APPENDIX. Supplementary data to the article:

Zagorchev, I., Balica, C., Kozhoukharova, E., Coriolan Balintoni, I. 2017. Pirin metamorphic and igneous evolution revisited in a geochronological frame based on U-Pb zircon studies. *Geologica Balcanica* 46 (1), 27–63.

Table A1

Isotopic data for sample 298BKP. Amphibolite, road between the villages Kadiytsa and Polena

Zircon grain No.	Analysis			Isotope ratios							Apparent ages (Ma)						Best age		Conc. (%)
	U (ppm)	$^{206}Pb/^{204}Pb$	U/Th	$^{206}Pb^*/^{207}Pb^*$	2σ (%)	$^{207}Pb^*/^{235}U^*$	2σ (%)	$^{206}Pb^*/^{238}U$	2σ (%)	error corr.	$^{206}Pb^*/^{238}U^*$	2σ (Ma)	$^{207}Pb^*/^{235}U$	2σ (Ma)	$^{206}Pb^*/^{207}Pb^*$	2σ (Ma)	Age (Ma)	2σ (Ma)	
298BKP-6	1320	22910	6.9	19.2507	2.2	0.2780	4.1	0.0388	3.4	0.84	245.5	8.3	249.1	9.1	283.1	51.1	**245.5**	8.3	86.7
298BKP-12	845	21816	5.8	18.3932	4.1	0.3647	5.5	0.0487	3.6	0.65	306.3	10.7	315.7	14.9	386.3	93.1	**306.3**	10.7	79.3
298BKP-3	1603	21296	8.6	17.7369	2.0	0.4161	2.0	0.0535	0.5	0.25	336.1	1.6	353.2	6.0	467.4	43.3	**336.1**	1.6	71.9
298BKP-19	1030	19642	2.7	18.0394	2.2	0.4491	2.5	0.0588	1.3	0.50	368.1	4.5	376.7	8.0	429.8	48.9	**368.1**	4.5	85.6
298BKP-11	1345	22346	2.7	17.7982	1.2	0.4616	1.7	0.0596	1.2	0.71	373.1	4.4	385.4	5.5	459.7	27.1	**373.1**	4.4	81.2
298BKP-8	2117	48906	1.9	17.7792	1.2	0.4786	3.0	0.0617	2.7	0.91	386.0	10.2	397.1	9.8	462.0	27.5	**386.0**	10.2	83.6
298BKP-4	825	29268	2.6	17.6936	2.7	0.4815	3.2	0.0618	1.8	0.56	386.5	6.8	399.1	10.7	472.8	59.3	**386.5**	6.8	81.8
298BKP-20	2121	34980	1.7	17.7193	2.0	0.4823	5.6	0.0620	5.2	0.94	387.7	19.6	399.7	18.4	469.5	43.3	**387.7**	19.6	82.6
298BKP-21	915	17528	4.3	18.2513	2.9	0.4696	3.6	0.0622	2.1	0.58	388.8	8.0	390.9	11.8	403.7	65.9	**388.8**	8.0	96.3
298BKP-7	1676	38292	2.1	17.6831	2.1	0.4867	3.7	0.0624	3.1	0.83	390.3	11.7	402.7	12.3	474.1	45.4	**390.3**	11.7	82.3
298BKP-16	1332	27878	5.1	18.1151	1.5	0.4849	1.7	0.0637	0.9	0.54	398.1	3.6	401.4	5.7	420.4	32.4	**398.1**	3.6	94.7
298BKP-22	2049	61100	2.3	17.8031	1.8	0.4987	2.3	0.0644	1.4	0.62	402.3	5.5	410.8	7.8	459.1	40.0	**402.3**	5.5	87.6
298BKP1	2157	16626	2.5	17.6594	1.3	0.5072	2.0	0.0650	1.5	0.77	405.7	6.1	416.6	6.8	477.0	28.2	**405.7**	6.1	85.0
298BKP-15	998	29420	3.6	18.1184	2.0	0.4955	3.7	0.0651	3.1	0.84	406.7	12.4	408.7	12.5	420.0	44.9	**406.7**	12.4	96.8
298BKP-14	1700	37800	3.2	18.0306	1.4	0.5087	2.2	0.0665	1.7	0.77	415.1	6.7	417.6	7.4	430.8	30.4	**415.1**	6.7	96.4
298BKP-13	1370	52250	3.9	18.2919	1.9	0.5043	2.9	0.0669	2.2	0.75	417.5	8.7	414.6	9.8	398.7	43.0	**417.5**	8.7	104.7
298BKP-9	363	11918	2.7	18.0878	3.8	0.5283	6.1	0.0693	4.9	0.79	432.0	20.3	430.7	21.6	423.8	84.1	**432.0**	20.3	101.9
298BKP-23	650	22502	3.2	17.6484	2.8	0.5505	3.0	0.0705	1.0	0.33	438.9	4.2	445.3	10.8	478.4	62.5	**438.9**	4.2	91.8
298BKP-17	586	18584	2.1	18.3013	3.5	0.5348	4.2	0.0710	2.4	0.57	442.1	10.3	435.0	14.9	397.5	77.6	**442.1**	10.3	111.2
298BKP-18	1960	63074	1.1	17.7670	1.6	0.5562	1.7	0.0717	0.5	0.30	446.2	2.2	449.0	6.0	463.6	35.0	**446.2**	2.2	96.2
298BKP-24	1528	43988	2.2	17.4840	1.6	0.5667	3.7	0.0719	3.3	0.90	447.3	14.3	455.8	13.5	499.1	34.6	**447.3**	14.3	89.6
298BKP-5	1468	47180	2.5	17.3012	1.5	0.6004	2.0	0.0753	1.4	0.67	468.2	6.2	477.5	7.8	522.1	33.2	**468.2**	6.2	89.7
298BKP-2	1143	35280	2.1	17.4865	2.0	0.5941	2.1	0.0754	0.8	0.36	468.3	3.5	473.5	8.1	498.7	44.1	**468.3**	3.5	93.9
298BKP-10	1983	70032	1.8	17.2433	0.7	0.6333	1.5	0.0792	1.3	0.89	491.4	6.2	498.2	5.7	529.5	14.3	**491.4**	6.2	92.8

Table A2

Isotopic data for sample 299BKPa. Krupnik granite, road between the villages Kadiytsa and Polena

Zircon grain No.	Analysis			Isotope ratios							Apparent ages (Ma)						Best age		Conc. (%)
	U (ppm)	$^{206}Pb/^{204}Pb$	U/Th	$^{206}Pb^*/^{207}Pb^*$	2σ (%)	$^{207}Pb^*/^{235}U^*$	2σ (%)	$^{206}Pb^*/^{238}U$	2σ (%)	error corr.	$^{206}Pb^*/^{238}U^*$	2σ (Ma)	$^{207}Pb^*/^{235}U$	2σ (Ma)	$^{206}Pb^*/^{207}Pb^*$	2σ (Ma)	Age (Ma)	2σ (Ma)	
299BKPa-14	1201	14868	2.8	20.1676	13.3	0.0305	16.4	0.0045	9.6	0.58	28.7	2.7	30.5	4.9	175.5	311.3	**28.7**	2.7	94.1
299BKPa-33	2986	20724	1.7	20.9309	6.6	0.0337	7.0	0.0051	2.3	0.33	32.9	0.8	33.7	2.3	88.2	157.7	**32.9**	0.8	97.7
299BKPa-36	10638	2190	15.9	17.0003	9.7	0.0426	9.9	0.0053	1.9	0.20	33.8	0.7	42.4	4.1	560.5	211.9	**33.8**	0.7	79.7
299BKPa-7	3359	36568	36.2	20.0508	5.0	0.0422	10.3	0.0061	9.0	0.88	39.5	3.5	42.0	4.2	189.1	115.6	**39.5**	3.5	94.0
299BKPa-37	997	15592	5.2	20.2042	5.9	0.0749	9.1	0.0110	7.0	0.77	70.4	4.9	73.4	6.5	171.3	136.9	**70.4**	4.9	95.9
299BKPa-38	345	3420	12.2	21.2131	10.6	0.1327	10.9	0.0204	2.5	0.23	130.3	3.3	126.6	12.9	56.4	252.9	**130.3**	3.3	103.0
299BKPa-42	563	16322	10.0	19.2127	10.8	0.1499	11.6	0.0209	4.1	0.35	133.2	5.4	141.8	15.3	287.6	248.4	**133.2**	5.4	94.0
299BKPa-25	2117	119874	43.0	18.8004	3.7	0.1560	7.7	0.0213	6.8	0.88	135.7	9.1	147.2	10.5	336.9	83.7	**135.7**	9.1	92.2
299BKPa-16	295	21058	3.5	18.9978	6.2	0.1965	6.4	0.0271	1.4	0.22	172.2	2.4	182.2	10.7	313.2	142.2	**172.2**	2.4	94.5
299BKPa-18	2384	43650	4.5	19.5683	3.9	0.1921	5.3	0.0273	3.6	0.69	173.4	6.2	178.4	8.7	245.5	89.0	**173.4**	6.2	97.2
299BKPa-8	1205	44980	2.1	19.4349	2.9	0.2163	6.8	0.0305	6.2	0.90	193.6	11.8	198.8	12.3	261.2	67.0	**193.6**	11.8	97.4
299BKPa-39	742	14050	1.8	19.0138	5.0	0.2269	5.7	0.0313	2.7	0.47	198.6	5.2	207.6	10.7	311.3	114.1	**198.6**	5.2	95.7
299BKPa-3	390	14334	2.0	20.3216	4.3	0.2195	5.7	0.0324	3.7	0.65	205.3	7.5	201.5	10.4	157.8	101.1	**205.3**	7.5	101.9
299BKPa-1	319	7696	0.7	19.3938	7.4	0.2405	10.0	0.0338	6.7	0.67	214.5	14.2	218.8	19.7	266.1	169.7	**214.5**	14.2	98.0
299BKPa-34	507	17744	1.5	18.5090	6.5	0.2546	7.1	0.0342	3.0	0.42	216.7	6.5	230.3	14.7	372.2	145.6	**216.7**	6.5	94.1
299BKPa-15	1054	93118	113.5	19.5401	4.5	0.2543	5.8	0.0360	3.8	0.65	228.2	8.5	230.0	12.0	248.8	102.5	**228.2**	8.5	99.2
299BKPa-13	606	53186	2.2	19.1376	4.2	0.2657	4.7	0.0369	2.1	0.44	233.4	4.7	239.2	9.9	296.5	95.3	**233.4**	4.7	97.6
299BKPa-5	659	71004	3.8	19.0482	6.1	0.2675	7.9	0.0370	5.0	0.63	234.0	11.4	240.7	16.9	307.2	139.1	**234.0**	11.4	97.2
299BKPa-44	1302	20892	1.2	19.2554	2.3	0.2702	2.5	0.0377	1.0	0.38	238.7	2.3	242.8	5.4	282.5	53.3	**238.7**	2.3	98.3
299BKPa-10	958	22704	1.6	18.8268	4.1	0.2810	4.9	0.0384	2.7	0.54	242.7	6.4	251.5	10.9	333.8	93.3	**242.7**	6.4	96.5
299BKPa-30	1179	74286	236.7	19.0939	4.0	0.2796	4.1	0.0387	1.0	0.25	244.9	2.5	250.3	9.2	301.7	91.5	**244.9**	2.5	97.8
299BKPa-22	913	36204	1.8	19.1646	4.0	0.2810	4.3	0.0391	1.6	0.37	247.0	3.8	251.4	9.6	293.3	91.9	**247.0**	3.8	98.2
299BKPa-32	1461	37856	26.1	18.9407	3.7	0.2885	4.7	0.0396	2.9	0.62	250.5	7.2	257.3	10.7	320.1	83.6	**250.5**	7.2	97.3
299BKPa-4	923	55310	1.8	19.2236	3.6	0.2891	6.7	0.0403	5.6	0.84	254.8	14.0	257.9	15.2	286.3	82.9	**254.8**	14.0	98.8
299BKPa-31	511	15726	1.6	19.7325	4.1	0.2862	4.8	0.0410	2.6	0.54	258.7	6.6	255.5	10.9	226.2	93.7	**258.7**	6.6	101.3
299BKPa-2	413	103212	1.6	18.4662	5.4	0.3058	5.4	0.0410	0.6	0.12	258.8	1.6	270.9	12.8	377.4	120.7	**258.8**	1.6	95.5
299BKPa-9	1069	15844	2.0	19.0062	2.8	0.3091	3.8	0.0426	2.5	0.67	269.0	6.6	273.5	9.1	312.2	64.2	**269.0**	6.6	98.4

Table A2 (*continued*)

299BKPa-20	1201	212584	176.0	18.9105	3.7	0.3168	5.8	0.0434	4.5	0.77	274.2	12.0	279.4	14.2	323.7	84.3	**274.2**	12.0	98.1
299BKPa-40	1105	112106	308.7	19.2124	4.3	0.3132	4.4	0.0436	0.7	0.16	275.4	1.9	276.7	10.7	287.6	99.3	**275.4**	1.9	99.5
299BKPa-17	927	32714	0.9	18.7354	5.7	0.3237	6.6	0.0440	3.2	0.48	277.4	8.6	284.7	16.3	344.8	130.0	**277.4**	8.6	97.4
299BKPa-11	1173	82602	213.9	18.8031	3.8	0.3238	4.0	0.0442	1.3	0.33	278.5	3.6	284.8	10.0	336.6	85.9	**278.5**	3.6	97.8
299BKPa-27	1331	324946	210.5	18.5848	3.3	0.3497	6.0	0.0471	5.0	0.83	296.9	14.4	304.5	15.8	363.0	75.3	**296.9**	14.4	97.5
299BKPa-12	1513	101136	211.3	19.3550	3.9	0.3364	3.9	0.0472	0.6	0.14	297.4	1.6	294.4	10.0	270.6	89.0	**297.4**	1.6	101.0
299BKPa-19	699	105782	297.4	19.5931	4.6	0.3382	4.9	0.0481	1.8	0.37	302.6	5.4	295.8	12.6	242.5	105.4	**302.6**	5.4	102.3
299BKPa-43	1027	107296	226.5	19.0756	4.1	0.3497	6.5	0.0484	5.1	0.78	304.5	15.1	304.5	17.2	303.9	93.5	**304.5**	15.1	100.0
299BKPa-23	417	26510	77.6	18.4893	3.5	0.3692	4.2	0.0495	2.3	0.55	311.5	7.0	319.1	11.6	374.6	79.8	**311.5**	7.0	97.6
299BKPa-45	388	15792	6.3	17.6913	4.6	0.3985	4.7	0.0511	0.6	0.13	321.4	1.9	340.5	13.5	473.1	102.7	**321.4**	1.9	94.4
299BKPa-26	334	20692	6.1	18.3387	3.2	0.3949	5.0	0.0525	3.9	0.78	330.0	12.5	337.9	14.4	393.0	71.1	**330.0**	12.5	97.6
299BKPa-21	324	51790	1.9	18.4782	4.8	0.4186	5.1	0.0561	1.7	0.33	351.8	5.7	355.0	15.2	375.9	108.2	**351.8**	5.7	99.1
299BKPa-29	328	65176	4.9	15.9098	4.5	0.5362	4.7	0.0619	1.5	0.31	387.0	5.6	435.9	16.8	703.3	95.6	**387.0**	5.6	88.8
299BKPa-35	410	69958	43.9	17.7606	2.8	0.5250	3.9	0.0676	2.7	0.69	421.9	10.9	428.5	13.5	464.4	62.3	**421.9**	10.9	98.4
299BKPa-41	702	189142	4.3	18.3593	4.7	0.5341	5.8	0.0711	3.5	0.60	442.9	15.1	434.6	20.7	390.4	104.9	**442.9**	15.1	101.9
299BKPa-6	1018	169218	1.6	17.0274	2.7	0.6087	3.9	0.0752	2.8	0.72	467.2	12.5	482.7	14.9	557.1	59.1	**467.2**	12.5	96.8
299BKPa-28	295	22390	4.2	17.3552	2.7	0.6814	2.8	0.0858	0.8	0.28	530.5	4.0	527.6	11.7	515.3	59.9	**530.5**	4.0	100.5

Table A3

Isotopic data for sample 299BKPb. Quartzo-feldspathic material from amphibolite xenolith in Krupnik granite, road between the villages Kadiytsa and Polena

Zircon grain No.	Analysis			Isotope ratios							Apparent ages (Ma)						Best age		Conc. (%)
	U (ppm)	$^{206}Pb/^{204}Pb$	U/Th	$^{206}Pb^*/^{207}Pb^*$	2σ (%)	$^{207}Pb^*/^{235}U^*$	2σ (%)	$^{206}Pb^*/^{238}U$	2σ (%)	error corr.	$^{206}Pb^*/^{238}U^*$	2σ (Ma)	$^{207}Pb^*/^{235}U$	2σ (Ma)	$^{206}Pb^*/^{207}Pb^*$	2σ (Ma)	Age (Ma)	2σ (Ma)	
299BKPb-1	817	23952	2.4	17.6872	1.1	0.5339	1.9	0.0685	1.6	0.82	427.0	6.5	434.4	6.8	473.5	24.6	**427.0**	6.5	98.3
299BKPb-2	628	32212	1.2	17.2974	2.2	0.6648	2.2	0.0834	0.6	0.26	516.4	2.9	517.6	9.0	522.6	47.2	**516.4**	2.9	99.8
299BKPb-3	669	24500	3.5	18.0026	1.9	0.5503	3.3	0.0719	2.8	0.82	447.3	11.9	445.2	12.0	434.3	42.2	**447.3**	11.9	100.5
299BKPb-4	350	15778	1.6	17.6803	2.7	0.6686	3.0	0.0857	1.2	0.39	530.3	5.9	519.9	12.0	474.4	60.3	**530.3**	5.9	102.0
299BKPb-5	900	21358	9.4	18.3283	3.0	0.3857	3.2	0.0513	1.1	0.33	322.3	3.3	331.3	9.0	394.2	67.6	**322.3**	3.3	97.3
299BKPb-6	792	30662	6.8	18.2008	1.6	0.4222	1.8	0.0557	0.9	0.49	349.6	3.0	357.6	5.5	409.9	35.3	**349.6**	3.0	97.8
299BKPb-7	773	23432	10.1	19.0112	2.4	0.3414	2.9	0.0471	1.6	0.55	296.5	4.7	298.2	7.6	311.6	55.7	**296.5**	4.7	99.4
299BKPb-8	873	44578	1.6	17.4784	1.7	0.6531	2.1	0.0828	1.3	0.61	512.7	6.3	510.4	8.4	499.8	36.6	**512.7**	6.3	100.5
299BKPb-9	773	35156	31.1	18.7060	3.1	0.3431	3.2	0.0465	0.8	0.24	293.3	2.2	299.5	8.2	348.3	69.6	**293.3**	2.2	97.9
299BKPb-10	490	22188	1.8	17.4558	2.4	0.6716	2.6	0.0850	0.9	0.33	526.0	4.3	521.7	10.5	502.6	53.7	**526.0**	4.3	100.8
299BKPb-11	396	18384	1.8	17.4424	3.1	0.6473	3.3	0.0819	1.3	0.38	507.3	6.1	506.8	13.3	504.3	68.0	**507.3**	6.1	100.1
299BKPb-12	430	16138	2.4	17.6127	3.0	0.6455	3.8	0.0825	2.4	0.61	510.8	11.5	505.7	15.2	482.9	66.6	**510.8**	11.5	101.0
299BKPb-13	325	19866	2.8	17.6213	1.4	0.6132	1.9	0.0784	1.3	0.68	486.4	6.0	485.6	7.3	481.8	30.5	**486.4**	6.0	100.2
299BKPb-14	682	26368	2.0	17.4719	1.8	0.6370	2.0	0.0807	0.8	0.42	500.4	4.0	500.5	7.9	500.6	40.2	**500.4**	4.0	100.0
299BKPb-15	714	21254	1.7	17.4746	2.0	0.6587	2.1	0.0835	0.8	0.35	516.9	3.7	513.8	8.6	500.3	44.0	**516.9**	3.7	100.6
299BKPb-16	683	23642	4.1	18.3889	2.4	0.4478	3.1	0.0597	2.0	0.64	373.9	7.2	375.7	9.7	386.8	53.2	**373.9**	7.2	99.5
299BKPb-17	119	4050	26.7	20.8019	9.9	0.3274	10.0	0.0494	1.1	0.11	310.8	3.3	287.6	25.0	102.9	234.7	**310.8**	3.3	108.1
299BKPb-18	591	30688	1.5	17.4004	1.6	0.6696	2.1	0.0845	1.3	0.62	522.9	6.4	520.5	8.4	509.6	35.6	**522.9**	6.4	100.5
299BKPb-19	1480	20046	2.2	17.6762	2.1	0.5099	3.7	0.0654	3.1	0.83	408.2	12.2	418.4	12.7	474.9	46.0	**408.2**	12.2	97.6
299BKPb-20	777	14090	1.7	17.8648	2.6	0.6232	2.9	0.0807	1.2	0.41	500.6	5.7	491.8	11.1	451.4	57.7	**500.6**	5.7	101.8
299BKPb-21	364	15424	1.6	17.2081	2.0	0.6839	2.9	0.0854	2.0	0.71	528.0	10.3	529.1	11.8	534.0	43.8	**528.0**	10.3	99.8
299BKPb-22	1024	28220	1.4	17.5001	2.5	0.5931	3.6	0.0753	2.5	0.71	467.9	11.4	472.8	13.4	497.0	55.1	**467.9**	11.4	98.9
299BKPb-23	580	16958	1.9	17.2657	1.6	0.6492	2.8	0.0813	2.3	0.81	503.8	11.0	508.0	11.1	526.7	35.4	**503.8**	11.0	99.2
299BKPb-24	743	26602	1.7	17.2585	2.0	0.6689	2.1	0.0837	0.5	0.24	518.3	2.5	520.0	8.5	527.6	44.5	**518.3**	2.5	99.7
299BKPb-25	467	24544	2.1	17.3766	2.3	0.6641	2.4	0.0837	0.6	0.27	518.1	3.2	517.1	9.6	512.6	50.2	**518.1**	3.2	100.2

Table A4

Isotopic data for sample 300. Quartzo-feldspathic gneiss (gneissified aplite), road between the villages Sushitsa and Polena

Zircon grain No.	Analysis			Isotopic ratios							Apparent ages (Ma)					Best age		Conc. (%)
	U (ppm)	$^{206}Pb/^{204}Pb$	U/Th	$^{206}Pb^*/^{207}Pb^*$	2σ (%)	$^{207}Pb^*/^{235}U^*$	2σ (%)	$^{206}Pb^*/^{238}U$	2σ (%)	error corr.	$^{206}Pb^*/^{238}U^*$	2σ (Ma)	$^{207}Pb^*/^{235}U$	2σ (Ma)	$^{206}Pb^*/^{207}Pb^*$	2σ (Ma)	Age (Ma)	2σ (Ma)	
300BL-18	791	24570	10.9	19.8314	3.2	0.2587	3.6	0.0372	1.7	0.47	235.5	3.9	233.6	7.6	214.7	74.5	235.5	3.9	109.7
300BL-29	1330	36002	9.3	19.4943	4.4	0.2635	4.7	0.0373	1.6	0.35	235.8	3.8	237.5	10.0	254.2	101.9	235.8	3.8	92.8
300BL-33	2365	72836	78.0	19.3395	2.8	0.2663	3.7	0.0374	2.4	0.65	236.4	5.5	239.7	7.8	272.5	64.0	236.4	5.5	86.8
300BL-11	779	20810	15.9	19.2384	3.4	0.2682	3.6	0.0374	1.1	0.30	236.8	2.5	241.2	7.7	284.5	78.5	236.8	2.5	83.2
300BL-23	606	34280	11.4	19.9018	5.9	0.2593	6.0	0.0374	0.6	0.09	236.8	1.3	234.1	12.5	206.4	137.9	236.8	1.3	114.8
300BL-5	2362	57128	120.3	19.7398	3.9	0.2629	4.1	0.0376	1.3	0.31	238.2	3.0	237.0	8.7	225.3	90.9	238.2	3.0	105.7
300BL-22	1565	52818	21.4	19.3493	3.3	0.2687	3.3	0.0377	0.8	0.23	238.7	1.8	241.7	7.2	271.3	74.8	238.7	1.8	88.0
300BL-35	1618	49528	10.8	19.2998	2.6	0.2696	2.7	0.0377	0.7	0.27	238.8	1.7	242.3	5.8	277.2	59.3	238.8	1.7	86.1
300BL-20	1318	58880	24.4	19.5334	2.2	0.2664	2.2	0.0377	0.5	0.24	238.8	1.3	239.8	4.7	249.6	49.6	238.8	1.3	95.7
300BL-27	1780	47334	25.2	19.3987	2.9	0.2683	3.1	0.0377	1.2	0.39	238.8	2.8	241.3	6.7	265.5	66.1	238.8	2.8	90.0
300BL-4	1116	43836	7.7	19.7365	3.4	0.2649	3.4	0.0379	0.5	0.15	239.9	1.2	238.6	7.3	225.8	78.0	239.9	1.2	106.3
300BL-31	1411	54718	13.9	19.2954	2.0	0.2728	2.0	0.0382	0.6	0.27	241.6	1.3	245.0	4.4	277.8	45.0	241.6	1.3	87.0
300BL-28	1216	60360	9.1	19.9985	3.2	0.2636	3.7	0.0382	1.9	0.51	241.9	4.4	237.5	7.7	195.2	73.3	241.9	4.4	123.9
300BL-6	1277	34470	8.8	19.5042	2.0	0.2705	2.0	0.0383	0.5	0.25	242.0	1.2	243.1	4.4	253.1	45.5	242.0	1.2	95.6
300BL-19	1266	50982	14.7	19.6998	2.2	0.2692	2.3	0.0385	0.5	0.22	243.3	1.2	242.1	4.9	230.0	51.1	243.3	1.2	105.8
300BL-32	1727	69582	10.0	19.4832	1.9	0.2726	2.4	0.0385	1.5	0.61	243.6	3.5	244.8	5.2	255.5	43.8	243.6	3.5	95.4
300BL-17	2840	59818	134.5	19.5448	2.6	0.2721	2.7	0.0386	0.6	0.21	243.9	1.3	244.4	5.8	248.3	60.1	243.9	1.3	98.3
300BL-16	1467	56206	28.4	19.2877	3.9	0.2765	4.1	0.0387	1.4	0.34	244.7	3.4	247.9	9.1	278.7	88.6	244.7	3.4	87.8
300BL-15	937	24306	8.8	19.7854	2.3	0.2710	2.3	0.0389	0.5	0.22	246.0	1.2	243.5	5.0	220.0	52.4	246.0	1.2	111.8

Table A5

Isotopic data for sample 12-557. Diatexite from septum between the Krupnik and Kresna plutons. Road 79, northern part of Kresna Gorge

Zircon grain No.	Analysis			Isotope ratios							Apparent ages (Ma)						Best age		Conc. (%)
	U (ppm)	$^{206}Pb/^{204}Pb$	U/Th	$^{206}Pb^*/^{207}Pb^*$	2σ (%)	$^{207}Pb^*/^{235}U^*$	2σ (%)	$^{206}Pb^*/^{238}U$	2σ (%)	error corr.	$^{206}Pb^*/^{238}U^*$	2σ (Ma)	$^{207}Pb^*/^{235}U$	2σ (Ma)	$^{206}Pb^*/^{207}Pb^*$	2σ (Ma)	Age (Ma)	2σ (Ma)	
557-1	3065	92310	32.8	20.9168	4.3	0.0380	4.8	0.0058	2.1	0.44	37.1	0.8	37.9	1.8	89.8	101.8	**37.1**	0.8	97.8
557-23A	1538	32481	90.8	22.0713	8.0	0.0411	9.1	0.0066	4.3	0.47	42.3	1.8	40.9	3.7	-39.1	195.2	**42.3**	1.8	103.4
557-14A	507	43548	6.6	18.5246	5.1	0.0573	37.4	0.0077	37.0	0.99	49.5	18.2	56.6	20.6	370.3	114.5	**49.5**	18.2	87.4
557-19	822	74665	7.9	19.0582	2.2	0.1884	11.6	0.0260	11.4	0.98	165.8	18.6	175.3	18.7	306.0	50.3	**165.8**	18.6	94.6
557-26	755	103275	3.6	18.8814	3.0	0.2142	7.2	0.0293	6.5	0.91	186.3	12.0	197.0	12.8	327.2	67.7	**186.3**	12.0	94.6
557-23	455	5349	3.1	16.8408	6.8	0.2648	20.1	0.0323	18.9	0.94	205.2	38.1	238.6	42.7	581.0	148.7	**205.2**	38.1	86.0
557-18	1249	47919	2.6	18.9996	2.4	0.2349	3.1	0.0324	1.9	0.62	205.4	3.8	214.3	5.9	313.0	54.8	**205.4**	3.8	95.9
557-2	1257	205162	3.7	18.9004	1.6	0.2450	2.1	0.0336	1.3	0.64	213.0	2.8	222.5	4.2	324.9	36.9	**213.0**	2.8	95.7
557-6	1051	135054	2.0	19.0596	3.6	0.2432	4.8	0.0336	3.3	0.67	213.2	6.8	221.0	9.6	305.8	81.3	**213.2**	6.8	96.4
557-14	209	62675	1.8	20.1205	8.9	0.2578	15.1	0.0376	12.2	0.81	238.1	28.6	232.9	31.5	181.0	207.7	**238.1**	28.6	102.2
557-15	1134	39580	1.5	18.7276	1.4	0.2849	2.0	0.0387	1.3	0.68	244.7	3.2	254.5	4.4	345.7	32.5	**244.7**	3.2	96.2
557-5	555	36888	1.6	18.4692	5.7	0.2910	19.4	0.0390	18.5	0.96	246.5	44.7	259.3	44.3	377.0	128.6	**246.5**	44.7	95.0
557-15A	815	9759	1.4	18.1026	2.8	0.3002	4.3	0.0394	3.3	0.76	249.2	8.0	266.5	10.1	422.0	62.9	**249.2**	8.0	93.5
557-3	797	134613	2.7	18.7560	2.2	0.3136	2.6	0.0427	1.5	0.56	269.3	3.9	277.0	6.4	342.3	49.1	**269.3**	3.9	97.2
557-9	309	26232	1.6	18.9604	6.3	0.3174	11.3	0.0436	9.4	0.83	275.4	25.4	279.9	27.7	317.7	142.6	**275.4**	25.4	98.4
557-24	240	30575	1.3	19.3254	6.0	0.3180	7.0	0.0446	3.6	0.51	281.1	9.8	280.3	17.2	274.2	138.5	**281.1**	9.8	100.3
557-6	445	100869	3.0	18.5734	3.2	0.3337	6.1	0.0449	5.2	0.85	283.4	14.5	292.4	15.6	364.4	72.7	**283.4**	14.5	96.9
557-22	784	110338	3.5	19.0027	2.1	0.3281	2.8	0.0452	1.9	0.67	285.1	5.2	288.1	7.0	312.6	47.3	**285.1**	5.2	99.0
557-20	253	46662	2.4	18.7335	3.8	0.3417	4.3	0.0464	1.8	0.43	292.6	5.2	298.5	11.0	345.0	87.0	**292.6**	5.2	98.0
557-16	336	117049	1.7	19.1465	3.0	0.3365	6.4	0.0467	5.6	0.88	294.4	16.0	294.5	16.2	295.5	69.6	**294.4**	16.0	100.0
557-4	478	103351	3.8	18.9173	2.8	0.3445	2.9	0.0473	0.9	0.31	297.7	2.6	300.6	7.6	322.9	62.8	**297.7**	2.6	99.0
557-8	882	202430	2.3	18.9107	1.1	0.3465	3.1	0.0475	2.9	0.93	299.3	8.4	302.1	8.0	323.6	24.8	**299.3**	8.4	99.1
557-8 A	754	196478	2.6	18.9877	2.2	0.3482	2.3	0.0480	0.6	0.25	301.9	1.6	303.4	5.9	314.4	49.8	**301.9**	1.6	99.5
557-12	121	51306	1.1	19.3926	13.7	0.3419	16.1	0.0481	8.4	0.52	302.8	25.0	298.6	41.6	266.2	315.3	**302.8**	25.0	101.4
557-20A	263	61896	2.4	18.5056	4.1	0.3626	4.9	0.0487	2.7	0.55	306.4	8.1	314.2	13.2	372.6	91.8	**306.4**	8.1	97.5
557-7A	501	91319	2.2	18.7738	1.7	0.3604	2.6	0.0491	1.9	0.75	308.8	5.9	312.5	7.0	340.2	38.9	**308.8**	5.9	98.8

Table A5 (*continued*)

557-25	785	135037	5.0	18.9202	1.1	0.3585	1.7	0.0492	1.3	0.78	309.6	4.0	311.1	4.5	322.5	24.2	**309.6**	4.0	99.5
557-13	597	159746	2.5	18.9652	2.5	0.3585	5.9	0.0493	5.3	0.90	310.3	16.1	311.1	15.7	317.1	57.1	**310.3**	16.1	99.7
557-10	172	48382	1.7	18.5177	6.7	0.3681	7.8	0.0494	4.0	0.51	311.0	12.0	318.2	21.2	371.1	150.9	**311.0**	12.0	97.7
557-21	201	39957	1.3	19.3150	6.5	0.3529	6.7	0.0494	1.7	0.25	311.1	5.1	306.9	17.9	275.4	149.7	**311.1**	5.1	101.4
557-7	498	84309	3.1	18.7737	4.3	0.3671	6.1	0.0500	4.4	0.72	314.4	13.6	317.5	16.8	340.2	96.6	**314.4**	13.6	99.0
557-11	538	123835	1.1	19.3002	2.0	0.3583	2.1	0.0502	0.7	0.34	315.4	2.2	310.9	5.7	277.2	45.7	**315.4**	2.2	101.5
557-17	243	42322	2.1	18.6182	3.7	0.3716	4.3	0.0502	2.1	0.49	315.6	6.5	320.8	11.8	358.9	84.1	**315.6**	6.5	98.4
557-5A	364	112278	2.0	18.3229	4.3	0.3809	7.2	0.0506	5.7	0.80	318.3	17.8	327.7	20.1	394.9	96.7	**318.3**	17.8	97.1
557-18A	358	48996	1.2	18.5991	5.8	0.4005	11.8	0.0540	10.3	0.87	339.2	33.9	342.0	34.3	361.2	132.0	**339.2**	33.9	99.2

Table A6

Isotopic data for sample 309. Quartzo-feldspathic gneiss (Bachkovo Formation), Sandanski Memorial, road between Katuntsi and Gotse Delchev

Zircon grain No.	Analysis			Isotopic ratios							Apparent ages (Ma)						Best age		Conc. (%)
	U (ppm)	$^{206}Pb/^{204}Pb$	U/Th	$^{206}Pb^*/^{207}Pb^*$	2σ (%)	$^{207}Pb^*/^{235}U^*$	2σ (%)	$^{206}Pb^*/^{238}U$	2σ (%)	error corr.	$^{206}Pb^*/^{238}U^*$	2σ (Ma)	$^{207}Pb^*/^{235}U$	2σ (Ma)	$^{206}Pb^*/^{207}Pb^*$	2σ (Ma)	Age (Ma)	2σ (Ma)	
309BB-1	759	15524	1.7	18.2565	6.5	0.3563	6.6	0.0472	0.6	0.09	297.2	1.8	309.4	17.5	403.0	146.7	**297.2**	1.8	73.7
309BB-2	703	36138	3.0	17.5752	4.5	0.2712	7.2	0.0346	5.6	0.78	219.1	12.0	243.7	15.6	487.6	100.2	**219.1**	12.0	44.9
309BB-3	1556	85114	2.5	17.0855	2.0	0.6401	2.2	0.0793	1.0	0.46	492.1	4.9	502.4	8.9	549.6	43.3	**492.1**	4.9	89.5
309BB-4	1565	55774	2.2	16.5191	2.1	0.7850	2.3	0.0940	0.8	0.37	579.4	4.7	588.3	10.1	622.8	45.3	**579.4**	4.7	93.0
309BB-5	2483	23568	2.2	18.5241	2.0	0.2392	3.4	0.0321	2.7	0.81	203.9	5.5	217.8	6.6	370.3	44.4	**203.9**	5.5	55.1
309BB-6	457	19048	2.5	19.6739	4.5	0.3426	4.7	0.0489	1.5	0.32	307.6	4.6	299.1	12.3	233.1	103.7	**307.6**	4.6	132.0
309BB-7	129	3774	2.2	20.6367	10.6	0.2195	10.7	0.0328	0.8	0.07	208.4	1.6	201.5	19.5	121.6	251.3	**208.4**	1.6	171.3
309BB-8	620	29372	2.0	16.1633	5.7	0.7229	5.7	0.0847	0.6	0.11	524.3	3.0	552.4	24.3	669.6	121.2	**524.3**	3.0	78.3
309BB-9	41	1198	0.9	22.3626	31.7	0.2705	31.8	0.0439	2.6	0.08	276.8	7.1	243.1	68.8	-71.0	790.6	**276.8**	7.1	-389.9
309BB-10	120	6228	1.3	17.0234	4.5	0.5251	5.5	0.0648	3.2	0.58	405.0	12.4	428.6	19.1	557.6	97.6	**405.0**	12.4	72.6
309BB-11	86	3756	0.6	18.7052	11.6	0.3271	11.6	0.0444	1.1	0.09	279.9	3.0	287.4	29.1	348.4	262.0	**279.9**	3.0	80.3
309BB-13	564	22036	1.5	19.1150	2.5	0.3497	2.6	0.0485	0.7	0.25	305.2	1.9	304.5	6.8	299.2	56.8	**305.2**	1.9	102.0
309BB-14	2510	20564	6.2	18.5947	2.8	0.2308	6.2	0.0311	5.5	0.89	197.6	10.7	210.9	11.8	361.8	63.0	**197.6**	10.7	54.6
309BB-15	648	20228	4.8	18.8512	2.4	0.3373	3.0	0.0461	1.8	0.60	290.6	5.1	295.1	7.7	330.8	54.0	**290.6**	5.1	87.9
309BB-16	682	27350	7.2	18.7365	3.6	0.3756	3.8	0.0510	1.3	0.34	320.9	4.0	323.8	10.6	344.7	81.8	**320.9**	4.0	93.1
309BB-17	1244	42336	8.2	17.6942	3.1	0.4318	5.0	0.0554	4.0	0.79	347.7	13.5	364.5	15.4	472.7	68.2	**347.7**	13.5	73.6
309BB-18	1475	54820	2.3	16.8527	3.6	0.6114	4.2	0.0747	2.0	0.49	464.6	9.1	484.4	16.0	579.5	78.9	**464.6**	9.1	80.2
309BB-19	373	6682	3.0	19.3889	3.6	0.2846	3.8	0.0400	1.2	0.32	252.9	3.0	254.3	8.5	266.7	81.7	**252.9**	3.0	94.8
309BB-20	103	5930	2.0	16.8782	13.0	0.3528	13.2	0.0432	2.0	0.15	272.6	5.4	306.8	34.9	576.2	284.4	**272.6**	5.4	47.3
309BB-21	565	93266	15.9	17.6986	2.6	0.4281	2.7	0.0550	0.8	0.30	344.9	2.7	361.8	8.2	472.1	56.7	**344.9**	2.7	73.0
309BB-22	249	6358	3.9	15.4819	5.4	0.7534	7.0	0.0846	4.4	0.64	523.5	22.2	570.2	30.4	761.0	113.4	**523.5**	22.2	68.8
309BB-23	936	42022	2.8	18.8531	4.3	0.3357	4.3	0.0459	0.5	0.12	289.3	1.4	293.9	11.0	330.6	97.1	**289.3**	1.4	87.5
309BB-24	892	21740	1.9	18.8070	2.9	0.3116	3.4	0.0425	1.8	0.53	268.3	4.7	275.4	8.1	336.2	65.0	**268.3**	4.7	79.8
309BB-25	68	1886	0.7	21.2883	16.9	0.2699	17.2	0.0417	3.2	0.19	263.2	8.4	242.6	37.2	47.9	406.9	**263.2**	8.4	549.4
309BB-26	194	6110	1.2	17.7227	4.9	0.3578	5.0	0.0460	0.5	0.10	289.9	1.4	310.6	13.3	469.1	109.3	**289.9**	1.4	61.8
309BB-27	100	4788	1.2	19.1870	14.9	0.3318	15.2	0.0462	2.9	0.19	291.0	8.2	290.9	38.4	290.6	341.6	**291.0**	8.2	100.1
309BB-28	176	4764	0.8	20.1580	5.3	0.3082	5.3	0.0451	0.5	0.09	284.2	1.4	272.8	12.8	176.7	124.0	**284.2**	1.4	160.9

Table A6 (*continued*)

309BB-29	177	10242	1.0	19.7177	4.5	0.3285	5.2	0.0470	2.6	0.51	295.9	7.6	288.4	13.1	227.9	103.7	**295.9**	7.6	129.8
309BB-30	629	12066	2.2	19.0303	2.4	0.3004	4.6	0.0415	4.0	0.86	261.9	10.2	266.7	10.8	309.3	53.8	**261.9**	10.2	84.7
309BB-31	39	1474	0.8	31.7907	60.3	0.1726	60.4	0.0398	3.4	0.06	251.6	8.3	161.7	90.5	1015.6	1947.6	**251.6**	8.3	-24.8
309BB-32	83	4524	1.3	21.5916	12.2	0.2777	12.3	0.0435	1.5	0.12	274.4	4.1	248.8	27.2	14.0	295.1	**274.4**	4.1	1955.8
309BB-33	108	4718	1.2	20.1739	9.2	0.3005	9.3	0.0440	1.4	0.15	277.4	3.9	266.8	21.8	174.8	214.9	**277.4**	3.9	158.7
309BB-34	92	2816	1.6	21.8272	14.1	0.2896	14.4	0.0458	3.1	0.21	289.0	8.7	258.3	32.9	-12.1	342.3	**289.0**	8.7	2385.2
309BB-35	190	7058	1.7	19.5892	7.4	0.3204	7.5	0.0455	1.3	0.17	286.9	3.6	282.2	18.4	243.0	169.9	**286.9**	3.6	118.1

Table A7

Isotopic data for sample 310. Quartzo-feldspathic layer (metaaplite) in metapelites, Lukovitsa Formation, road Katuntsi - Gotse Delchev, between Yane Sandanski Memorial and Popovi Livadi

Zircon grain No.	Analysis			Isotope ratios							Apparent ages (Ma)						Best age		Conc. (%)
	U (ppm)	$^{206}Pb/^{204}Pb$	U/Th	$^{206}Pb^*/^{207}Pb^*$	2σ (%)	$^{207}Pb^*/^{235}U^*$	2σ (%)	$^{206}Pb^*/^{238}U$	2σ (%)	error corr.	$^{206}Pb^*/^{238}U^*$	2σ (Ma)	$^{207}Pb^*/^{235}U$	2σ (Ma)	$^{206}Pb^*/^{207}Pb^*$	2σ (Ma)	Age (Ma)	2σ (Ma)	
310BL-1	518	22500	2.1	19.1781	4.1	0.3566	4.2	0.0496	0.9	0.21	312.0	2.6	309.6	11.1	291.7	93.2	**312.0**	2.6	107.0
310BL-2	635	15606	1.5	19.4736	2.6	0.3473	2.9	0.0490	1.2	0.41	308.7	3.6	302.7	7.5	256.7	60.2	**308.7**	3.6	120.3
310BL-3	484	13816	2.1	19.3404	2.4	0.3609	2.7	0.0506	1.2	0.43	318.4	3.6	312.9	7.3	272.4	56.1	**318.4**	3.6	116.9
310BL-4	580	12362	1.8	19.2285	2.2	0.3471	2.5	0.0484	1.3	0.50	304.7	3.8	302.5	6.6	285.7	50.0	**304.7**	3.8	106.7
310BL-5	964	16244	1.7	19.2604	1.5	0.3235	2.5	0.0452	2.0	0.79	284.9	5.5	284.6	6.2	281.9	34.7	**284.9**	5.5	101.1
310BL-6	541	20656	1.6	19.1709	3.4	0.3395	3.6	0.0472	1.0	0.28	297.4	2.9	296.8	9.2	292.5	78.1	**297.4**	2.9	101.7
310BL-7	345	8098	1.8	18.7636	3.0	0.3591	3.1	0.0489	0.9	0.29	307.5	2.7	311.5	8.3	341.4	67.3	**307.5**	2.7	90.1
310BL-8	783	588	1.9	11.0268	14.0	0.5469	14.3	0.0437	2.8	0.20	276.0	7.7	443.0	51.5	1440.0	269.1	**276.0**	7.7	19.2
310BL-9	819	1262	1.2	15.1153	7.7	0.3117	9.6	0.0342	5.7	0.59	216.6	12.1	275.5	23.1	811.4	161.8	**216.6**	12.1	26.7
310BL-10	387	10250	2.0	18.4039	8.8	0.3442	8.8	0.0459	0.8	0.10	289.5	2.4	300.3	22.9	385.0	197.1	**289.5**	2.4	75.2
310BL-11	205	7280	2.5	20.0948	7.0	0.3414	7.2	0.0498	1.9	0.27	313.0	5.9	298.2	18.7	184.0	162.7	**313.0**	5.9	170.1
310BL-12	689	880	2.1	11.4643	27.3	0.4286	27.3	0.0356	1.3	0.05	225.7	2.8	362.2	83.4	1365.5	535.4	**225.7**	2.8	16.5
310BL-13	684	16258	1.3	19.4050	3.4	0.3502	3.5	0.0493	1.1	0.30	310.2	3.2	304.9	9.3	264.8	77.8	**310.2**	3.2	117.1
310BL-14	988	14474	1.0	18.7531	3.1	0.3134	3.2	0.0426	1.1	0.34	269.0	2.9	276.8	7.9	342.6	69.2	**269.0**	2.9	78.5
310BL-15	507	15532	1.9	18.9488	4.1	0.3566	4.3	0.0490	1.4	0.32	308.4	4.1	309.6	11.5	319.1	92.7	**308.4**	4.1	96.7
310BL-16	518	28444	2.2	19.0058	2.7	0.3560	3.0	0.0491	1.2	0.39	308.8	3.5	309.2	7.9	312.2	62.4	**308.8**	3.5	98.9
310BL-17	477	12162	2.0	19.2624	3.0	0.3474	3.6	0.0485	2.1	0.57	305.5	6.2	302.8	9.5	281.7	68.3	**305.5**	6.2	108.5
310BL-18	512	14762	2.1	19.1009	3.1	0.3338	5.7	0.0462	4.8	0.84	291.4	13.6	292.4	14.4	300.9	69.9	**291.4**	13.6	96.8
310BL-19	709	23058	1.6	18.8803	1.8	0.3633	2.6	0.0497	1.8	0.71	312.9	5.5	314.7	6.9	327.3	40.8	**312.9**	5.5	95.6
310BL-20	1133	16738	7.5	17.9478	1.5	0.3075	8.7	0.0400	8.5	0.99	253.0	21.2	272.3	20.7	441.1	32.8	**253.0**	21.2	57.4
310BL-21	327	12426	2.3	18.6438	5.2	0.3580	6.2	0.0484	3.5	0.56	304.7	10.3	310.7	16.6	355.8	116.6	**304.7**	10.3	85.6
310BL-22	540	11752	2.2	18.9418	5.4	0.3681	5.6	0.0506	1.5	0.26	318.0	4.5	318.2	15.3	319.9	122.8	**318.0**	4.5	99.4
310BL-23	560	10892	2.0	18.5295	3.9	0.3508	5.4	0.0471	3.8	0.70	297.0	11.0	305.4	14.3	369.7	87.4	**297.0**	11.0	80.3
310BL-24	492	13272	1.4	19.4206	2.7	0.3575	3.1	0.0504	1.7	0.53	316.7	5.2	310.4	8.4	262.9	60.9	**316.7**	5.2	120.5
310BL-25	676	17828	1.7	19.2747	2.8	0.3389	3.3	0.0474	1.8	0.55	298.4	5.2	296.3	8.5	280.2	63.1	**298.4**	5.2	106.5
310BL-26	530	12660	1.8	18.7176	1.7	0.3694	2.3	0.0501	1.6	0.69	315.4	5.0	319.2	6.4	346.9	38.1	**315.4**	5.0	90.9
310BL-27	567	16542	2.1	18.7497	2.1	0.3620	2.6	0.0492	1.6	0.61	309.8	4.7	313.7	7.0	343.1	46.5	**309.8**	4.7	90.3
310BL-28	743	2932	1.6	16.6093	7.8	0.3154	8.7	0.0380	4.0	0.45	240.4	9.3	278.4	21.3	611.0	168.6	**240.4**	9.3	39.3
310BL-29	620	19526	1.8	19.0224	2.6	0.3625	2.9	0.0500	1.3	0.44	314.6	4.0	314.1	7.9	310.3	60.0	**314.6**	4.0	101.4
310BL-30	532	11294	2.0	19.4667	3.9	0.3434	4.3	0.0485	1.8	0.42	305.2	5.4	299.7	11.3	257.5	90.6	**305.2**	5.4	118.5

Table A8

Isotopic data for sample SP1. Spanchevo granite, road between Katuntsi and Gotse Delchev, between Gorno Spanchovo and Pirin Village crossing

Zircon grain No.	Analysis			Isotope ratios							Apparent ages (Ma)					Best age			Conc. (%)
	U (ppm)	$^{206}Pb/^{204}Pb$	U/Th	$^{206}Pb^*/^{207}Pb^*$	2σ (%)	$^{207}Pb^*/^{235}U^*$	2σ (%)	$^{206}Pb^*/^{238}U$	2σ (%)	error corr.	$^{206}Pb^*/^{238}U^*$	2σ (Ma)	$^{207}Pb^*/^{235}U$	2σ (Ma)	$^{206}Pb^*/^{207}Pb^*$	2σ (Ma)	Age (Ma)	2σ (Ma)	
SP1-1	730	3958	1.2	22.4257	12.9	0.0542	13.2	0.0088	3.1	0.24	56.6	1.8	53.6	6.9	-77.9	315.5	**56.6**	1.8	-72.6
SP1-2	360	1784	1.8	19.0101	25.1	0.0643	25.2	0.0089	1.9	0.08	56.9	1.1	63.2	15.4	311.7	579.1	**56.9**	1.1	18.2
SP1-3	380	2854	1.5	23.5952	12.6	0.0542	13.0	0.0093	3.1	0.24	59.5	1.8	53.6	6.8	-203.8	318.2	**59.5**	1.8	-29.2
SP1-6	349	2768	1.5	20.1601	25.2	0.0580	25.5	0.0085	3.9	0.15	54.5	2.1	57.3	14.2	176.4	595.7	**54.5**	2.1	30.9
SP1-7	462	2516	1.7	22.3587	11.2	0.0522	11.9	0.0085	3.8	0.32	54.3	2.1	51.7	6.0	-70.6	274.9	**54.3**	2.1	-77.0
SP1-8	827	2716	0.8	21.2638	7.5	0.0547	7.5	0.0084	0.9	0.12	54.2	0.5	54.1	4.0	50.7	178.6	**54.2**	0.5	106.9
SP1-9	385	2754	1.8	20.2495	13.8	0.0614	14.0	0.0090	2.4	0.17	57.9	1.4	60.6	8.2	166.1	324.3	**57.9**	1.4	34.9
SP1-10	1233	6036	2.2	21.3630	6.0	0.0548	6.2	0.0085	1.4	0.23	54.5	0.8	54.1	3.3	39.6	143.6	**54.5**	0.8	137.7
SP1-11	1006	3914	1.9	20.4799	8.6	0.0599	8.8	0.0089	1.9	0.21	57.1	1.1	59.1	5.1	139.6	202.8	**57.1**	1.1	40.9
SP1-13	433	3494	1.5	19.1921	16.1	0.0656	16.1	0.0091	1.2	0.08	58.6	0.7	64.5	10.1	290.0	369.5	**58.6**	0.7	20.2
SP1-14	525	1970	1.5	24.5556	15.6	0.0506	15.8	0.0090	2.6	0.16	57.8	1.5	50.1	7.7	-304.8	401.7	**57.8**	1.5	-19.0
SP1-15	412	4008	1.6	24.7744	18.7	0.0476	19.0	0.0086	3.5	0.18	54.9	1.9	47.2	8.8	-327.6	483.9	**54.9**	1.9	-16.8
SP1-16	427	4372	1.2	23.5132	13.9	0.0525	14.1	0.0089	2.3	0.16	57.4	1.3	51.9	7.1	-195.1	349.2	**57.4**	1.3	-29.4
SP1-17	525	3366	1.6	21.4670	28.6	0.0550	28.8	0.0086	3.0	0.10	54.9	1.6	54.3	15.2	27.9	698.6	**54.9**	1.6	196.8
SP1-19	808	5946	1.4	22.5430	9.6	0.0549	10.3	0.0090	3.7	0.36	57.6	2.1	54.3	5.4	-90.7	236.0	**57.6**	2.1	-63.6
SP1-21	1114	8032	2.0	22.9316	8.3	0.0520	8.4	0.0086	1.4	0.16	55.5	0.8	51.4	4.2	-132.8	204.3	**55.5**	0.8	-41.8
SP1-22	457	4224	1.2	20.8769	10.2	0.0598	10.3	0.0091	1.5	0.15	58.1	0.9	59.0	5.9	94.3	240.9	**58.1**	0.9	61.6
SP1-23	449	4506	1.7	22.6518	22.0	0.0518	22.2	0.0085	3.1	0.14	54.6	1.7	51.2	11.1	-102.5	547.1	**54.6**	1.7	-53.3
SP1-24	522	3728	1.6	21.6120	15.9	0.0551	16.3	0.0086	3.9	0.24	55.4	2.2	54.4	8.7	11.8	383.7	**55.4**	2.2	471.5
SP1-25	270	1496	1.9	17.3531	15.4	0.0672	15.4	0.0085	0.5	0.03	54.3	0.3	66.1	9.9	515.6	340.6	**54.3**	0.3	10.5
SP1-27	330	4092	1.5	35.6670	43.3	0.0328	43.4	0.0085	2.9	0.07	54.5	1.6	32.8	14.0	-1371.9	1449.8	**54.5**	1.6	-4.0
SP1-28	358	1932	1.7	21.3893	44.8	0.0589	44.9	0.0091	2.9	0.07	58.7	1.7	58.2	25.4	36.6	1123.1	**58.7**	1.7	160.4
SP1-1	452	10600	1.3	25.2892	22.7	0.0480	22.8	0.0088	1.9	0.08	56.5	1.1	47.6	10.6	-380.7	596.6	**56.5**	1.1	-14.8
SP1-2	215	1870	3.2	21.0523	45.5	0.0598	45.7	0.0091	4.1	0.09	58.6	2.4	59.0	26.2	74.5	1136.6	**58.6**	2.4	78.7
SP1-4	341	8784	1.7	27.0471	26.1	0.0478	26.4	0.0094	4.1	0.15	60.1	2.4	47.4	12.2	-558.5	713.7	**60.1**	2.4	-10.8
SP1-6	276	2772	1.5	25.4516	103.5	0.0473	103.6	0.0087	5.1	0.05	56.1	2.9	46.9	47.6	-397.4	1396.7	**56.1**	2.9	-14.1
SP1-7	355	4010	1.8	23.3208	25.2	0.0530	25.3	0.0090	2.5	0.10	57.5	1.4	52.4	12.9	-174.5	635.8	**57.5**	1.4	-33.0

Table A8 (*continued*)

SP1-9	675	6886	1.8	21.5518	12.0	0.0590	12.1	0.0092	1.9	0.16	59.2	1.1	58.2	6.9	18.5	288.3	**59.2**	1.1	320.6
SP1-10	342	6998	1.6	18.1219	6.0	0.0654	6.7	0.0086	3.0	0.45	55.2	1.7	64.3	4.2	419.6	133.6	**55.2**	1.7	13.1
SP1-12	490	5396	1.7	20.4175	12.2	0.0588	12.3	0.0087	1.6	0.13	55.8	0.9	58.0	6.9	146.8	285.9	**55.8**	0.9	38.0
SP1-13	3453	37352	2.1	21.5621	3.3	0.0585	3.8	0.0092	1.8	0.48	58.7	1.1	57.7	2.1	17.3	79.5	**58.7**	1.1	340.0
SP1-14	314	1474	1.7	20.9001	36.5	0.0579	36.5	0.0088	1.3	0.04	56.3	0.7	57.1	20.3	91.7	890.2	**56.3**	0.7	61.4
SP1-15	454	15382	1.4	16.4660	12.5	0.0743	12.9	0.0089	3.1	0.24	57.0	1.7	72.8	9.1	629.7	271.1	**57.0**	1.7	9.0

Table A9

Isotopic data for sample SP2. Spanchevo granite, road between Katuntsi and Gotse Delchev, between Gorno Spanchevo and Pirin Village crossing

Zircon grain No.	Analysis			Isotope ratios							Apparent ages (Ma)						Best age		Conc. (%)
	U (ppm)	$^{206}Pb/^{204}Pb$	U/Th	$^{206}Pb^*/^{207}Pb^*$	2σ (%)	$^{207}Pb^*/^{235}U^*$	2σ (%)	$^{206}Pb^*/^{238}U$	2σ (%)	error corr.	$^{206}Pb^*/^{238}U^*$	2σ (Ma)	$^{207}Pb^*/^{235}U$	2σ (Ma)	$^{206}Pb^*/^{207}Pb^*$	2σ (Ma)	Age (Ma)	2σ (Ma)	
SP2A-1	1550	6680	4.6	20.8778	4.1	0.0593	4.5	0.0090	1.7	0.38	57.6	1.0	58.5	2.5	94.2	97.6	57.6	1.0	61.1
SP2A-4	1371	9260	4.4	21.6667	8.0	0.0562	8.3	0.0088	2.3	0.27	56.7	1.3	55.5	4.5	5.7	192.5	56.7	1.3	998.5
SP2A-8	1541	9830	9.3	21.9954	7.9	0.0576	8.7	0.0092	3.7	0.43	59.0	2.2	56.9	4.8	-30.7	191.1	59.0	2.2	-192.2
SP2A-9	5110	15186	3.7	21.1834	1.4	0.0585	3.4	0.0090	3.2	0.91	57.7	1.8	57.7	1.9	59.7	33.2	57.7	1.8	96.6
SP2A-11	811	4670	2.3	23.7367	11.3	0.0534	12.2	0.0092	4.6	0.37	59.0	2.7	52.8	6.3	-218.8	285.8	59.0	2.7	-26.9
SP2A-12	2785	14226	3.8	21.0868	2.4	0.0586	4.4	0.0090	3.7	0.84	57.5	2.1	57.8	2.5	70.6	57.0	57.5	2.1	81.5
SP2A-13	1013	9622	3.7	22.3486	6.9	0.0569	7.0	0.0092	1.3	0.19	59.2	0.8	56.2	3.8	-69.5	168.5	59.2	0.8	-85.2
SP2A-14	2599	15422	9.4	21.5521	3.2	0.0582	3.9	0.0091	2.2	0.56	58.3	1.3	57.4	2.2	18.4	77.5	58.3	1.3	316.5
SP2A-16	3571	15752	22.4	21.7658	3.2	0.0578	3.4	0.0091	1.2	0.36	58.5	0.7	57.1	1.9	-5.3	77.5	58.5	0.7	-1101.1
SP2A-18	1570	8840	6.9	21.7168	5.8	0.0572	6.5	0.0090	3.1	0.47	57.8	1.8	56.5	3.6	0.1	139.7	57.8	1.8	57839.5
SP2A-19	2943	11832	7.7	21.5108	2.2	0.0579	2.8	0.0090	1.7	0.62	57.9	1.0	57.1	1.5	23.0	52.2	57.9	1.0	252.0
SP2A-20	1182	8072	2.7	22.0765	6.0	0.0581	6.3	0.0093	1.9	0.30	59.6	1.1	57.3	3.5	-39.6	145.6	59.6	1.1	-150.5
SP2A-21	1240	6698	2.6	22.2651	5.8	0.0559	6.3	0.0090	2.5	0.39	58.0	1.4	55.3	3.4	-60.3	142.6	58.0	1.4	-96.1
SP2A-22	1567	8708	9.7	21.6314	7.8	0.0545	8.0	0.0085	1.9	0.24	54.9	1.0	53.9	4.2	9.6	188.2	54.9	1.0	573.7
SP2A-23	1253	6600	1.5	22.5833	6.7	0.0522	7.0	0.0086	1.8	0.26	54.9	1.0	51.7	3.5	-95.0	165.7	54.9	1.0	-57.8
SP2A-24	2380	11452	10.2	21.1605	6.1	0.0568	6.5	0.0087	2.0	0.31	55.9	1.1	56.1	3.5	62.3	146.1	55.9	1.1	89.8
SP2-3	3773	17188	6.4	21.3199	4.2	0.0591	5.2	0.0091	3.1	0.59	58.7	1.8	58.3	2.9	44.4	100.6	58.7	1.8	132.2
SP2-4	860	7206	2.0	21.7052	8.3	0.0576	8.5	0.0091	1.4	0.17	58.1	0.8	56.8	4.7	1.4	201.2	58.1	0.8	4226.2
SP2-5	7461	14608	5.6	20.7242	2.8	0.0590	4.2	0.0089	3.1	0.74	56.9	1.8	58.2	2.4	111.7	65.7	56.9	1.8	50.9
SP2-6	3430	20764	4.2	20.2803	4.1	0.0612	4.5	0.0090	2.0	0.43	57.8	1.1	60.3	2.6	162.5	95.0	57.8	1.1	35.5
SP2-8	2219	10236	3.6	21.5683	5.8	0.0587	6.3	0.0092	2.6	0.41	59.0	1.5	58.0	3.6	16.6	138.7	59.0	1.5	355.5
SP2-9	1891	4174	0.7	18.5176	26.3	0.0653	26.5	0.0088	3.1	0.12	56.3	1.7	64.2	16.5	371.1	601.0	56.3	1.7	15.2
SP2-10	3328	19876	2.6	21.0425	3.3	0.0575	3.6	0.0088	1.4	0.37	56.3	0.8	56.8	2.0	75.6	79.4	56.3	0.8	74.5
SP2-11	1177	8714	1.7	21.6536	5.0	0.0562	5.2	0.0088	1.6	0.31	56.6	0.9	55.5	2.8	7.1	120.3	56.6	0.9	793.6
SP2-12	1156	6184	1.2	21.7917	7.2	0.0578	7.2	0.0091	0.6	0.08	58.6	0.3	57.0	4.0	-8.2	173.7	58.6	0.3	-716.2
SP2-13	3380	19432	3.1	21.4116	2.0	0.0563	2.1	0.0087	0.7	0.32	56.1	0.4	55.6	1.1	34.1	47.3	56.1	0.4	164.5
SP2-14	2008	16496	3.9	21.6744	5.4	0.0548	5.7	0.0086	1.9	0.32	55.3	1.0	54.1	3.0	4.8	130.9	55.3	1.0	1150.1

Table A9 (*continued*)

SP2-15	510	3414	1.8	22.1854	10.2	0.0567	10.5	0.0091	2.2	0.21	58.6	1.3	56.0	5.7	-51.6	249.9	58.6	1.3	-113.5
SP2-16	1230	8270	9.4	22.6322	15.1	0.0555	15.1	0.0091	0.5	0.03	58.5	0.3	54.8	8.1	-100.4	372.7	58.5	0.3	-58.2
SP2-19	1304	6032	2.0	20.6421	10.0	0.0619	10.7	0.0093	3.6	0.34	59.5	2.1	61.0	6.3	121.1	236.9	59.5	2.1	49.1
SP2-20	136	1432	3.1	27.9097	55.1	0.0452	55.9	0.0092	8.8	0.16	58.7	5.2	44.9	24.5	-643.9	1621.6	58.7	5.2	-9.1
SP2-21	2383	5920	6.3	20.1917	3.5	0.0616	3.5	0.0090	0.6	0.16	57.9	0.3	60.7	2.1	172.8	80.8	57.9	0.3	33.5
SP2-22	1467	2692	0.7	14.8300	24.9	0.0838	25.1	0.0090	2.5	0.10	57.8	1.5	81.7	19.7	851.1	526.1	57.8	1.5	6.8
SP2-23	2212	9408	2.3	21.2657	4.8	0.0581	5.2	0.0090	1.8	0.35	57.5	1.0	57.3	2.9	50.4	115.8	57.5	1.0	114.0
SP2-24	1178	5232	1.9	20.8051	8.0	0.0569	8.0	0.0086	0.8	0.10	55.1	0.4	56.2	4.4	102.5	189.3	55.1	0.4	53.8
SP2-25	4804	24540	9.1	21.0707	2.2	0.0566	2.6	0.0087	1.4	0.53	55.6	0.7	55.9	1.4	72.4	51.5	55.6	0.7	76.7
SP2-27	2689	23140	7.3	20.8848	2.9	0.0572	3.0	0.0087	0.9	0.30	55.6	0.5	56.5	1.7	93.4	68.9	55.6	0.5	59.6
SP2-28	1441	9470	3.6	20.1220	3.4	0.0606	3.9	0.0089	1.8	0.46	56.8	1.0	59.8	2.2	180.8	80.1	56.8	1.0	31.4
SP2-29	218	1768	1.9	19.7275	20.9	0.0587	21.1	0.0084	2.8	0.13	53.9	1.5	57.9	11.9	226.8	488.1	53.9	1.5	23.8
SP2-32	869	5538	2.6	23.3181	11.7	0.0529	11.7	0.0089	0.5	0.04	57.4	0.3	52.3	6.0	-174.3	293.4	57.4	0.3	-33.0
SP2-33	5316	38028	3.4	21.3638	2.2	0.0589	4.4	0.0091	3.8	0.86	58.6	2.2	58.1	2.5	39.5	53.3	58.6	2.2	148.4
SP2-34	591	6570	1.9	21.6829	10.2	0.0556	10.5	0.0087	2.7	0.25	56.1	1.5	55.0	5.6	3.8	245.9	56.1	1.5	1465.0

Table A10

Isotopic data for sample 301BK. Kresna (North Pirin, Dautov) granite, near the tunnel, Kresna Gorge, road E-79

Zircon grain No.	Analysis			Isotope ratios							Apparent ages (Ma)						Best age		Conc. (%)
	U (ppm)	$^{206}Pb/^{204}Pb$	U/Th	$^{206}Pb^*/^{207}Pb^*$	2σ (%)	$^{207}Pb^*/^{235}U^*$	2σ (%)	$^{206}Pb^*/^{238}U$	2σ (%)	error corr.	$^{206}Pb^*/^{238}U^*$	2σ (Ma)	$^{207}Pb^*/^{235}U$	2σ (Ma)	$^{206}Pb^*/^{207}Pb^*$	2σ (Ma)	Age (Ma)	2σ (Ma)	
301BK-3	426	19568	18.6	18.5606	6.7	0.3551	7.4	0.0478	3.3	0.45	301.0	9.8	308.6	19.8	365.9	150.2	**301.0**	9.8	82.3
301BK-4	408	19850	8.9	17.7245	3.1	0.5359	3.7	0.0689	1.9	0.52	429.5	8.0	435.7	13.1	468.9	69.6	**429.5**	8.0	91.6
301BK-5	1566	6468	2.8	24.3215	14.6	0.0288	14.6	0.0051	1.6	0.11	32.7	0.5	28.8	4.2	-280.4	372.3	**32.7**	0.5	-11.6
301BK-6	2906	8928	2.5	21.4570	7.3	0.0313	7.9	0.0049	3.0	0.38	31.3	0.9	31.3	2.4	29.0	176.3	**31.3**	0.9	108.0
301BK-7	1955	28106	2.7	21.6175	9.3	0.0315	10.1	0.0049	4.0	0.40	31.8	1.3	31.5	3.1	11.1	223.0	**31.8**	1.3	285.4
301BK-8	793	2688	3.6	18.9789	10.2	0.0336	10.9	0.0046	3.9	0.35	29.7	1.1	33.5	3.6	315.5	233.2	**29.7**	1.1	9.4
301BK-9	2583	5706	2.4	21.5480	8.1	0.0313	8.8	0.0049	3.6	0.40	31.5	1.1	31.3	2.7	18.9	194.2	**31.5**	1.1	166.7
301BK-12	1460	5530	3.4	22.5212	8.2	0.0290	8.7	0.0047	3.1	0.35	30.4	0.9	29.0	2.5	-88.3	200.2	**30.4**	0.9	-34.4
301BK-13	545	3348	5.8	23.2386	83.8	0.0256	83.9	0.0043	2.8	0.03	27.7	0.8	25.6	21.2	-165.7	2640.6	**27.7**	0.8	-16.7
301BK-14	1591	5078	3.4	20.9882	9.2	0.0313	9.5	0.0048	2.4	0.25	30.6	0.7	31.2	2.9	81.7	219.6	**30.6**	0.7	37.4
301BK-15	1143	47066	27.2	18.0312	3.6	0.2829	5.6	0.0370	4.3	0.77	234.2	9.8	253.0	12.4	430.8	79.2	**234.2**	9.8	54.4
301BK-16	1695	13202	3.3	21.3647	12.6	0.0315	12.8	0.0049	2.1	0.16	31.4	0.7	31.5	4.0	39.4	303.2	**31.4**	0.7	79.7
301BK-17	1501	5314	3.7	21.0480	10.5	0.0325	10.6	0.0050	1.3	0.12	31.9	0.4	32.5	3.4	75.0	250.8	**31.9**	0.4	42.6
301BK-18	1302	4720	3.5	21.7321	13.3	0.0307	13.3	0.0048	1.1	0.08	31.1	0.3	30.7	4.0	-1.6	321.0	**31.1**	0.3	-1971.5
301BK-19	1687	66378	96.6	19.1527	3.8	0.3537	5.0	0.0491	3.1	0.63	309.2	9.5	307.5	13.1	294.7	87.5	**309.2**	9.5	104.9
301BK-20	2220	5706	2.7	18.0143	4.2	0.1374	6.5	0.0180	5.0	0.76	114.7	5.7	130.8	8.0	432.9	93.7	**114.7**	5.7	26.5
301BK-21	1086	44664	8.3	17.8480	2.4	0.4490	6.0	0.0581	5.5	0.92	364.2	19.6	376.6	19.0	453.5	53.6	**364.2**	19.6	80.3
301BK-22	916	3182	2.7	26.0564	31.9	0.0258	32.0	0.0049	1.7	0.05	31.3	0.5	25.8	8.1	-459.0	860.8	**31.3**	0.5	-6.8
301BK-23	1175	57616	5.4	18.4679	5.9	0.1837	6.4	0.0246	2.5	0.39	156.7	3.8	171.3	10.0	377.2	131.8	**156.7**	3.8	41.6
301BK-24	1621	8228	3.0	22.8982	11.2	0.0302	11.3	0.0050	0.8	0.07	32.3	0.3	30.3	3.4	-129.2	278.5	**32.3**	0.3	-25.0
301BK-25	1648	36970	16.7	17.1239	5.2	0.4852	6.2	0.0603	3.3	0.53	377.2	12.1	401.6	20.5	544.7	114.0	**377.2**	12.1	69.2
301BK-26	1254	4948	3.9	21.4184	20.9	0.0314	21.4	0.0049	4.8	0.22	31.4	1.5	31.4	6.6	33.3	504.1	**31.4**	1.5	94.2
301BK-27	448	31622	20.2	17.7786	4.1	0.5368	4.4	0.0692	1.6	0.36	431.4	6.7	436.3	15.8	462.1	91.9	**431.4**	6.7	93.4
301BK-28	1323	6958	4.1	21.7365	7.0	0.0382	7.2	0.0060	1.8	0.25	38.7	0.7	38.1	2.7	-2.1	168.4	**38.7**	0.7	-1872.5
301BK-29	546	38838	11.2	17.2811	3.6	0.5534	5.8	0.0694	4.6	0.78	432.3	19.1	447.2	21.1	524.7	79.6	**432.3**	19.1	82.4
301BK-30	1946	1470	3.4	15.1093	12.9	0.0684	13.9	0.0075	5.1	0.37	48.1	2.4	67.1	9.0	812.2	271.6	**48.1**	2.4	5.9
301BK-32	83	8620	1.7	17.5095	6.5	0.7228	6.8	0.0918	2.0	0.30	566.1	11.0	552.3	29.1	495.9	144.0	**566.1**	11.0	114.2