

Supplemental Item S9 - Detrital volcanic-lithic ⁴⁰Ar/³⁹Ar (DARL) fusion ages from cobbles sampled from modern rivers, Wrangell Arc, Wrangell-St. Elias Mountains, Alaska-Canada

WRANGELL CLASTS WR 11-15A16 #1-#20

Weighted average of J from standards = 1.078e-04 +/- 7.437e-07

Sample name	River	40Ar/39Ar		37Ar/39Ar		36Ar/39Ar		% Atm.	+/-	Ca/K	+/-	Cl/K	+/-	40*/39K	+/-	Fusion Age		Volts	# Grains
		meas.	+/-	meas.	+/-	meas.	+/-									Age (Ma)	+/- (Ma)		
Sanford-1	Sanford	190.24506	1.42275	2.92455	0.03842	0.64331	0.00737	99.81225	0.90466	5.37726	0.07079	0.03259	0.00072	0.35786	1.72449	0.07	0.34	1.27694	2
Sanford-2	Sanford	474.44504	2.9396	3.66183	0.02759	1.56649	0.01461	97.5088	0.68868	6.73637	0.05089	0.04069	0.00111	11.8493	3.27748	2.3	0.64	4.32151	2
Sanford-3	Sanford	9.80232	0.0663	1.19182	0.01542	0.01103	0.0009	32.34029	2.7136	2.18867	0.02834	0.00157	0.00019	6.61771	0.26946	1.29	0.05	0.16231	2
Sanford-4	Sanford	22.94593	0.14523	2.13695	0.0207	0.06367	0.00258	81.3316	3.29846	3.92694	0.0381	0.03606	0.00072	4.28457	0.7583	0.83	0.15	0.18247	2
Sanford-5	Sanford	309.03765	1.85316	1.10757	0.01097	1.01653	0.01233	97.17963	1.03081	2.03382	0.02015	0.01054	0.00072	8.72199	3.1887	1.69	0.62	5.30757	2
Sanford-6	Sanford	35.90542	0.17633	2.18353	0.021	0.11177	0.00314	91.56216	2.56342	4.01266	0.03865	0.04243	0.00071	3.03181	0.92168	0.59	0.18	0.43554	2
Sanford-7	Sanford	99.9231	0.72665	3.01112	0.03403	0.32678	0.0065	96.41762	1.81265	5.53677	0.06271	0.02536	0.00077	3.58619	1.81564	0.7	0.35	1.01792	2
Sanford-8	Sanford	133.15242	0.79688	2.30525	0.02551	0.44521	0.00431	98.68208	0.79145	4.23672	0.04696	0.02721	0.00084	1.75731	1.05606	0.34	0.21	1.1568	2
Sanford-9	Sanford	61.88664	0.19401	1.43882	0.01476	0.20034	0.00278	95.51462	1.31083	2.64271	0.02714	0.02561	0.00049	2.77734	0.81226	0.54	0.16	0.89048	2
Sanford-11	Sanford	12.14767	0.09725	1.82546	0.0192	0.02994	0.00178	71.7742	4.30805	3.35378	0.03533	0.03076	0.00065	3.42482	0.5238	0.67	0.1	0.15313	2
Sanford-12	Sanford	124.12094	0.5373	3.13183	0.02584	0.42734	0.00689	101.55389	1.59387	5.75921	0.04762	0.03882	0.00087	-1.93252	1.98202	-0.38	0.39	0.95548	2
Sanford-13	Sanford	7.647	0.0683	0.76803	0.0088	0.02184	0.00141	83.88592	5.43611	1.41	0.01617	0.02838	0.00057	1.22813	0.41458	0.24	0.08	0.09928	2
Sanford-14	Sanford	8.5552	0.04123	0.94501	0.00757	0.0222	0.00088	76.03023	3.05522	1.73512	0.01391	0.01876	0.0003	2.04491	0.26118	0.4	0.05	0.17553	2
Sanford-15	Sanford	9.54933	0.05106	0.91126	0.00692	0.02638	0.00228	81.11168	7.06685	1.67311	0.01272	0.00125	0.00033	1.79926	0.67357	0.35	0.13	0.10264	2
Sanford-16	Sanford	5.48224	0.02381	0.25876	0.00492	0.0088	0.00064	47.31931	3.4609	0.47488	0.00903	0.00146	0.00014	2.87296	0.18939	0.56	0.04	0.15914	2
Sanford-17	Sanford	39.47992	0.2645	1.2515	0.01599	0.10839	0.00274	80.92777	1.99157	2.29837	0.02939	0.00045	0.0003	7.5307	0.78936	1.46	0.15	0.48422	2
Sanford-18	Sanford	16.57983	0.05015	0.62914	0.0058	0.04506	0.00106	80.14606	1.88382	1.15491	0.01065	0.0011	0.00024	3.28732	0.31259	0.64	0.06	0.29535	2
Sanford-19	Sanford	12.28946	0.05761	0.26844	0.00409	0.03139	0.00143	75.46807	3.4255	0.49264	0.00751	0.001	0.00025	3.00813	0.42046	0.58	0.08	0.20716	2
White-2	White	1522.1052	10.29774	1.2012	0.01941	0.23162	0.00343	4.49032	0.05949	2.2059	0.03567	0.00192	0.00055	1454.9637	9.8994	262.66	1.66	13.57914	2
White-3	White	124.77588	0.87407	2.25165	0.02766	0.22239	0.0045	52.53056	1.01364	4.13805	0.05092	0.00324	0.00041	59.31065	1.3465	11.49	0.26	1.12433	2

WRANGELL CLASTS WR 11-15A16 #21-#40

Weighted average of J from standards = 1.052e-04 +/- 1.125e-06

Sample name	River	40Ar/39Ar		37Ar/39Ar		36Ar/39Ar		% Atm.	+/-	Ca/K	+/-	Cl/K	+/-	40*/39K	+/-	Age (Ma)	+/- (Ma)	Volts	# Grains	*Step heat		
		meas.	+/-	meas.	+/-	meas.	+/-													Age (Ma)	+/- (Ma)	
White-5	White	388.17008	3.66227	1.46783	0.02688	0.7729	0.01137	58.81139	0.66585	2.69605	0.04943	0.04511	0.00084	160.03552	3.00144	30.09	0.56	3.15986	2		23.5	0.7
White-6	White	80.94422	0.50109	0.93931	0.01311	0.09075	0.00325	33.04571	1.17156	1.72465	0.02409	0.00285	0.00028	54.21171	1.0116	10.25	0.19	1.28646	2			
White-7	White	659.9611	6.78545	9.71461	0.12219	0.535	0.01215	23.83465	0.48729	17.9481	0.22732	0.00968	0.00086	506.11141	6.1839	93.48	1.11	2.6627	1			
White-8	White	153.21408	1.05457	2.13292	0.02755	0.29309	0.00506	56.42343	0.90252	3.91951	0.0507	0.00835	0.00048	66.85322	1.46847	12.63	0.28	1.40475	1			
White-11	White	96.86552	0.21333	0.07621	0.00309	0.16117	0.00208	49.1765	0.62634	0.13985	0.00567	0.00126	0.00016	49.218	0.61774	9.31	0.12	3.36341	1	10.4	0.2	
White-13	White	1869.8127	27.64165	11.73399	0.2045	0.53441	0.01351	8.39413	0.17328	21.71017	0.38153	0.00612	0.00198	1727.1436	25.95707	300.86	4.16	4.53643	1			
White-15	White	120.9263	0.55366	1.21191	0.01237	0.22761	0.00276	55.55057	0.63509	2.2256	0.02274	0.00163	0.00027	53.78389	0.81676	10.17	0.15	1.81501	1			
White-16	White	204.90748	0.85319	0.23992	0.00414	0.51585	0.00459	74.39233	0.58917	0.44029	0.0076	0.00647	0.0004	52.47332	1.22955	9.92	0.23	4.85341	1			
White-17	White	71.53709	0.25275	0.69943	0.00561	0.04824	0.00128	19.85264	0.52544	1.28399	0.01031	0.00466	0.00019	57.33962	0.42961	10.84	0.08	1.95735	1			
White-18	White	1866.799	11.97679	13.2691	0.1015	0.52868	0.00545	8.31017	0.06788	24.57728	0.18978	0.00499	0.00075	1727.8291	11.27181	300.97	1.81	15.76533	1			
Chisana-1	Chisana	1404.8793	20.76302	23.45199	0.38065	3.83671	0.06573	80.56488	0.70312	43.75587	0.72216	0.02867	0.00262	277.63247	10.88827	51.88	2.01	4.45854	1			
Chisana-2	Chisana	310.65447	4.73182	0.99199	0.02173	0.56057	0.01531	53.30099	1.21357	1.82144	0.03993	0.05124	0.00207	145.16039	4.38328	27.31	0.82	0.91524	1	22.9	0.3	
Chisana-3	Chisana	253.15456	1.2965	0.79278	0.01239	0.40555	0.00463	47.31832	0.48544	1.45545	0.02276	0.01617	0.00071	133.42514	1.41151	25.12	0.26	3.18726	1			
Chisana-4	Chisana	84.75545	0.32946	0.44931	0.0051	0.12577	0.00229	43.82123	0.7835	0.82469	0.00936	0.00409	0.00037	47.613	0.69413	9	0.13	1.36301	1			
Chisana-5	Chisana	283.91627	1.06847	1.41561	0.01112	0.84757	0.00874	88.18269	0.85053	2.60005	0.02045	0.01075	0.00049	33.58134	2.42172	6.36	0.46	2.93369	1			
Chisana-6	Chisana	58.0991	0.19355	0.2479	0.00455	0.08516	0.00154	43.30224	0.77545	0.45495	0.00835	0.00301	0.00024	32.92982	0.46654	6.23	0.09	1.3449	1			
Chisana-7	Chisana	51.09066	0.25466	0.51129	0.0077	0.04011	0.00264	23.13017	1.52647	0.93849	0.01413	0.00328	0.0004	39.26466	0.80525	7.43	0.15	0.70122	1			
Chisana-8	Chisana	51.27696	0.2109	0.61095	0.00764	0.0497	0.00266	28.55948	1.53493	1.12149	0.01403	0.0024	0.00025	36.62712	0.80549	6.93	0.15	0.73186	1			
Chisana-9	Chisana	46.23093	0.31584	0.95616	0.01257	0.04492	0.00258	28.56127	1.63979	1.75561	0.0231	0.00218	0.00033	33.02789	0.79403	6.25	0.15	0.60031	1			

WRANGELL CLASTS WR 11-15A16 #41-#60

Weighted average of J from standards = 1.054e-04 +/- 3.042e-07

Sample name	River	40Ar/39Ar		37Ar/39Ar		36Ar/39Ar		% Atm.	+/-	Ca/K	+/-	Cl/K	+/-	40*/39K	+/-	Age (Ma)	+/- (Ma)	Volts	# Grains	*Step heat		
		meas.	+/-	meas.	+/-	meas.	+/-													Age (Ma)	+/- (Ma)	
Chisana-11	Chisana	383.87002	1.98228	0.57099	0.01492	0.79606	0.011	61.27236	0.78615	1.04812	0.02739	0.02922	0.00078	148.71229	3.11731	28.04	0.58	3.41509	1	20.6	0.5	
Chisana-16	Chisana	1124.7257	9.78276	4.53275	0.05374	0.78942	0.01097	20.70779	0.22515	8.34368	0.09924	0.01773	0.0006	894.66027	8.21457	162.45	1.43	12.00942	1			
Chisana-17	Chisana	67.23996	0.25892	0.01663	0.00116	0.10153	0.0013	44.63607	0.55243	0.03051	0.00212	0.00051	0.00016	37.21068	0.40425	7.06	0.08	2.61533	1			
Chisana-18	Chisana	105.47728	0.50329	1.17971	0.0078	0.21415	0.00318	59.91962	0.85171	2.1664	0.01434	0.00366	0.00035	42.29904	0.92619	8.02	0.18	2.12391	1			

Cross 1	Cross	1146.4276	9.37956	0.22586	0.00822	0.17377	0.00418	4.4776	0.10123	0.41448	0.01509	0.00285	0.00068	1095.2415	9.03845	196.95	1.54	13.6089	1
Cross 2	Cross	1202.1627	8.22921	4.75666	0.0611	0.71677	0.01229	17.58643	0.2772	8.75723	0.11286	0.01033	0.00095	994.06006	7.60783	179.63	1.31	8.60884	1
Cross 3	Cross	642.76823	3.33631	0.03462	0.00289	0.04423	0.00142	2.03312	0.06423	0.06353	0.00531	0.04364	0.00047	629.68628	3.29507	115.85	0.59	15.08346	1
Cross 4	Cross	201.79624	1.45848	0.86061	0.00898	0.23308	0.00329	34.10048	0.4152	1.58007	0.0165	0.00726	0.00046	133.04405	1.2778	25.1	0.24	3.39525	1
Cross 9	Cross	272.41927	3.24617	7.78001	0.10361	0.78457	0.01394	84.87858	1.13427	14.35411	0.19221	0.11897	0.00269	41.41676	3.15178	7.85	0.6	1.53046	1
Dad 1A-1	Dadina	61.0114	0.34106	1.15953	0.01095	0.19806	0.00228	95.81702	0.98231	2.12931	0.02012	0.02708	0.00073	2.55294	0.60014	0.49	0.11	0.87465	2
Dad 1A-2	Dadina	20.64785	0.0926	0.91028	0.01086	0.06456	0.00213	92.16463	3.04603	1.67131	0.01996	0.00184	0.00037	1.61655	0.62876	0.31	0.12	0.3392	2
Dad 1B-1	Dadina	72.14991	0.19283	0.7424	0.00664	0.21118	0.00217	86.44217	0.87009	1.36291	0.0122	0.00227	0.00025	9.78307	0.62969	1.86	0.12	1.8365	2
Dad 1B-2	Dadina	2.74603	0.03778	2.02381	0.01646	0.00126	0.00168	7.51777	18.32379	3.71872	0.03029	0.03635	0.00053	2.51575	0.49985	0.48	0.09	0.03478	2
Dad 1B-3	Dadina	5.16671	0.04133	1.10032	0.01668	0.00892	0.00157	49.56763	9.01158	2.02051	0.03064	0.00346	0.00033	2.59274	0.46428	0.49	0.09	0.07429	2
Dad 1B-4	Dadina	9.36281	0.03835	0.95387	0.0085	0.01966	0.00152	61.41743	4.80374	1.7514	0.01561	0.01927	0.00033	3.60339	0.44916	0.68	0.09	0.22271	2
Dad 1C-1	Dadina	3.64219	0.033	0.61193	0.01102	-0.00079	0.00198	-7.88193	16.19924	1.1233	0.02025	0.01946	0.00038	3.89892	0.58643	0.74	0.11	0.04924	2
Dad 1C-2	Dadina	8.65763	0.03385	1.31298	0.0142	0.00355	0.00152	10.8937	5.20826	2.41137	0.0261	0.00491	0.00029	7.69519	0.45087	1.46	0.09	0.18422	2
Dad 1C-3	Dadina	3.13973	0.02084	0.19941	0.0063	0.00057	0.00141	4.84387	13.35837	0.36594	0.01157	0.00046	0.0002	2.9598	0.41601	0.56	0.08	0.05984	2
Dad 1C-4	Dadina	6.61198	0.0434	0.28409	0.00572	0.01076	0.00158	47.93705	7.09227	0.52138	0.0105	0.00036	0.00013	3.42762	0.46777	0.65	0.09	0.14366	2
Dad 1C-5	Dadina	4.40084	0.04612	0.80411	0.01347	0.00147	0.00289	8.42781	19.54387	1.47627	0.02475	0.00152	0.00048	4.00504	0.85591	0.76	0.16	0.04406	2

WRANGELL CLASTS WR 11-15A16 #60-#80

Weighted average of J from standards = 9.377e-05 +/- 4.498e-07

Sample name		40Ar/39Ar		37Ar/39Ar		36Ar/39Ar		% Atm.		Ca/K		Cl/K		40*/39K		Age		Volts		# Grains		*Step heat	
		meas.	+/-	meas.	+/-	meas.	+/-	40Ar	+/-	+/-	+/-	+/-	+/-	+/-	+/-	(Ma)	(Ma)					Age	+/-
Nabesna 1	Nabesna	132.77372	1.49642	1.33852	0.02744	0.0934	0.00604	20.7077	1.32588	2.45833	0.05044	0.02872	0.00128	105.3554	2.13533	17.72	0.36	0.56533	1				
Nabesna 2	Nabesna	452.58378	8.96188	2.11835	0.0543	0.93409	0.02442	60.95356	1.0478	3.89271	0.09993	0.06622	0.00297	176.971	5.92146	29.66	0.98	1.16475	1			23.9	0.4
Nabesna 4	Nabesna	159.25889	1.05426	1.20565	0.01641	0.15271	0.00381	28.27689	0.68501	2.21408	0.03017	0.01476	0.00075	114.30146	1.33872	19.21	0.22	1.18871	1				
Nabesna 5	Nabesna	582.82995	1.37628	0.58305	0.0073	0.54617	0.00525	27.68424	0.25859	1.70725	0.01341	0.00766	0.00038	421.63005	1.81385	69.87	0.29	16.30858	1				
Nabesna 7	Nabesna	150.58167	1.44606	0.81505	0.01915	0.10015	0.00626	19.6121	1.21503	1.49636	0.03518	0.00766	0.00092	121.09529	2.17037	20.35	0.36	0.9647	1				
Nabesna 8	Nabesna	127.75277	0.49677	1.35611	0.01755	0.05454	0.00446	12.53187	1.03171	2.49067	0.03226	0.00064	0.00074	111.8241	1.3918	18.8	0.23	0.79333	1				
Nabesna 11	Nabesna	1518.8729	13.64052	8.53636	0.07872	1.95696	0.01977	38.02756	0.17751	15.75805	0.14619	0.00689	0.00086	946.97311	8.98709	153.31	1.39	9.17461	1				
Nabesna 12	Nabesna	32.20291	0.32543	3.29306	0.04153	0.08239	0.00653	74.8242	5.95394	6.0564	0.07656	0.06449	0.00137	8.11876	1.92262	1.37	0.32	0.13146	1				
Nabesna 13	Nabesna	178.77837	0.94255	0.36015	0.00677	0.06399	0.00247	10.56162	0.40507	0.66099	0.01243	0.0024	0.00045	159.91059	1.11694	26.82	0.19	2.23625	1			27.7	0.2
Nabesna 14	Nabesna	275.94686	1.61441	1.2039	0.019	0.47834	0.00582	51.19328	0.54713	2.21088	0.03492	0.01351	0.00088	134.78072	1.70683	22.63	0.28	2.87825	1				
Che 1A-1	Chetaslina	17.24291	0.09611	0.79771	0.01249	0.05073	0.00215	86.6992	3.6546	1.46451	0.02295	0.0126	0.00025	2.29079	0.62967	0.39	0.11	0.2355	2				
Che 1A-2	Chetaslina	80.35281	0.35948	0.45747	0.00648	0.25954	0.00247	95.43592	0.82282	0.83967	0.01189	0.02649	0.00036	3.66719	0.66213	0.62	0.11	1.63622	2				
Che 1A-3	Chetaslina	575.00533	2.81537	0.9651	0.00736	1.92771	0.01436	99.05784	0.55974	1.77204	0.01352	0.00408	0.00076	5.42089	3.22087	0.92	0.54	8.92782	2				
Che 1B-1 (BI)		948.01516	3.05857	0.02279	0.00356	0.0703	0.00225	2.19115	0.06975	0.04182	0.00654	0.0033	0.00035	927.22858	3.06499	150.24	0.48	24.27026	2				
Che 1B-2	Chetaslina	987.08618	6.43814	0.82145	0.00988	0.15704	0.00228	4.69456	0.061	1.50812	0.01815	0.011	0.00036	941.26462	6.17378	152.42	0.96	23.7192	2				
Che 1C-2	Chetaslina	11.87068	0.13451	1.87354	0.02296	0.03355	0.00224	82.42608	5.59189	3.44224	0.04225	0.01367	0.00052	2.08369	0.66536	0.35	0.11	0.1401	2				
Che 1C-3	Chetaslina	7.00215	0.02816	0.2984	0.00608	0.01355	0.00157	57.0631	6.67281	0.54764	0.01115	0.00029	0.00024	2.99439	0.46565	0.51	0.08	0.16628	2				
Che 1C-5	Chetaslina	130.76249	0.59195	0.61886	0.00769	0.4273	0.00504	96.54563	1.07533	1.13601	0.01413	0.01527	0.00036	4.51797	1.40766	0.76	0.24	2.32502	2				
Che 1C-6	Chetaslina	19.00503	0.09783	0.87499	0.0072	0.05989	0.00138	92.87785	2.09849	1.60648	0.01323	0.03435	0.00035	1.35229	0.39864	0.23	0.07	0.52172	2				
Cross 3	Cross	761.10439	2.41286	0.65685	0.00839	0.13042	0.00153	5.05649	0.05741	1.2058	0.01542	0.0059	0.00025	722.92638	2.33645	118.19	0.37	23.30714	1				

WRANGELL CLASTS WR 11-15A16 #80-#100

Weighted average of J from standards = 9.653e-05 +/- 5.912e-07

		40Ar/39Ar	+/-	37Ar/39Ar	+/-	36Ar/39Ar	+/-	% Atm.	+/-	Ca/K	+/-	Cl/K	+/-	40*/39K	+/-	Age	+/-			
Sample name		meas.		meas.		meas.		40Ar								(Ma)	(Ma)	Volts	# Grains	
Cross 5	Cross	924.06678	5.91813	0.2396	0.00701	0.12736	0.00398	4.07089	0.12474	0.4397	0.01287	0.00068	0.0006	886.57054	5.79568	147.97	0.93	10.93585	1	
Cross 6	Cross	659.52247	4.34735	0.60861	0.01003	0.48533	0.00714	21.73849	0.28605	1.11719	0.01842	0.01214	0.00045	516.35093	3.89564	87.65	0.65	13.65695	1	
Cross 7	Cross	248.23067	0.8349	0.46537	0.00961	0.31887	0.00583	37.94758	0.68404	0.85417	0.01765	0.00489	0.00076	154.06535	1.78145	26.6	0.31	2.01366	1	
Kot 11 7/23	Kotsina	24.98463	0.07883	0.73383	0.01013	0.07177	0.00227	84.74349	2.68144	1.34717	0.01861	0.02659	0.00048	3.80923	0.66988	0.66	0.12	0.437	2	
Kot 12 7/23	Kotsina	145.48933	1.22624	1.17504	0.01861	0.49224	0.00736	99.93119	1.25383	2.15782	0.03421	0.03294	0.00104	0.10018	1.82535	0.02	0.32	1.35848	2	
Kot 14 7/23	Kotsina	7.69315	0.06232	0.95537	0.01535	0.00974	0.00238	36.5207	9.1757	1.75415	0.02819	0.00568	0.0004	4.868	0.70504	0.85	0.12	0.12168	2	
Kot 15 7/23	Kotsina	1.27408	0.02372	0.56848	0.00773	0.00227	0.00204	50.2442	48.44621	1.04351	0.0142	0.00425	0.00029	0.6194	0.60344	0.11	0.1	0.023	2	
Kot 16 7/23	Kotsina	3557.3337	207.22948	88.25716	5.17206	7.89594	0.47944	65.3859	1.12707	172.70412	10.79357	0.28476	0.02051	1313.1777	92.14551	215.07	14.23	1.68246	2	
Kot 1A-1	Kotsina	179.45311	0.64441	0.76302	0.01125	0.59897	0.00776	98.61233	1.22876	1.40079	0.02067	0.02885	0.00078	2.49115	2.20592	0.43	0.38	3.17915	2	
Kot 1A-2	Kotsina	137.35609	0.45179	0.82796	0.01152	0.45245	0.00436	97.30872	0.88288	1.52009	0.02117	0.02945	0.00056	3.698	1.21325	0.64	0.21	3.20149	2	
Kot 1B-1	Kotsina	1006.9576	7.06201	0.93212	0.01432	0.3179	0.00794	9.32178	0.22371	1.71143	0.02632	0.00456	0.00066	913.66574	6.79842	152.31	1.09	8.76884	2	
Kot 1B-2	Kotsina	119.70986	0.3482	0.71227	0.0071	0.39564	0.00373	97.63835	0.87831	1.30758	0.01304	0.02777	0.00035	2.82784	1.05177	0.49	0.18	2.92448	2	
Kot 1B-3	Kotsina	262.40458	1.09001	0.59588	0.00697	0.85816	0.00951	96.63163	0.99409	1.09382	0.0128	0.00627	0.00049	8.84148	2.6097	1.54	0.45	8.29925	2	

Kot 1B-4	Kotsina	9.43723	0.07067	0.30204	0.00702	0.02121	0.00329	66.34828	10.32129	0.55431	0.01289	0.00298	0.00048	3.16647	0.97168	0.55	0.17	0.15697	2
Kot 1B-5	Kotsina	64.41687	0.2988	0.5667	0.00756	0.20482	0.00318	93.92636	1.40039	1.04022	0.01388	0.0249	0.00057	3.91221	0.90259	0.68	0.16	1.51041	2
Kot 1B-6	Kotsina	950.56776	2.54466	0.27846	0.00457	0.16856	0.00169	5.23763	0.05059	0.51104	0.0084	0.00108	0.00032	900.92955	2.46203	150.27	0.39	17.949	2
Nad 1A-1	Nadina	12.8352	0.06974	1.80567	0.02205	0.03267	0.00329	74.23387	7.58853	3.31738	0.04057	0.0151	0.00069	3.30371	0.97354	0.57	0.17	0.13404	2
Nad 1A-2	Nadina	39.7172	0.19205	0.69596	0.00959	0.12528	0.00203	93.13639	1.45221	1.27761	0.01761	0.0116	0.00027	2.72534	0.57706	0.47	0.1	0.77675	2
Nad 1A-3	Nadina	60.05548	0.42144	1.68177	0.02323	0.18871	0.00654	92.66744	3.15841	3.08949	0.04272	0.00219	0.00087	4.40666	1.89871	0.77	0.33	0.42029	2
Nad 1A-4	Nadina	2.78138	0.05343	1.14165	0.02205	0.00255	0.00315	23.93555	33.83464	2.09647	0.04052	0.02182	0.00054	2.09476	0.93314	0.36	0.16	0.02949	2

WRANGELL CLASTS WR 11-15A16 #101-#122

Weighted average of J from standards = 9.653e-05 +/- 5.912e-07

Sample name		40Ar/39Ar meas.	+/-	37Ar/39Ar meas.	+/-	36Ar/39Ar meas.	+/-	% Atm. 40Ar	+/-	Ca/K	+/-	Cl/K	+/-	40*/39K	+/-	Age (Ma)	+/- (Ma)	Volts	# Grains
Nad 1A-5	Nadina	16.16308	0.07572	0.84611	0.00778	0.0516	0.00261	94.07938	4.75957	1.55343	0.01429	0.00242	0.00031	0.95577	0.76844	0.17	0.13	0.24063	2
Nad 1A-6	Nadina	25.73234	0.26627	1.7901	0.02448	0.08175	0.00353	93.41479	3.94546	3.28874	0.04504	0.01378	0.00041	1.69472	1.01568	0.29	0.18	0.27257	2
Nad 1B-1	Nadina	7.29724	0.07069	1.08155	0.02967	0.01723	0.00561	68.82933	22.8179	1.98602	0.05452	0.00667	0.00064	2.26708	1.66005	0.39	0.29	0.04108	2
Nad 1B-2	Nadina	11.47077	0.04588	1.2211	0.00889	0.02191	0.00221	55.71966	5.71088	2.24249	0.01635	0.02719	0.00034	5.07053	0.65445	0.88	0.11	0.22778	2
Kusk-1A-1	Kuskalana	57.24689	0.21134	0.44763	0.00669	0.13386	0.00236	69.06622	1.20494	0.82159	0.01229	0.00208	0.00023	17.70504	0.69558	3.08	0.12	1.43095	2
Kusk-1B-1	Kuskalana	229.61414	2.01874	1.02794	0.01618	0.71798	0.01174	92.37513	1.28116	1.88751	0.02973	0.00304	0.00057	17.51822	2.94892	3.04	0.51	2.40652	2
Kusk-1B-2	Kuskalana	69.41188	0.26048	0.45352	0.00844	0.17349	0.00323	73.83717	1.35348	0.83242	0.0155	0.00229	0.00031	18.15816	0.94315	3.16	0.16	1.19035	2
Kusk-1B-3	Kuskalana	35.54177	0.2365	0.79964	0.00875	0.06615	0.00267	54.85981	2.19559	1.46806	0.01606	0.00165	0.0003	16.03928	0.78857	2.79	0.14	0.66772	2
Kusk-1B-4	Kuskalana	120.30248	0.64395	0.944	0.00954	0.35113	0.00422	86.20464	0.92835	1.73327	0.01753	0.00403	0.00036	16.60314	1.12107	2.89	0.19	3.02405	2
Kusk-1B-5	Kuskalana	175.03778	0.44663	0.48287	0.00839	0.51898	0.00501	87.60616	0.8164	0.8863	0.01541	0.00427	0.00052	21.69763	1.43065	3.77	0.25	3.80497	2
Kusk-1B-6	Kuskalana	76.98563	0.23562	0.63736	0.00821	0.19344	0.00343	74.2095	1.30065	1.16999	0.01508	0.00437	0.00031	19.85626	1.00461	3.45	0.17	1.62449	2
Kusk-1B-7	Kuskalana	138.53934	0.5154	0.76597	0.01196	0.40456	0.00544	86.26449	1.12975	1.40621	0.02196	0.00258	0.00037	19.0353	1.57044	3.31	0.27	2.58442	2
Kusk-1B-8	Kuskalana	74.14033	0.35094	0.64076	0.01094	0.19018	0.00366	75.75817	1.42285	1.17624	0.02009	0.00327	0.00034	17.97391	1.06073	3.12	0.18	1.296	2
Kusk-1C-1	Kuskalana	137.19123	1.0195	2.84903	0.03083	0.3926	0.00658	84.40947	1.27676	5.23811	0.05679	0.0025	0.00058	21.42733	1.76358	3.72	0.31	1.14112	2
Kusk-1C-2 (HO)	Kuskalana	120.38647	0.95291	9.61229	0.09853	0.32357	0.00821	78.7844	1.92151	17.75777	0.18327	0.05331	0.00099	25.70898	2.33983	4.47	0.41	0.8252	4
Kusk-1C-3	Kuskalana	129.34624	0.34058	0.23658	0.00478	0.34903	0.00465	79.74226	1.04163	0.43417	0.00878	0.00259	0.00025	26.20098	1.34928	4.55	0.23	3.54591	2
Kusk-1C-4	Kuskalana	160.34358	1.44533	1.75235	0.02406	0.46409	0.00877	85.45301	1.42483	3.2193	0.04426	0.00215	0.00101	23.34974	2.29798	4.06	0.4	1.42613	2
Kusk-1C-6	Kuskalana	214.8663	1.90135	1.13706	0.02442	0.65715	0.0107	90.34437	1.2553	2.08803	0.04488	0.00555	0.0013	20.7605	2.70963	3.61	0.47	1.72446	2
Kusk-1C-5	Kuskalana	92.99143	0.2478	0.36333	0.00359	0.23615	0.00291	75.03495	0.90427	0.66683	0.0066	0.00123	0.00021	23.2139	0.84338	4.03	0.15	5.44606	2
Kusk-1D-1	Kuskalana	52.74231	0.22543	1.19692	0.0176	0.11441	0.00349	63.94749	1.93992	2.19804	0.03234	0.00571	0.00044	19.02031	1.02803	3.31	0.18	0.65732	2
Cross 8	Cross	1499.0703	24.30575	0.05218	0.03505	1.41496	0.03097	27.89234	0.41038	0.09575	0.06431	0.01343	0.00195	1080.9629	18.57928	178.86	2.93	6.33374	1
Cross10	Cross	178.70573	0.83591	0.44399	0.00476	0.09065	0.0016	14.97126	0.25659	0.81491	0.00873	0.00556	0.00027	151.97363	0.85494	26.8	0.15	3.2877	1

CLASTS WR 11-21B16 #110

Weighted average of J from standards = 1.252e-04 +/- 6.542e-07

Sample name		40Ar/39Ar meas.	+/-	37Ar/39Ar meas.	+/-	36Ar/39Ar meas.	+/-	% Atm. 40Ar	+/-	Ca/K	+/-	Cl/K	+/-	40*/39K	+/-	Age (Ma)	+/- (Ma)	Volts	# Grains
Chisana 12	Chisana	72.22306	0.63176	0.05604	0.0059	0.15607	0.00212	63.87377	0.68067	0.10283	0.01082	0.00105	0.00034	26.08178	0.5477	5.88	0.12	0.77922	1

CLASTS WR 11-21B16 #111-#114

Weighted average of J from standards = 1.206e-04 +/- 5.634e-07

Sample name		40Ar/39Ar meas.	+/-	37Ar/39Ar meas.	+/-	36Ar/39Ar meas.	+/-	% Atm. 40Ar	+/-	Ca/K	+/-	Cl/K	+/-	40*/39K	+/-	Age (Ma)	+/- (Ma)	Volts	# Grains
Chisana 13	Chisana	114.51218	0.66948	0.75594	0.00955	0.26447	0.00598	68.21088	1.50474	1.38778	0.01755	0.00293	0.00051	36.41242	1.74456	7.9	0.38	0.6693	1
Chisana 14	Chisana	67.34095	0.6328	0.86821	0.01804	0.08534	0.00309	37.35893	1.31209	1.59402	0.03314	0.01188	0.00042	42.19036	0.97054	9.15	0.21	0.44961	1
Chisana 15	Chisana	34.27781	0.0785	0.05299	0.00343	0.01373	0.00066	11.83734	0.56569	0.09724	0.0063	0.00198	0.00016	30.19518	0.20639	6.55	0.04	0.69514	1

Note:

Monitor mineral TCR with an age of 28.619 Ma (Renne et al., 2010) was used to monitor neutron flux and calculate ages.

*Refer to Repository Item DR6 for step-heat ⁴⁰Ar/³⁹Ar data

Reference:

Renne, P.R., Mundil, R., Balco, G., Min, K., and Ludwig, K.R., 2010, Joint determination of ⁴⁰K decay constants and ⁴⁰Ar/⁴⁰K for the Fish Canyon sanidine standard, and improved accuracy for ⁴⁰Ar/³⁹Ar geochronology: Geochimica et Cosmochimica Acta, v. 74, p. 5349.