013)	Eastern Cordillera	10DP17, Lower Cambrian Puncoviscana Formation	

LONG	LAT	Age	Error Reference	Location	sample
-65.3395	-24.7199	38.0	1.6 Pearson et al., in prep.	Eastern Cordillera	10DP17, Lower Cambrian Puncoviscana Formation
-66.1749	-26.1250	17.5	1.0 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB01-1
-66.1749	-26.1250	24.7	1.5 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB01-2
-66.1032	-26.1250	70.1	4.2 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB05-1
-66.1032	-26.1250	27.4	1.6 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB05-2
-66.1032	-26.1250	52.7	3.2 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB05-3
-66.1032	-26.1250	132.4	1.9 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB5_A
-66.1032	-26.1250	72.2	1.0 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB5_B
-66.1032	-26.1250	74.6	1.2 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB5_C
-66.1032	-26.1250	101.0	1.4 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB5_D
-66.1032	-26.1250	68.2	1.0 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB5_E
-66.1032	-26.1250	97.1	1.4 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB5_F
-66.0673	-26.1250	144.4	8.7 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB07-1
-66.0673	-26.1250	15.3	0.9 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB07-2
-66.0673	-26.1250	44.2	2.7 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB07-3
-66.0673	-26.1250	62.6	0.9 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB7_A
-66.0673	-26.1250	207.9	3.0 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB7_B
-66.0673	-26.1250	45.4	0.7 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB7_C
-66.0673	-26.1250	16.9	0.3 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB7_D
-66.0673	-26.1250	43.6	0.7 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB7_E
-66.0673	-26.1250	108.6	1.6 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB7_F
-66.0567	-26.1250	51.9	3.1 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB08-1
-66.0567	-26.1250	38.6	2.3 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB08-2
-66.0567	-26.1250	49.1	2.9 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB08-3
-66.0457	-26.1141	40.8	2.5 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB09-1
-66.0457	-26.1141	32.3	1.9 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB09-2
-66.0457	-26.1141	15.3	0.9 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB09-3
-66.0457	-26.1141	24.7	0.4 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB9_A
-66.0457	-26.1141	19.2	0.3 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB9_B
-66.0457	-26.1141	16.4	0.3 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB9_C
-66.0457	-26.1141	27.2	0.4 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB9_D
-66.0457	-26.1141	19.7	0.3 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB9_E
-66.0457	-26.1141	37.1	0.5 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB9_F
-66.0375	-26.1143	12.0	0.7 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB10-1
-66.0375	-26.1143	23.4	1.4 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB10-2
-66.0375	-26.1143	7.3	0.4 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB10-3
-66.0375	-26.1143	7.4	0.3 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB10_A
-66.0375	-26.1143	8.9	0.1 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB10_B
-66.0375	-26.1143	43.6	0.6 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB10_C
-66.0375	-26.1143	10.0	0.2 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB10_D
-66.0375	-26.1143	14.9	0.2 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB10_E
-66.0375	-26.1143	29.6	0.6 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB10_F
-66.0133	-26.0933	96.1	5.8 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB11-1
-66.0133	-26.0933	78.8	4.7 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB11-2
-66.0133	-26.0933	82.0	4.9 Carrapa et al. (in rev)	Eastern Cordillera	Laguna Barva LB11-3
-65.8911	-24.4863	47.57	1.33 Reiners et al. (this volume)	Eastern Cordillera	Quebrada del Toro, just above Tastil village 08AA13
-65.8911	-24.4863	45.62	1.27 Reiners et al. (this volume)	Eastern Cordillera	
-65.0197	-23.2802	5.65	0.27 Reiners et al. (this volume)	Eastern Cordillera	Devonian sandstone, Hornocal syncline 08AA07
-65.0197	-23.2802	31.95	0.90 Reiners et al. (this volume)	Eastern Cordillera	
-65.0197	-23.2802	38.16	0.80 Reiners et al. (this volume)	Eastern Cordillera	
-65.0197	-23.2802	5.84	0.33 Reiners et al. (this volume)	Eastern Cordillera	Devonian sandstone, Hornocal syncline 08AA07a
-65.0197	-23.2802	6.13	0.32 Reiners et al. (this volume)	Eastern Cordillera	
-65.0197	-23.2802	5.65	0.27 Reiners et al. (this volume)	Eastern Cordillera	
-65.0197	-23.2802	31.95	0.90 Reiners et al. (this volume)	Eastern Cordillera	
-65.0197	-23.2802	38.16	0.80 Reiners et al. (this volume)	Eastern Cordillera	
-65.0197	-23.2802	5.84	0.33 Reiners et al. (this volume)	Eastern Cordillera	
-65.6948	-24.8908	5.71	1.40 Reiners et al. (this volume)	Eastern Cordillera	Puncoviscana, Quebrada del Toro 08AA11

LONG	LAT	Age	Error Reference	Location	sample	
-67.5570	-27.0389	17.5	1.1 Carrapa et al. (in rev)	N Sierras Pampeanas	Cerro Negro	040-1
-67.5570	-27.0389	21.6	1.3 Carrapa et al. (in rev)	N Sierras Pampeanas	Cerro Negro	040-2
-67.5570	-27.0389	29.0	1.7 Carrapa et al. (in rev)	N Sierras Pampeanas	Cerro Negro	040-3
-67.5570	-27.0389	21.6	1.3 Carrapa et al. (in rev)	N Sierras Pampeanas	Cerro Negro	040-4
-67.5913	-27.0800	13.4	0.8 Carrapa et al. (in rev)	N Sierras Pampeanas	Cerro Negro	044-1
-67.5913	-27.0800	17.4	1.0 Carrapa et al. (in rev)	N Sierras Pampeanas	Cerro Negro	044-2
-67.6053	-27.0781	16.7	1.0 Carrapa et al. (in rev)	N Sierras Pampeanas	Cerro Negro	045-1
-67.6053	-27.0781	15.3	0.9 Carrapa et al. (in rev)	N Sierras Pampeanas	Cerro Negro	045-2
-67.6053	-27.0781	14.9	0.9 Carrapa et al. (in rev)	N Sierras Pampeanas	Cerro Negro	045-3
-67.6281	-27.1014	30.7	1.8 Carrapa et al. (in rev)	N Sierras Pampeanas	Cerro Negro	046-1
-67.6281	-27.1014	14.9	0.9 Carrapa et al. (in rev)	N Sierras Pampeanas	Cerro Negro	046-2
-67.6281	-27.1014	18.4	1.1 Carrapa et al. (in rev)	N Sierras Pampeanas	Cerro Negro	046-3
-66.5022	-26.6944	92.1	1.4 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709B_11a
-66.5022	-26.6944	77.3	1.2 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709B_13a
-66.5022	-26.6944	105.9	1.6 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709B_17a
-66.5022	-26.6944	34.4	0.5 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709B_Aa
-66.5022	-26.6944	84.2	1.4 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709B_Ba
-66.5022	-26.6944	179.7	2.7 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709A_16a
-66.5022	-26.6944	96.8	1.5 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709A_19a
-66.5022	-26.6944	83.5	7.6 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709A_Aa
-66.5022	-26.6944	85.4	1.5 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709A_Ba
-66.5022	-26.6944	74.2	1.1 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709A_Ca
-66.4815	-26.6931	92.7	1.3 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709C_1a
-66.4815	-26.6931	86.7	2.0 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709C_5a
-66.4815	-26.6931	79.8	1.4 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709C_8a
-66.4815	-26.6931	95.7	1.4 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709C_16a
-66.4815	-26.6931	87.1	1.3 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709C_20a
-66.4668	-26.6876	88.3	1.7 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709D_1a
-66.4668	-26.6876	87.8	1.5 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709D_5a
-66.4668	-26.6876	89.2	1.6 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709D_12a
-66.4668	-26.6876	94.2	1.4 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709D_18a
-66.4668	-26.6876	103.6	1.7 Carrapa et al. (in rev)	N Sierras Pampeanas	La Quebrada	42709D_20a
-68.2051	-27.6266	10.4	0.5 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-68.2051	-27.6266	10.1	0.2 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-68.2051	-27.6266	9.2	0.4 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-68.3001	-27.6619	21.1	0.4 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-68.3001	-27.6619	9.5	0.3 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-68.3001	-27.6619	15.6	0.5 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-68.3001	-27.6619	17.5	0.4 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-68.3001	-27.6619	15.6	0.3 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-67.9761	-27.7412	18.7	0.4 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-67.9761	-27.7412	13.8	1.5 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-67.9761	-27.7412	4.2	0.2 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-67.9761	-27.7412	21.4	0.6 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-67.8518	-27.7036	87.7	1.7 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-67.8518	-27.7036	10.6	0.3 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-67.8518	-27.7036	38.3	0.5 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-67.8518	-27.7036	10.2	0.3 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-67.8518	-27.7036	7.0	0.3 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-67.7565	-27.6962	2.3	0.1 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	
-67.7565	-27.6962	2.3	0.0 Safipour et al. (this volume)	N Sierras Pampeanas	Fiambala	

* for sedimentary samples only ages younger than depositional age (fully reset) were used

#average age among several single grain ages from one single sample

Time-Temperature cooling/exhumation history of the India-Asia collision zone

2015008

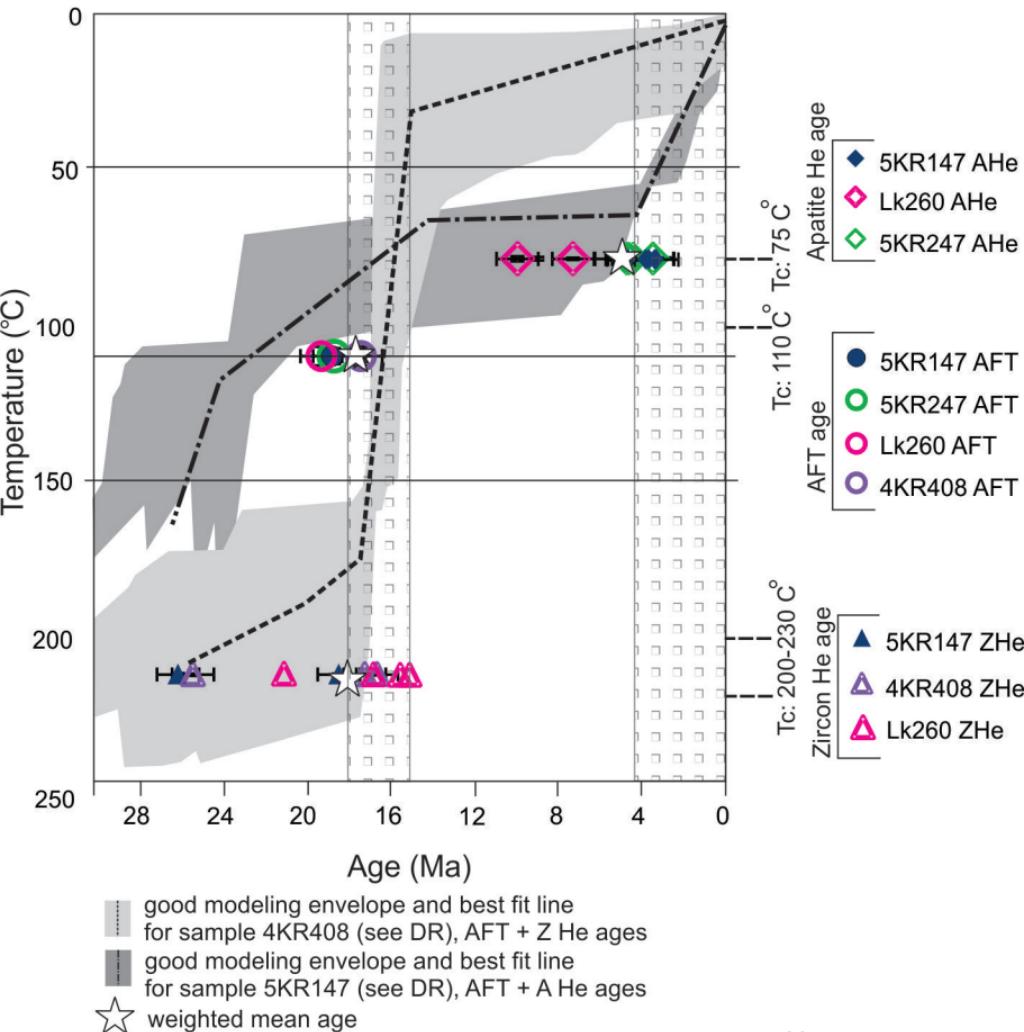


Figure DR4