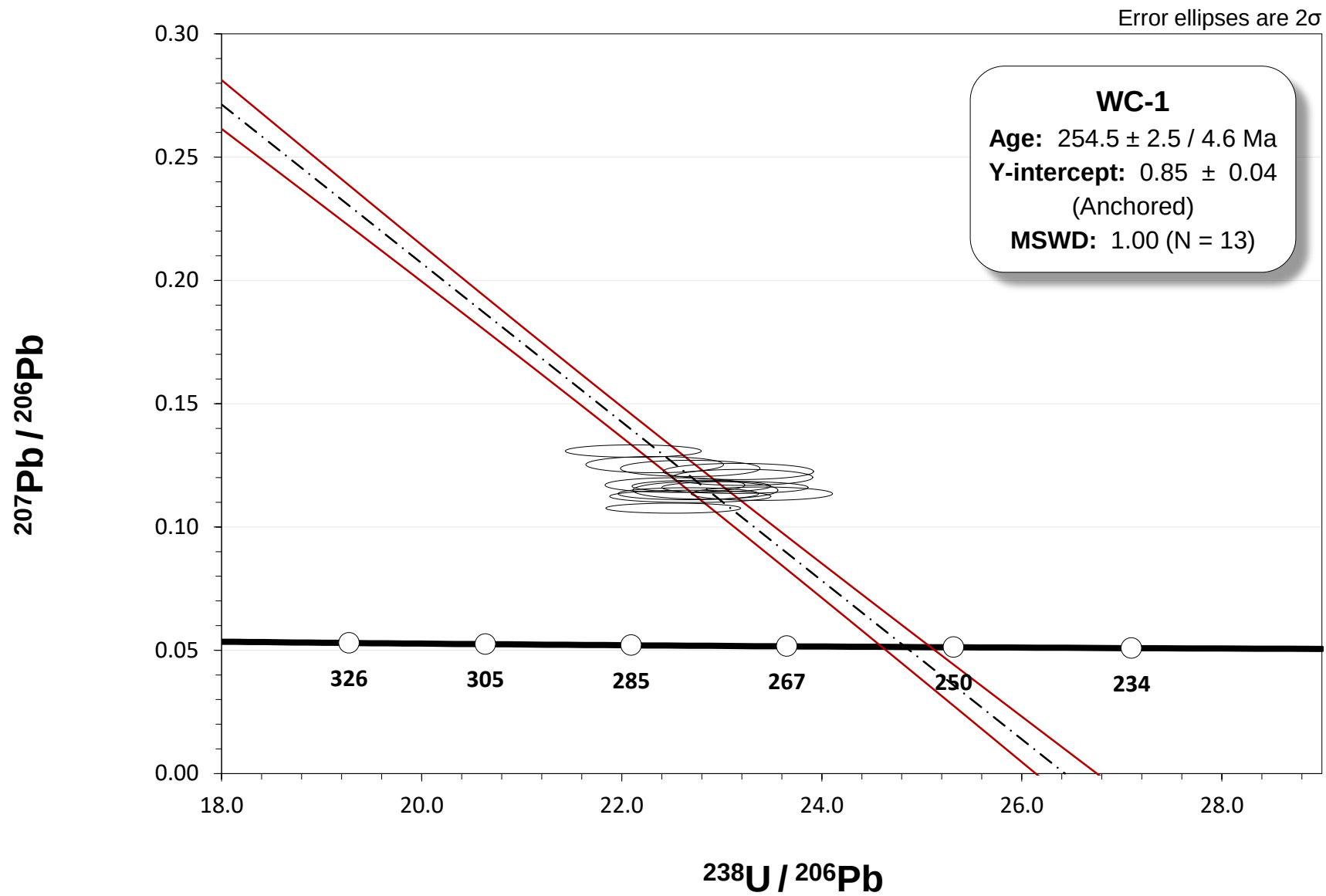
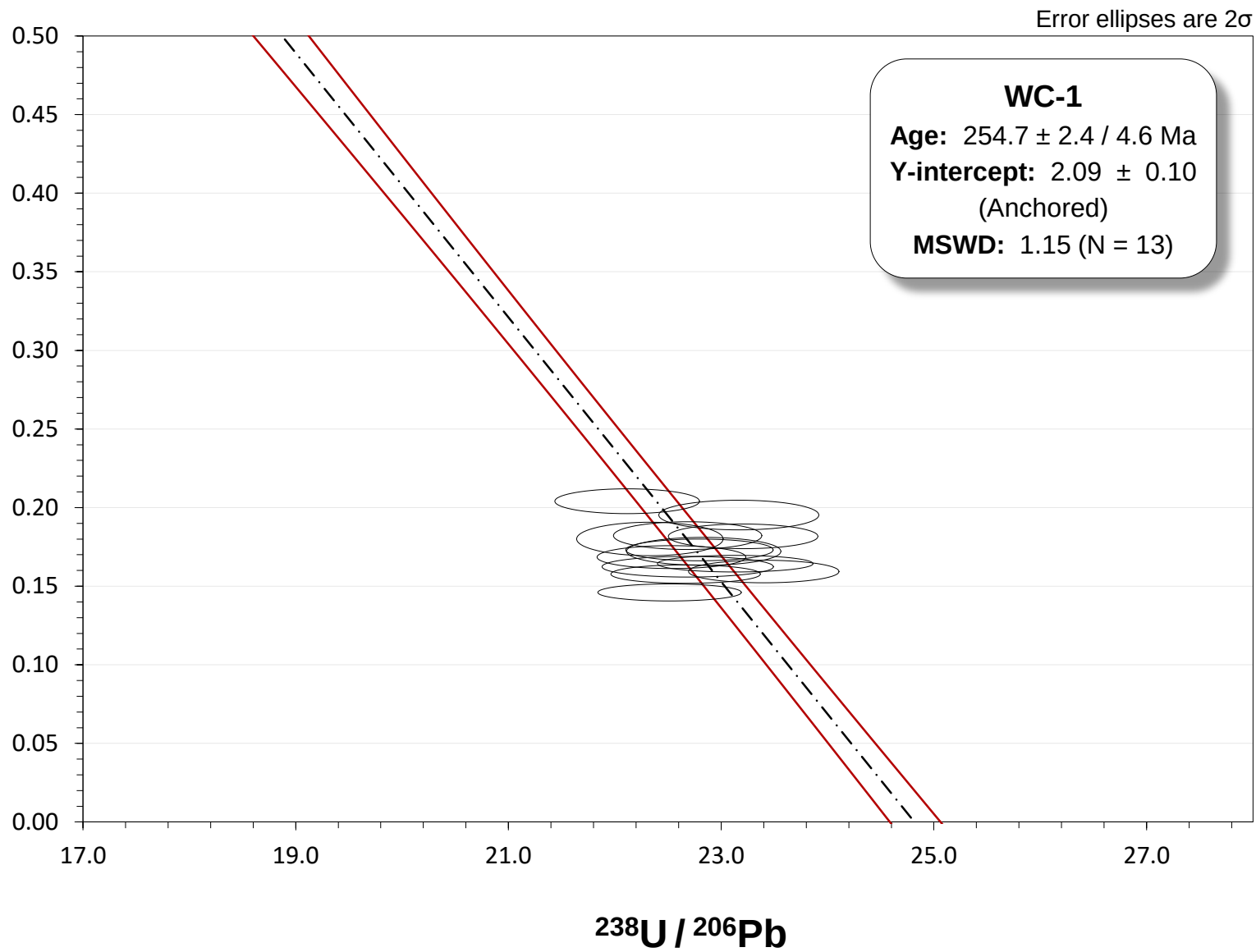


Sequence of analysis 1

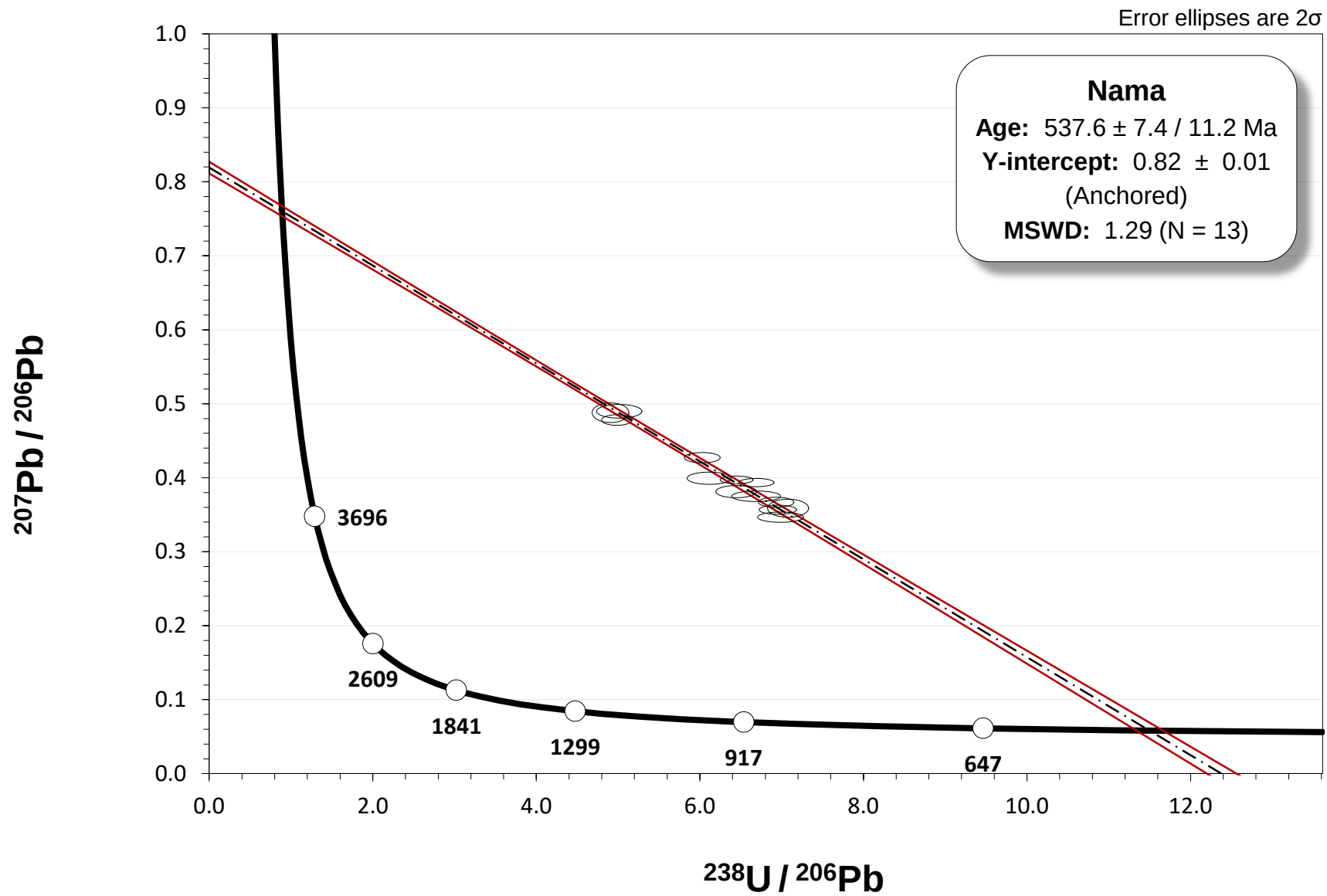


Sec RM1

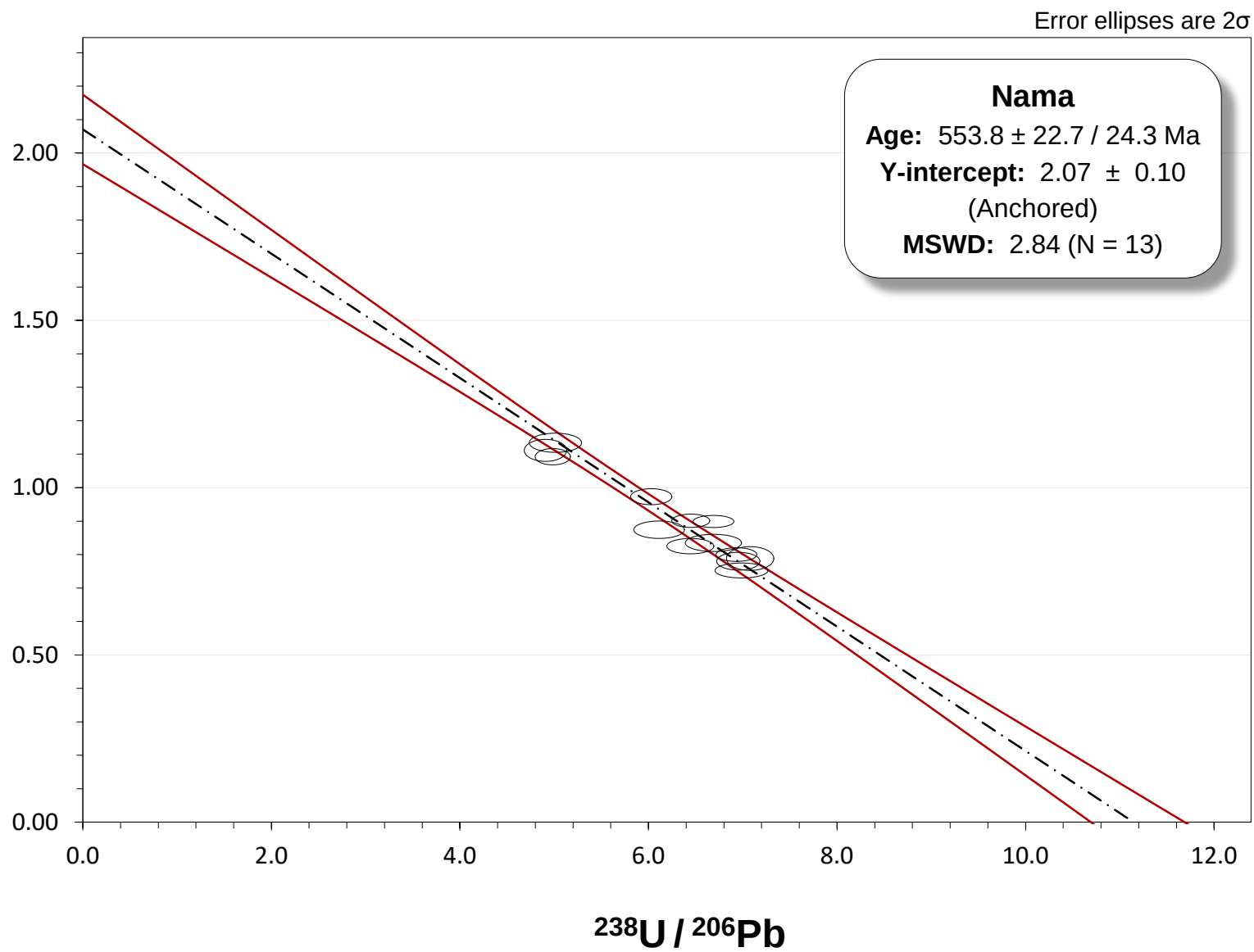
$^{208}\text{Pb} / ^{206}\text{Pb}$

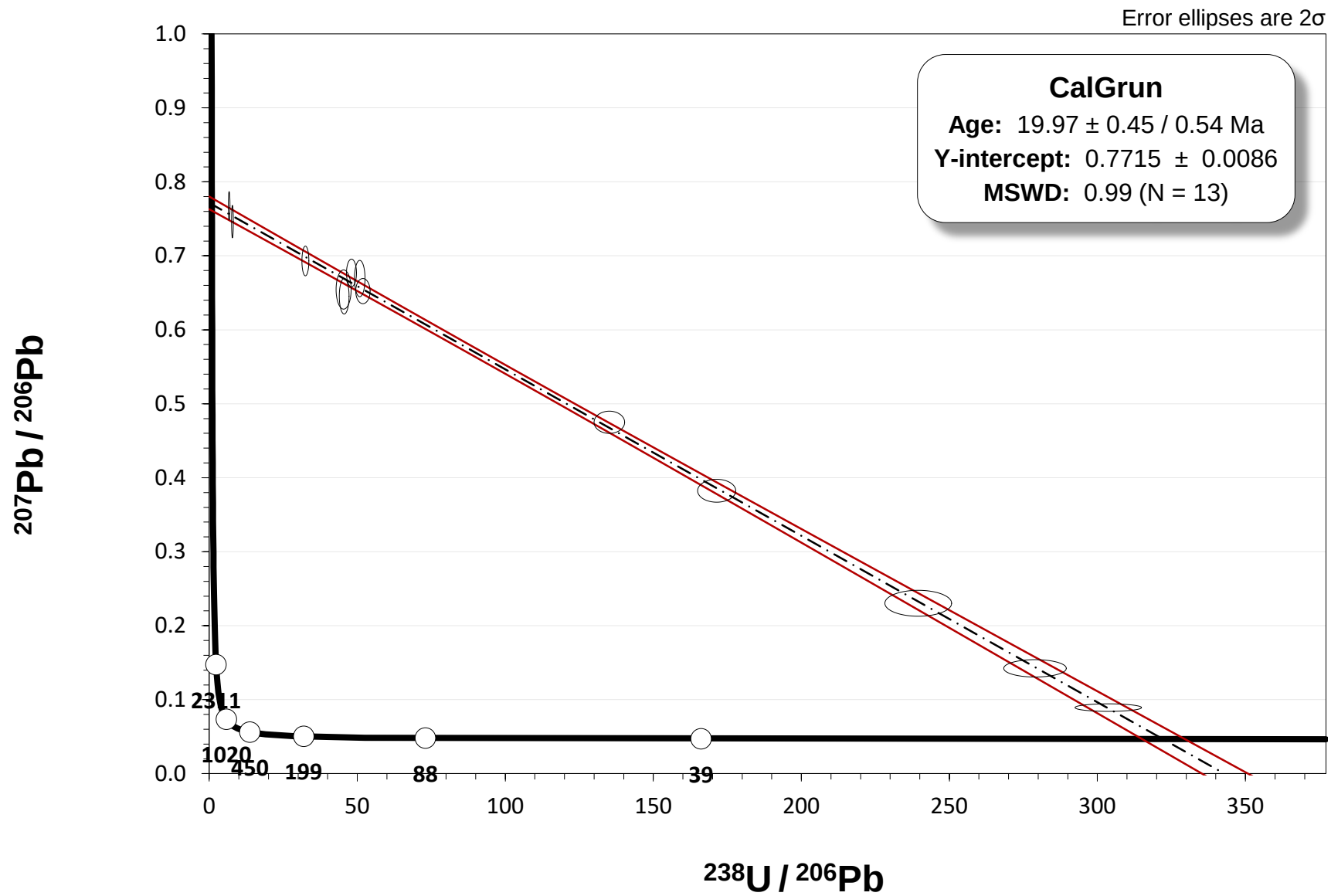


Sec RM1

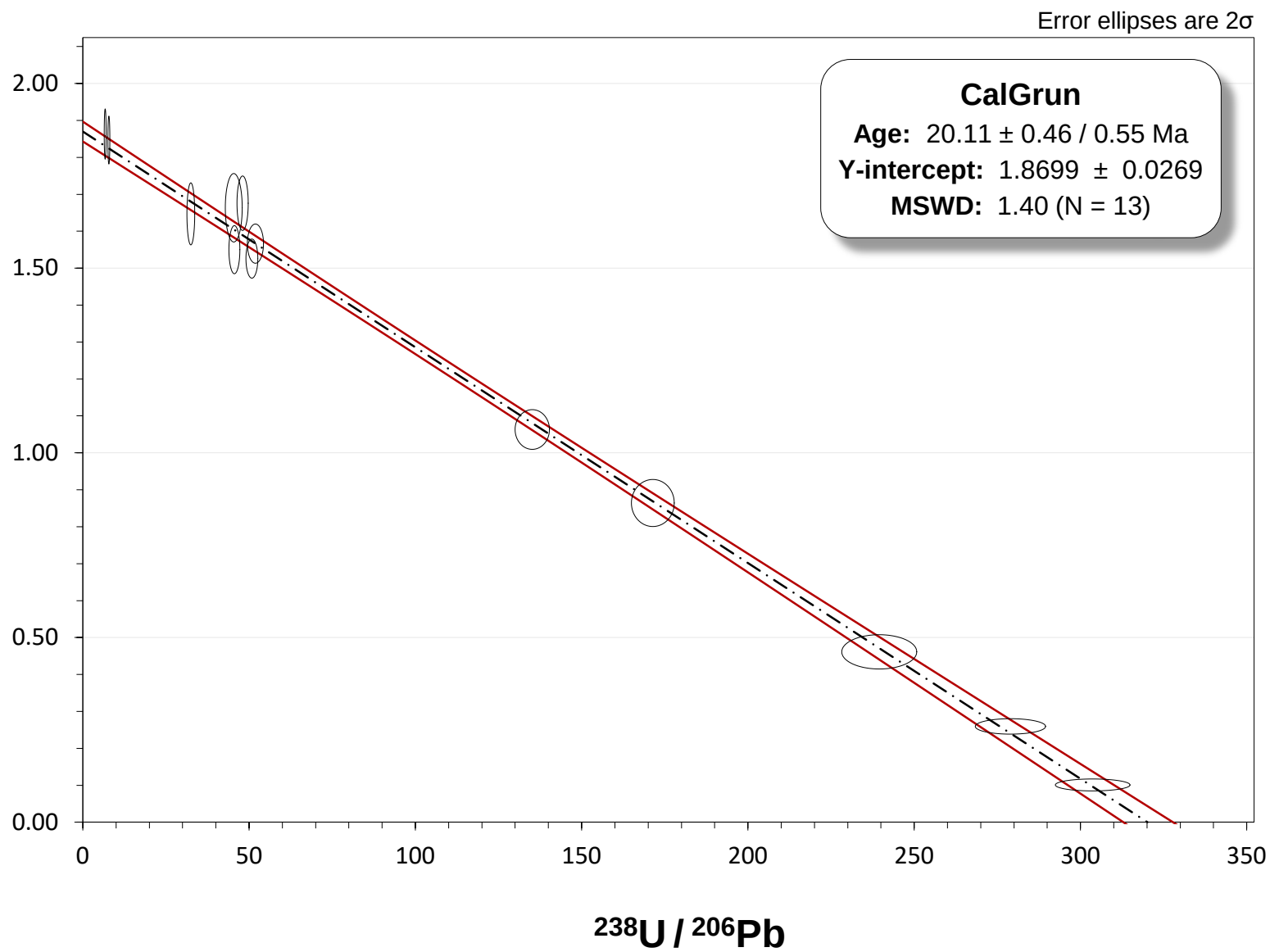


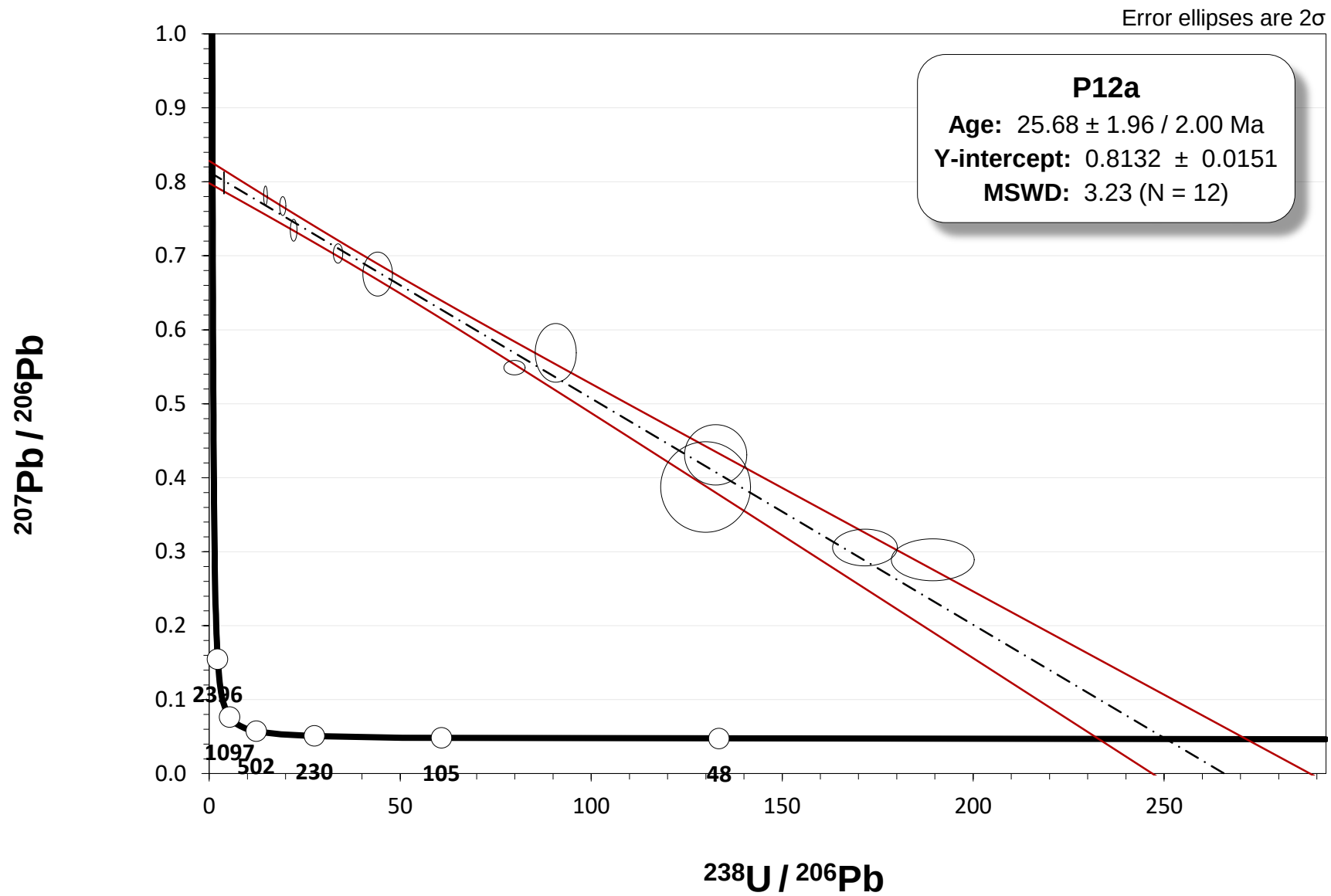
$^{208}\text{Pb} / ^{206}\text{Pb}$

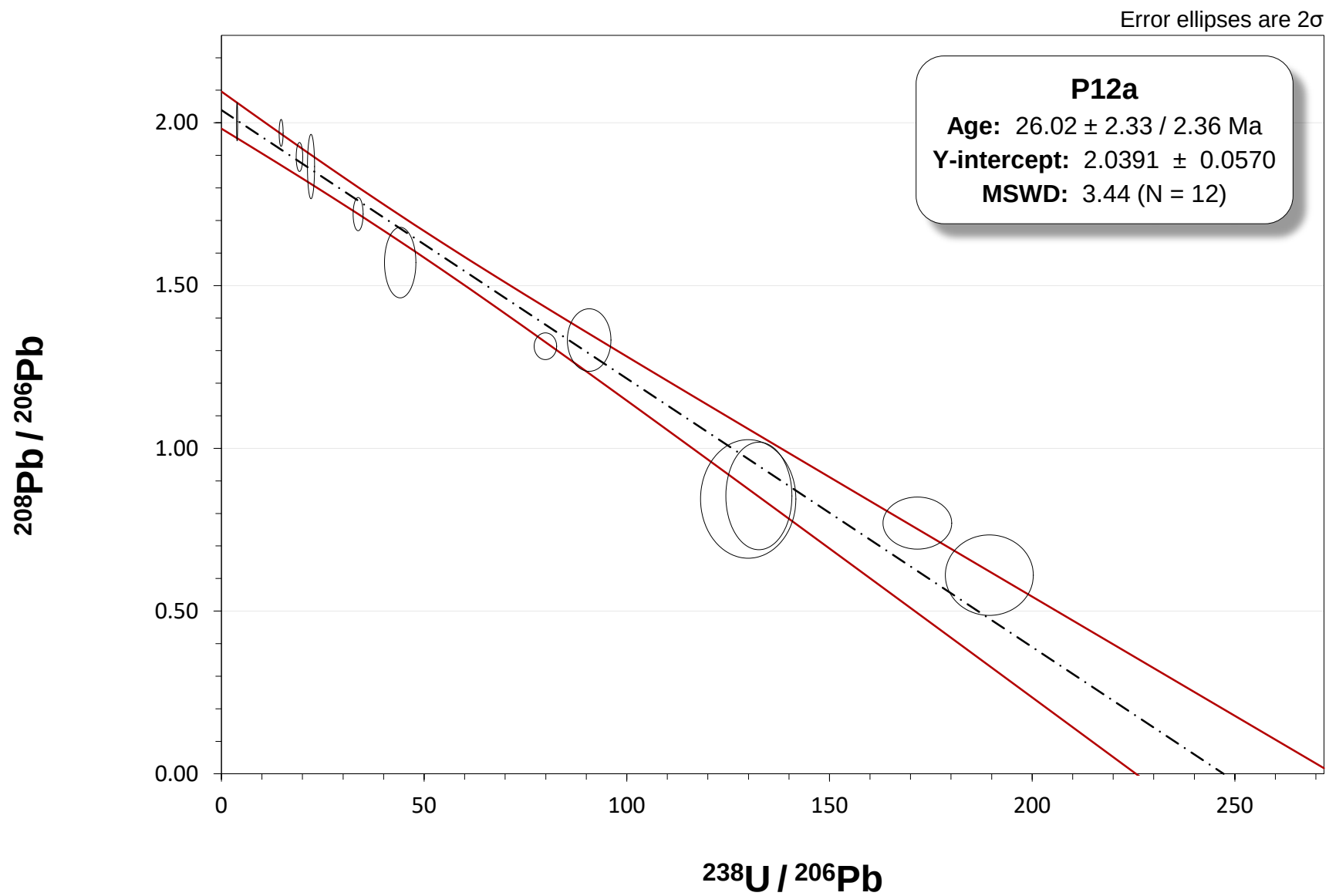


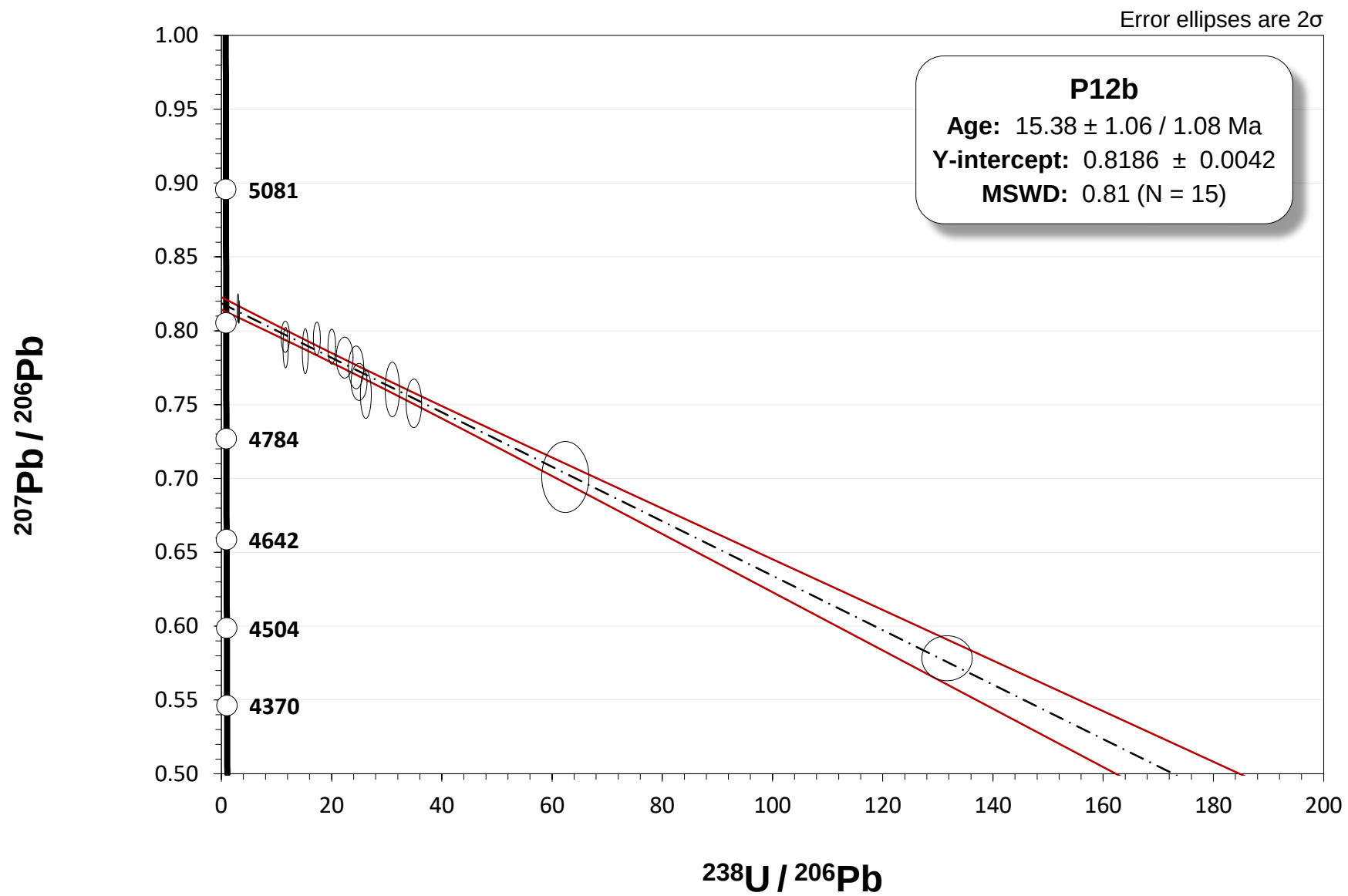


$^{208}\text{Pb} / ^{206}\text{Pb}$

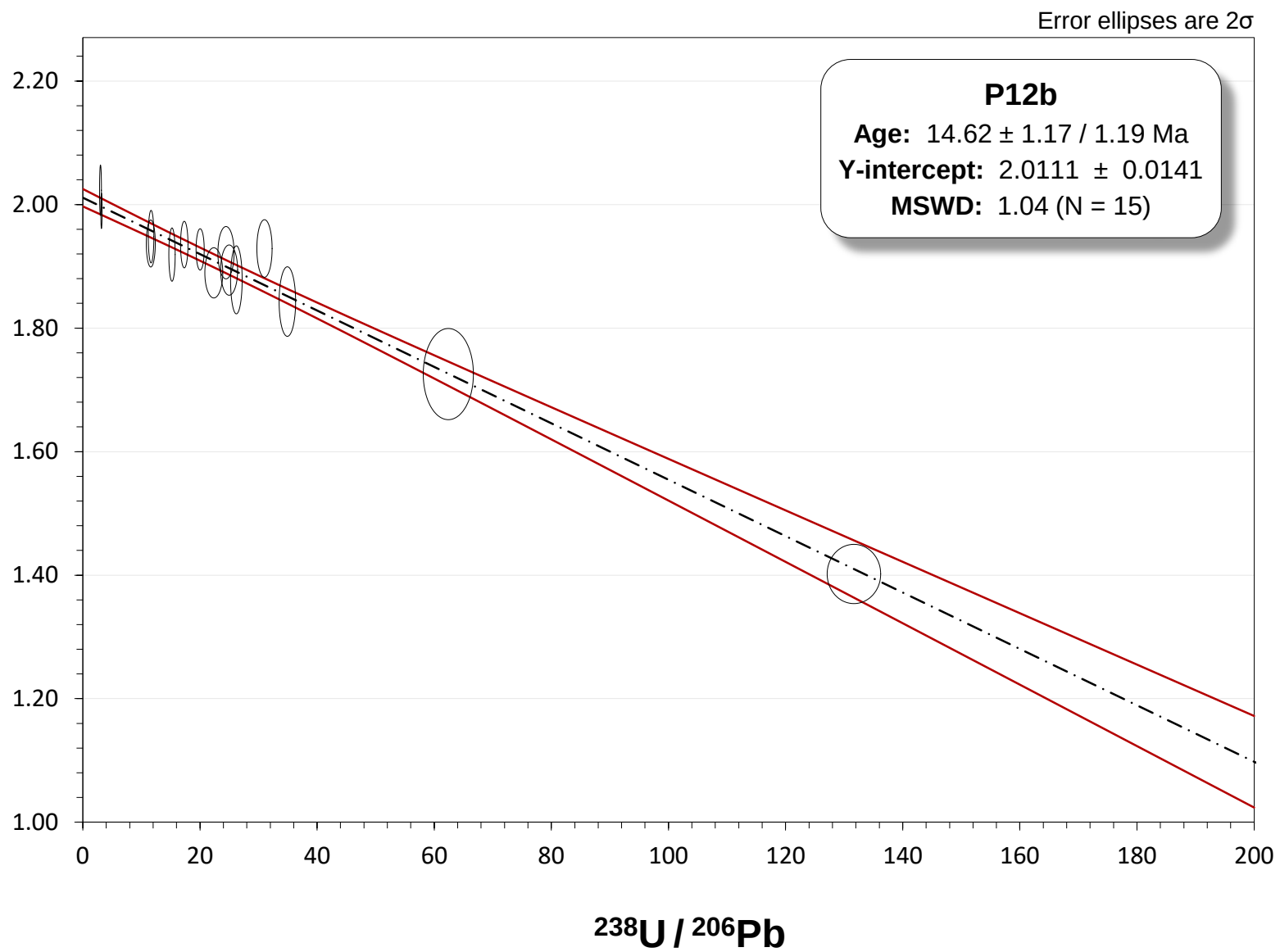


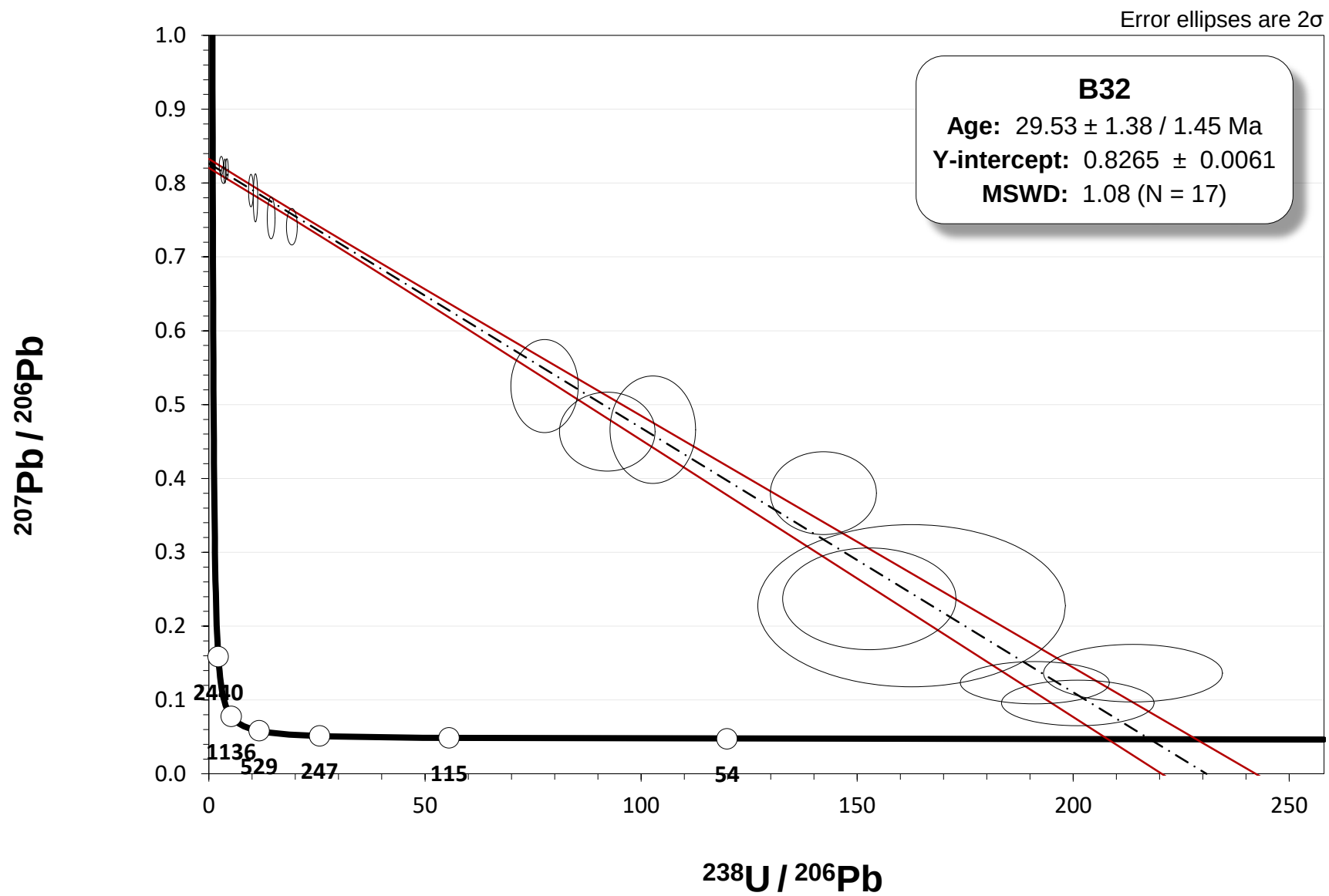




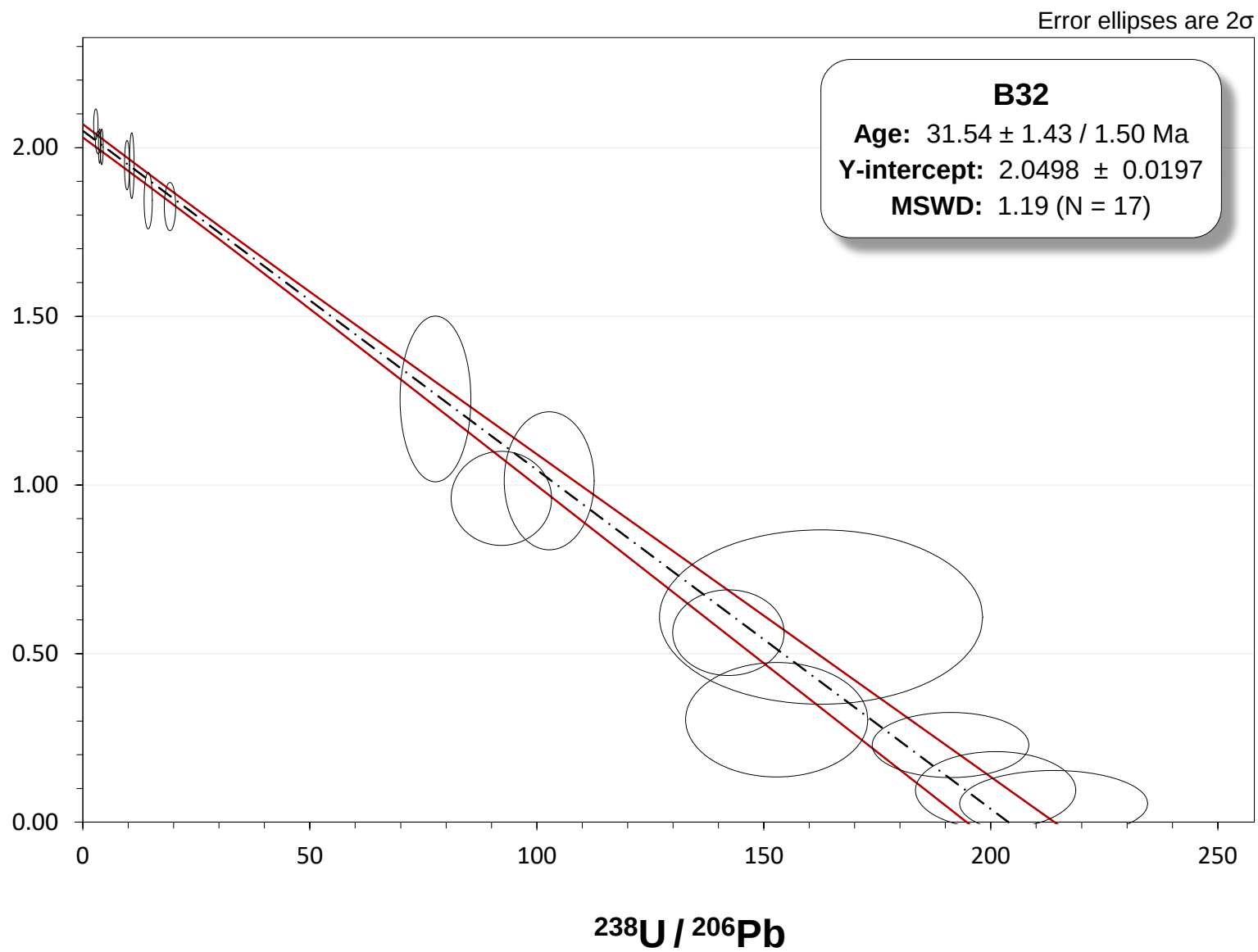


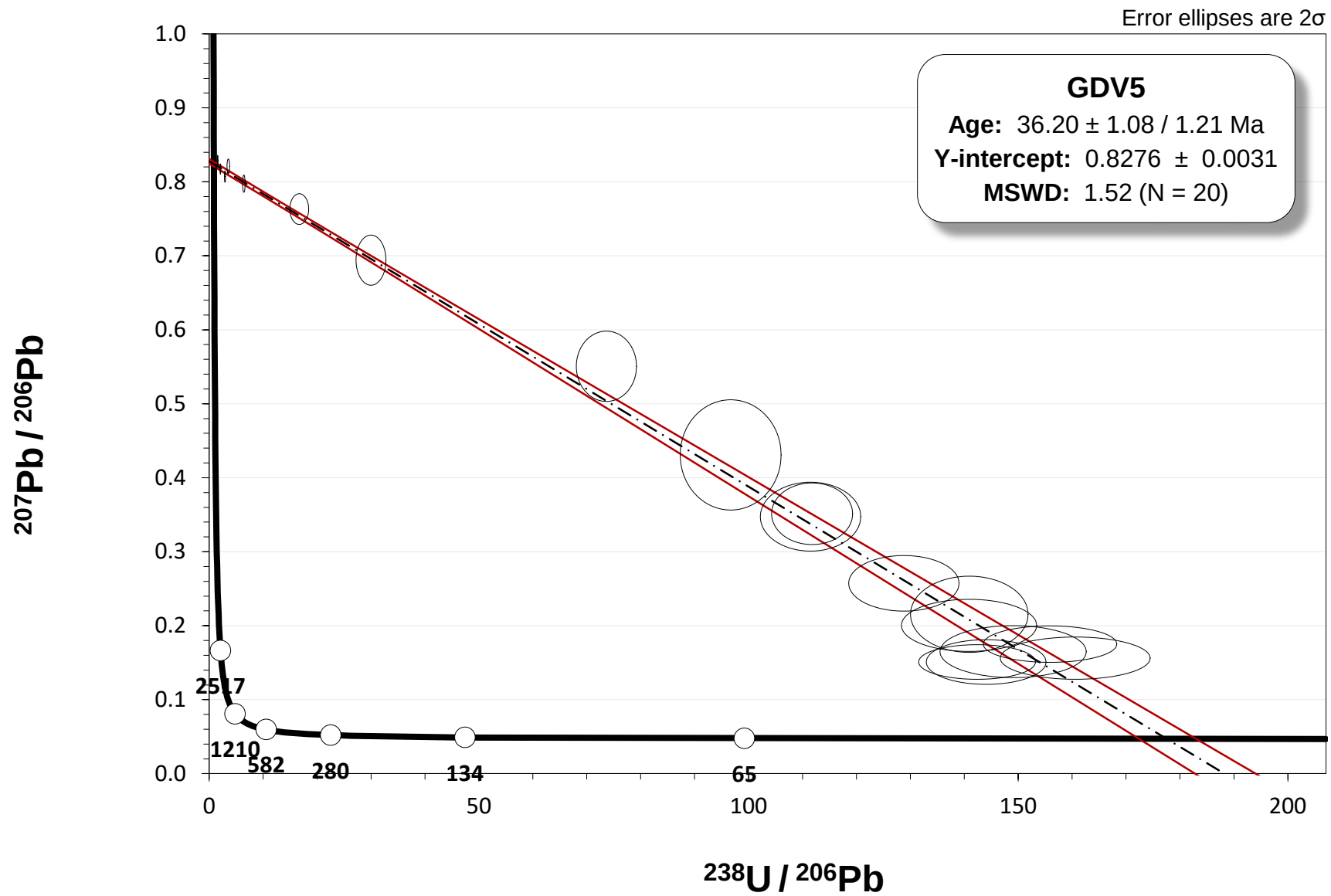
$^{208}\text{Pb} / ^{206}\text{Pb}$



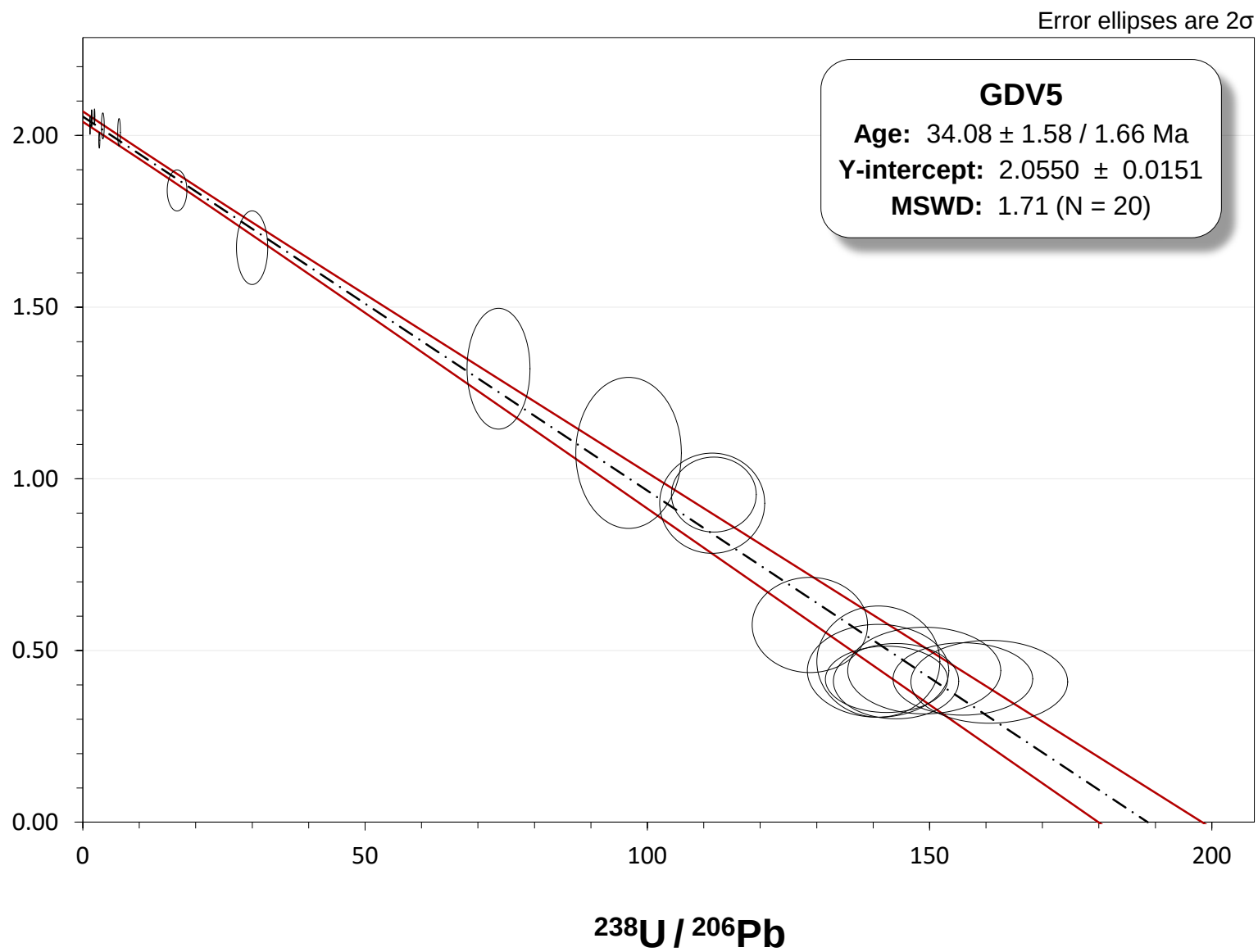


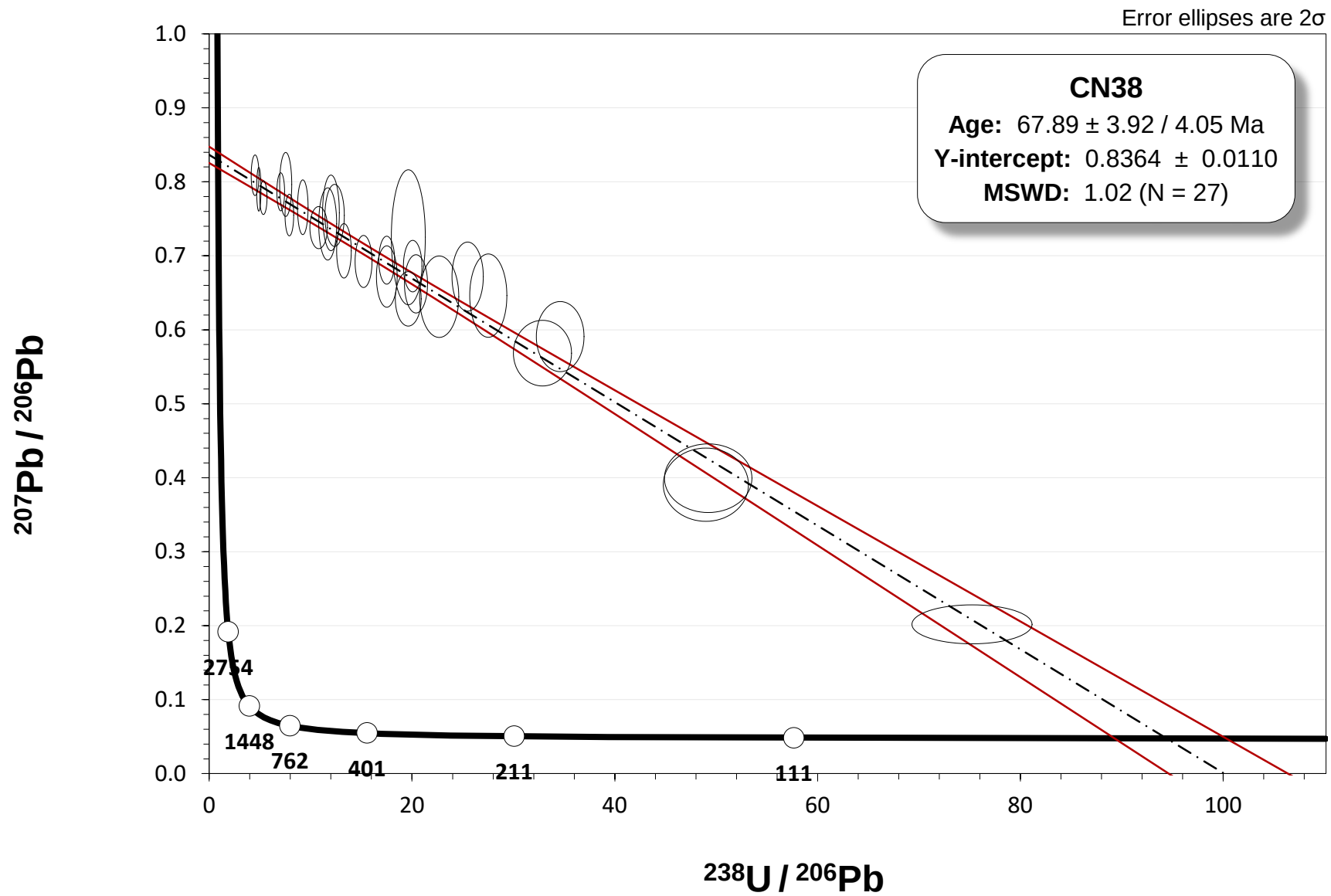
$^{208}\text{Pb} / ^{206}\text{Pb}$



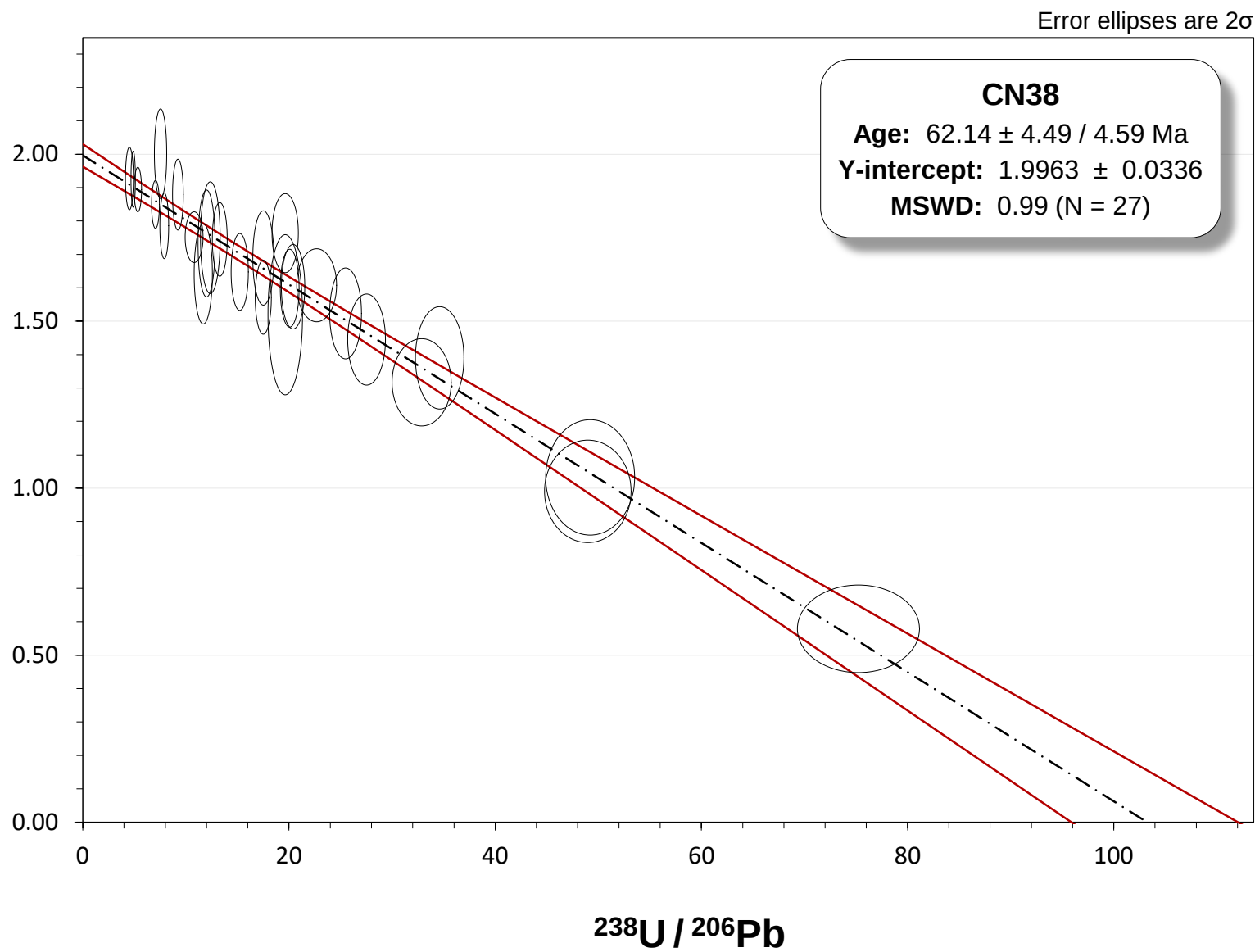


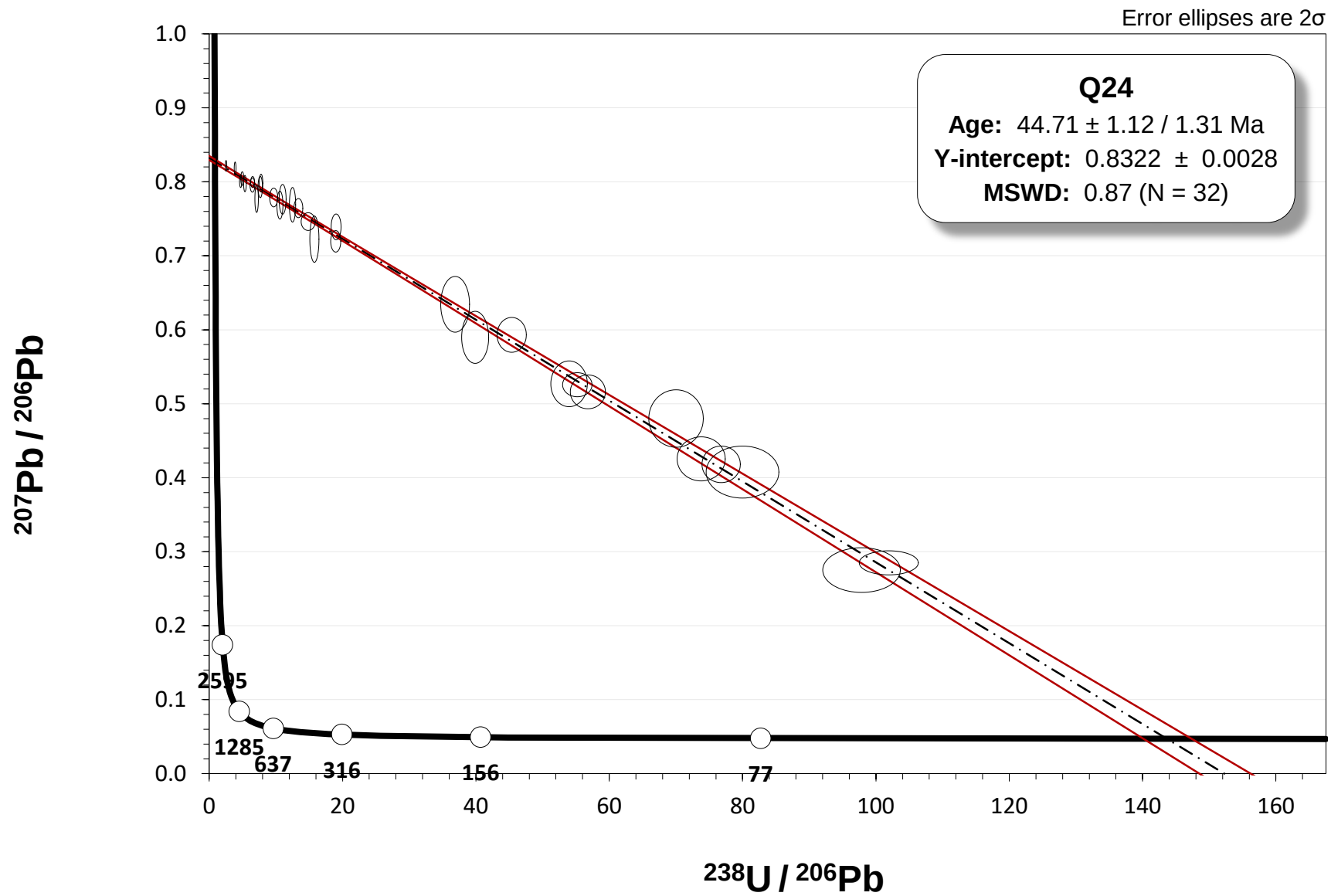
$^{208}\text{Pb} / ^{206}\text{Pb}$



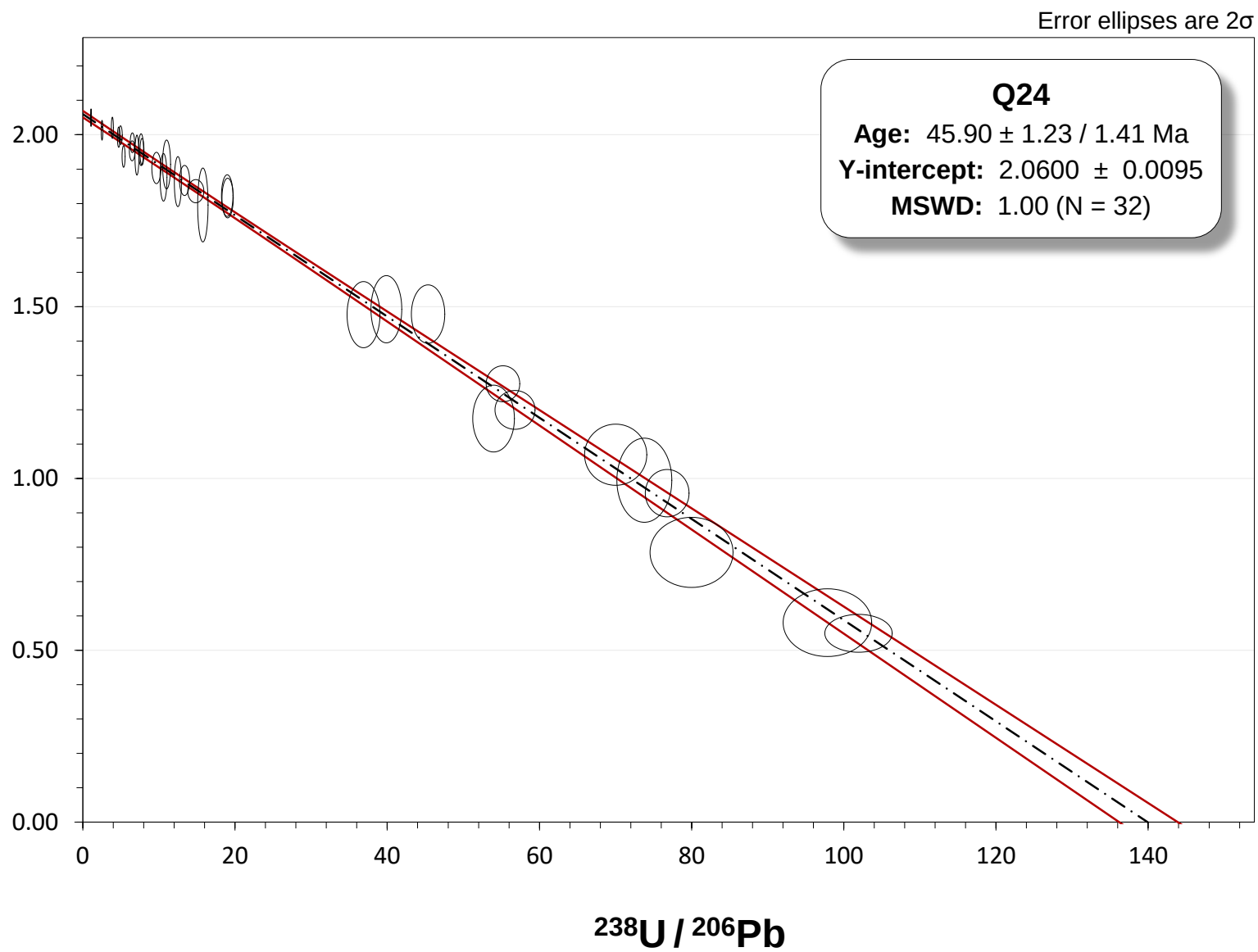


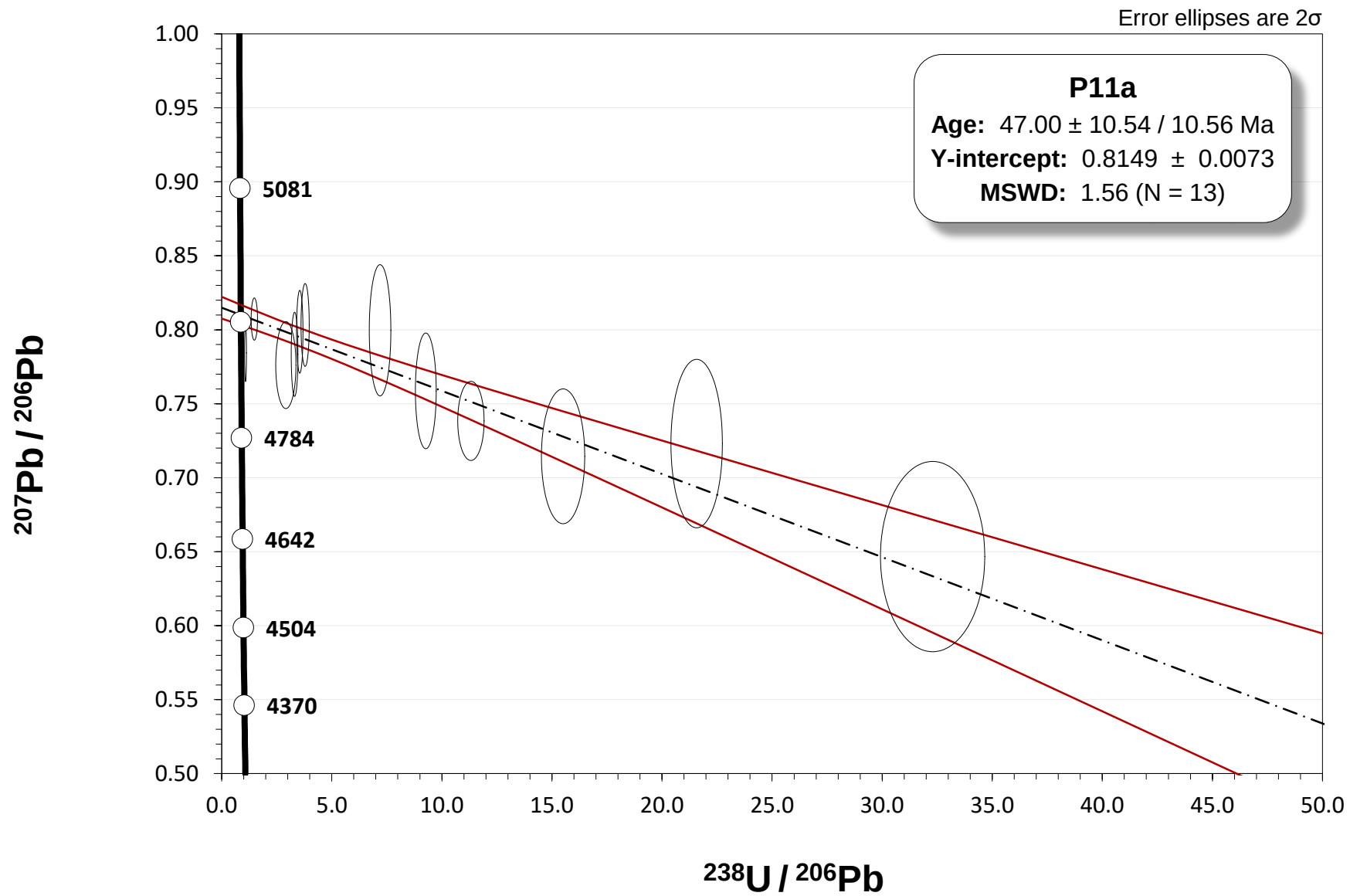
$^{208}\text{Pb} / ^{206}\text{Pb}$



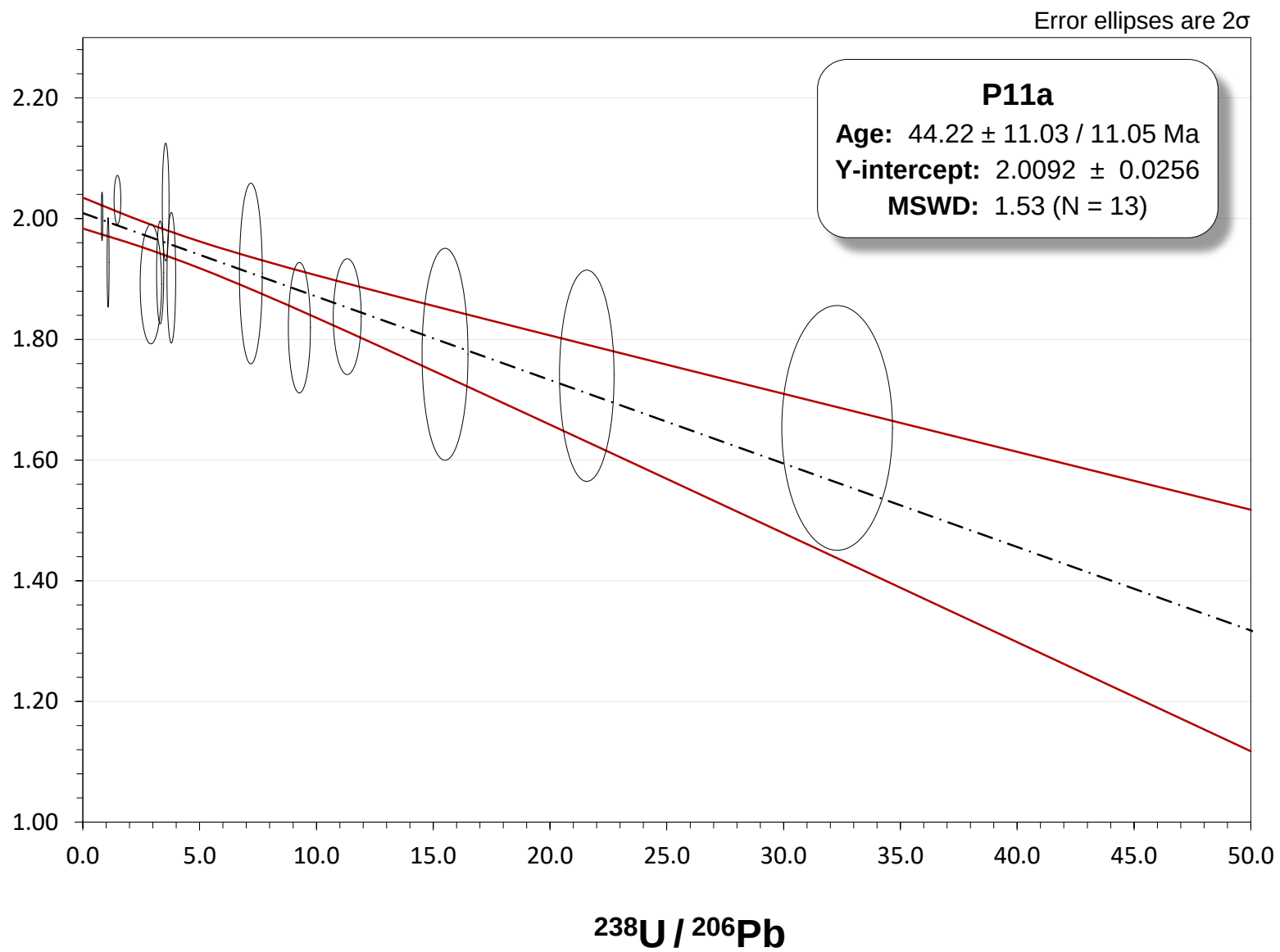


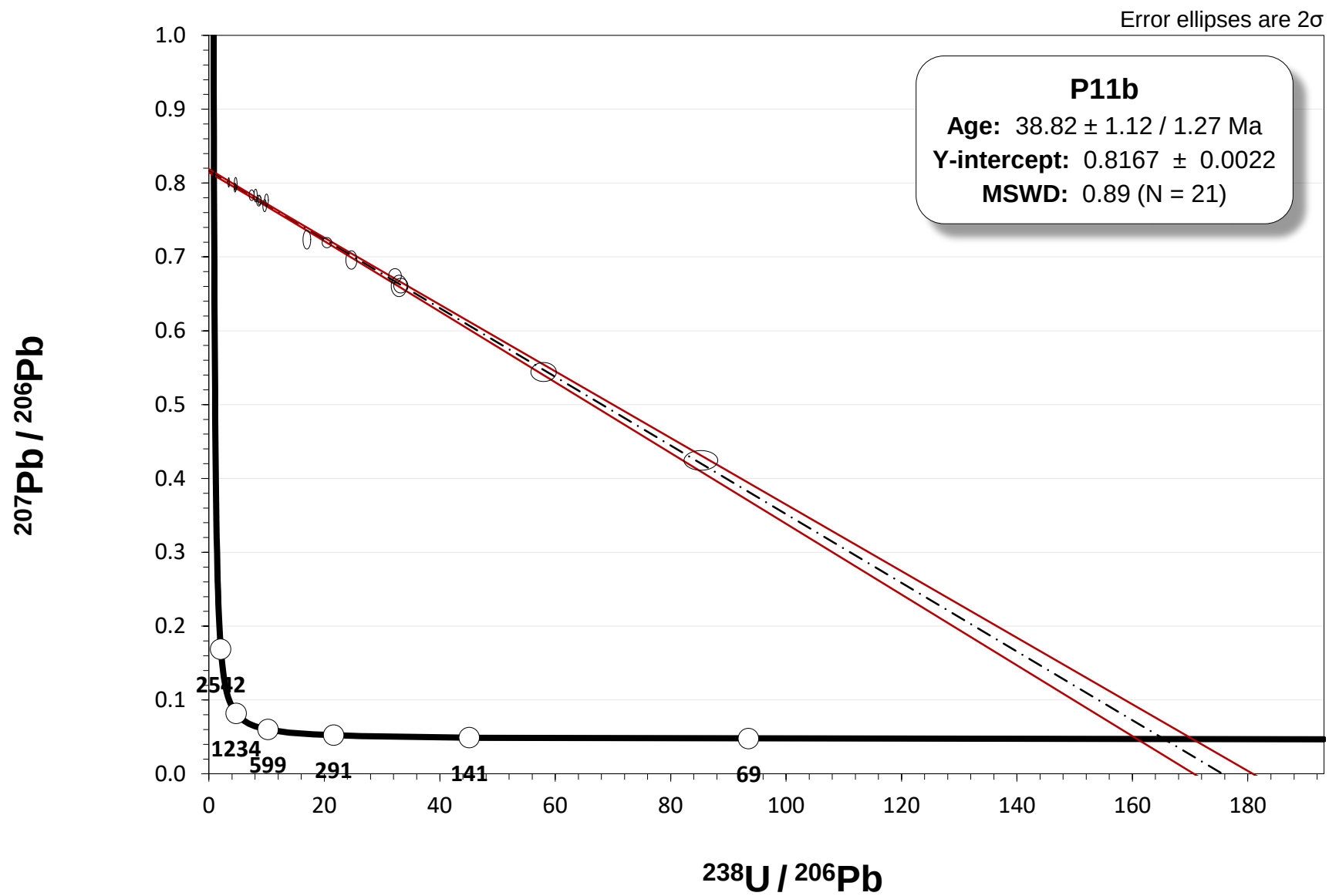
$^{208}\text{Pb} / ^{206}\text{Pb}$



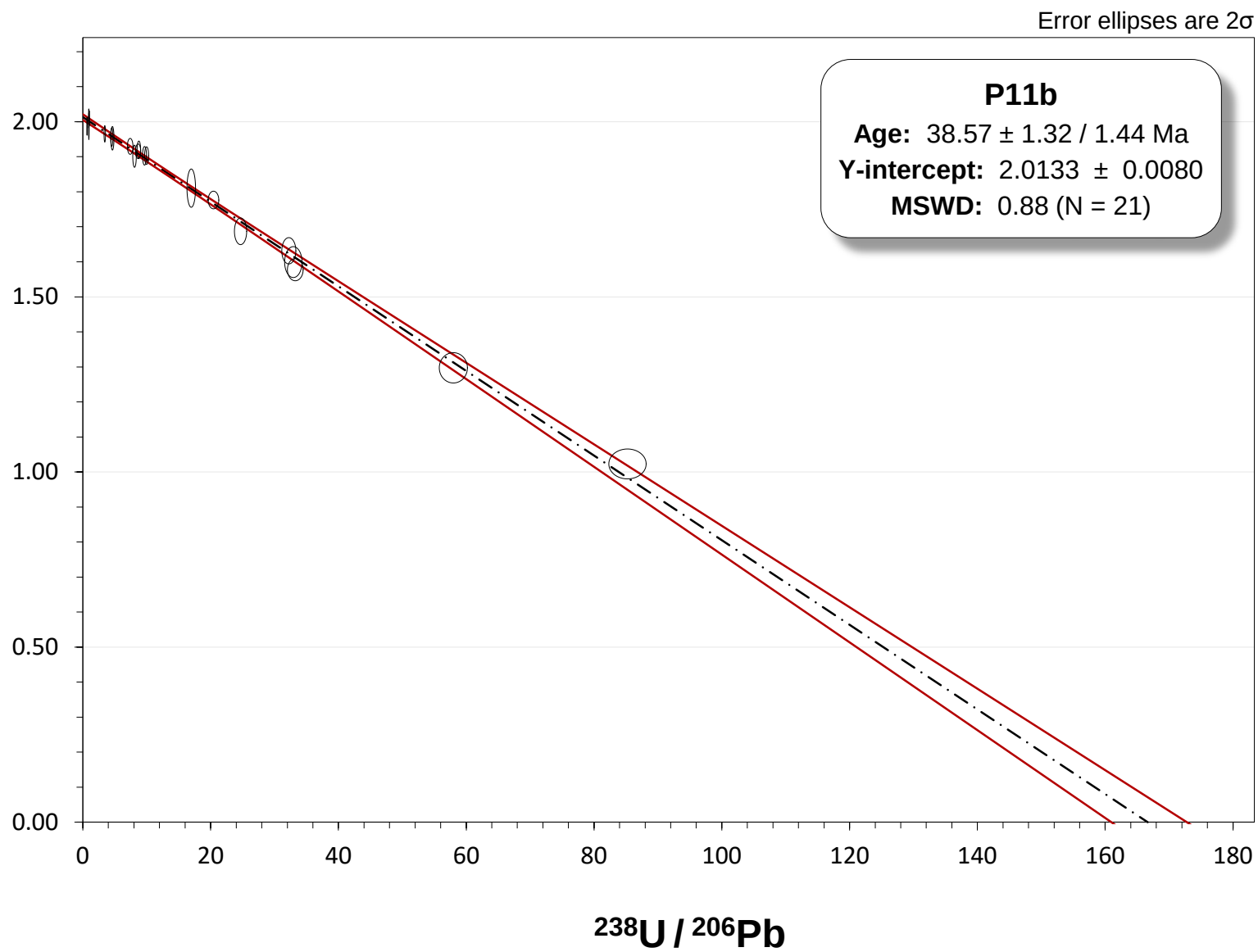


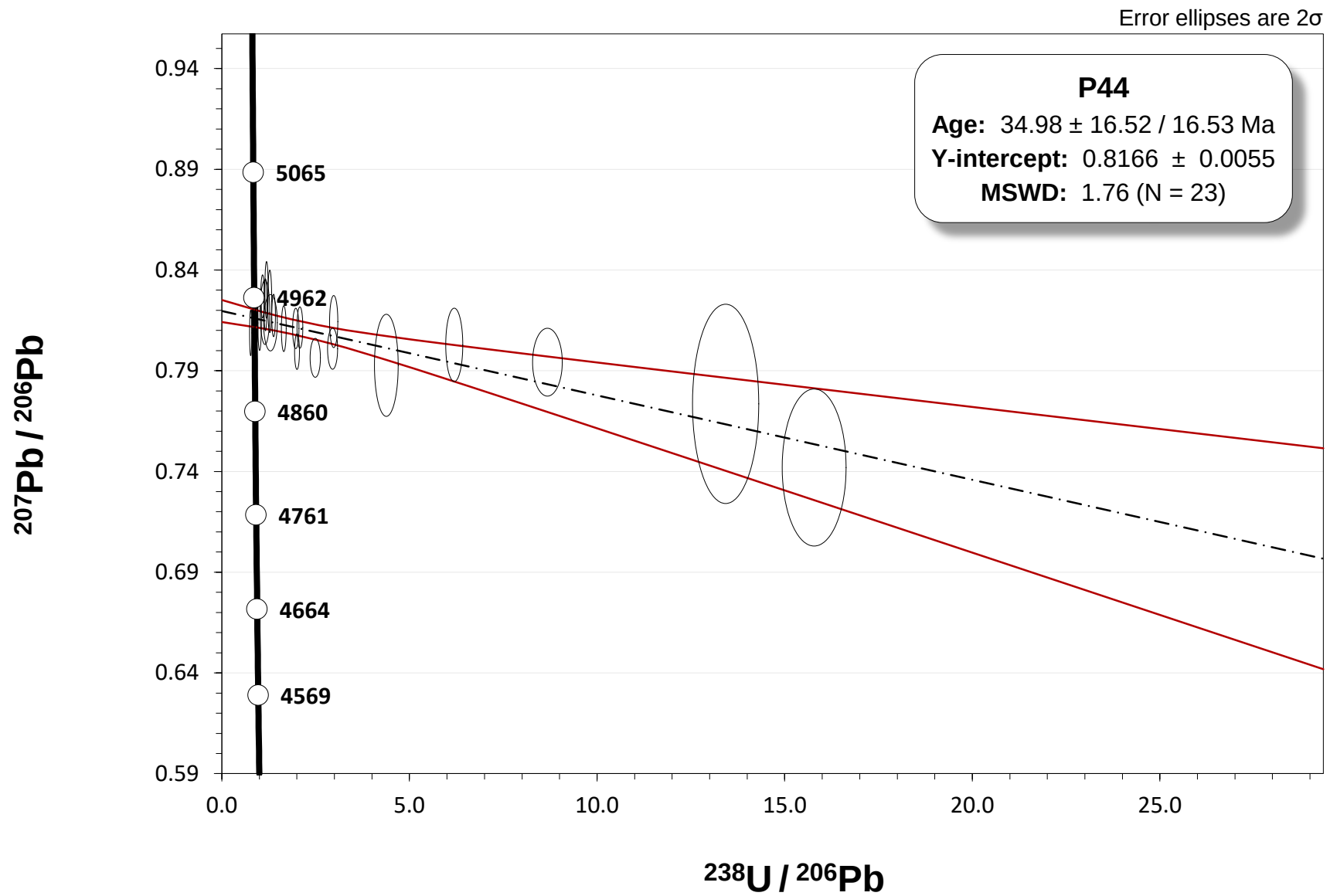
$^{208}\text{Pb} / ^{206}\text{Pb}$

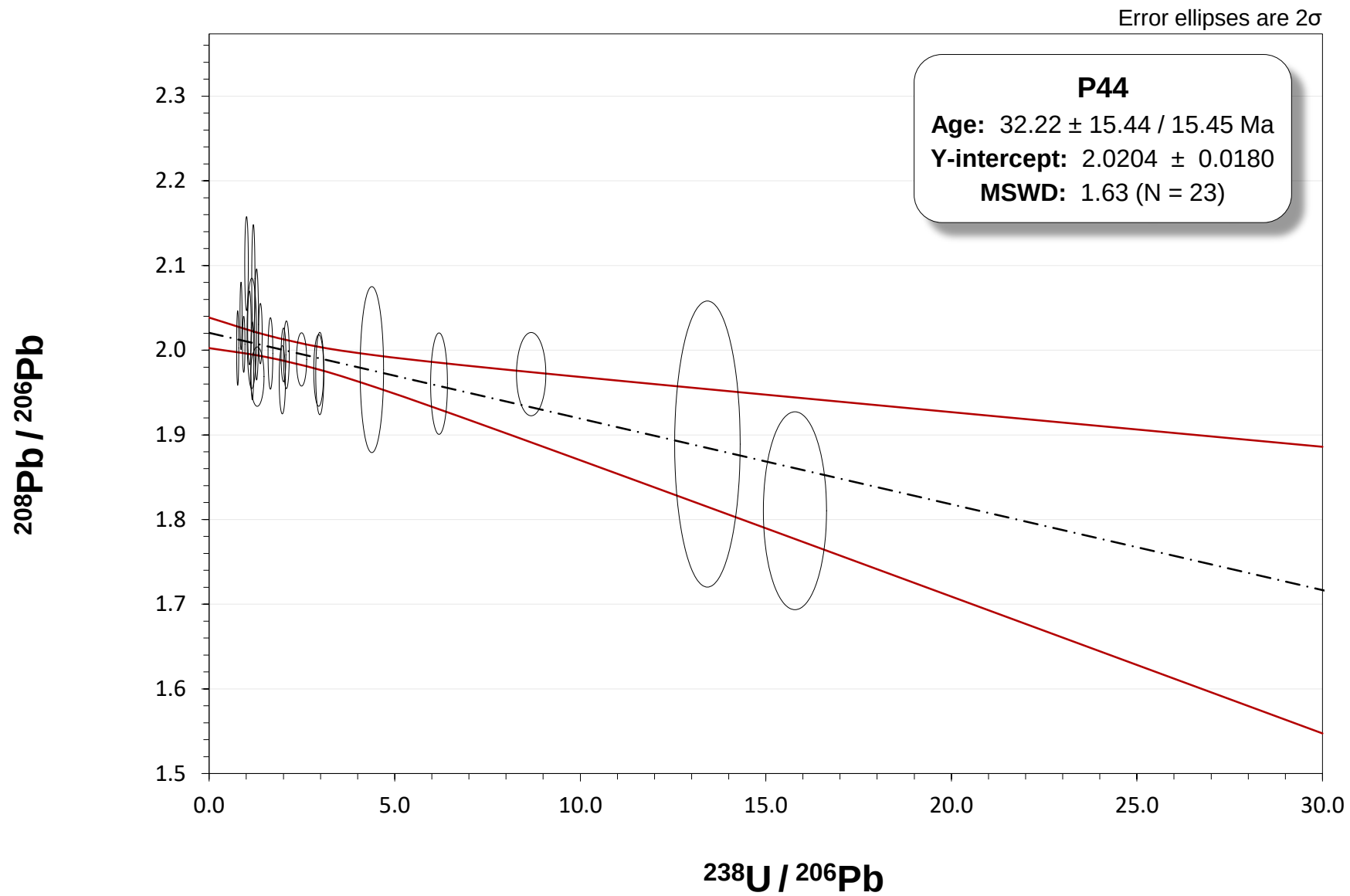


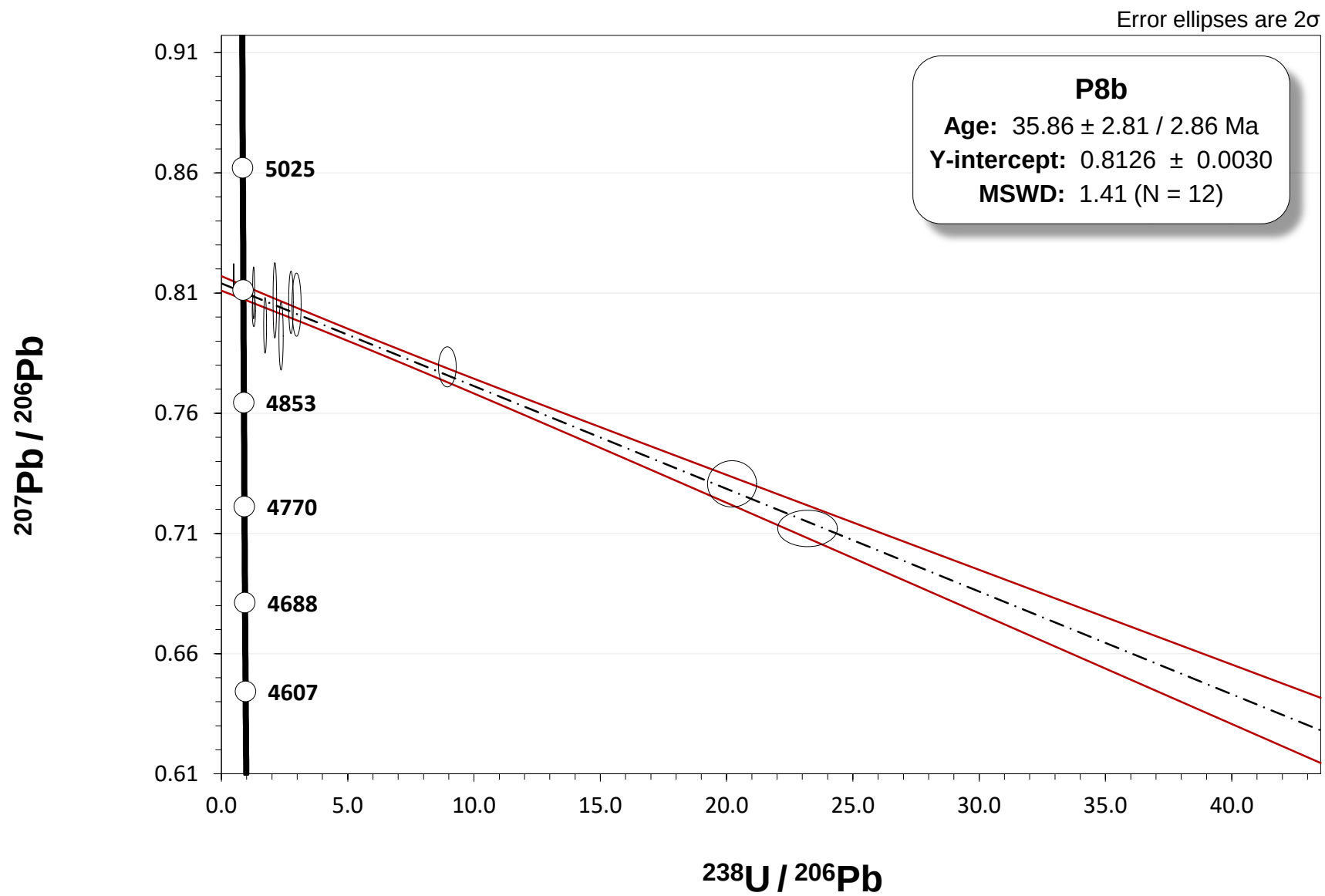


$^{208}\text{Pb} / ^{206}\text{Pb}$

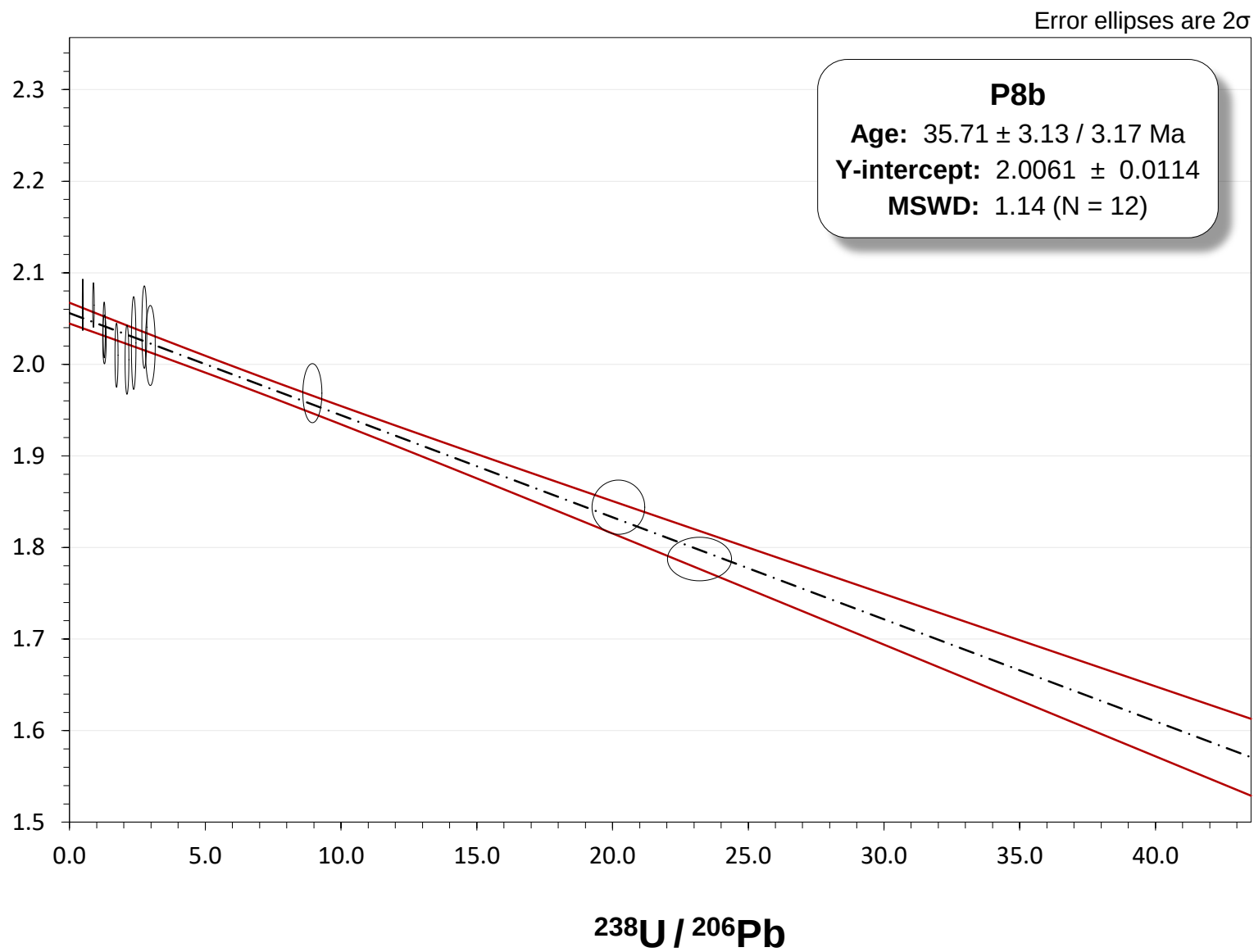


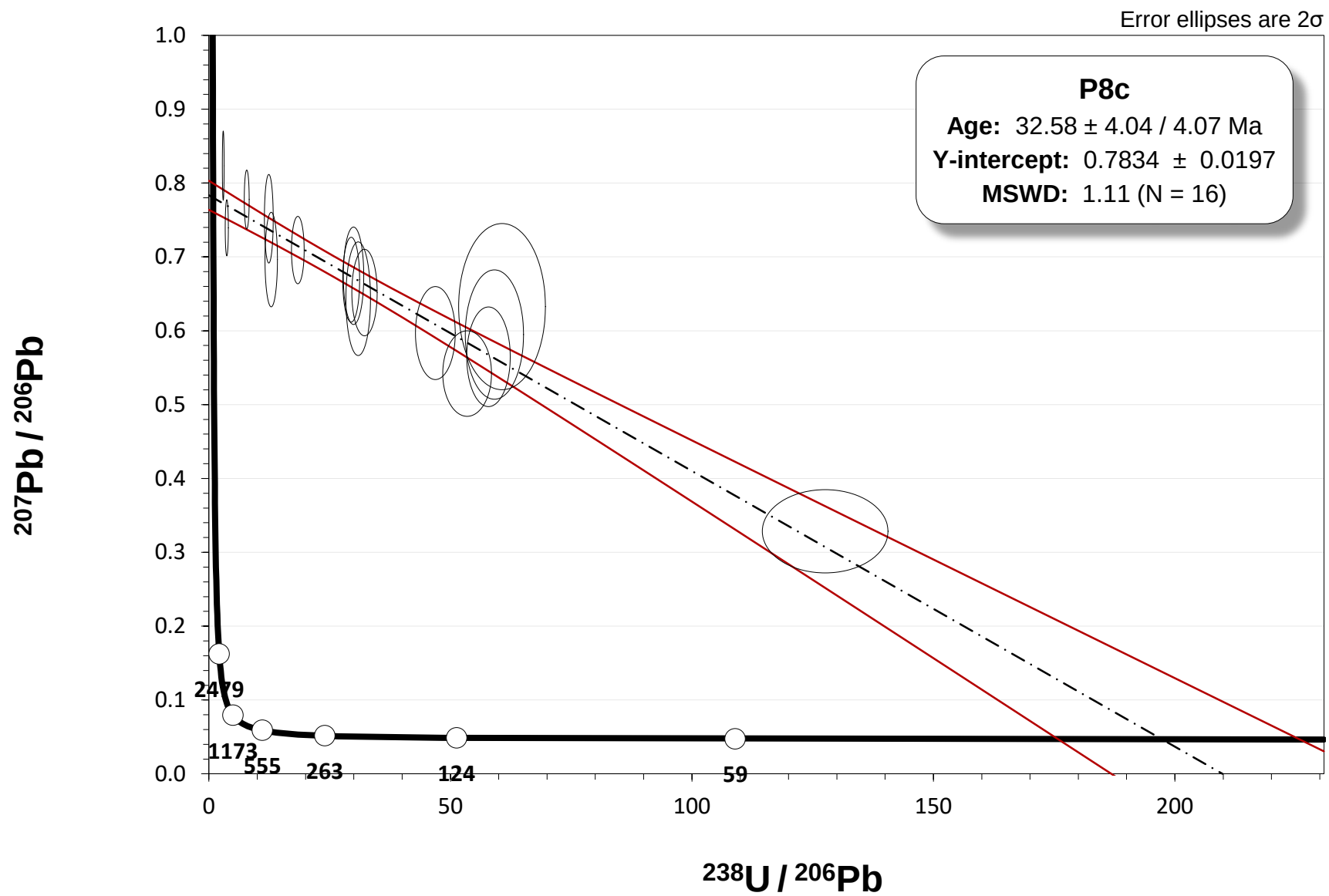


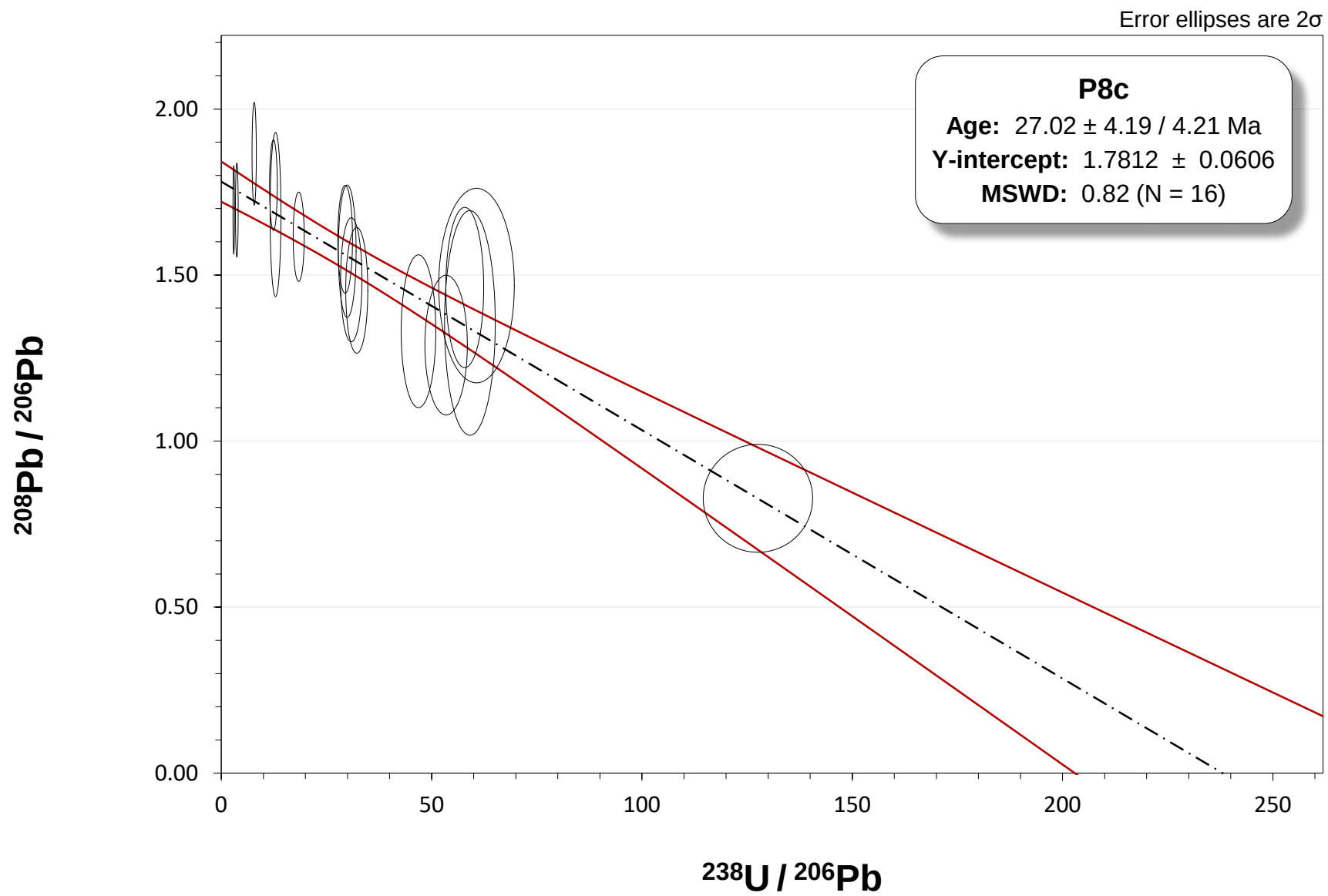


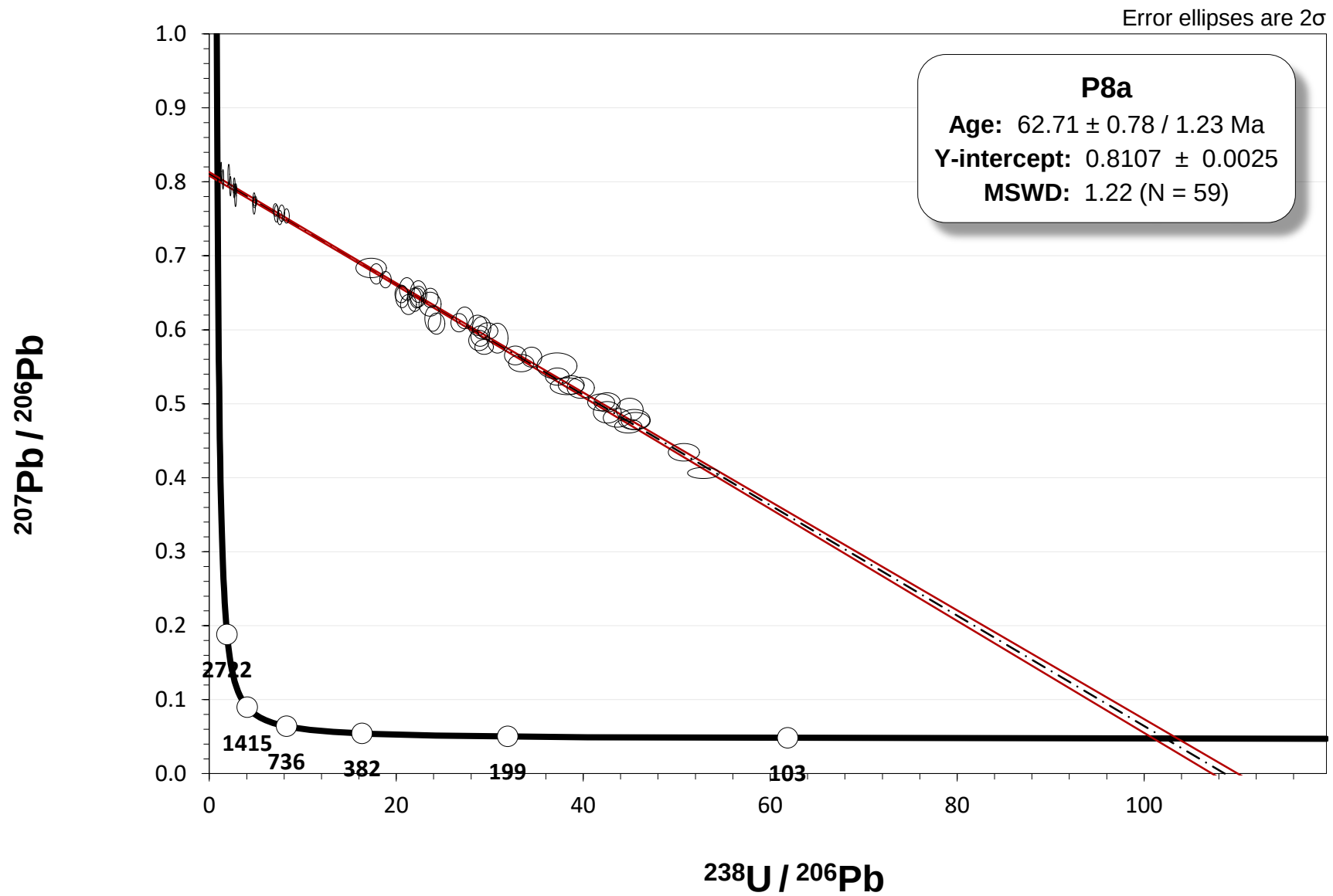


$^{208}\text{Pb} / ^{206}\text{Pb}$

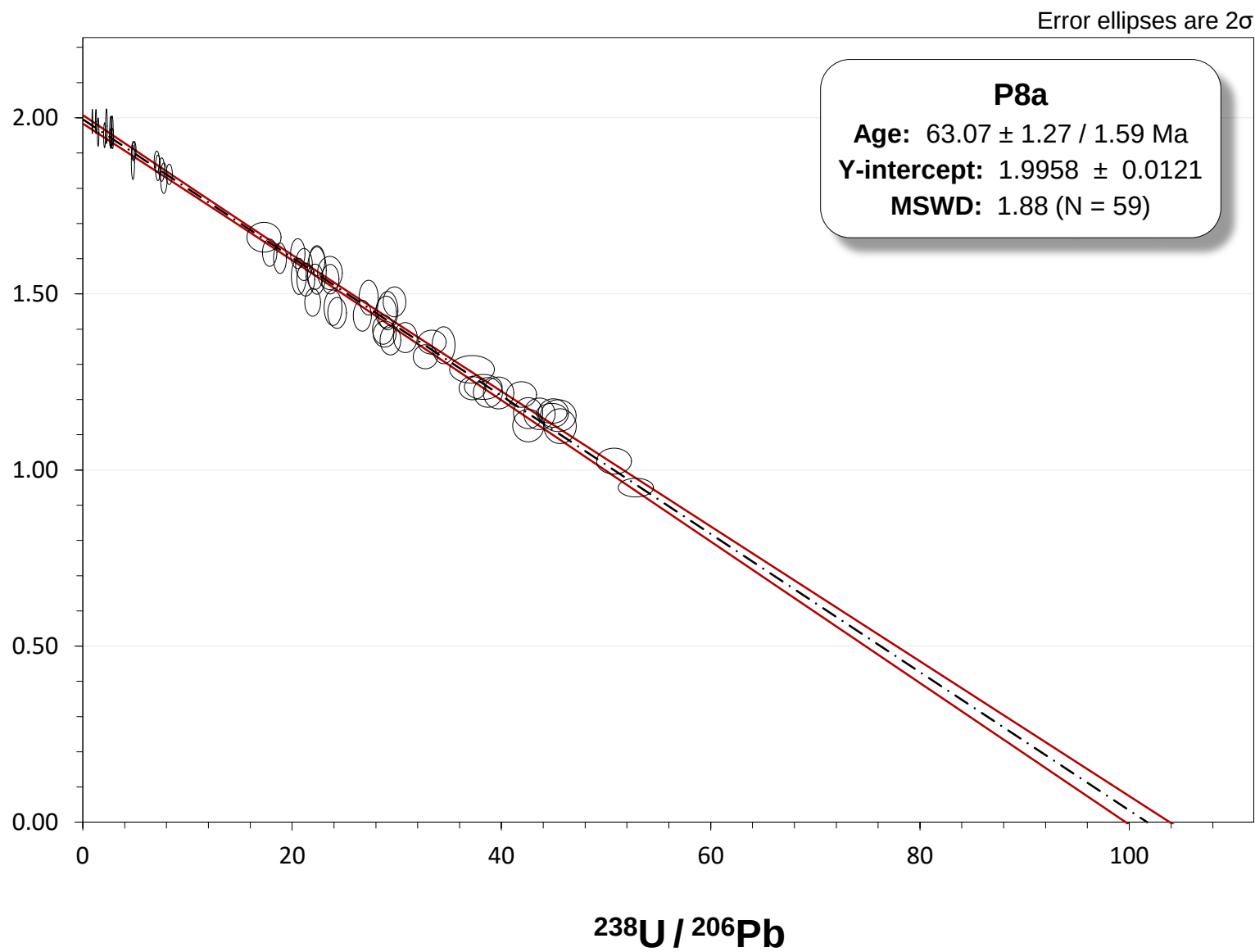


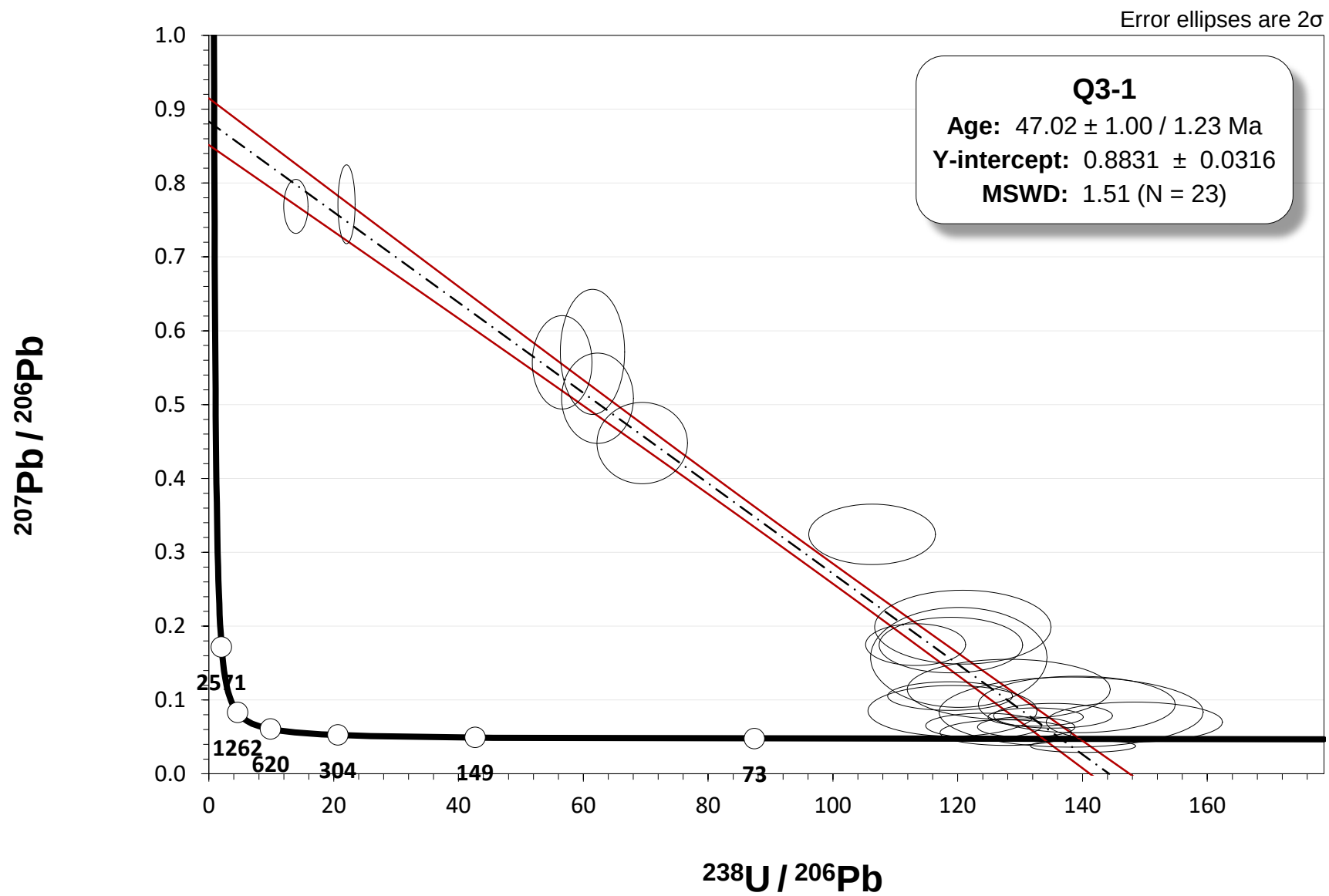




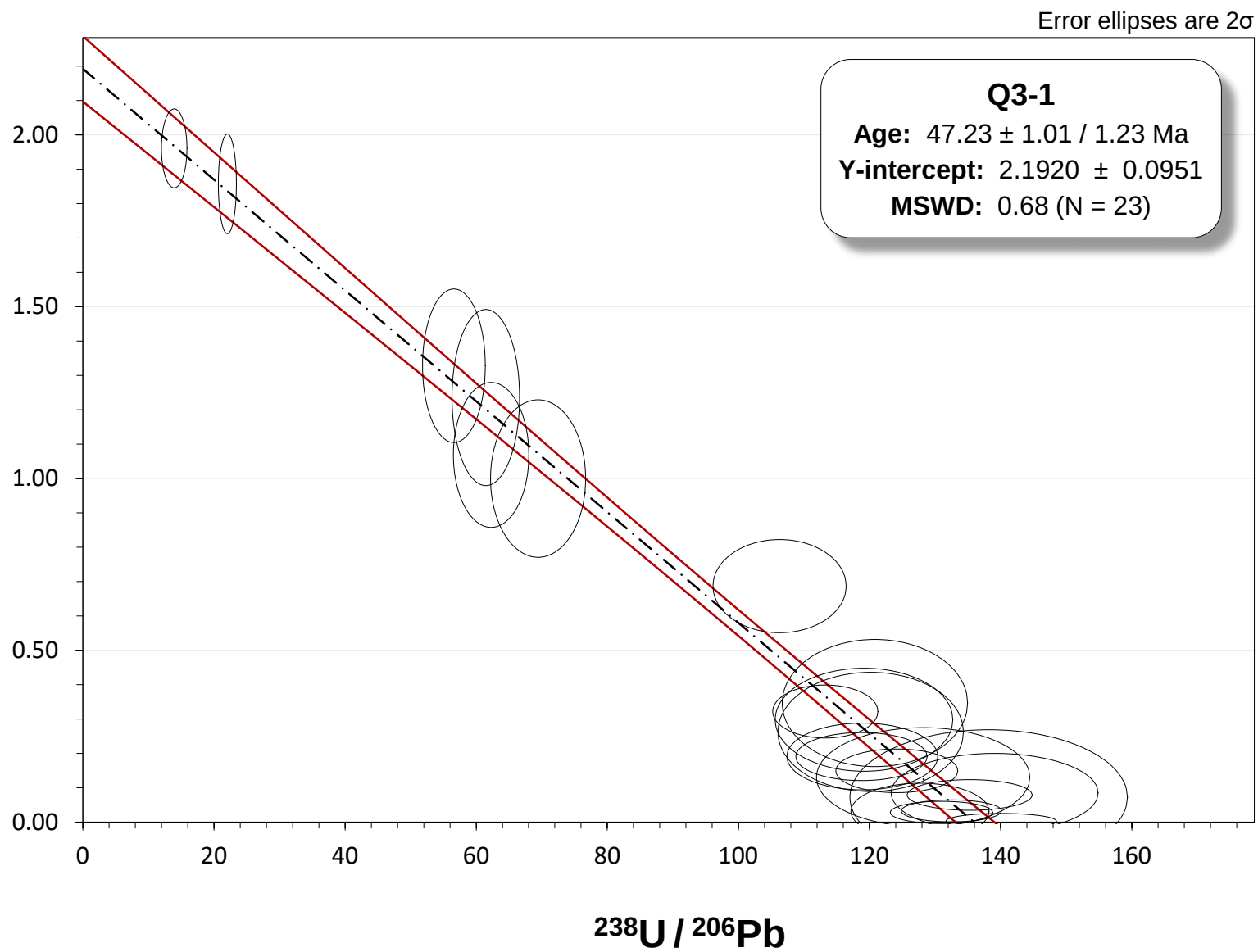


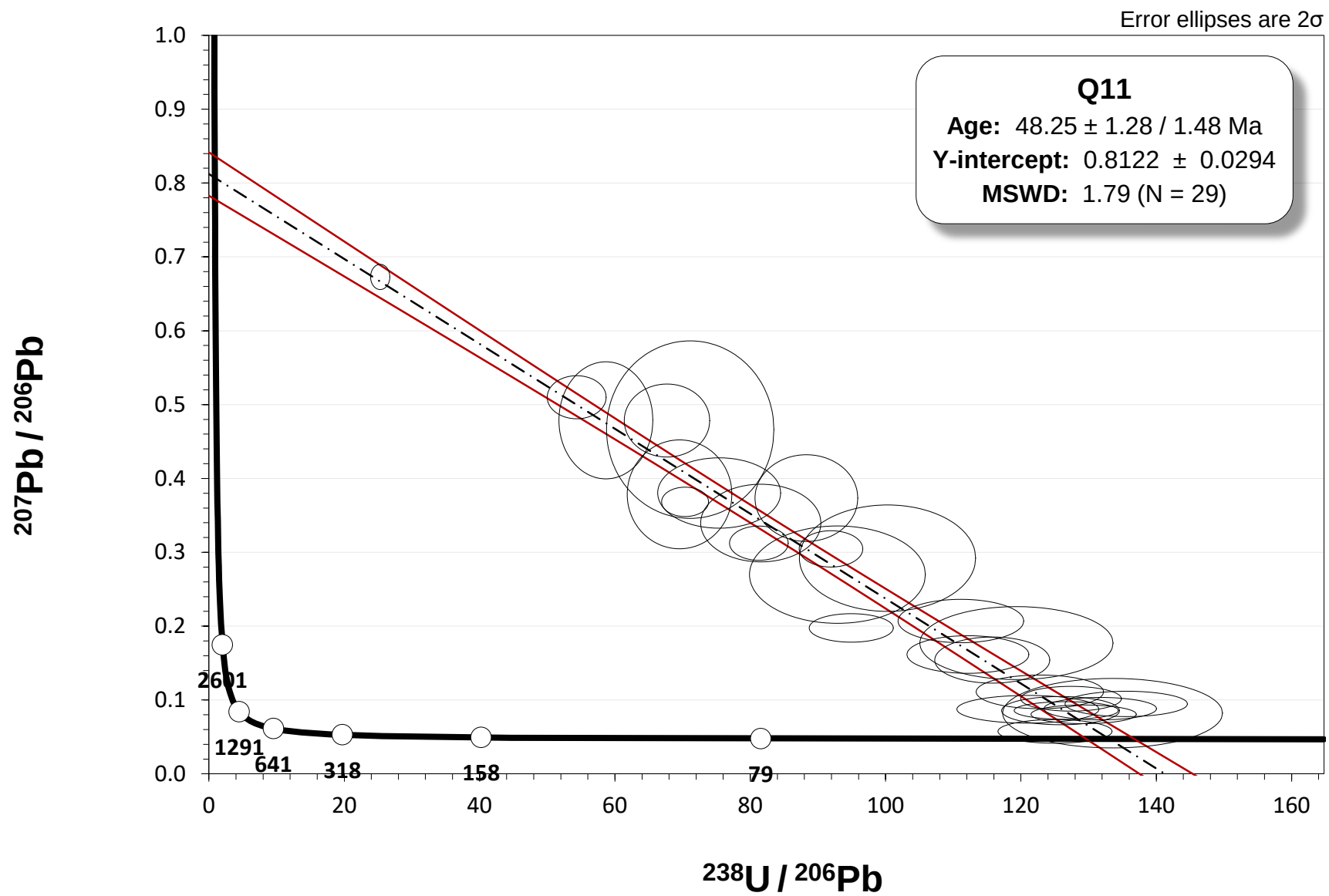
$^{208}\text{Pb} / ^{206}\text{Pb}$



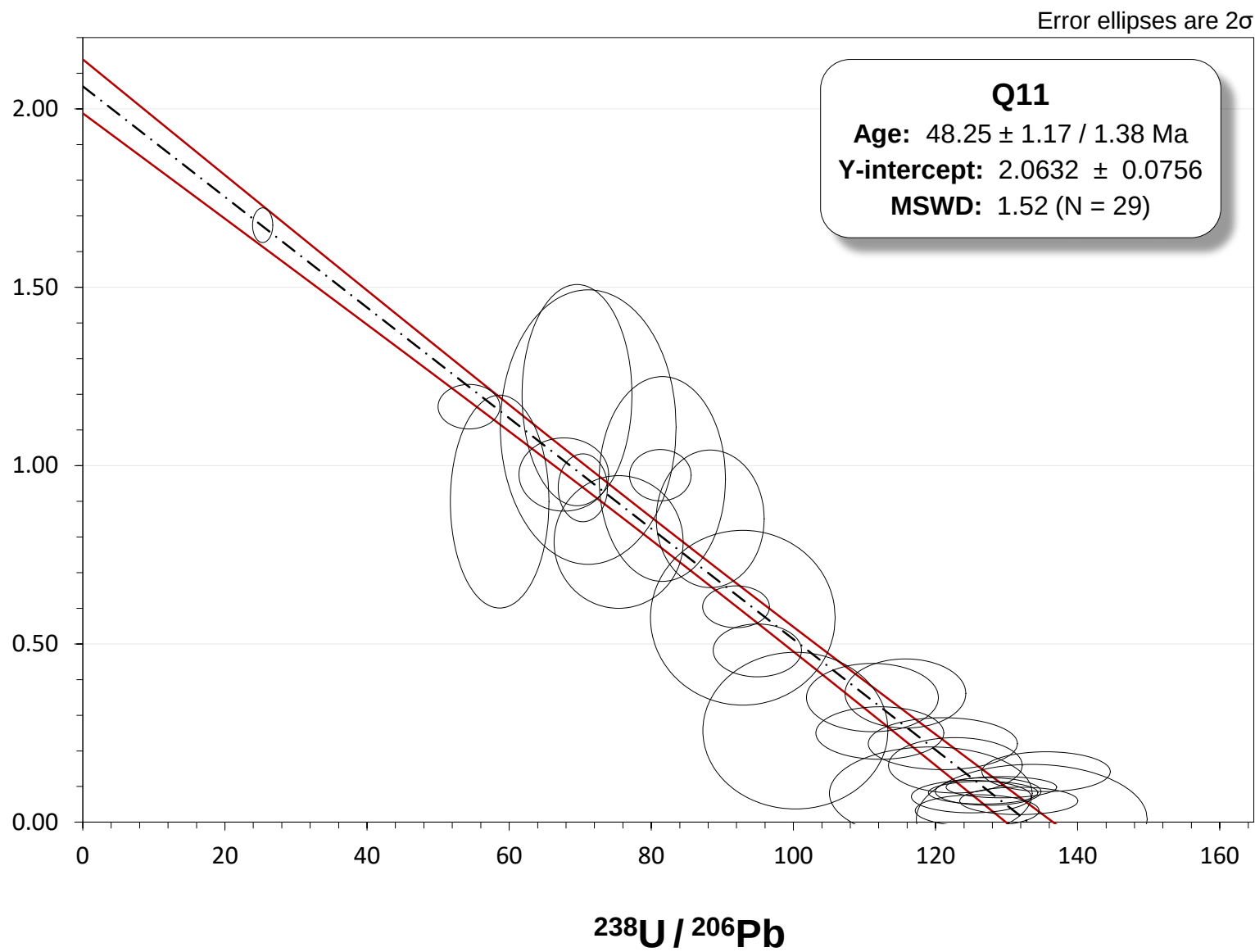


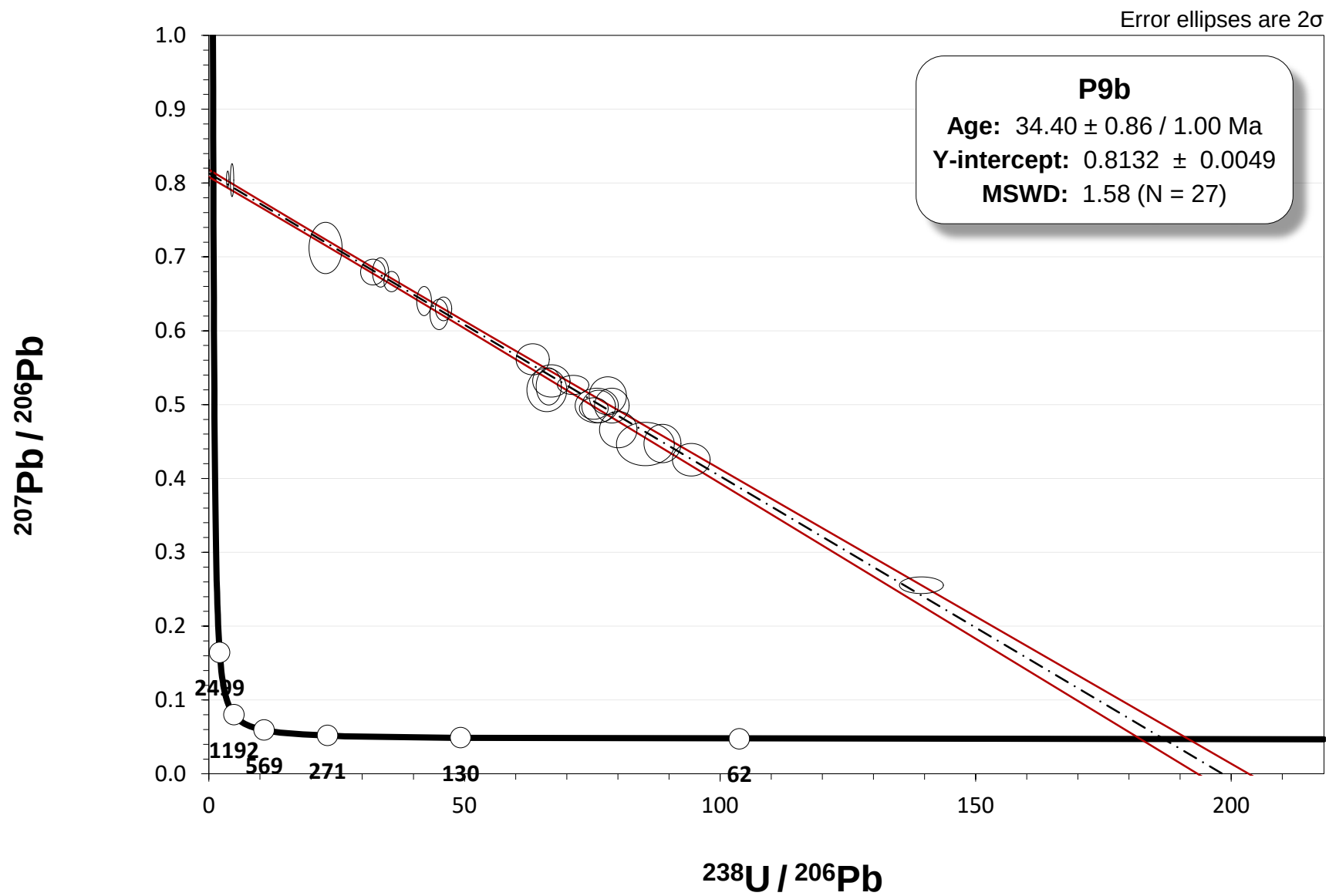
$^{208}\text{Pb} / ^{206}\text{Pb}$



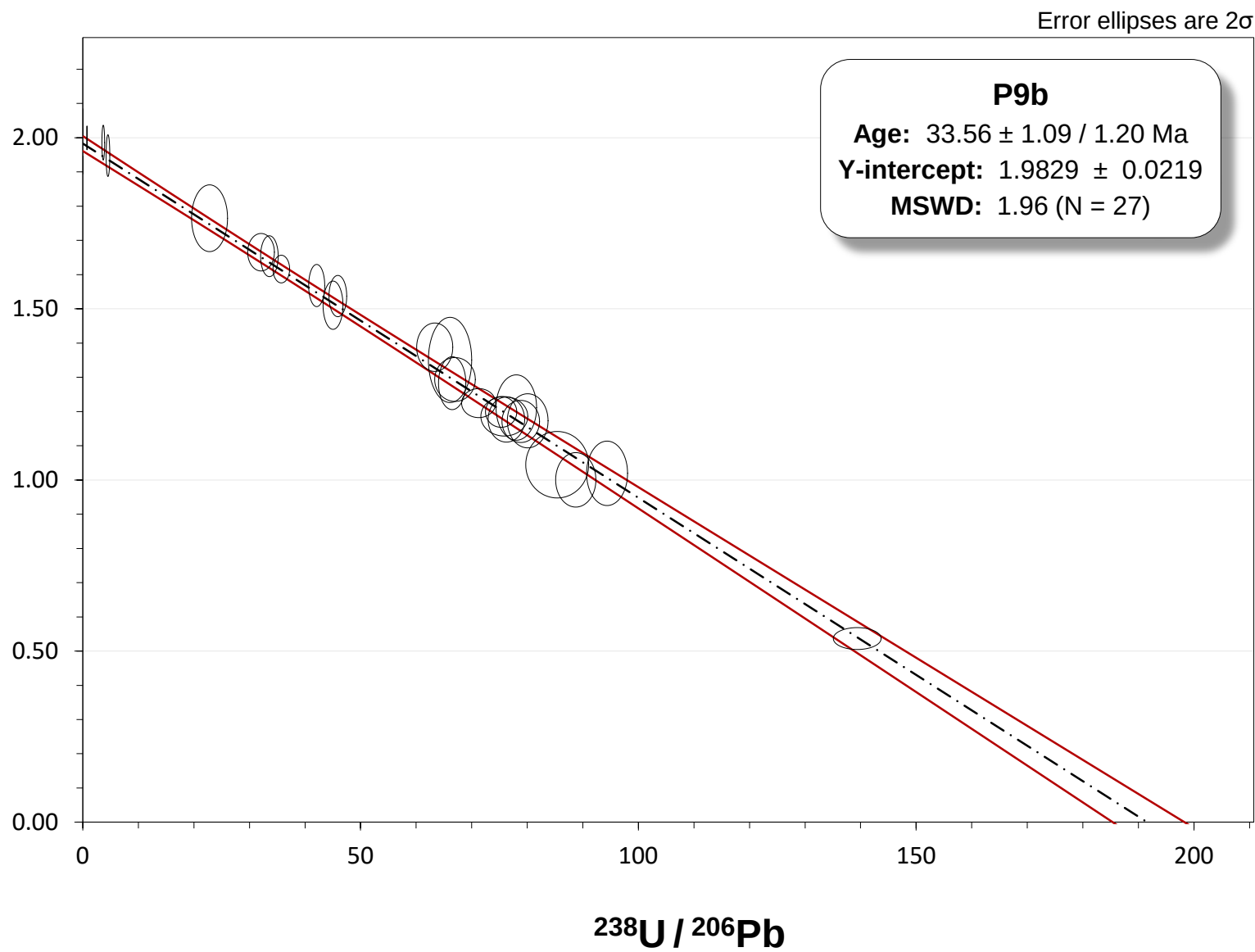


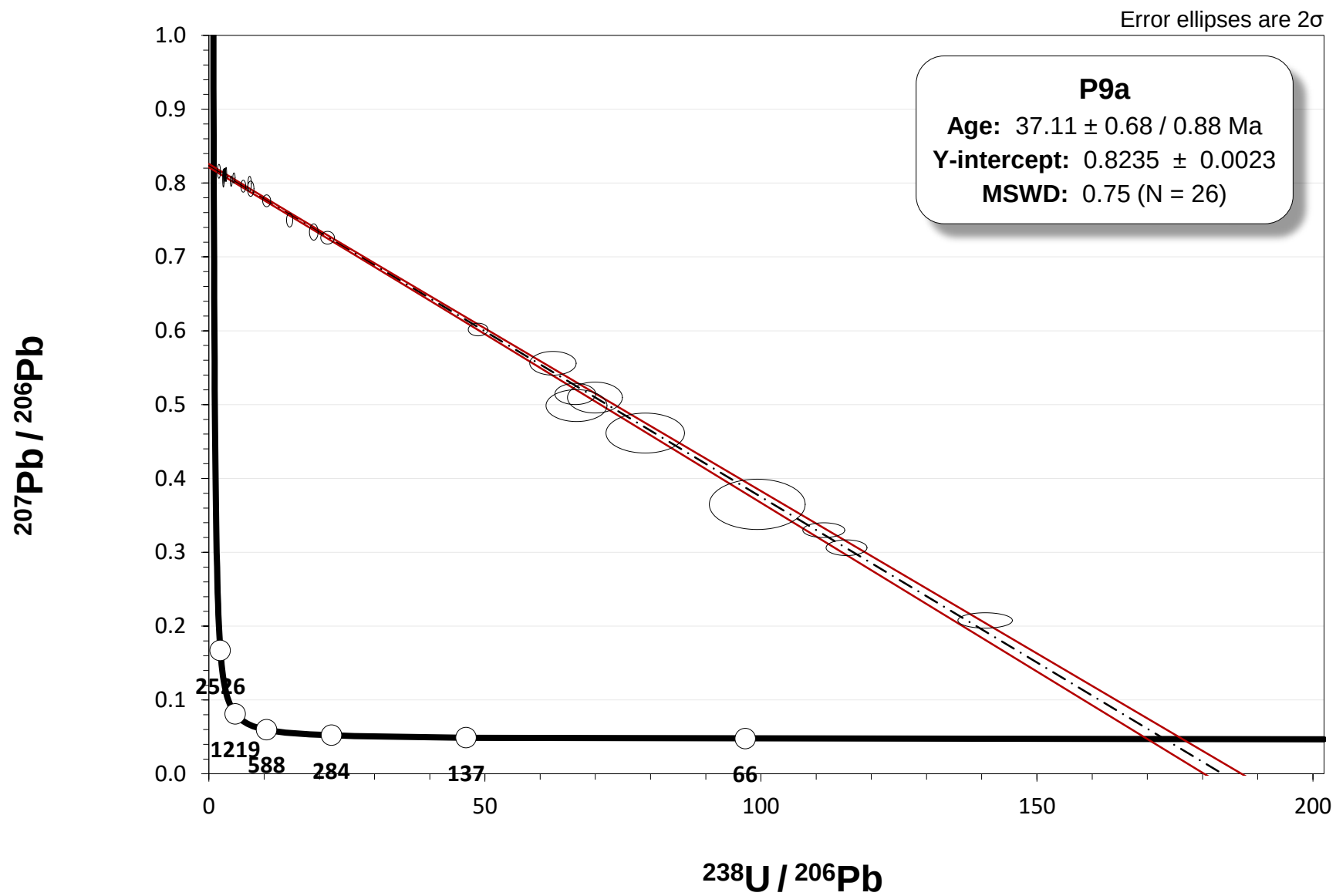
$^{208}\text{Pb} / ^{206}\text{Pb}$



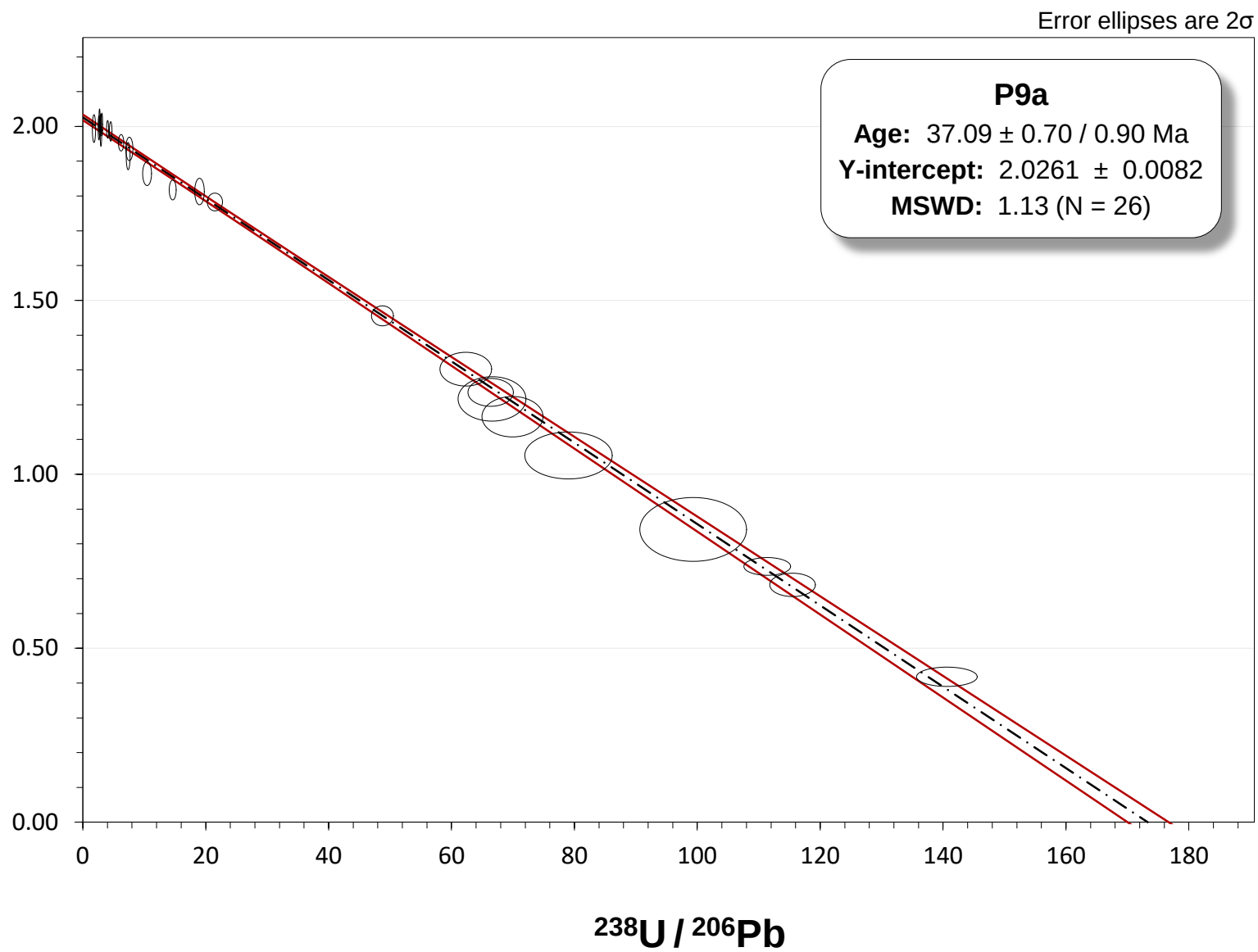


$^{208}\text{Pb} / ^{206}\text{Pb}$





$^{208}\text{Pb} / ^{206}\text{Pb}$



Sequence 1

grain	name / sample	²⁰⁷ Pb ^a (cps)	U ^b (ppm)	Pb ^b (ppm)	$\frac{^{232}\text{Th}^b}{^{238}\text{U}}$	$\frac{^{238}\text{U}^c}{^{206}\text{Pb}}$	±2σ (%)	$\frac{^{207}\text{Pb}^c}{^{206}\text{Pb}}$	±2σ (%)	$\frac{^{208}\text{Pb}^c}{^{206}\text{Pb}}$	±2σ (%)	rho ^d
A06	P12a	7738	0.14	0.12	0.00009	3.859	3.6	0.7986	1.9	2.003	2.9	0.00
A07	P12a	9127	0.87	0.14	0.00002	19.25	4.2	0.7672	1.7	1.895	2.3	0.00
A08	P12a	14133	0.78	0.18	0.0012	14.72	3.3	0.7814	1.7	1.969	2.1	0.00
A09	P12a	171	0.42	0.004	0.00068	189.4	5.7	0.2891	9.8	0.6104	20	0.00
A10	P12a	1217	0.29	0.019	0.00023	44.10	8.8	0.6753	4.4	1.571	6.9	0.00
A11	P12a	105	0.12	0.002	0.00000	130.0	9.1	0.3875	16	0.8445	22	0.00
A12	P12a	200	0.23	0.003	0.00022	132.6	6.1	0.4309	9.5	0.8538	19	0.00
A13	P12a	512	0.29	0.009	0.00052	90.72	5.9	0.5688	7.0	1.333	7.2	0.00
A15	P12a	299	0.61	0.007	0.00007	171.7	4.9	0.3057	8.1	0.7704	10	0.00
A16	P12a	4794	2.7	0.083	0.0070	79.92	3.5	0.5488	1.8	1.314	3.1	0.00
A17	P12a	6956	1.3	0.11	0.0057	33.72	3.7	0.7031	1.9	1.720	3.0	0.00
A18	P12a	5156	0.53	0.080	0.00007	22.10	4.0	0.7345	2.0	1.866	5.3	0.00
A19	P12b	3458	1.2	0.055	0.0024	62.41	6.9	0.7010	3.4	1.726	4.3	0.00
A20	P12b	6622	0.85	0.10	0.00052	26.21	3.8	0.7570	2.2	1.878	2.9	0.00
A21	P12b	36752	0.54	0.57	0.069	3.176	3.4	0.8128	0.95	1.990	1.4	0.00
A22	P12b	14041	1.3	0.22	0.12	20.03	3.5	0.7892	1.5	1.927	1.7	0.00
A23	P12b	3285	2.8	0.056	0.020	131.7	3.5	0.5783	2.6	1.402	3.4	0.00
A24	P12b	16224	2.0	0.26	0.11	24.98	5.8	0.7654	1.6	1.894	2.1	0.00
A25	P12b	13007	1.4	0.19	0.080	24.44	5.6	0.7752	1.9	1.922	2.2	0.00
A26	P12b	24310	1.4	0.38	0.14	11.60	6.6	0.7959	1.3	1.937	2.0	0.00
A27	P12b	17735	1.4	0.27	0.097	17.32	3.6	0.7947	1.4	1.935	1.9	0.00
A28	P12b	10395	0.76	0.16	0.014	15.22	3.5	0.7862	1.9	1.919	2.2	0.00
A29	P12b	11912	0.66	0.19	0.044	11.65	4.1	0.7886	1.7	1.948	2.2	0.00
A30	P12b	9599	1.0	0.15	0.079	22.36	6.8	0.7818	1.8	1.889	2.2	0.00
A31	P12b	5947	0.93	0.095	0.0088	31.02	4.2	0.7602	2.4	1.929	2.4	0.00
A32	P12b	29235	0.41	0.46	0.38	3.014	5.4	0.8154	1.2	2.023	2.0	0.00
A38	P12b	5862	1.0	0.094	0.0063	34.92	4.0	0.7508	2.2	1.843	3.1	0.00
A94	B32	2686	0.25	0.042	0.23	19.19	6.5	0.7409	3.3	1.825	3.9	0.00
A95	B32	2886	0.13	0.045	0.29	9.731	5.8	0.7898	2.8	1.948	3.8	0.00
A96	B32	9567	0.17	0.15	0.22	3.696	6.9	0.8164	2.0	2.005	2.6	0.00
A97	B32	2580	0.19	0.042	0.19	14.39	6.3	0.7528	3.8	1.843	4.6	0.00
A98	B32	17179	0.25	0.29	0.29	2.857	17	0.8233	1.5	2.069	2.2	0.00
A99	B32	18	0.044	0.000	0.012	162.6	22	0.2277	48	0.6083	42	0.00
A100	B32	20894	0.36	0.35	0.55	3.372	17	0.8109	1.4	2.015	1.7	0.00
A101	B32	2227	0.12	0.037	0.31	10.77	4.8	0.7800	4.2	1.947	5.0	0.00
A107	B32	9234	0.17	0.15	0.27	4.159	7.7	0.8189	1.7	2.002	2.6	0.00
A108	B32	139	0.19	0.002	0.0038	142.2	8.6	0.3801	15	0.5620	23	0.00
A109	B32	21	0.20	0.001	0.0045	208.3	9.3	0.08077	38			0.00
A110	B32	56	0.25	0.001	0.0063	189.6	8.3	0.1650	17			0.00
A111	B32	348	0.26	0.006	0.0055	92.19	12	0.4634	12	0.9601	15	0.00
A113	B32	185	0.15	0.003	0.011	102.7	9.6	0.4660	16	1.012	20	0.00
A114	B32	3	0.21	0.001	0.0049	248.3	10.0	0.01302	182			0.00
A115	B32	11	0.12	0.000	0.0091	228.8	12	0.07297	55			0.00
A116	B32	13	0.18	0.001	0.0070	204.6	11	0.06410	44			0.00
A117	B32	13	0.15	0.001	0.0073	226.2	9.7	0.07451	48			0.00
A118	B32	17	0.17	0.001	0.0032	223.7	10	0.08903	36			0.00
A119	B32	25	0.20	0.001	0.0059	201.1	8.8	0.09603	32	0.09477	121	0.00
A120	B32	32	0.31	0.001	0.0071	228.2	6.2	0.08490	30			0.00
A121	B32	41	0.24	0.002	0.0078	191.1	9.0	0.1234	23	0.2290	42	0.00
A122	B32	34	0.18	0.001	0.0064	213.8	9.7	0.1363	29	0.05514	178	0.00
A123	B32	6	0.19	0.000	0.0047	258.8	10	0.02824	162			0.00
A124	B32	145	0.082	0.003	0.0017	77.67	10	0.5251	12	1.255	20	0.00
A125	B32	68	0.16	0.001	0.0023	152.8	13	0.2370	29	0.3039	56	0.00
A130	GDV5	266	0.15	0.010	0.044	73.64	7.6	0.5506	8.6	1.321	13	0.00
A131	GDV5	65	0.18	0.002	0.15	140.9	8.9	0.2004	18	0.4410	31	0.00
A132	GDV5	52	0.19	0.002	0.34	149.1	9.1	0.1649	21	0.4417	29	0.00

A133	GDV5	76	0.20	0.002	0.14	140.9	7.7	0.2154	24	0.4678	35	0.00
A135	GDV5	112	0.22	0.003	0.26	128.8	7.9	0.2573	15	0.5745	24	0.00
A136	GDV5	27335	0.40	0.46	0.95	2.914	3.4	0.8071	0.95	1.986	1.2	0.00
A137	GDV5	72438	0.75	1.2	2.17	2.065	3.4	0.8173	0.84	2.056	1.0	0.00
A138	GDV5	99652	0.64	1.7	1.23	1.272	4.4	0.8177	0.78	2.030	1.3	0.00
A139	GDV5	56	0.22	0.002	0.14	144.1	7.7	0.1509	20	0.4108	27	0.00
A140	GDV5	5303	0.43	0.086	0.45	16.69	10	0.7632	2.7	1.840	3.2	0.00
A141	GDV5	15405	0.51	0.27	0.63	6.414	3.7	0.7975	1.5	2.009	2.0	0.00
A142	GDV5	29723	0.47	0.48	0.73	3.540	6.9	0.8210	1.2	2.028	1.9	0.00
A143	GDV5	80588	0.62	1.4	1.04	1.566	4.6	0.8288	0.85	2.050	1.2	0.00
A144	GDV5	235	0.29	0.006	1.07	111.8	6.7	0.3513	12	0.9542	11	0.00
A145	GDV5	183	0.23	0.004	1.19	111.5	8.3	0.3474	13	0.9290	16	0.00
A151	GDV5	69	0.27	0.003	0.35	142.4	7.6	0.1509	15	0.4162	23	0.00
A152	GDV5	64	0.22	0.002	0.40	155.9	7.9	0.1751	14	0.4172	25	0.00
A153	GDV5	568	0.50	0.012	1.04	96.68	9.7	0.4309	17	1.076	20	0.00
A153i	GDV5	2732	0.45	0.047	0.95	29.99	9.2	0.6941	4.9	1.673	6.4	0.00
A154	GDV5	47	0.19	0.002	0.040	160.6	8.7	0.1561	18	0.4090	30	0.00
A155	GDV13	2405106	0.010	22	0.81	0.000809	4.4	0.8373	0.56	0.1802	16	0.00
A156	GDV13	2050759	0.013	29	0.026	0.001235	3.8	0.8377	0.51	1.377	14	0.00
A157	GDV13	1557065	0.017	27	0.15	0.002148	4.2	0.8389	0.57	2.099	0.98	0.00
A158	GDV13	3563762	0.002	29	98.2	0.000122	6.9	0.8465	1.1	0.1074	3.0	0.00
A159	GDV13	650313	0.66	12	4.63	0.1895	3.9	0.8364	0.51	2.080	0.95	0.00
A160	309B	203226	0.005	3.8	14.3	0.004644	7.7	0.8409	0.76	2.085	1.00	0.00
A161	309B	190588	0.007	3.5	0.23	0.006407	6.2	0.8386	0.72	2.076	1.2	0.00
A162	309B	332981	0.012	6.1	18.0	0.006773	5.0	0.8374	0.66	2.070	1.0	0.00
A163	311B	78630	0.074	2.9	1.05	0.2310	4.1	1.097	20	8.430	3.9	0.00
A164	311B	161708	0.053	3.0	0.62	0.06022	5.1	0.8364	0.60	2.075	1.2	0.00
A165	CN38	218	0.024	0.004	0.0024	19.64	8.5	0.7250	13	1.519	16	0.00
A166	CN38	163	0.081	0.004	0.029	49.21	8.8	0.3994	12	1.032	17	0.00
A167	CN38	2608	0.097	0.045	0.10	7.050	5.4	0.7865	3.3	1.850	3.9	0.00
A168	CN38	1199	0.13	0.021	0.00038	17.50	4.5	0.6941	4.7	1.572	7.0	0.00
A169	CN38	397	0.098	0.008	0.027	34.61	6.8	0.5908	8.0	1.390	11	0.00
A170	CN38	770	0.082	0.014	0.0068	17.51	5.8	0.6720	6.2	1.689	8.4	0.00
A171	CN38	1075	0.097	0.019	0.038	15.22	5.5	0.6924	5.1	1.647	7.0	0.00
A172	CN38	572	0.072	0.011	0.046	19.63	6.5	0.6418	5.7	1.764	6.7	0.00
A173	CN38	586	0.038	0.010	0.11	11.68	7.6	0.7431	6.6	1.642	9.1	0.00
A174	CN38	853	0.057	0.015	0.023	12.37	7.7	0.7546	5.6	1.750	9.6	0.00
A175	CN38	3772	0.071	0.062	0.22	4.521	8.5	0.8089	3.4	1.927	4.9	0.00
A176	CN38	1600	0.068	0.028	0.24	7.901	5.4	0.7551	3.7	1.785	5.5	0.00
A177	CN38	1435	0.071	0.025	0.15	9.226	5.6	0.7657	4.8	1.879	5.6	0.00
A178	CN38	1709	0.10	0.029	0.16	10.79	8.0	0.7381	3.9	1.751	4.3	0.00
A179	CN38	103	0.15	0.003	0.026	75.23	7.9	0.2018	13	0.5790	23	0.00
A180	CN38	631	0.098	0.011	0.073	25.49	6.1	0.6719	7.0	1.523	8.9	0.00
A181	CN38	736	0.15	0.012	0.12	32.87	8.7	0.5684	7.8	1.317	9.9	0.00
A182	CN38	582	0.085	0.011	0.017	22.68	8.5	0.6447	8.5	1.608	6.8	0.00
A183	CN38	2811	0.083	0.049	0.61	5.338	6.7	0.7786	2.9	1.894	3.5	0.00
A184	CN38	667	0.087	0.025	0.028	20.39	5.6	0.6621	5.9	1.603	7.9	0.00
A185	CN38	417	0.074	0.007	0.025	27.52	6.7	0.6462	8.7	1.445	9.4	0.00
A186	CN38	115	0.061	0.003	0.00000	48.98	8.6	0.3906	13	0.9905	15	0.00
A187	CN38	637	0.043	0.011	0.40	12.00	6.9	0.7580	6.7	1.733	9.2	0.00
A188	CN38	2043	0.052	0.035	0.068	4.887	4.4	0.7899	3.7	1.925	4.4	0.00
A189	CN38	1216	0.095	0.022	0.039	13.29	5.4	0.7067	5.2	1.745	6.3	0.00
A190	CN38	891	0.11	0.016	0.067	20.07	4.6	0.6861	5.1	1.599	7.3	0.00
A191	CN38	965	0.034	0.016	0.15	7.540	7.9	0.7965	5.4	2.001	6.7	0.00
A231	Q24	5965	0.23	0.11	0.00004	7.107	3.7	0.7768	2.3	1.941	3.0	0.00
A232	Q24	6389	0.71	0.12	0.0033	18.97	4.0	0.7196	2.0	1.823	3.3	0.00
A233	Q24	669	0.30	0.013	0.0014	53.97	5.1	0.5270	5.9	1.174	8.3	0.00
A234	Q24	934	0.24	0.018	0.00028	36.88	5.9	0.6344	5.9	1.477	6.5	0.00
A235	Q24	1792	0.17	0.033	0.00006	15.77	4.3	0.7225	4.3	1.796	6.0	0.00
A236	Q24	422	0.31	0.009	0.17	73.79	4.9	0.4255	7.0	0.9950	12	0.00
A237	Q24	1529	0.49	0.030	0.0070	45.37	4.8	0.5931	4.0	1.478	5.7	0.00

A243	Q24	3190	1.4	0.064	0.041	55.21	4.0	0.5257	3.1	1.276	4.1	0.00
A244	Q24	534	0.83	0.013	0.0025	101.9	4.3	0.2850	5.7	0.5496	10	0.00
A245	Q24	205	0.32	0.005	0.0014	97.84	5.9	0.2752	11	0.5806	17	0.00
A246	Q24	1940	0.91	0.039	0.019	56.79	4.6	0.5161	4.4	1.200	4.7	0.00
A247	Q24	910	0.73	0.020	0.00099	76.79	3.7	0.4181	5.9	0.9573	7.2	0.00
A248	Q24	35131	0.94	0.64	0.078	4.953	4.5	0.8044	1.1	1.999	1.4	0.00
A249	Q24	241	0.21	0.005	0.026	79.99	6.8	0.4077	8.6	0.7850	13	0.00
A250	Q24	418	0.26	0.009	0.17	70.02	5.8	0.4800	8.1	1.069	8.3	0.00
A251	Q24	19075	0.57	0.35	0.017	5.353	3.7	0.7977	1.4	1.937	1.6	0.00
A252	Q24	4741	0.29	0.087	0.012	10.60	4.3	0.7685	2.5	1.876	3.7	0.00
A253	Q24	125181	0.75	2.3	0.57	1.074	5.7	0.8244	0.76	2.050	1.2	0.00
A254	Q24	13372	0.57	0.24	0.060	7.650	4.3	0.7930	1.8	1.957	2.4	0.00
A255	Q24	52407	0.70	0.95	1.02	2.521	4.3	0.8216	0.89	2.013	1.4	0.00
A256	Q24	21410	1.8	0.39	0.085	14.84	7.1	0.7463	1.6	1.836	1.8	0.00
A257	Q24	4216	0.30	0.078	0.0031	12.49	3.8	0.7690	3.0	1.864	3.9	0.00
A258	Q24	8729	0.28	0.23	0.063	11.00	4.8	0.7764	2.6	1.913	3.7	0.00
A259	Q24	37776	0.79	0.68	0.33	3.879	3.5	0.8179	1.1	2.020	1.5	0.00
A260	Q24	26838	0.85	0.46	0.12	6.479	5.7	0.7956	1.2	1.953	1.5	0.00
A261	Q24	13475	0.93	0.24	0.074	13.37	5.0	0.7645	1.7	1.867	2.3	0.00
A262	Q24	11812	0.56	0.20	0.18	9.669	6.2	0.7788	1.6	1.903	2.4	0.00
A263	Q24	678	0.20	0.014	0.0014	39.89	5.1	0.5898	6.0	1.492	6.5	0.00
A264	Q24	16217	0.70	0.30	0.13	7.769	3.4	0.7983	1.5	1.950	2.0	0.00
A265	Q24	44149	1.6	0.82	0.037	6.508	4.4	0.7997	0.93	1.977	1.5	0.00
A266	Q24	31337	0.82	0.58	0.12	4.715	3.7	0.8008	1.1	1.993	1.5	0.00
A267	Q24	5056	0.57	0.094	0.067	19.03	3.9	0.7391	2.4	1.816	3.2	0.00
A268	P11a	2206	0.043	0.040	0.0015	3.545	4.1	0.7987	3.5	2.027	4.8	0.00
A269	P11a	2473	0.053	0.045	0.00085	3.788	4.9	0.8033	3.5	1.902	5.7	0.00
A270	P11a	2602	0.052	0.050	0.20	3.310	4.6	0.7834	3.6	1.911	4.5	0.00
A271	P11a	1285	0.069	0.024	0.0044	9.270	5.1	0.7587	5.2	1.819	5.9	0.00
A272	P11a	4216	0.026	0.078	0.059	1.081	3.9	0.7843	2.5	1.928	3.8	0.00
A273	P11a	1812	0.030	0.034	0.0030	2.913	16	0.7761	3.8	1.892	5.2	0.00
A274	P11a	21716	0.097	0.40	0.22	0.8223	3.7	0.8194	1.2	2.004	2.0	0.00
A275	P11a	833	0.030	0.015	0.0062	7.193	6.8	0.7997	5.5	1.909	7.8	0.00
A282	P11a	355	0.079	0.007	0.049	32.29	7.3	0.6467	9.9	1.653	12	0.00
A288	P11a	1451	0.10	0.028	0.068	11.32	5.3	0.7384	3.6	1.838	5.2	0.00
A289	P11a	546	0.074	0.010	0.0045	21.57	5.4	0.7231	7.9	1.740	10	0.00
A290	P11a	516	0.052	0.010	0.013	15.51	6.3	0.7145	6.4	1.775	9.9	0.00
A291	P11a	11992	0.10	0.23	0.031	1.481	9.8	0.8073	1.8	2.031	2.0	0.00
A276	P11b	76603	3.8	1.4	0.021	8.646	4.7	0.7763	0.95	1.916	1.1	0.00
A277	P11b	143161	0.74	2.7	0.030	0.9284	3.6	0.8132	0.80	2.009	1.4	0.00
A278	P11b	11828	1.3	0.23	0.012	16.97	3.9	0.7234	1.8	1.810	3.0	0.00
A279	P11b	89969	1.8	1.7	0.025	3.433	3.3	0.8008	0.80	1.965	1.2	0.00
A280	P11b	49686	0.27	0.94	0.22	0.9402	4.4	0.8115	1.1	1.987	1.9	0.00
A281	P11b	61970	0.23	1.2	0.17	0.6581	3.8	0.8068	0.95	1.987	1.3	0.00
A292	P11b	9451	2.1	0.18	0.0063	33.25	3.7	0.6611	1.5	1.578	2.0	0.00
A293	P11b	40498	2.4	0.77	0.0019	9.978	3.2	0.7769	1.1	1.903	1.3	0.00
A294	P11b	69572	3.6	1.3	0.0011	8.765	3.1	0.7767	0.80	1.920	1.3	0.00
A295	P11b	12209	2.7	0.24	0.0031	32.23	3.4	0.6744	1.4	1.632	2.3	0.00
A296	P11b	64219	1.7	1.2	0.0059	4.630	5.2	0.7988	1.1	1.953	1.7	0.00
A297	P11b	220414	1.2	4.2	0.035	0.9955	3.7	0.8140	0.64	2.010	1.1	0.00
A298	P11b	105416	2.8	2.0	0.0090	4.525	3.8	0.7937	0.74	1.956	1.4	0.00
A299	P11b	15745	2.5	0.31	0.0081	24.68	3.9	0.6958	1.8	1.687	2.3	0.00
A300	P11b	55905	3.2	1.1	0.015	9.653	3.3	0.7694	1.1	1.903	1.4	0.00
A301	P11b	53230	2.5	1.0	0.0017	8.088	3.4	0.7831	1.1	1.901	1.7	0.00
A302	P11b	66096	2.9	1.3	0.0011	7.404	5.9	0.7836	0.92	1.930	1.2	0.00
A303	P11b	36882	4.7	0.72	0.0014	20.44	4.1	0.7193	0.97	1.777	1.4	0.00
A304	P11b	7625	1.7	0.15	0.0058	32.94	4.1	0.6607	2.2	1.599	2.8	0.00
A305	P11b	3581	3.3	0.084	0.0011	85.24	3.4	0.4245	3.1	1.023	4.2	0.00
A306	P11b	5827	2.9	0.12	0.00074	57.98	3.8	0.5441	2.4	1.297	3.3	0.00
A307	P44	14180	0.094	0.27	0.67	1.162	3.3	0.8197	1.6	1.987	2.3	0.00
A308	P44	1009	0.098	0.019	0.17	15.78	5.4	0.7389	5.3	1.810	6.5	0.00

A309	P44	10462	0.092	0.16	0.24	13.43	6.6	0.7705	6.4	1.889	8.9	0.00
A310	P44	1980	0.049	0.038	0.58	4.383	7.2	0.7896	3.2	1.977	5.0	0.00
A311	P44	6564	0.043	0.13	0.60	1.148	11	0.8160	2.0	2.020	3.2	0.00
A312	P44	16072	0.27	0.31	0.38	2.951	4.5	0.7979	1.3	1.976	2.1	0.00
A313	P44	13671	0.060	0.26	0.89	0.7680	3.8	0.8057	1.4	2.002	2.2	0.00
A314	P44	19555	0.10	0.38	0.86	0.9305	3.6	0.8107	1.2	2.007	1.7	0.00
A315	P44	22357	0.27	0.44	1.55	2.003	3.2	0.7965	1.1	1.994	1.6	0.00
A316	P44	15180	0.096	0.29	0.56	1.084	4.4	0.8238	1.3	2.026	2.2	0.00
A317	P44	11834	0.080	0.23	0.68	1.190	3.6	0.8271	1.7	2.084	3.1	0.00
A318	P44	14026	0.069	0.27	0.30	0.8578	3.2	0.8180	1.5	2.040	2.0	0.00
A319	P44	6596	0.048	0.13	1.67	1.277	4.1	0.8214	1.9	2.030	3.2	0.00
A320	P44	14337	0.25	0.28	0.33	2.981	3.7	0.8114	1.6	1.972	2.5	0.00
A321	P44	5521	0.20	0.11	0.16	6.193	3.7	0.7998	2.3	1.960	3.1	0.00
A322	P44	6597	0.34	0.13	0.12	8.676	4.6	0.7912	2.1	1.972	2.5	0.00
A323	P44	20976	0.25	0.41	0.15	2.080	3.7	0.8084	1.3	1.995	2.0	0.00
A324	P44	15372	0.21	0.41	0.94	1.295	14	0.8108	1.7	1.969	1.8	0.00
A325	P44	18114	0.21	0.35	0.72	1.970	4.3	0.8079	1.2	1.965	2.1	0.00
A326	P44	21967	0.22	0.44	1.92	1.650	3.9	0.8078	1.4	1.996	2.1	0.00
A327	P44	28716	0.45	0.58	1.24	2.489	5.5	0.7933	1.2	1.989	1.6	0.00
A333	P44	18567	0.15	0.37	2.41	1.379	3.5	0.8144	1.3	2.020	1.8	0.00
A335	P44	7401	0.043	0.16	1.24	1.006	4.8	0.8123	1.9	2.102	2.6	0.00
A336	P8b	11710	0.15	0.23	0.14	2.114	3.3	0.8055	1.9	1.955	1.9	0.00
A337	P8b	36115	4.7	0.73	0.0060	20.22	4.8	0.7292	1.3	1.794	1.6	0.00
A338	P8b	30841	5.0	0.64	0.0067	23.20	5.1	0.7106	1.1	1.738	1.4	0.00
A339	P8b	13444	0.25	0.27	0.16	2.974	6.1	0.8037	1.6	1.971	2.2	0.00
A340	P8b	11761	0.19	0.23	0.19	2.754	3.3	0.8047	1.6	1.991	2.3	0.00
A341	P8b	19959	0.21	0.39	0.19	1.729	3.3	0.7952	1.5	1.960	1.8	0.00
A342	P8b	65598	0.19	1.3	0.29	0.4857	3.5	0.8152	0.70	2.015	1.4	0.00
A343	P8b	22181	0.17	0.44	0.25	1.275	3.3	0.8086	1.3	1.988	1.5	0.00
A344	P8b	70181	0.37	1.4	0.54	0.8799	3.2	0.8096	0.77	2.015	1.2	0.00
A345	P8b	64143	0.54	1.3	0.38	1.284	5.0	0.8011	0.82	1.977	1.4	0.00
A346	P8b	28879	1.6	0.58	0.031	8.944	3.9	0.7779	1.1	1.919	1.7	0.00
A348	P8b	9904	0.14	0.20	0.0031	2.361	3.6	0.7907	1.8	1.973	2.6	0.00
A395	P8c	768	0.014	0.014	0.00000	2.961	6.2	0.8236	5.7	1.696	7.8	0.00
A396	P8c	298	0.072	0.006	0.0013	32.21	8.1	0.6517	9.0	1.454	13	0.00
A397	P8c	80	0.15	0.002	0.00082	127.6	10	0.3285	17	0.8277	20	0.00
A398	P8c	351	0.080	0.008	0.00014	29.45	5.9	0.6692	8.6	1.607	10	0.00
A399	P8c	220	0.090	0.005	0.00000	46.88	8.8	0.5969	11	1.331	17	0.00
A400	P8c	359	0.079	0.008	0.00025	29.94	7.1	0.6744	9.8	1.572	13	0.00
A401	P8c	88	0.043	0.002	0.00000	59.11	10	0.5949	15	1.356	25	0.00
A402	P8c	182	0.084	0.004	0.00015	53.46	9.4	0.5420	11	1.289	16	0.00
A403	P8c	301	0.028	0.007	0.00077	12.89	10.0	0.6964	9.2	1.682	15	0.00
A404	P8c	974	0.049	0.020	0.0021	7.824	6.5	0.7777	5.1	1.865	8.3	0.00
A405	P8c	615	0.052	0.013	0.00043	12.40	7.4	0.7517	8.0	1.771	7.7	0.00
A406	P8c	650	0.016	0.013	0.0024	3.694	8.8	0.7394	5.1	1.695	8.4	0.00
A407	P8c	634	0.079	0.013	-0.00009	18.40	7.1	0.7093	6.4	1.615	8.3	0.00
A408	P8c	242	0.059	0.005	0.00070	30.91	8.2	0.6434	12	1.486	13	0.00
A409	P8c	175	0.091	0.004	0.00030	57.88	7.8	0.5648	12	1.462	16	0.00
A410	P8c	76	0.036	0.002	0.00033	60.69	15	0.6327	18	1.468	20	0.00
A364	P8a	34146	0.19	0.70	0.0041	0.9095	3.7	0.7959	1.1	1.989	1.7	0.00
A365	P8a	10983	0.18	0.22	0.0029	2.671	3.8	0.7918	1.7	1.959	2.3	0.00
A366	P8a	7983	0.24	0.16	0.0011	4.790	3.2	0.7707	1.9	1.874	2.6	0.00
A367	P8a	14262	0.18	0.28	0.0049	2.079	4.3	0.8102	1.7	1.951	1.8	0.00
A368	P8a	11526	0.16	0.24	0.0048	2.258	3.5	0.7941	1.7	1.976	2.5	0.00
A369	P8a	11193	0.20	0.23	0.0026	2.803	3.5	0.7812	1.9	1.963	2.2	0.00
A370	P8a	12460	0.11	0.25	0.0083	1.465	5.0	0.8033	1.6	1.959	2.1	0.00
A371	P8a	18038	0.14	0.36	0.011	1.257	4.4	0.8142	1.5	1.990	1.7	0.00
A372	P8a	5313	1.2	0.12	0.0019	27.31	3.3	0.6161	2.4	1.490	3.3	0.00
A373	P8a	3066	0.53	0.066	0.0011	22.36	4.0	0.6484	2.8	1.567	4.3	0.00
A374	P8a	6988	0.92	0.15	0.00072	17.86	3.9	0.6755	2.0	1.617	2.4	0.00
A375	P8a	4873	1.1	0.10	0.0018	28.70	3.5	0.6061	2.3	1.399	3.0	0.00

A376	P8a	5336	0.87	0.12	0.0015	21.13	3.8	0.6552	2.3	1.583	2.9	0.00
A377	P8a	6300	1.1	0.14	0.0011	21.31	4.0	0.6341	2.1	1.541	3.0	0.00
A378	P8a	4314	1.6	0.098	0.00095	38.71	3.6	0.5254	2.4	1.220	3.5	0.00
A379	P8a	4160	0.75	0.090	0.00002	23.61	5.0	0.6346	2.6	1.559	3.0	0.00
A380	P8a	6129	1.5	0.14	0.00004	28.85	3.8	0.5856	2.3	1.386	2.7	0.00
A381	P8a	4670	1.1	0.10	0.00013	28.98	3.4	0.5915	2.3	1.448	3.1	0.00
A382	P8a	5931	1.5	0.13	0.00052	29.40	3.4	0.5768	1.7	1.369	3.1	0.00
A388	P8a	6280	1.6	0.14	0.00051	29.79	3.6	0.5983	1.9	1.477	2.9	0.00
A389	P8a	2923	1.1	0.068	0.00026	39.73	3.7	0.5216	2.7	1.219	3.7	0.00
A390	P8a	4269	1.5	0.098	0.0013	37.23	3.4	0.5368	2.2	1.232	2.7	0.00
A391	P8a	5165	0.88	0.11	0.00035	21.96	3.4	0.6407	2.5	1.476	2.7	0.00
A392	P8a	18719	1.0	0.39	0.0012	8.259	3.6	0.7539	1.3	1.840	1.6	0.00
A393	P8a	11770	0.60	0.25	0.0053	7.743	4.1	0.7575	1.5	1.829	2.4	0.00
A394	P8a	20627	0.99	0.44	0.0021	7.177	3.3	0.7570	1.5	1.858	1.9	0.00
A414	P8a	3803	1.8	0.094	0.0026	43.64	3.4	0.4810	2.6	1.160	3.9	0.00
A415	P8a	3839	1.9	0.095	0.0024	45.61	3.4	0.4766	2.4	1.125	4.4	0.00
A416	P8a	3052	1.8	0.078	0.0024	50.77	3.3	0.4344	2.7	1.025	3.6	0.00
A417	P8a	6321	2.0	0.15	0.0055	33.37	4.1	0.5549	2.1	1.363	2.5	0.00
A420	P8a	7996	1.4	0.18	0.0072	22.38	3.4	0.6480	1.7	1.594	2.7	0.00
A421	P8a	5334	2.3	0.13	0.0044	41.92	3.4	0.5019	2.3	1.214	3.0	0.00
A422	P8a	13890	1.8	0.31	0.029	17.31	9.4	0.6836	1.9	1.661	2.5	0.00
A423	P8a	4729	3.2	0.13	0.00031	52.85	3.2	0.4064	1.8	0.9501	2.8	0.00
A424	P8a	35820	1.7	0.78	0.024	7.070	3.6	0.7619	1.1	1.875	1.6	0.00
A425	P8a	5713	2.2	0.14	0.0082	38.27	4.7	0.5237	2.2	1.236	2.9	0.00
A426	P8a	71264	1.2	1.6	0.066	2.634	3.4	0.7911	0.82	1.944	1.3	0.00
A427	P8a	21024	1.1	0.47	0.043	7.537	3.6	0.7517	1.3	1.853	1.8	0.00
A428	P8a	38928	1.3	0.86	0.028	4.833	3.8	0.7721	0.92	1.905	1.4	0.00
A429	P8a	5097	2.5	0.13	0.0082	44.82	3.2	0.4698	2.0	1.161	2.4	0.00
A430	P8a	5576	1.9	0.13	0.0029	37.19	5.8	0.5511	3.2	1.286	3.0	0.00
A431	P8a	6161	1.9	0.15	0.0021	32.74	3.5	0.5653	2.3	1.322	2.6	0.00
A432	P8a	46276	1.5	1.0	0.019	4.890	4.1	0.7740	0.87	1.908	1.4	0.00
A433	P8a	7315	1.2	0.17	0.0035	20.54	3.3	0.6485	1.8	1.614	2.6	0.00
A434	P8a	63734	1.2	1.4	0.0079	2.836	3.6	0.7902	0.91	1.941	1.5	0.00
A435	P8a	3603	1.2	0.087	0.0034	34.48	3.2	0.5630	2.4	1.354	3.9	0.00
A436	P8a	3187	0.65	0.074	0.0013	23.91	3.6	0.6152	2.8	1.461	3.4	0.00
A437	P8a	5342	1.2	0.12	0.0053	26.71	3.2	0.6096	2.0	1.438	3.1	0.00
A438	P8a	8407	1.2	0.19	0.0033	18.84	3.3	0.6678	1.7	1.601	2.7	0.00
A444	P8a	5901	1.0	0.14	0.0040	20.64	3.4	0.6446	2.3	1.550	3.3	0.00
A445	P8a	6676	1.3	0.16	0.0019	23.65	3.5	0.6431	2.0	1.542	2.7	0.00
A446	P8a	6183	1.1	0.14	0.0070	22.20	3.4	0.6430	2.1	1.549	2.3	0.00
A447	P8a	5045	1.1	0.12	0.0068	24.30	3.7	0.6083	2.3	1.446	3.0	0.00
A448	P8a	4571	1.2	0.11	0.0037	29.13	3.4	0.6027	2.5	1.453	3.8	0.00
A449	P8a	2690	1.4	0.070	0.0044	45.44	3.7	0.4787	2.8	1.154	3.9	0.00
A450	P8a	2881	1.4	0.074	0.0043	44.97	3.2	0.4919	3.2	1.162	3.5	0.00
A451	P8a	2778	1.3	0.071	0.0039	42.57	3.5	0.4885	3.0	1.126	4.1	0.00
A452	P8a	3125	1.4	0.079	0.0039	42.55	3.3	0.5020	2.6	1.162	3.8	0.00
A453	P8a	3872	1.1	0.094	0.0073	30.82	3.7	0.5887	3.4	1.376	3.1	0.00
A454	Q3-1	6334	0.100	0.085	0.035	62.27	9.2	0.5086	12	1.069	20	0.00
A455	Q3-1	9	0.076	0.001	0.0038	138.2	15	0.08363	57	0.07271	270	0.00
A456	Q3-1	179	0.091	0.004	0.021	56.60	8.5	0.5572	11	1.328	17	0.00
A457	Q3-1	125	0.21	0.004	0.011	106.3	9.6	0.3243	13	0.6869	20	0.00
A458	Q3-1	42	0.10	0.001	0.018	120.8	12	0.1987	25	0.3468	53	0.00
A459	Q3-1	15	0.16	0.001	0.0015	148.3	9.5	0.07018	39	-0.08118	84	0.00
A460	Q3-1	40	0.48	0.004	0.00088	131.0	6.0	0.06341	22	0.02847	114	0.00
A461	Q3-1	2222	0.13	0.041	0.082	13.93	14	0.7685	4.8	1.961	5.9	0.00
A462	Q3-1	133	0.11	0.004	0.012	69.44	10	0.4479	12	0.9999	23	0.00
A463	Q3-1	19	0.17	0.001	0.015	139.1	11	0.09396	41	0.08532	135	0.00
A464	Q3-1	31	0.33	0.003	0.14	124.2	7.5	0.06522	26	0.1496	42	0.00
A467	Q3-1	697	0.11	0.016	0.020	22.05	6.2	0.7713	6.9	1.857	7.8	0.00
A468	Q3-1	59	0.23	0.002	0.041	120.2	12	0.1577	43	0.2628	66	0.00
A469	Q3-1	15	0.087	0.001	0.13	128.2	13	0.1144	36	0.1309	110	0.00

A470	Q3-1	13	0.19	0.002	0.0065	127.7	8.2	0.05584	31	0.03151	260	0.00
A471	Q3-1	57	0.36	0.004	0.0082	118.8	8.4	0.1053	18	0.1911	37	0.00
A472	Q3-1	30	0.61	0.004	0.077	140.1	6.0	0.03768	23	0.003113	721	0.00
A473	Q3-1	59	0.57	0.004	0.011	132.5	5.8	0.07696	16	0.03303	97	0.00
A474	Q3-1	98	0.36	0.004	0.054	113.3	7.1	0.1750	16	0.3221	24	0.00
A475	Q3-1	45	0.42	0.003	0.011	135.3	7.0	0.07869	21	0.07937	56	0.00
A476	Q3-1	18	0.13	0.001	0.0065	119.2	11	0.08529	40	0.2982	50	0.00
A477	Q3-1	170	0.10	0.004	0.0099	61.47	8.4	0.5714	15	1.236	21	0.00
A479	Q3-1	51	0.20	0.002	0.042	118.9	9.7	0.1744	22	0.1914	51	0.00
A506	Q11	29	0.12	0.001	0.013	119.3	12	0.1771	28	0.08088	161	0.00
A507	Q11	187	0.54	0.008	0.026	94.93	6.5	0.1976	9.8	0.4818	15	0.00
A508	Q11	1745	1.0	0.045	0.058	54.35	8.0	0.5100	5.7	1.165	5.4	0.00
A509	Q11	38	0.074	0.001	0.0067	92.88	14	0.2698	24	0.5734	43	0.00
A510	Q11	47	0.037	0.001	0.0093	71.12	17	0.4661	26	1.108	35	0.00
A511	Q11	4230	0.94	0.11	0.090	25.31	5.6	0.6729	2.5	1.674	2.9	0.00
A512	Q11	83	0.090	0.002	0.011	75.41	12	0.3803	13	0.7858	24	0.00
A513	Q11	9	0.095	0.001	0.010	133.5	12	0.08217	57	0.008560	1794	0.00
A514	Q11	342	0.28	0.009	0.025	67.69	9.3	0.4784	10	0.9749	11	0.00
A515	Q11	69	0.51	0.004	0.031	127.4	5.8	0.1017	16	0.08618	45	0.00
A516	Q11	40	0.25	0.002	0.012	122.8	7.7	0.1110	20	0.1596	49	0.00
A517	Q11	29	0.39	0.003	0.0084	125.0	6.7	0.05750	28	0.07184	63	0.00
A518	Q11	56	0.48	0.004	0.017	131.7	6.3	0.08829	17	0.05986	64	0.00
A519	Q11	82	0.73	0.006	0.040	126.7	6.1	0.08577	14	0.08289	38	0.00
A520	Q11	97	0.32	0.004	0.0048	111.1	8.4	0.2070	14	0.3495	27	0.00
A521	Q11	73	0.089	0.002	0.0051	81.56	11	0.3396	15	0.9624	30	0.00
A522	Q11	56	0.48	0.004	0.019	135.6	6.7	0.09473	18	0.1418	39	0.00
A524	Q11	41	0.33	0.003	0.016	125.9	6.9	0.08560	22	0.03257	136	0.00
A525	Q11	58	0.27	0.003	0.016	115.8	7.3	0.1541	20	0.3610	27	0.00
A526	Q11	45	0.090	0.002	0.0080	100.3	13	0.2921	25	0.2568	86	0.00
A528	Q11	35	0.28	0.003	0.019	121.0	8.7	0.08745	21	0.2202	33	0.00
A529	Q11	401	0.71	0.013	0.024	91.93	5.1	0.3046	8.1	0.6041	9.7	0.00
A530	Q11	63	0.59	0.005	0.025	129.3	6.0	0.08063	16	0.09822	30	0.00
A531	Q11	374	0.57	0.015	0.37	81.27	5.3	0.3124	7.4	0.9730	7.4	0.00
A532	Q11	84	0.054	0.002	0.019	58.66	12	0.4787	17	0.8990	33	0.00
A533	Q11	435	0.49	0.014	0.026	70.37	4.9	0.3683	5.4	0.9377	10	0.00
A534	Q11	92	0.13	0.003	0.019	88.29	8.6	0.3734	16	0.8507	23	0.00
A535	Q11	78	0.34	0.004	0.037	112.2	8.0	0.1616	16	0.2501	29	0.00
A536	Q11	73	0.086	0.003	0.0052	69.55	11	0.3785	19	1.197	26	0.00
A537	P9b	2732	3.2	0.078	0.00002	88.73	4.1	0.4473	5.8	1.000	8.0	0.00
A538	P9b	13847	0.40	0.32	0.00084	4.524	7.3	0.8040	2.8	1.948	3.1	0.00
A539	P9b	345875	0.000	8.5	0.00000	0.000191	86	0.8019	0.75	1.920	1.3	0.00
A540	P9b	1761	2.3	0.052	0.00007	94.37	3.9	0.4254	5.2	1.019	9.2	0.00
A541	P9b	5691	2.5	0.15	0.00009	45.03	4.0	0.6221	3.3	1.511	4.7	0.00
A542	P9b	7022	2.8	0.19	0.00011	42.10	3.4	0.6402	3.1	1.568	3.9	0.00
A543	P9b	129643	0.72	3.2	0.0016	0.7484	3.8	0.8192	1.1	1.999	1.7	0.00
A544	P9b	122816	3.0	2.9	0.00031	3.680	6.7	0.8052	1.4	1.986	2.6	0.00
A545	P9b	612527	0.011	16	0.018	0.002321	13	0.8237	0.99	2.045	1.9	0.00
A546	P9b	8989	1.3	0.20	0.00003	22.82	14	0.7121	4.9	1.765	5.5	0.00
A547	P9b	2708	2.1	0.078	0.00002	66.48	3.7	0.5246	4.8	1.283	6.0	0.00
A548	P9b	3424	3.2	0.098	0.00001	78.03	4.7	0.5120	5.0	1.212	7.9	0.00
A554	P9b	4636	16	0.18	0.00041	139.4	3.1	0.2554	4.4	0.5366	6.0	0.00
A555	P9b	11193	10	0.32	0.0046	78.83	4.3	0.4987	4.7	1.171	5.2	0.00
A556	P9b	6422	5.6	0.18	0.0069	76.24	4.3	0.4975	4.4	1.176	5.6	0.00
A557	P9b	11612	5.2	0.32	0.0014	45.91	3.5	0.6297	2.5	1.537	3.9	0.00
A558	P9b	14395	13	0.42	0.00065	71.25	4.3	0.5266	2.5	1.225	3.5	0.00
A559	P9b	60642	14	1.4	0.00073	32.08	7.5	0.6795	2.6	1.665	3.3	0.00
A560	P9b	9942	6.5	0.27	0.00069	63.34	5.1	0.5613	3.8	1.388	5.1	0.00
A561	P9b	11731	11	0.34	0.0042	75.30	3.7	0.4947	2.9	1.199	3.7	0.00
A562	P9b	16711	5.2	0.43	0.0068	35.73	4.2	0.6666	2.1	1.616	2.5	0.00
A563	P9b	6219	7.4	0.19	0.00044	85.39	6.6	0.4466	6.6	1.044	9.3	0.00
A564	P9b	6211	5.8	0.18	0.0034	75.87	5.6	0.4987	4.7	1.186	4.9	0.00

A565	P9b	9877	7.6	0.28	0.0038	67.00	5.5	0.5321	4.1	1.293	5.0	0.00
A566	P9b	5255	5.4	0.16	0.0036	80.08	4.6	0.4661	5.3	1.173	6.7	0.00
A567	P9b	8627	2.7	0.23	0.00091	33.58	4.7	0.6790	2.9	1.654	3.6	0.00
A568	P9b	2069	1.6	0.062	0.0017	66.10	5.9	0.5199	5.7	1.351	9.2	0.00
A569	P9a	27821	14	0.77	0.0051	48.76	3.7	0.6017	1.4	1.456	2.0	0.00
A570	P9a	17557	13	0.48	0.0031	69.93	7.1	0.5096	4.1	1.166	5.0	0.00
A571	P9a	52935	9.5	1.4	0.0090	21.49	5.8	0.7260	1.2	1.783	1.4	0.00
A572	P9a	22712	19	0.66	0.0055	66.59	8.3	0.4987	4.3	1.217	5.2	0.00
A573	P9a	8238	17	0.28	0.0014	111.4	3.4	0.3300	3.0	0.7353	3.5	0.00
A574	P9a	28536	22	0.81	0.0070	66.37	5.6	0.5144	2.8	1.236	3.2	0.00
A575	P9a	3190	14	0.14	0.0013	140.6	3.5	0.2077	5.0	0.4181	6.6	0.00
A576	P9a	9607	22	0.34	0.0015	115.5	3.2	0.3062	3.5	0.6822	4.9	0.00
A577	P9a	26754	18	0.73	0.0010	62.32	6.7	0.5560	2.9	1.302	3.7	0.00
A578	P9a	7471	12	0.24	0.00081	99.33	8.7	0.3650	9.3	0.8416	11	0.00
A579	P9a	9735	9.3	0.28	0.0014	79.04	9.0	0.4615	5.9	1.054	6.4	0.00
A580	P9a	18495	0.38	0.49	0.35	2.621	5.4	0.8065	1.5	1.996	1.7	0.00
A581	P9a	31894	1.7	0.78	0.017	7.569	7.7	0.7924	1.3	1.935	1.7	0.00
A582	P9a	47769	1.6	1.2	0.043	4.532	4.6	0.8069	0.85	1.986	1.4	0.00
A583	P9a	23447	1.3	0.60	0.034	7.371	4.3	0.7990	1.3	1.915	2.0	0.00
A584	P9a	18523	2.9	0.49	0.052	18.98	4.1	0.7337	1.5	1.813	2.1	0.00
A585	P9a	52508	2.5	1.3	0.032	6.223	7.0	0.7958	1.0	1.953	1.2	0.00
A586	P9a	65433	2.1	1.7	0.037	4.033	4.2	0.8026	0.87	1.992	1.3	0.00
A587	P9a	36322	0.83	0.95	0.029	2.943	3.9	0.8109	1.1	1.974	1.6	0.00
A588	P9a	32309	0.70	0.84	0.015	2.768	5.2	0.8119	0.95	2.000	1.5	0.00
A589	P9a	29811	3.5	0.78	0.039	14.62	3.9	0.7499	1.3	1.817	1.6	0.00
A590	P9a	31121	2.7	0.83	0.050	10.45	6.9	0.7760	1.0	1.864	1.8	0.00
A591	P9a	35197	0.86	0.93	0.028	3.102	3.7	0.8116	1.2	2.005	1.6	0.00
A592	P9a	88522	0.93	2.0	0.039	1.812	15	0.8159	1.2	1.994	2.0	0.00
A593	P9a	40534	0.88	1.1	0.027	2.718	3.5	0.8075	1.1	2.019	1.6	0.00
A594	P9a	85853	2.0	2.3	0.042	2.913	4.6	0.8134	0.82	2.010	1.3	0.00
RM ₀ (n=25) ^g		84544	0.82	2.3	0.91	1.238	2.5	0.8710	0.62	2.101	1.1	0.00
RM ₁ (n=13) ^g		44965	1.8	1.2	0.035	6.495	169	0.7940	6.8	1.946	7.8	0.00
RM ₂ (n=13) ^g		50057	1.7	1.3	0.11	5.984	190	0.8000	8.7	1.962	8.9	0.00
RM ₃ (n=13) ^g		2344	2.1	0.048	0.00001	109.0	193	0.5250	90	1.238	100	0.00

^a Within run background-corrected mean ²⁰⁷Pb signal in cps (counts per second).

^b U and Pb concentrations and Th/U ratio were calculated relative to the primary reference material.

^c Corrected for background, within-run fractionation and subsequently normalised to the primary reference material (ID-TIMS value/measured value).

^d Rho is the ²⁰⁶Pb/²³⁸U - ²⁰⁷Pb/²⁰⁶Pb uncertainty correlation coefficient.

^e RM₁: Reference material 1.

RM₀												
G 01	NIST614	107409	0.86	2.4	0.85	1.224	0.50	0.8688	0.43	2.090	0.60	0.00
G 02	NIST614	102518	0.83	2.3	0.92	1.251	0.40	0.8739	0.36	2.109	0.71	0.00
G 33	NIST614	101057	0.84	2.4	0.88	1.240	0.53	0.8718	0.49	2.117	0.82	0.00
G 34	NIST614	99116	0.82	2.3	0.96	1.246	0.41	0.8728	0.38	2.100	0.69	0.00
G 67	NIST614	93140	0.77	2.2	0.84	1.202	0.43	0.8667	0.43	2.084	0.79	0.00
G 68	NIST614	100590	0.86	2.4	0.98	1.249	0.58	0.8701	0.62	2.108	0.85	0.00
G 102	NIST614	97307	0.85	2.4	0.97	1.256	0.57	0.8697	0.33	2.092	0.54	0.00
G 103	NIST614	98204	0.86	2.4	0.96	1.247	0.39	0.8694	0.44	2.117	0.45	0.00
G 146	NIST614	92072	0.82	2.3	0.90	1.239	0.62	0.8714	0.42	2.083	0.52	0.00
G 147	NIST614	91234	0.81	2.3	0.91	1.235	0.52	0.8765	0.32	2.102	0.87	0.00
G 195	NIST614	78355	0.70	2.0	0.77	1.224	1.1	0.8706	0.87	2.099	1.00	0.00
G 238	NIST614	88344	0.85	2.4	0.96	1.264	0.62	0.8723	0.52	2.108	0.83	0.00
G 239	NIST614	79151	0.74	2.1	0.82	1.227	0.79	0.8741	0.38	2.106	0.78	0.00
G 283	NIST614	87615	0.86	2.4	0.97	1.231	0.69	0.8680	0.47	2.104	0.53	0.00
G 284	NIST614	79923	0.80	2.2	0.91	1.247	0.47	0.8689	0.51	2.112	0.62	0.00
G 328	NIST614	84190	0.85	2.4	0.97	1.218	0.47	0.8734	0.37	2.126	0.76	0.00
G 329	NIST614	75806	0.77	2.2	0.87	1.219	0.51	0.8649	0.43	2.073	0.70	0.00
G 383	NIST614	79669	0.89	2.4	0.97	1.269	0.56	0.8705	0.51	2.101	0.71	0.00
G 384	NIST614	75050	0.82	2.3	0.85	1.248	0.65	0.8757	0.64	2.097	0.85	0.00

G 439	NIST614	72758	0.85	2.4	0.91	1.244	0.51	0.8722	0.52	2.095	0.76	0.00
G 440	NIST614	70175	0.81	2.3	0.92	1.238	0.75	0.8710	0.51	2.100	0.87	0.00
G 494	NIST614	67917	0.83	2.4	0.94	1.215	0.62	0.8688	0.55	2.106	0.86	0.00
G 495	NIST614	62517	0.77	2.2	0.85	1.235	0.72	0.8711	0.53	2.102	0.80	0.00
G 549	NIST614	64697	0.86	2.4	0.92	1.239	0.60	0.8697	0.45	2.097	0.71	0.00
G 550	NIST614	64795	0.87	2.4	0.90	1.246	0.45	0.8729	0.48	2.106	0.95	0.00

		84544	0.82	2.3	0.91	1.238	2.5	0.8710	0.62	2.101	1.1	0.00
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RM₁

P 03	WC-1	5571	4.4	0.21	0.00022	22.52	3.0	0.1076	1.9	0.1460	3.7	0.00
P 35	WC-1	5228	3.9	0.19	0.00037	22.53	3.1	0.1170	2.5	0.1685	4.3	0.00
P 69	WC-1	5381	4.2	0.21	0.00034	22.80	3.0	0.1165	2.1	0.1731	4.0	0.00
P 104	WC-1	4688	3.2	0.17	0.00033	22.12	3.1	0.1308	1.9	0.2041	3.9	0.00
P 148	WC-1	3574	2.9	0.14	0.00030	22.67	3.1	0.1135	2.2	0.1577	3.7	0.00
P 196	WC-1	4081	3.5	0.17	0.00020	23.13	3.2	0.1160	2.1	0.1643	3.2	0.00
P 240	WC-1	3790	3.5	0.17	0.00030	22.69	3.6	0.1124	2.2	0.1624	4.0	0.00
P 285	WC-1	3756	3.2	0.16	0.00030	22.68	3.1	0.1238	2.7	0.1822	4.8	0.00
P 330	WC-1	3257	3.2	0.15	0.00022	23.40	3.0	0.1135	2.4	0.1593	4.5	0.00
P 385	WC-1	3327	3.2	0.16	0.00023	23.17	3.2	0.1225	2.7	0.1953	4.8	0.00
P 441	WC-1	2596	2.8	0.14	0.00035	22.84	3.2	0.1149	3.2	0.1722	5.2	0.00
P 496	WC-1	3093	3.5	0.17	0.00026	23.21	3.0	0.1201	2.7	0.1817	4.3	0.00
P 551	WC-1	2597	2.9	0.15	0.00039	22.33	3.1	0.1253	2.6	0.1801	5.9	0.00

		3918	3.4	0.17	0.00029	22.78	3.3	0.1180	11	0.1728	18	0.00
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RM₂

B 04	Nama	38756	1.6	0.70	0.036	4.907	4.6	0.4879	2.7	1.111	3.0	0.00
B 36	Nama	18309	1.1	0.36	0.016	6.449	3.1	0.3971	1.3	0.9011	2.2	0.00
B 70	Nama	15678	1.2	0.32	0.012	6.933	3.1	0.3668	1.9	0.8000	2.6	0.00
B 105	Nama	11543	0.96	0.25	0.011	6.987	4.0	0.3467	2.0	0.7525	3.0	0.00
B 149	Nama	16150	1.2	0.35	0.029	6.689	4.5	0.3750	1.9	0.8349	3.1	0.00
B 197	Nama	20322	1.4	0.45	0.037	6.113	4.4	0.3994	2.1	0.8743	3.0	0.00
B 241	Nama	15621	0.74	0.33	0.038	5.013	5.5	0.4898	1.9	1.134	2.5	0.00
B 286	Nama	18148	1.4	0.42	0.077	6.690	3.2	0.3935	1.4	0.8990	2.0	0.00
B 331	Nama	14260	0.98	0.34	0.024	6.029	3.6	0.4271	1.6	0.9730	2.5	0.00
B 386	Nama	21935	1.2	0.53	0.055	4.985	3.8	0.4780	1.5	1.093	2.2	0.00
B 442	Nama	11764	1.1	0.33	0.019	6.444	3.9	0.3812	2.2	0.8252	2.8	0.00
B 497	Nama	8493	0.96	0.26	0.029	6.953	3.3	0.3568	1.7	0.7801	3.4	0.00
B 552	Nama	7626	0.94	0.25	0.011	7.078	3.5	0.3587	3.4	0.7882	4.5	0.00

		16816	1.1	0.38	0.030	6.252	26	0.4045	25	0.9051	29	0.00
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RM₃

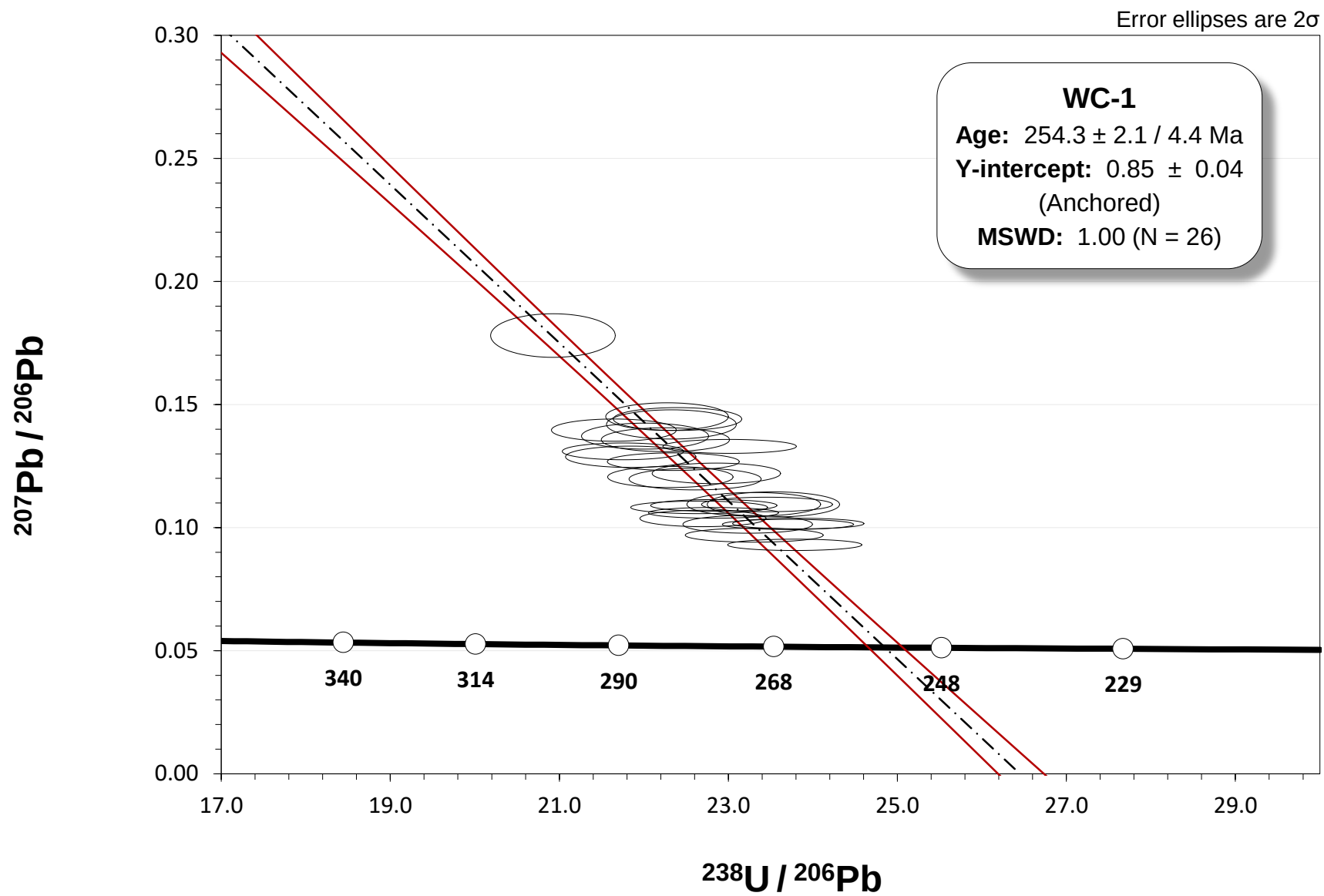
9 5	CalGrun	1383	5.4	0.033	0.00000	239.5	4.7	0.2303	7.6	0.4613	10	0.00
9 37	CalGrun	3766	0.15	0.061	0.00000	7.829	3.7	0.7462	2.9	1.847	3.5	0.00
9 71	CalGrun	3753	1.2	0.064	0.00001	51.90	4.7	0.6523	2.6	1.566	3.4	0.00
9 106	CalGrun	1374	2.6	0.029	0.00000	171.4	3.8	0.3824	4.0	0.8643	7.4	0.00
9 150	CalGrun	3510	1.0	0.063	0.00001	48.04	3.5	0.6768	2.8	1.676	4.4	0.00
9 198	CalGrun	391	5.7	0.019	0.00000	303.7	3.7	0.08929	5.7	0.1009	16	0.00
9 242	CalGrun	2301	0.69	0.044	0.00000	45.38	5.6	0.6544	4.1	1.664	5.6	0.00
9 287	CalGrun	4641	0.19	0.089	0.00005	6.717	4.2	0.7676	2.5	1.863	3.7	0.00
9 332	CalGrun	2829	0.62	0.056	0.00000	32.47	3.6	0.6930	2.9	1.647	5.1	0.00
9 387	CalGrun	2254	0.84	0.048	0.00000	50.83	3.5	0.6693	3.7	1.526	3.5	0.00
9 443	CalGrun	2315	0.88	0.054	0.00002	45.57	3.6	0.6454	3.7	1.550	4.2	0.00
9 498	CalGrun	1526	2.5	0.041	0.00000	135.1	3.8	0.4750	3.2	1.063	5.1	0.00
9 553	CalGrun	436	5.2	0.023	0.00000	278.9	3.8	0.1424	8.2	0.2594	8.1	0.00

		2344	2.1	0.048	0.00001	109.0	193	0.5250	90	1.238	100	0.00
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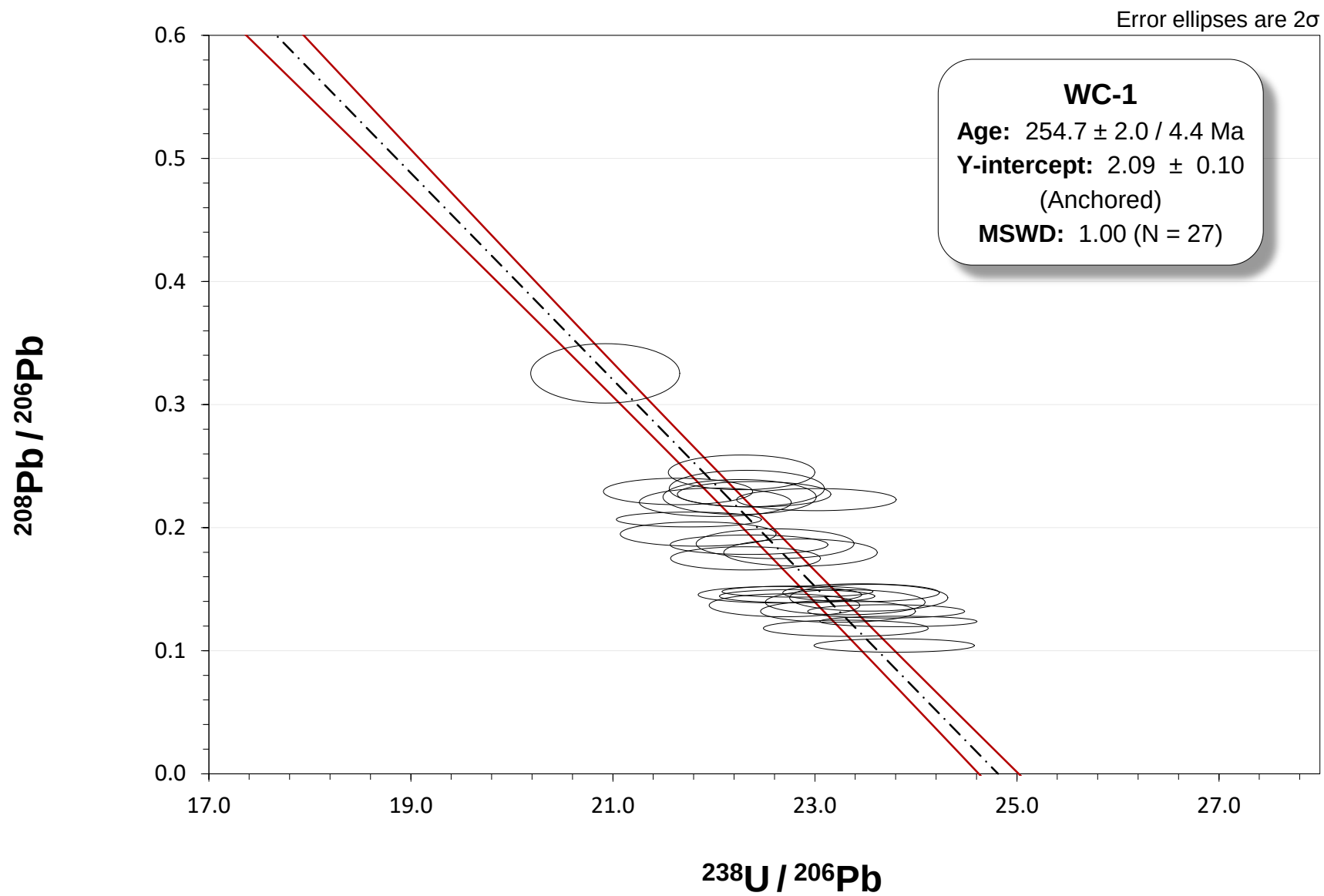
LA-ICP-MS U-Th-Pb data report

Laboratory & Sample Preparation	
Laboratory name	FIERCE, Frankfurt Isotope & Element Research Center Goethe Universität, Frankfurt am Main
Sample type/mineral	Carbonate
Sample preparation	25 mm polished resin mounts
Imaging	Petrographic microscope & 2400 dpi digital scan
Laser ablation system	
Make, Model & type	RESolution ArF excimer laser (COMpex Pro 102)
Ablation cell	Two-volume ablation cell (Laurin Technic S155)
Laser wavelength	193 nm
Pulse width	20 ns
Fluence	2 J/cm ²
Repetition rate	12 Hz
Pre-ablation	4 pulses (same parameters as main ablation)
Ablation duration	18 s
Ablation rate	~ 0.6 µm/s
Spot shape & size	Square, 213 µm (side)
Sampling mode	Static spot ablation
Gasses	Sample cell: He. Funnel: He + Ar. Tubbing: He + Ar + N
Gas flows	He (300 ml/min), Ar (1100 ml/min), N (5 ml/min).
ICP-MS Instrument	
Make, Model & type	ThermoScientific ElementXr sector field ICP-MS
Sample introduction	Ablation aerosol
RF power	1300 W
Detection system	Secondary electron multiplier (with conversion dynode at -8kV). Simultaneous analogue and counting (pulse) modes of detection (conversion factors calculated per mass and applied offline). Magnetic field fixed. Detection by peak jumping with electrostatic analyzer.
Masses measured	206, 207, 208, 232, 238
Dwell times	206: 6.4 ms, 207: 7.5 ms, 208: 3.0 ms, 232: 2.0 ms, 238: 4.6 ms
Samples per peak/integration type	4 for all masses/average
Total time per run	99 ms
Number of runs/total time	370 / 36.6 s
Acquisition mode	Trigger from laser (20 s after pre-ablation), background: 18 s, ablation: 18 s
Dead time	29 ns
Data Processing	
Gas blank	20 s on-peak zero subtracted.
Calibration strategy	NIST SRM-614 used as primary standard, WC-1, ASH15D, NAMA & Calgrun used as secondary reference materials (validation).
Reference Material (RM) information	Soda-lime glass NIST SRM-614, WC-1 (Roberts et al., 2017), ASH15D (Vaks et al., 2003), NAMA (in-house dolomite RM), Calgrun (in-house calcite RM)
Data processing / LIEF correction	In-house VBA spreadsheet program (Gerdes and Zeh, 2006, 2009). Intercept method for LIEF correction, assumes cPb corrected WC-1 and samples behave identically.
Mass discrimination	²⁰⁷ Pb/ ²⁰⁶ Pb (0.2%) and ²⁰⁶ Pb/ ²³⁸ U (5%) normalised to primary standard
Common-Pb correction	No common-Pb correction applied to the data.
Uncertainty level & propagation	Ages are quoted at 2s absolute, propagation by quadratic addition.
Quality control / Validation	Sequence 1: WC-1: 254.5 ± 2.5 Ma (2s, MSWD = 1.00, n = 13) NAMA: 537.6 ± 7.4 Ma (2s, MSWD = 1.29, n = 13) Calgrun: 19.97 ± 0.45 Ma (2s, MSWD = 0.99, n = 13) (Ages are the ²⁰⁶ Pb/ ²³⁸ U lower intercept ages of the calculated isochrons with the concordia curve in the Tera-Wasserburg space)
Other information	

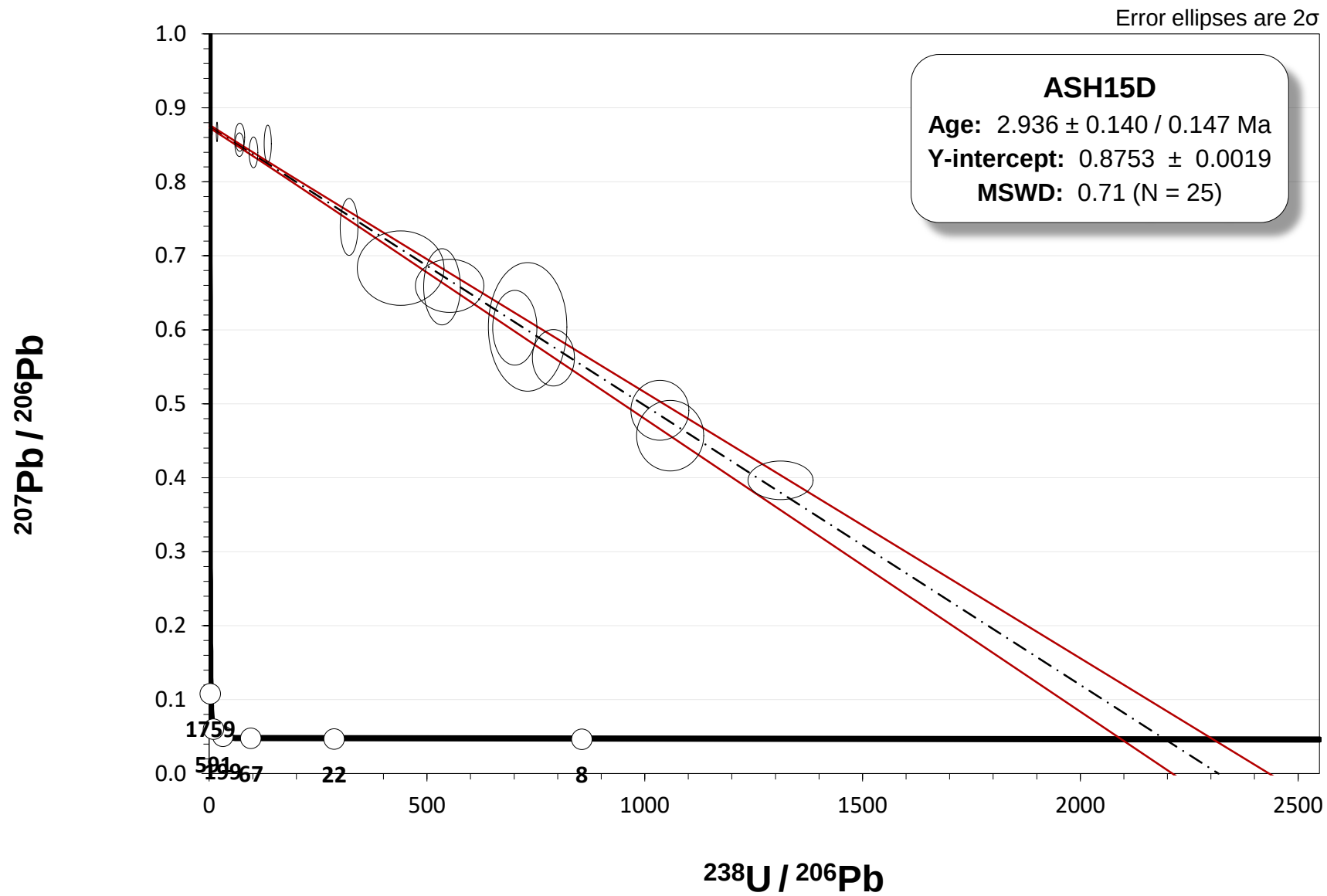
Sequence of analysis 2

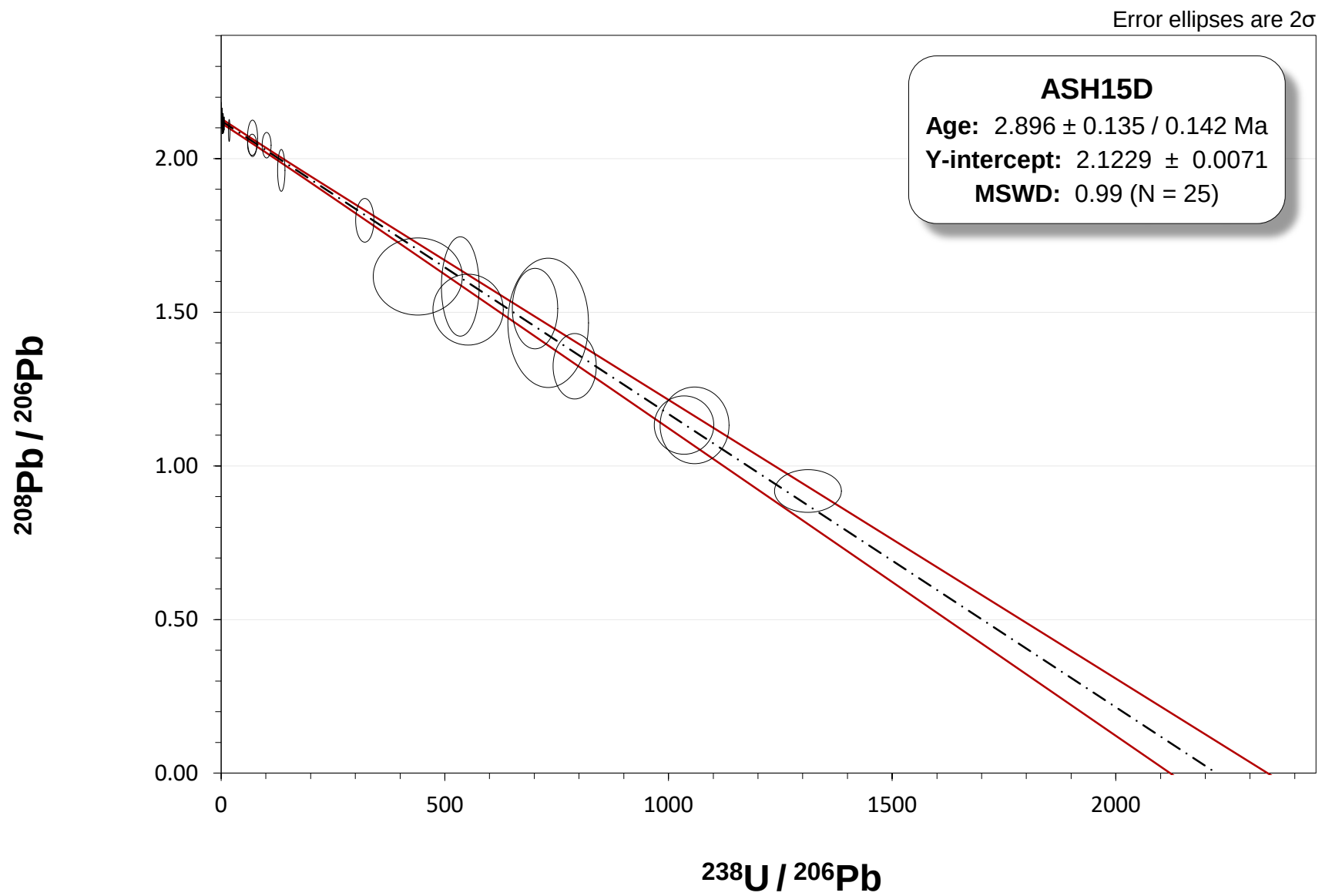


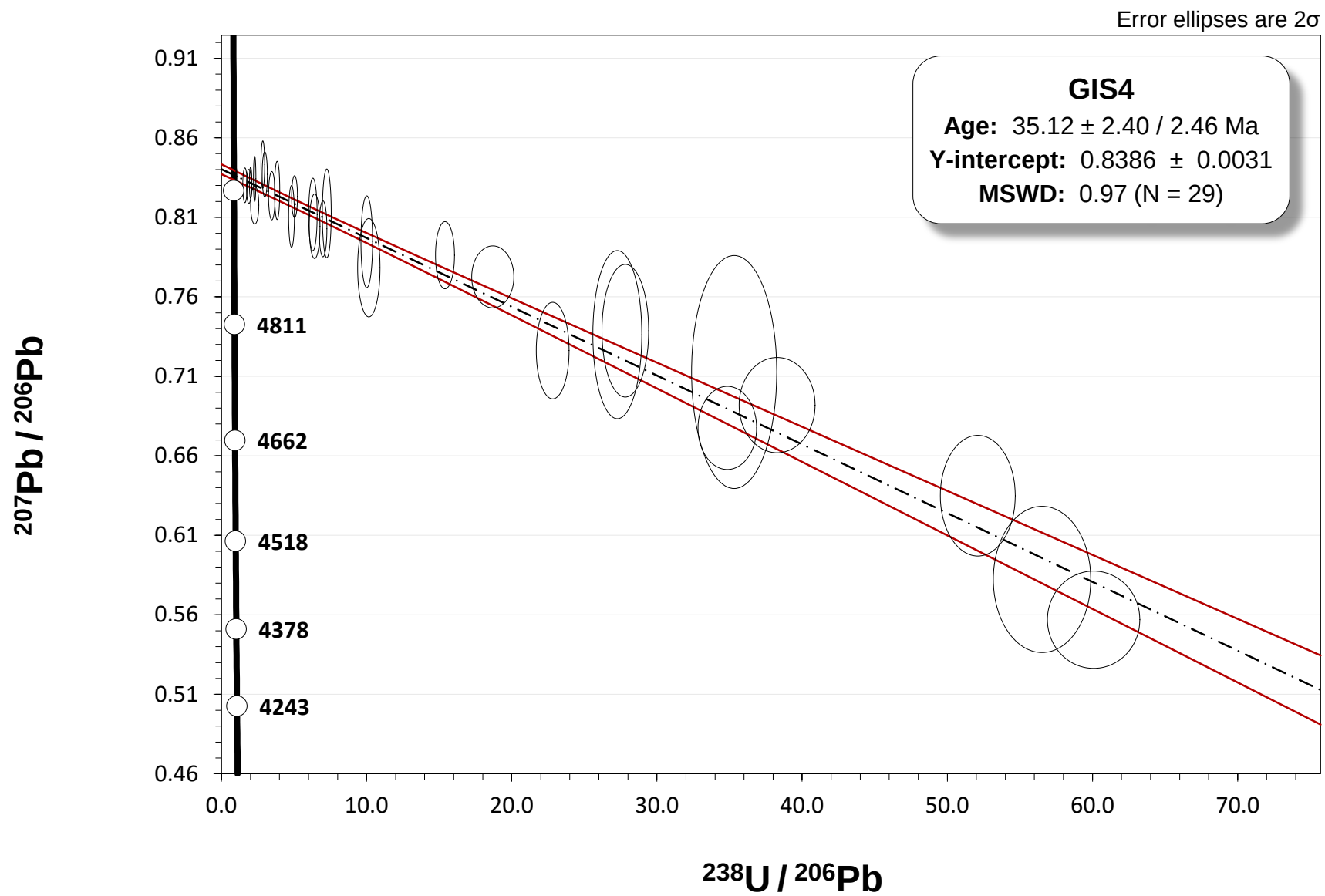
Sec RM1



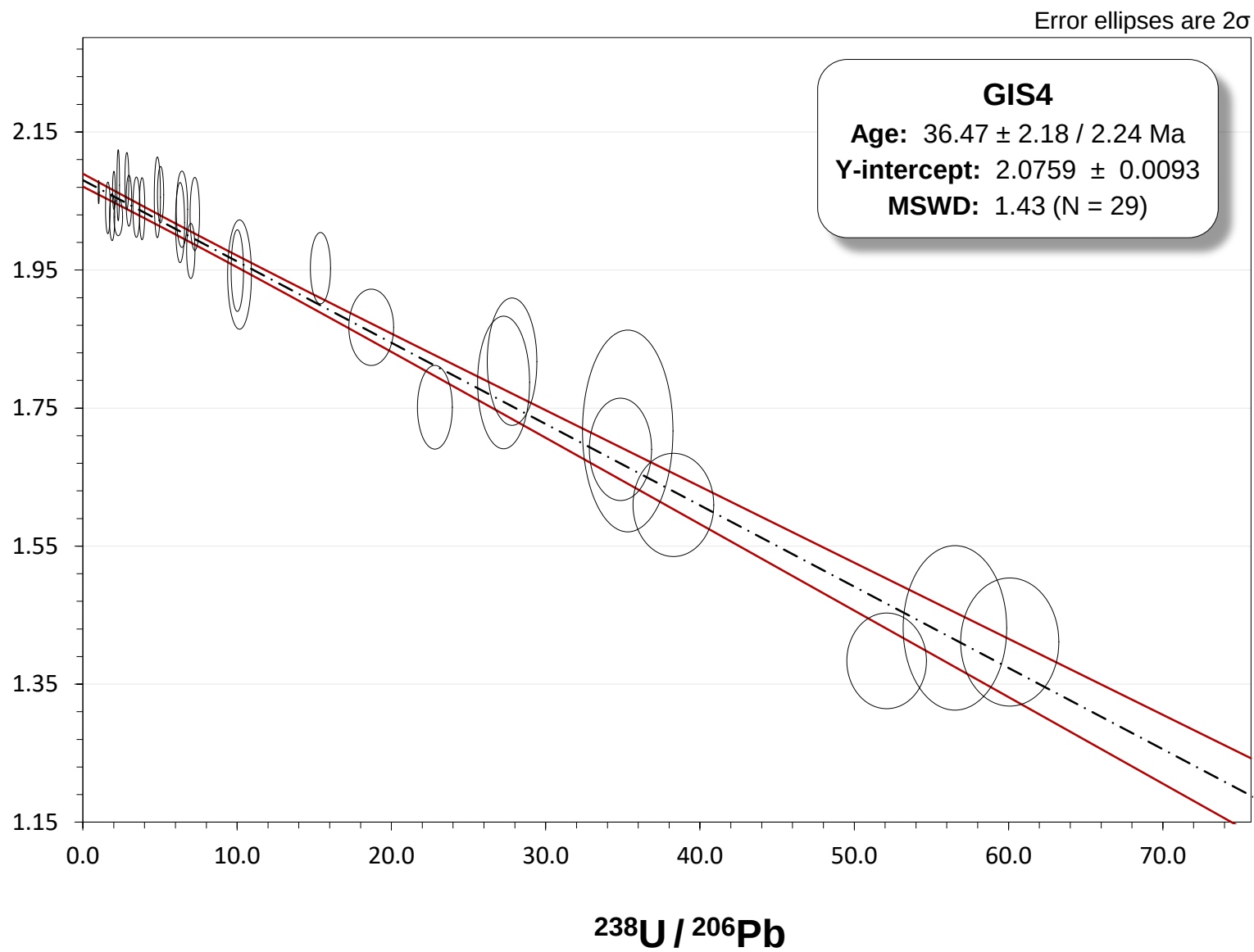
Sec RM1



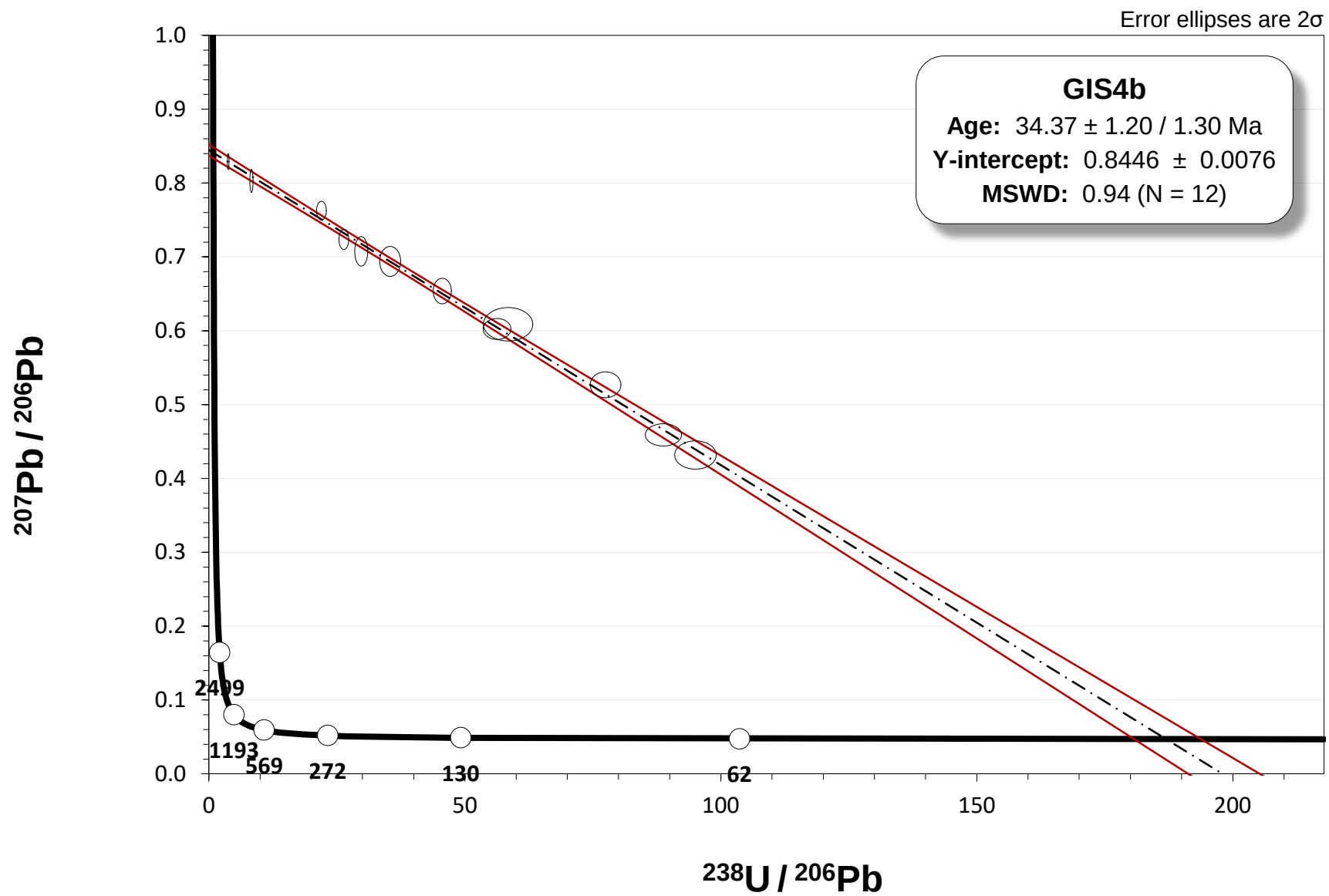




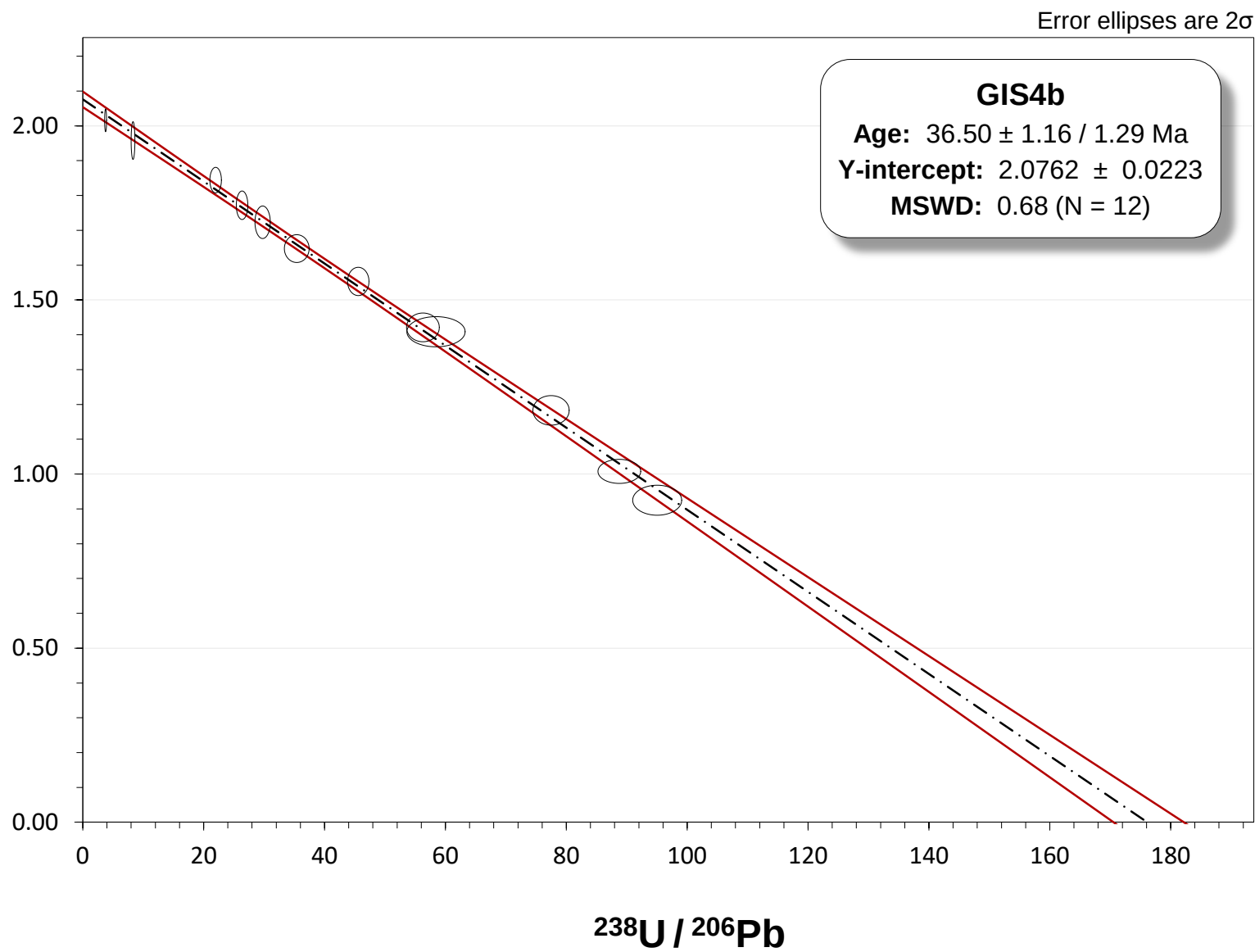
$^{208}\text{Pb} / ^{206}\text{Pb}$

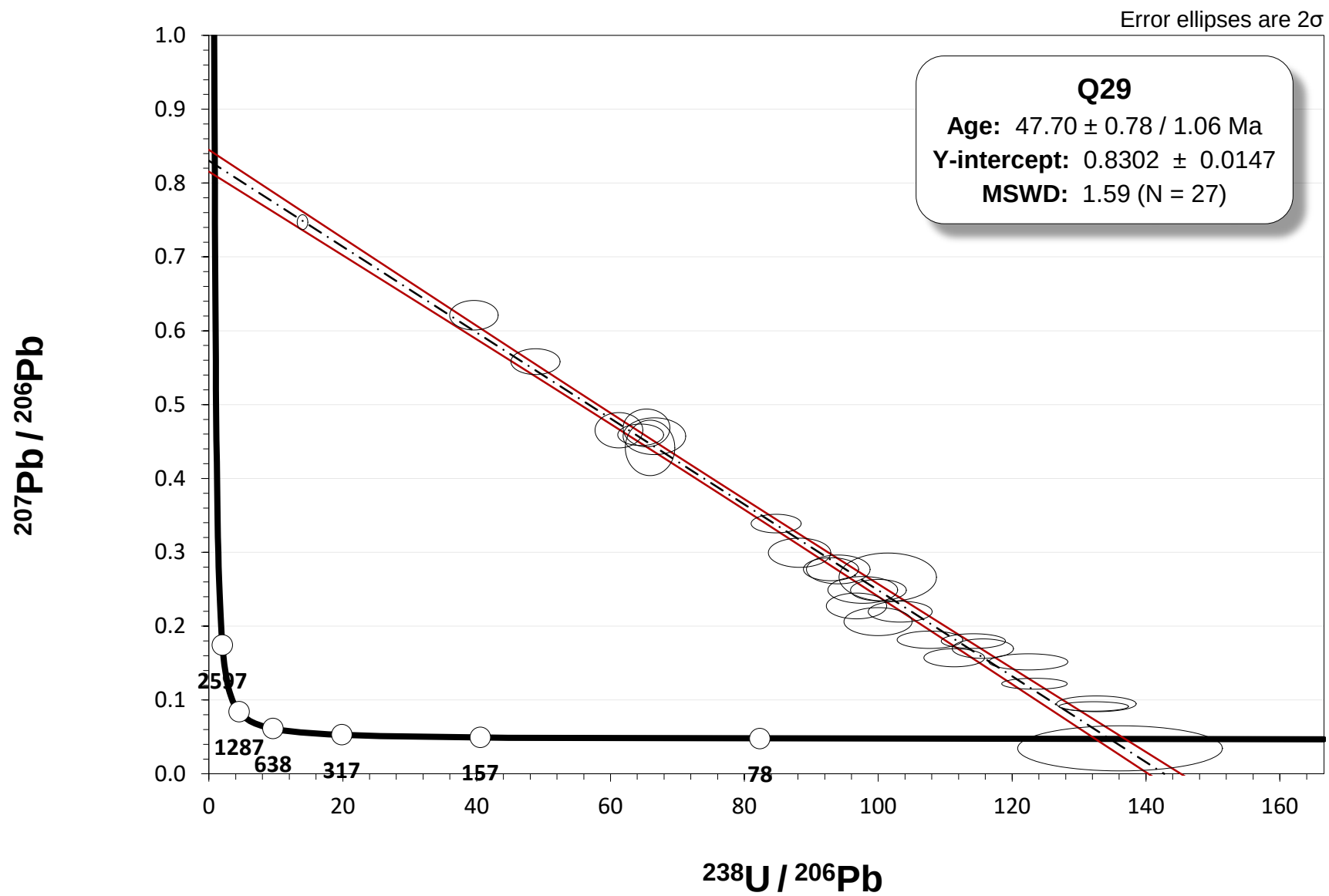


$^{238}\text{U} / ^{206}\text{Pb}$

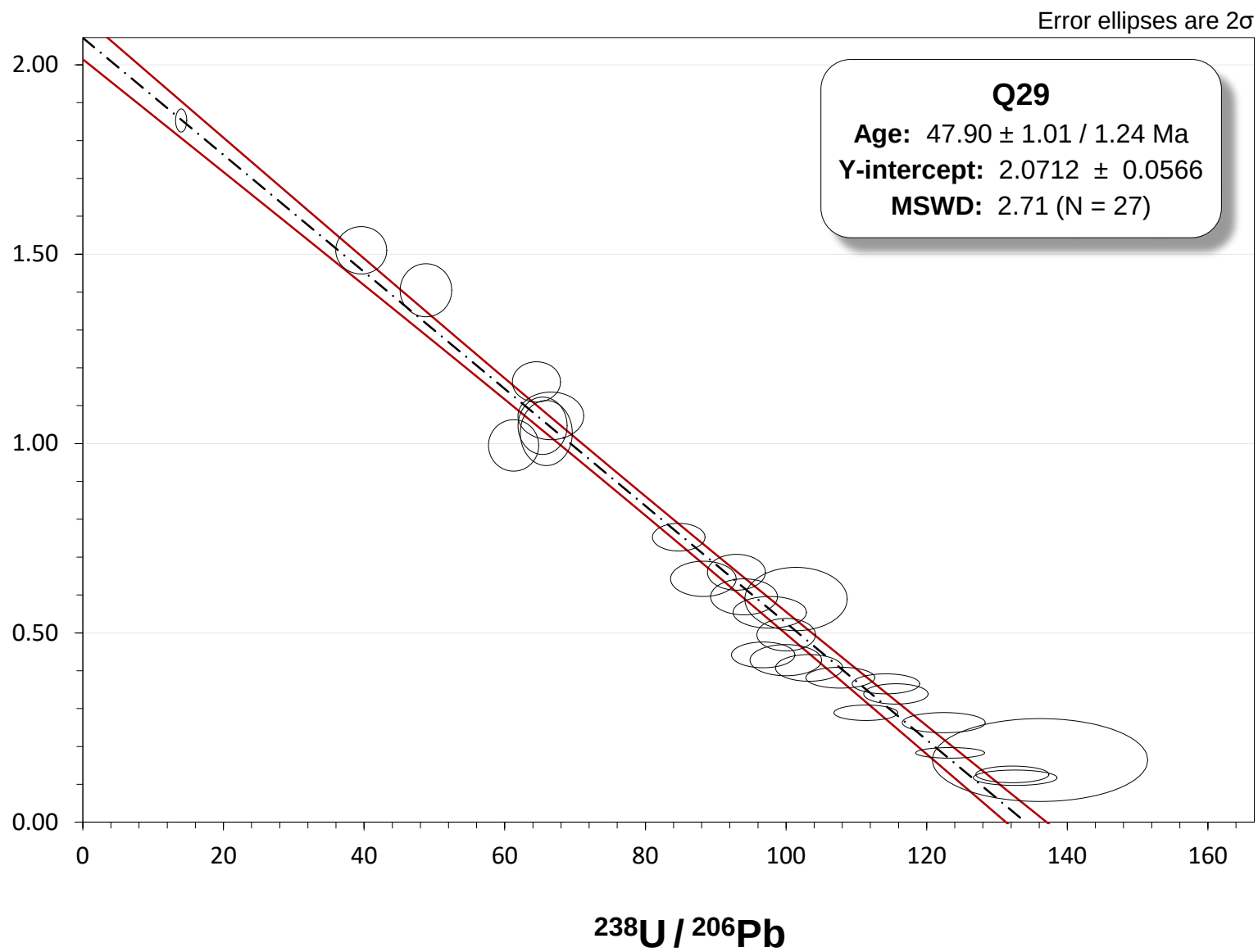


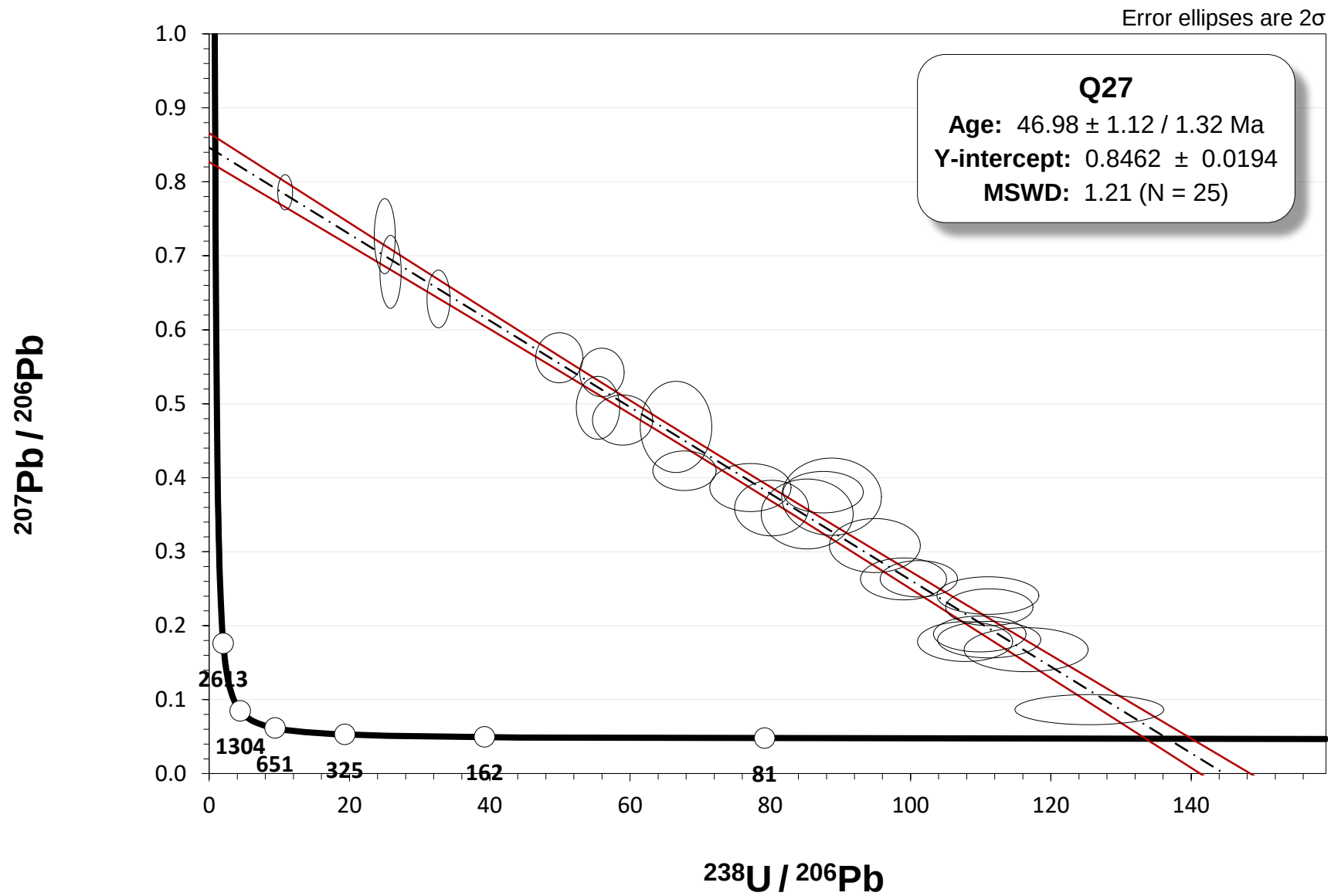
$^{208}\text{Pb} / ^{206}\text{Pb}$



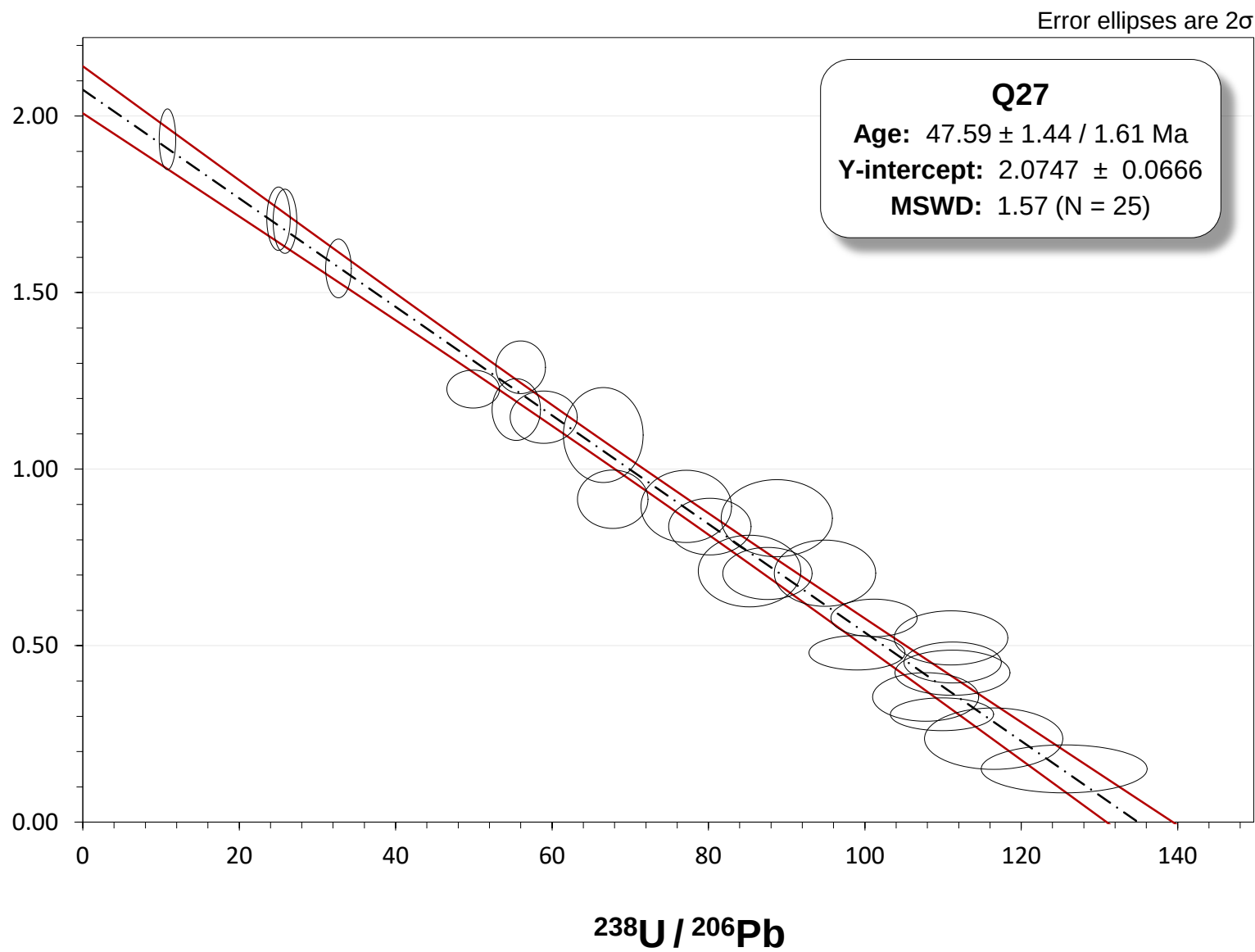


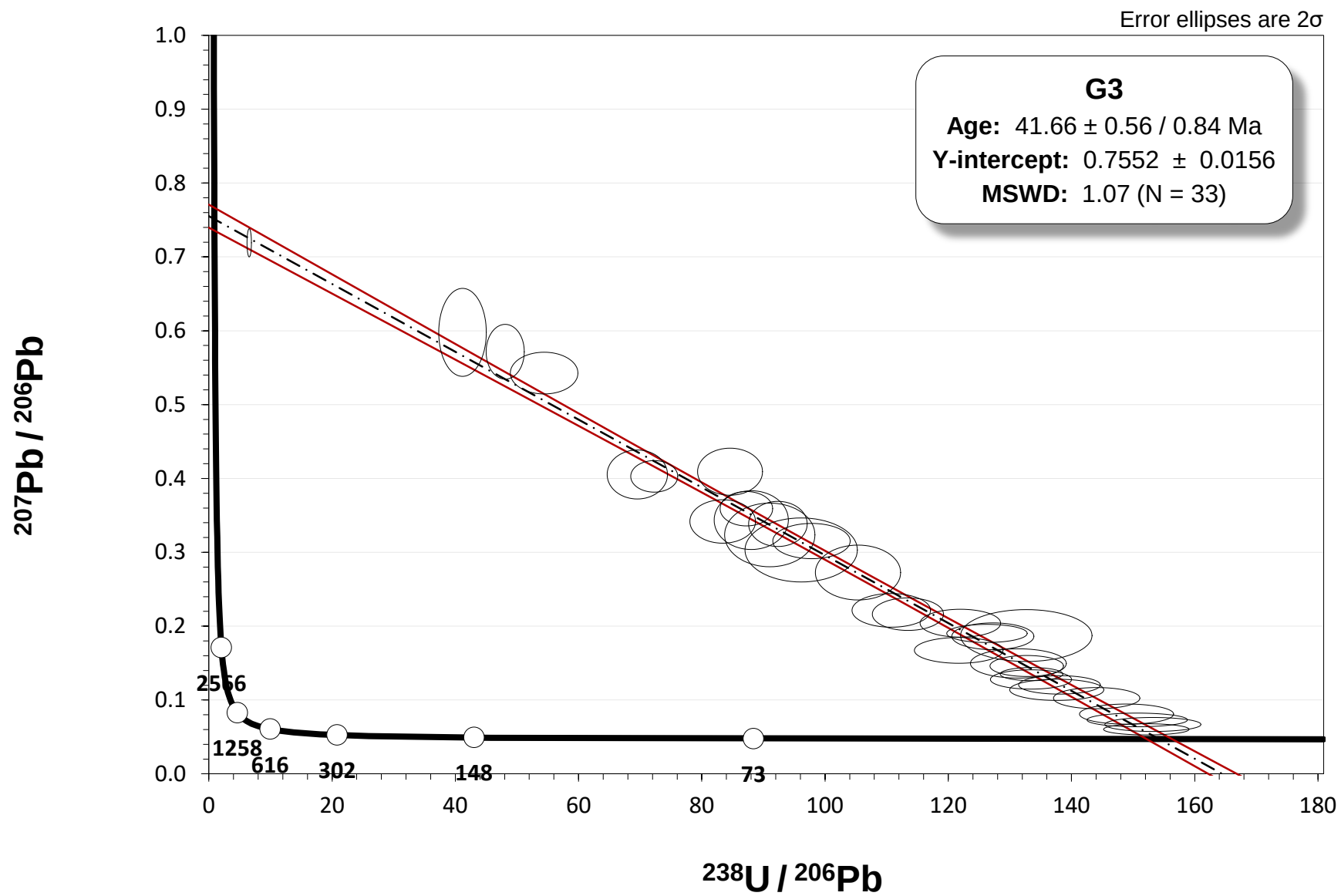
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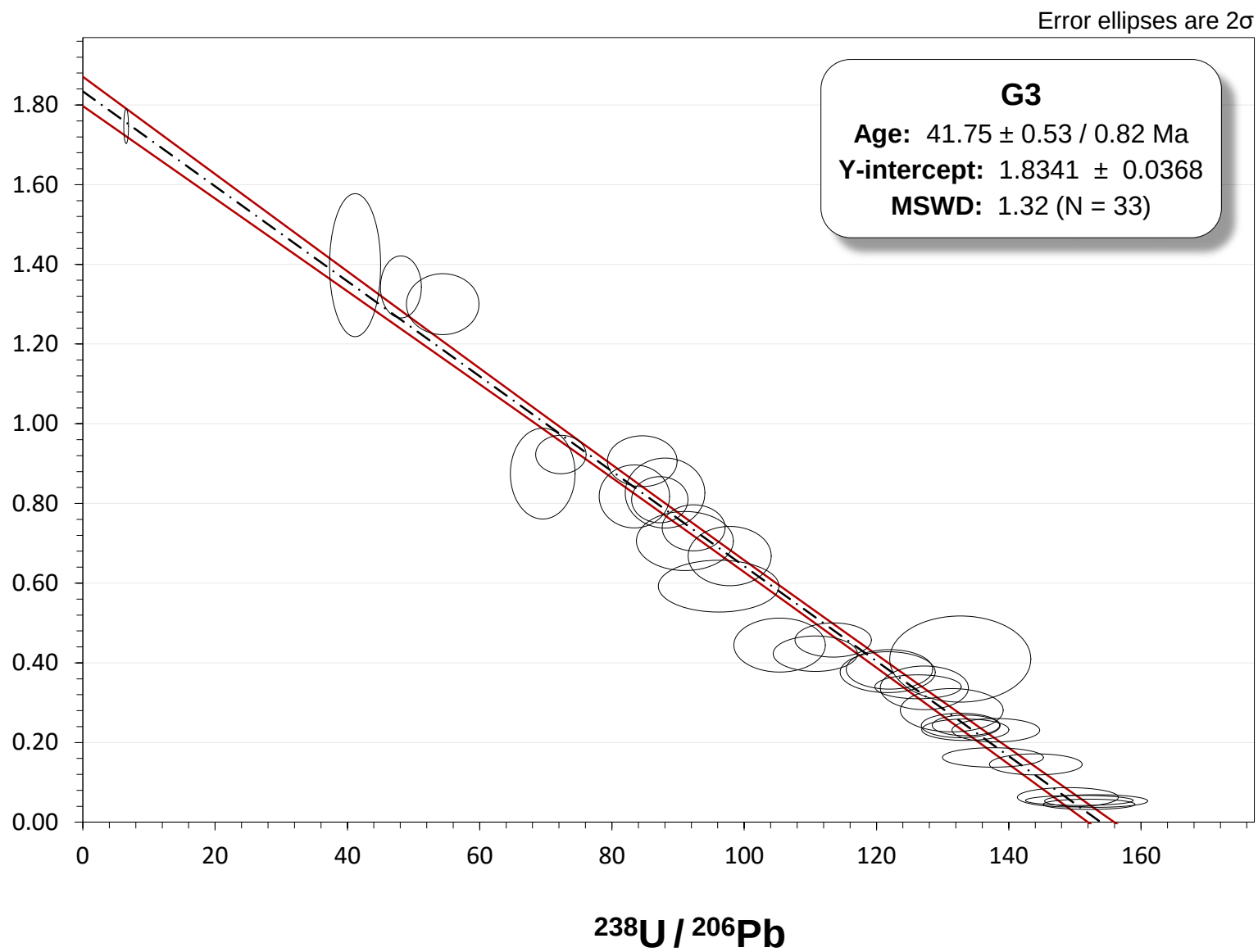


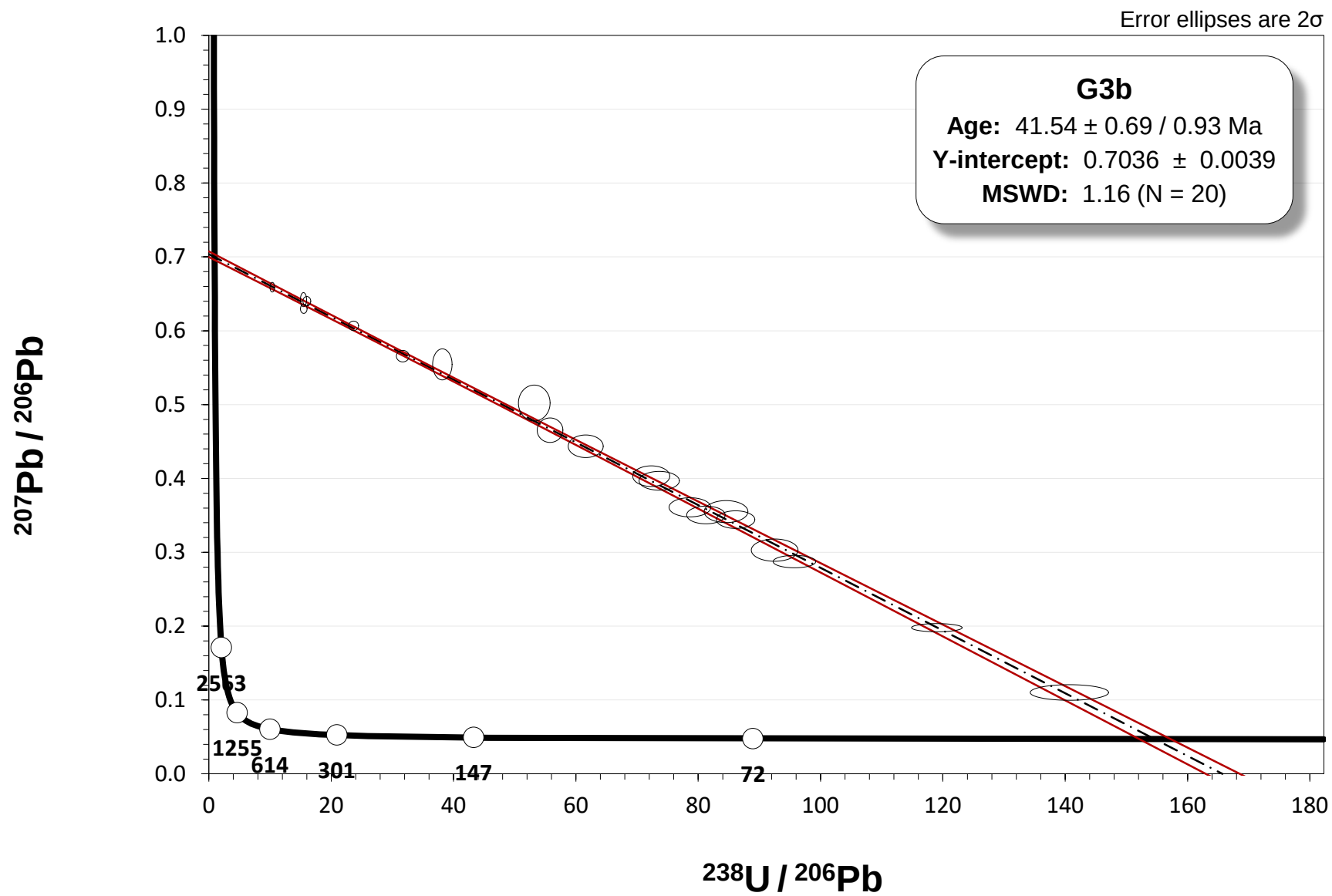
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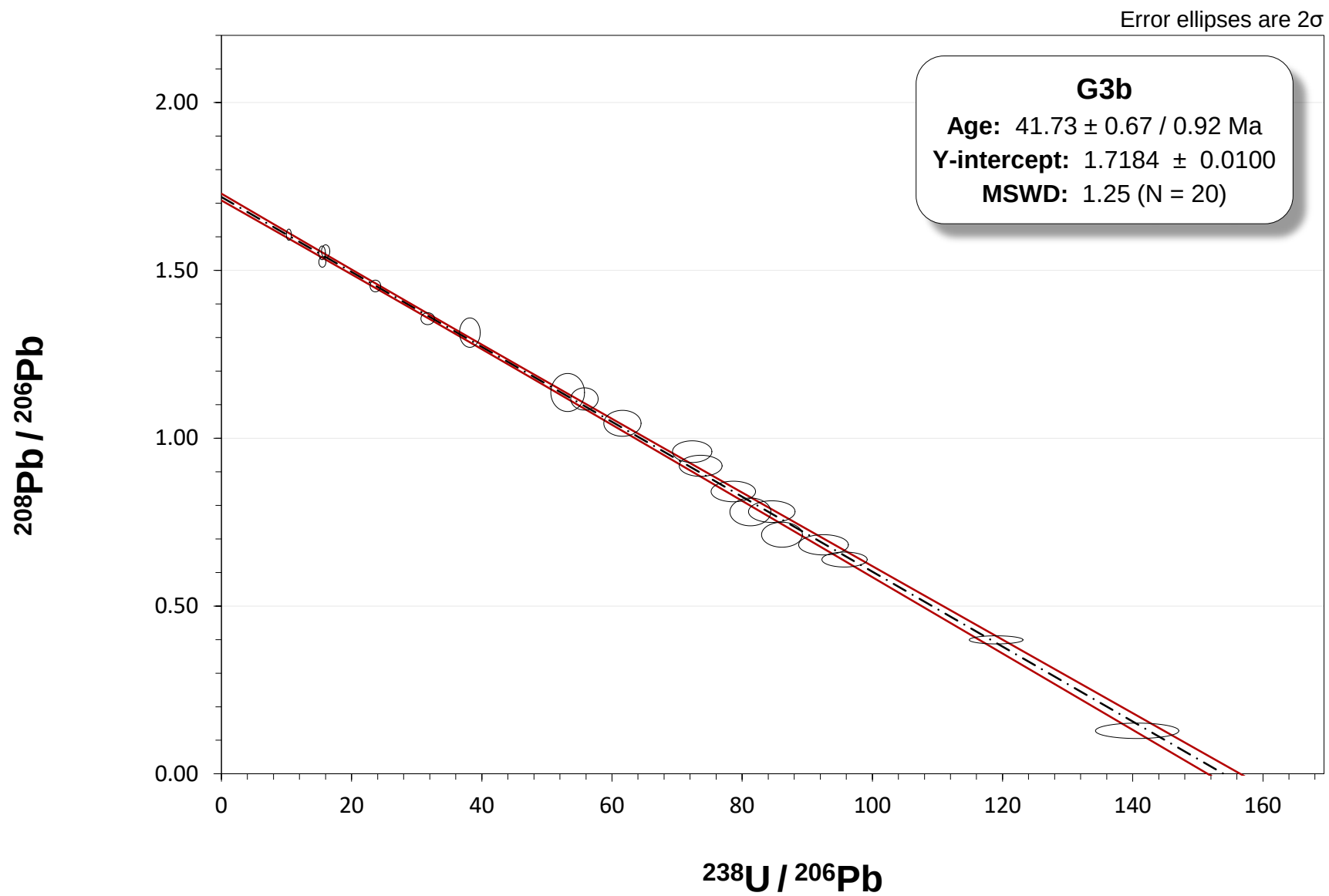


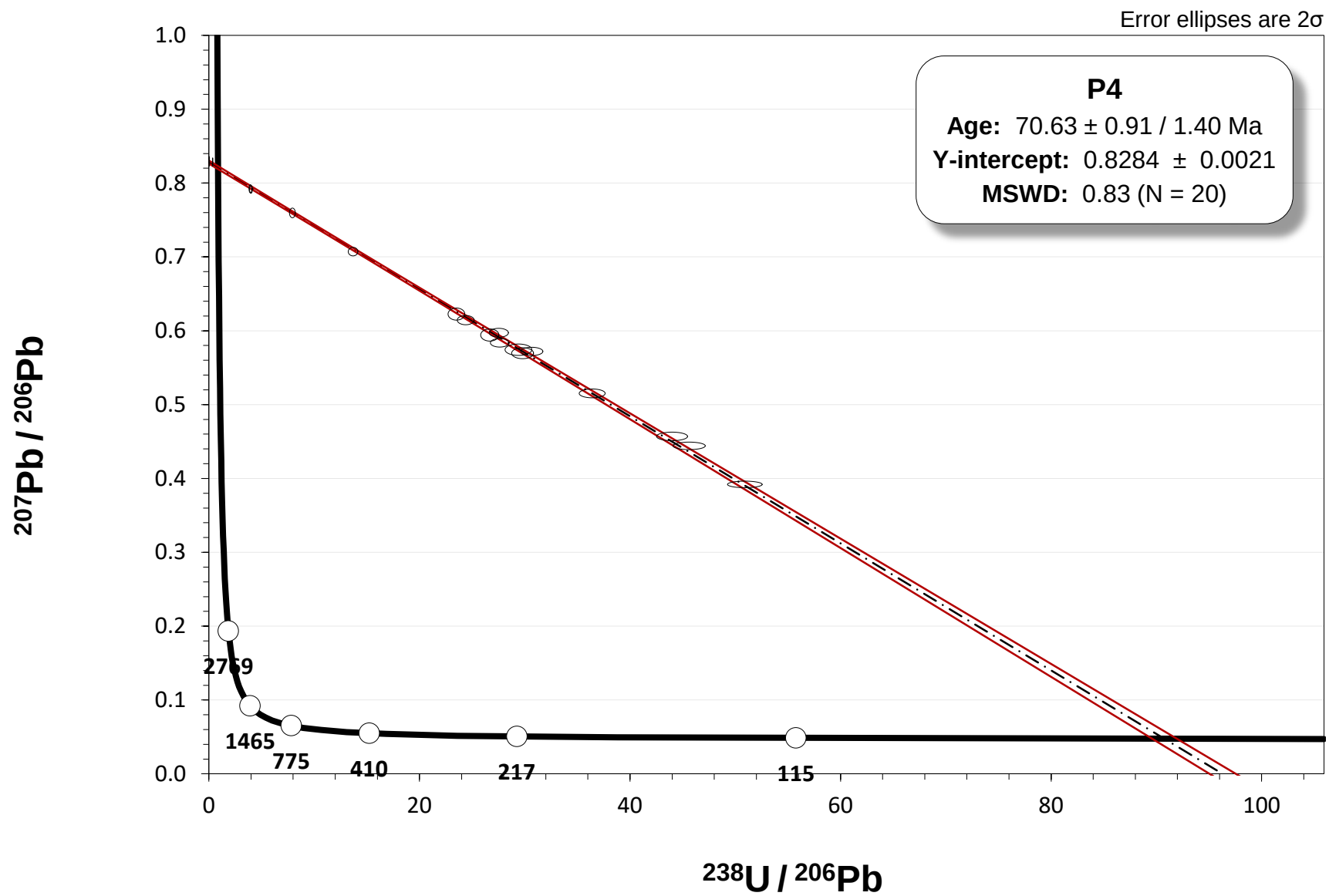


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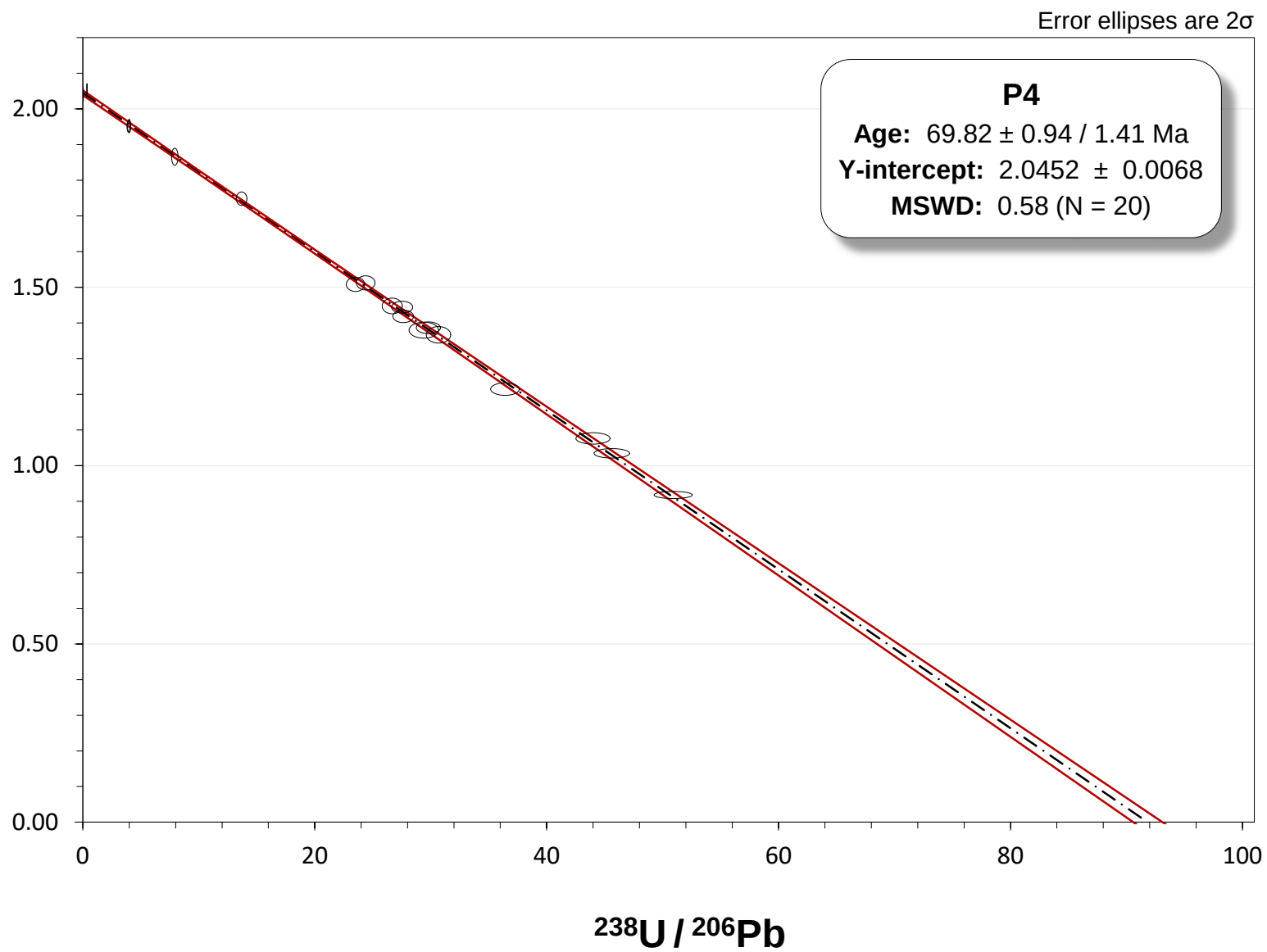


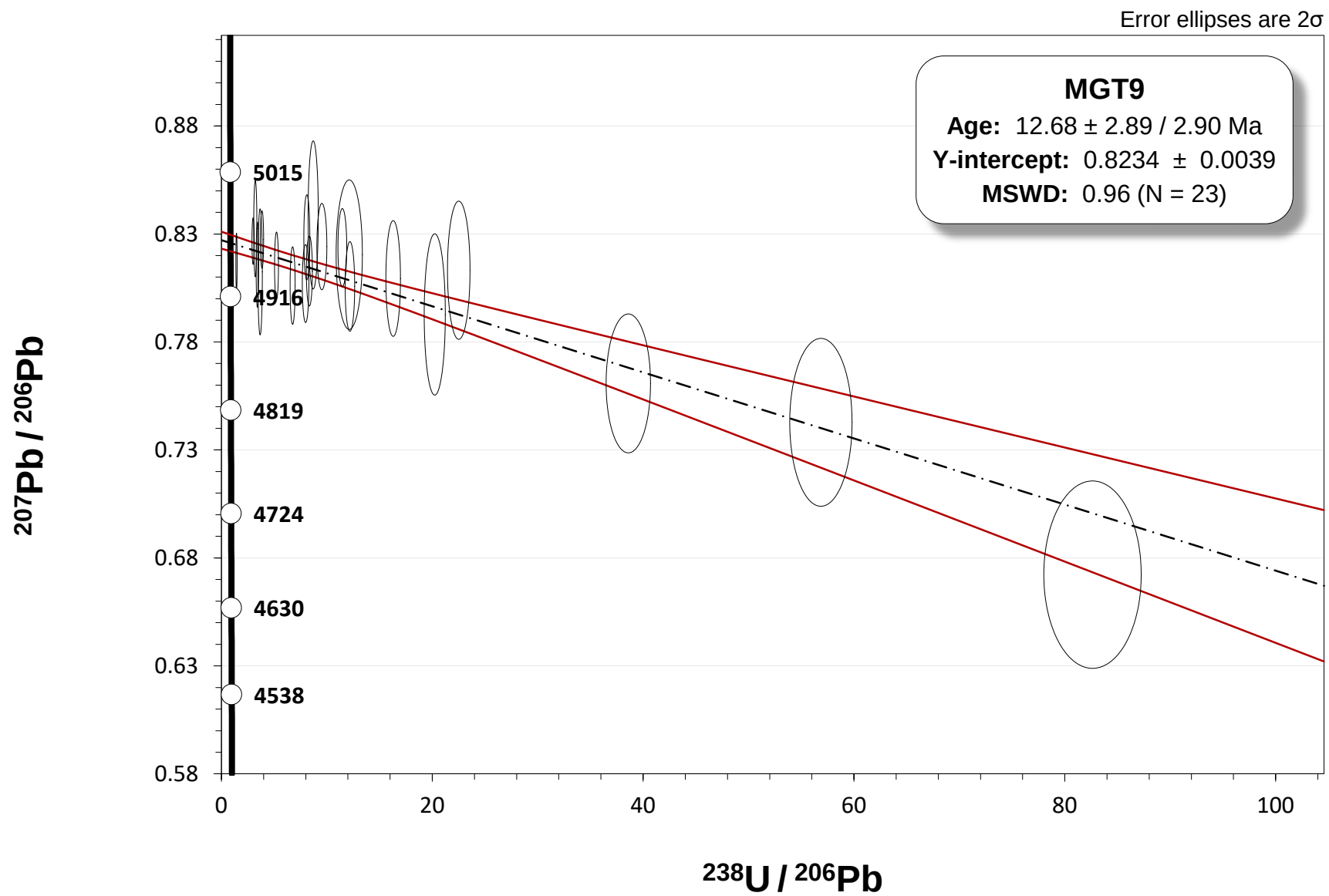




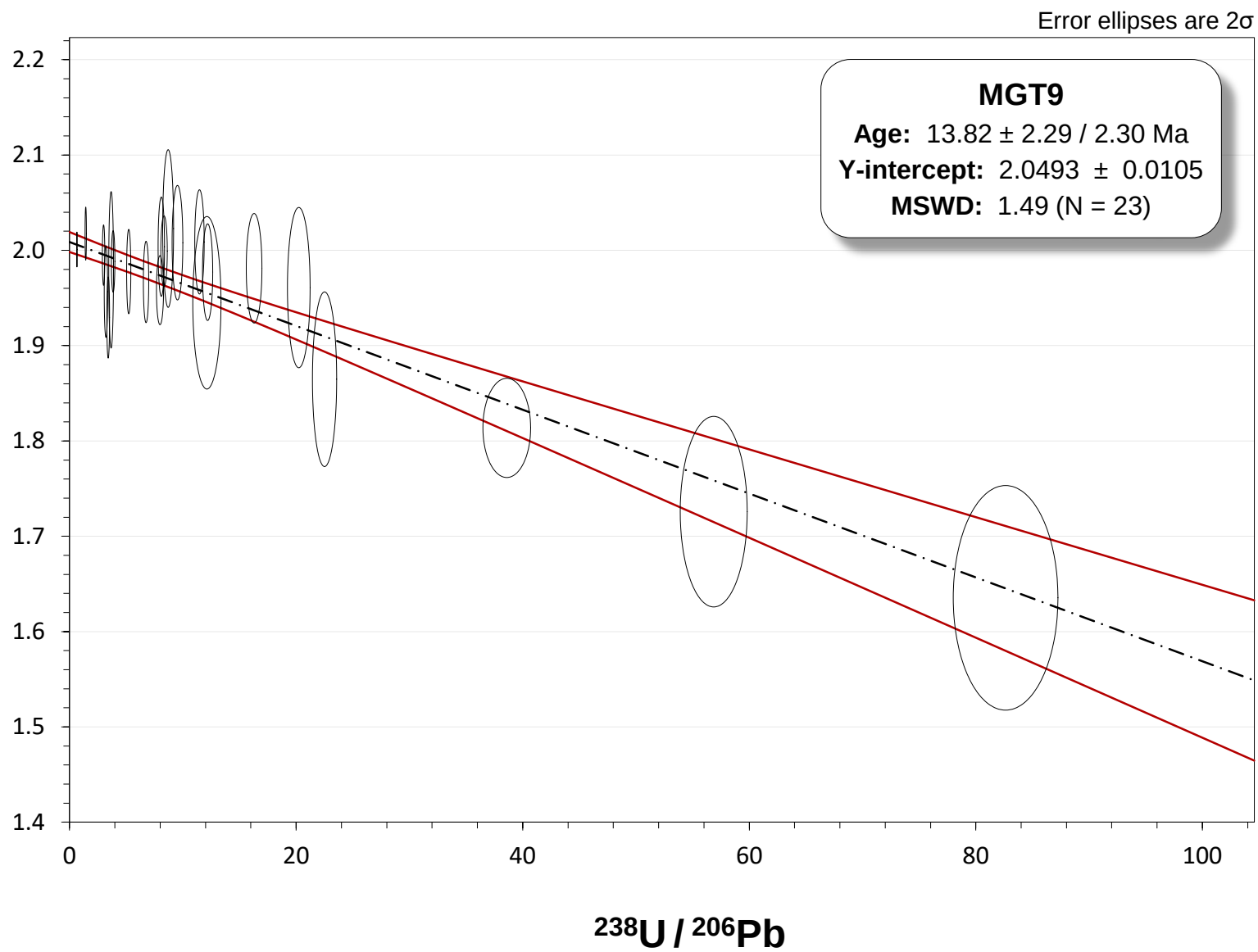


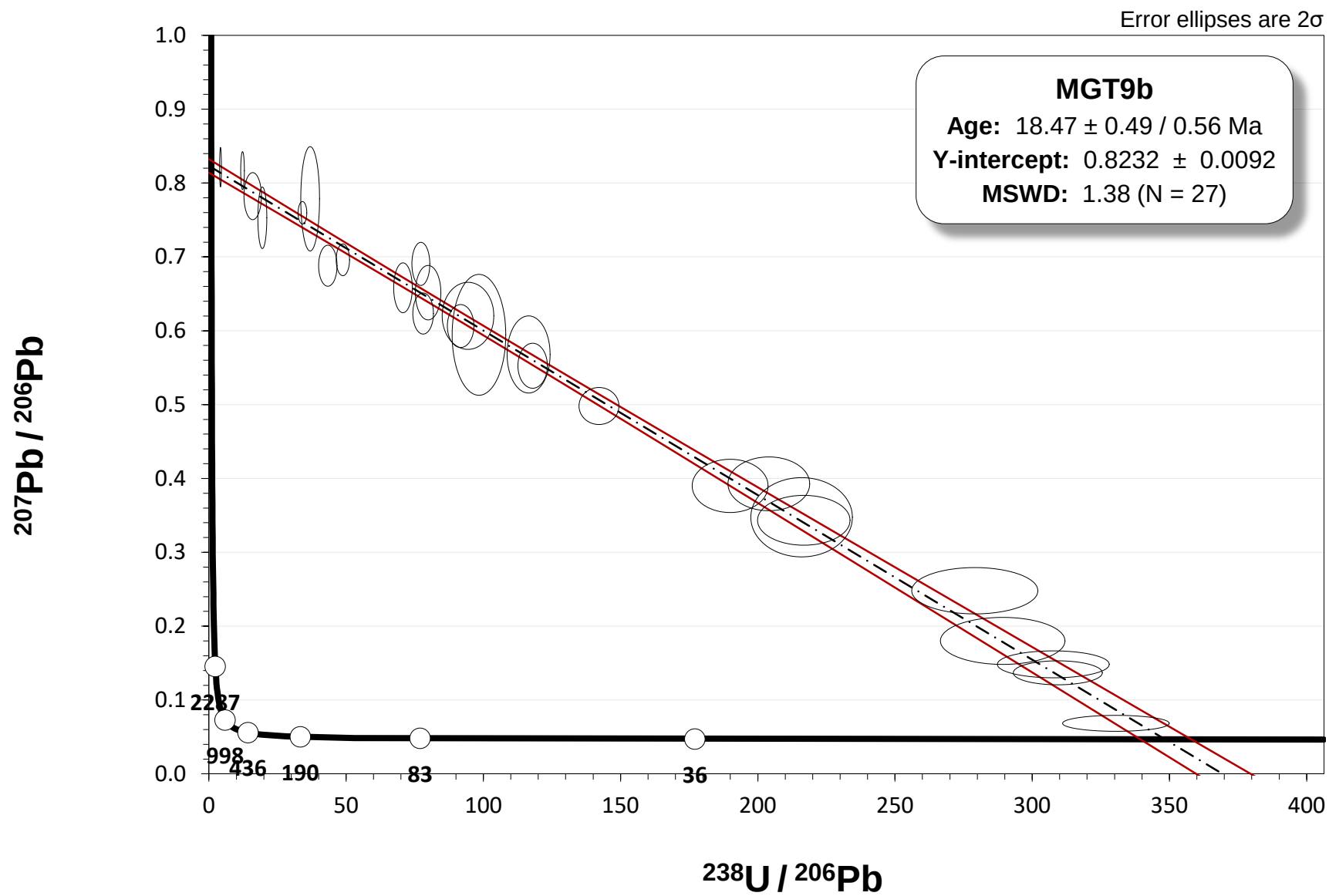
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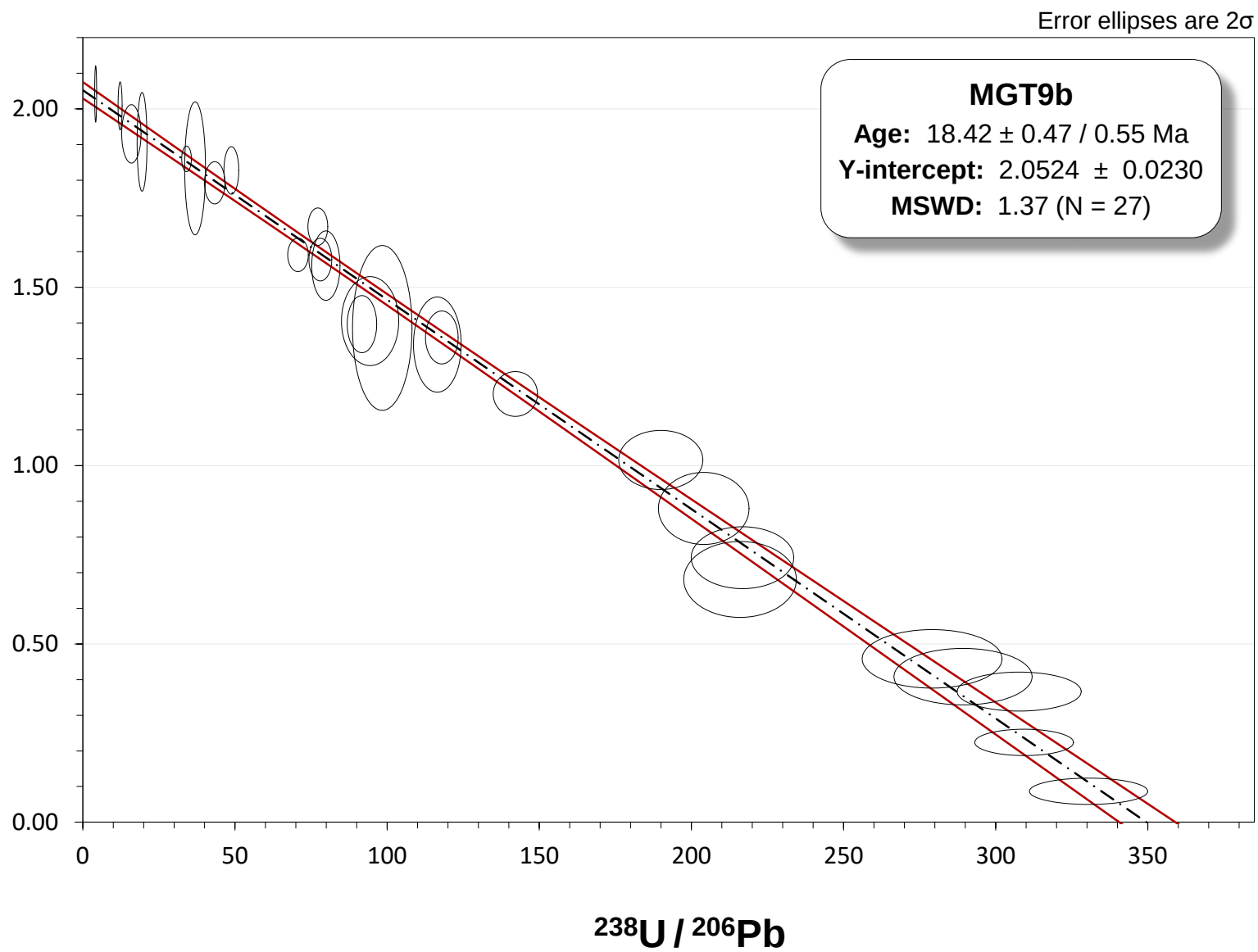


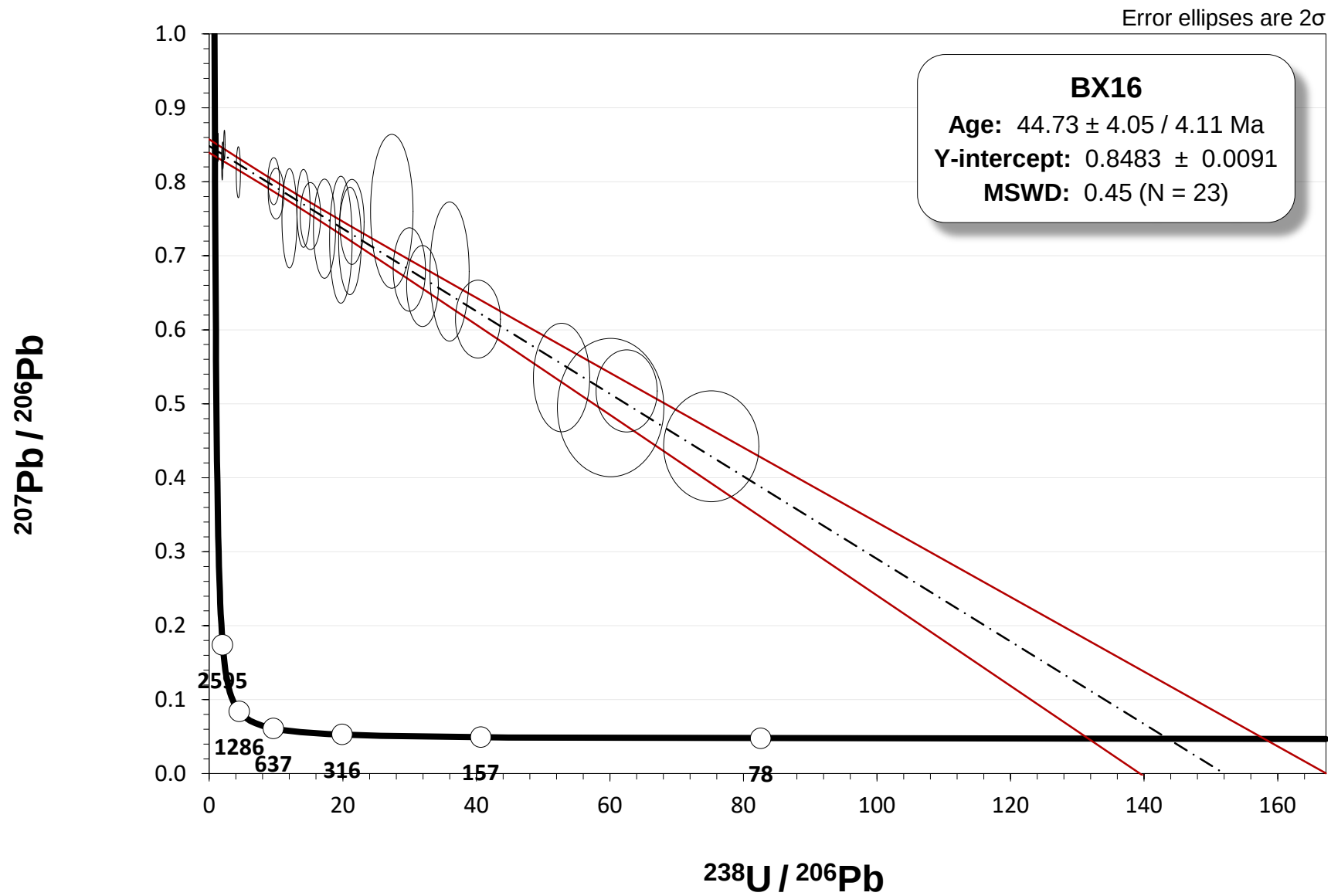
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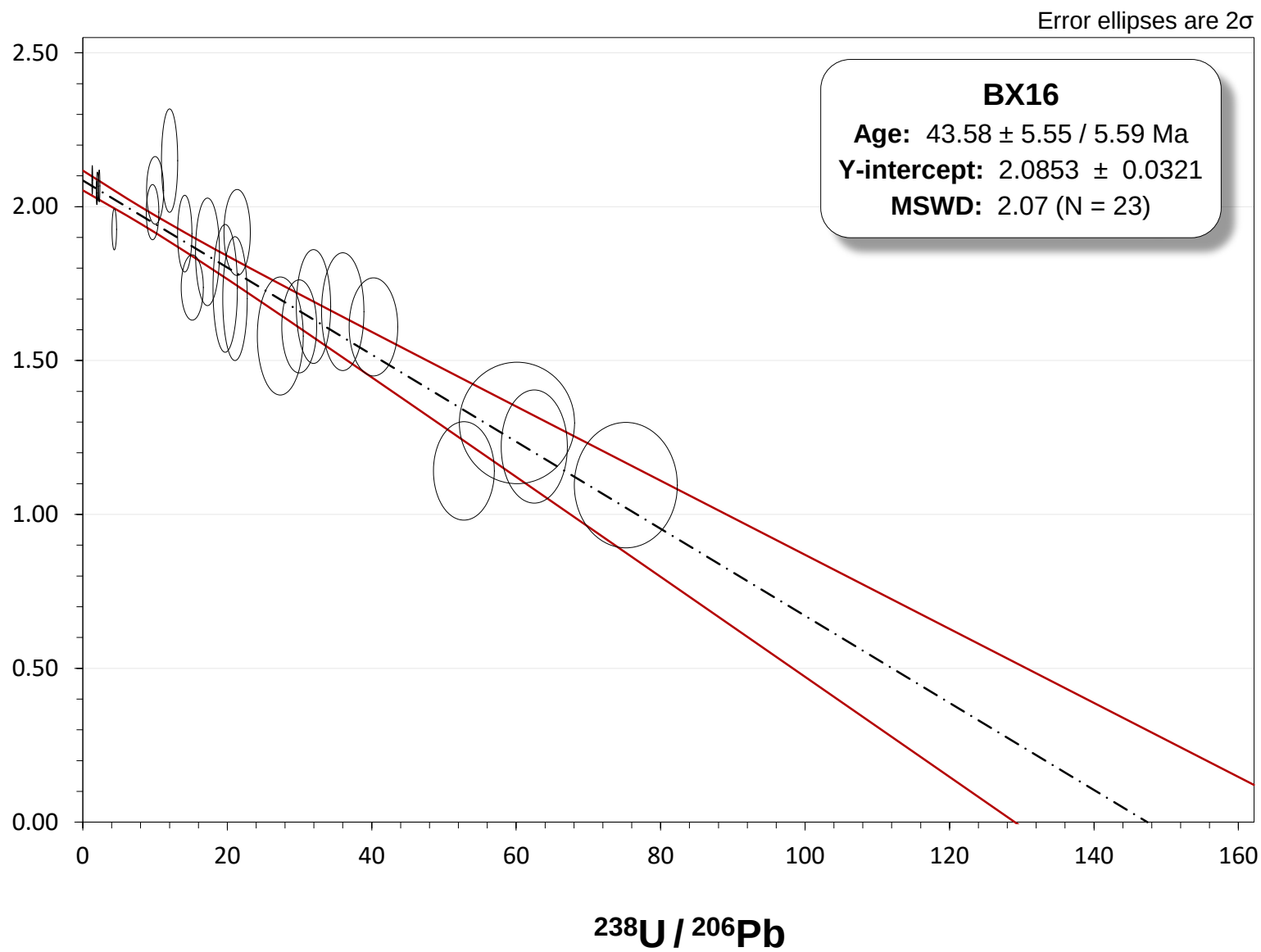


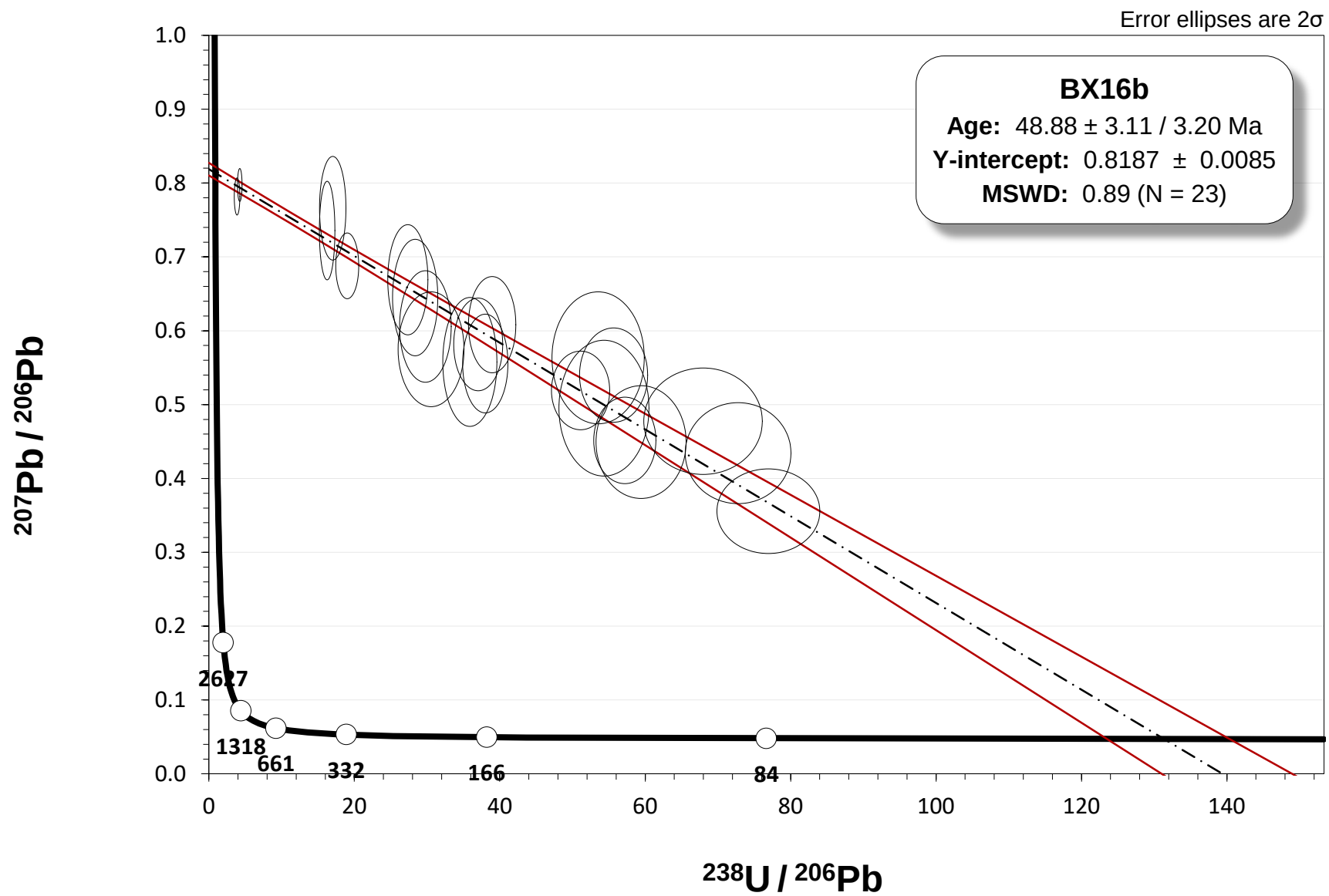
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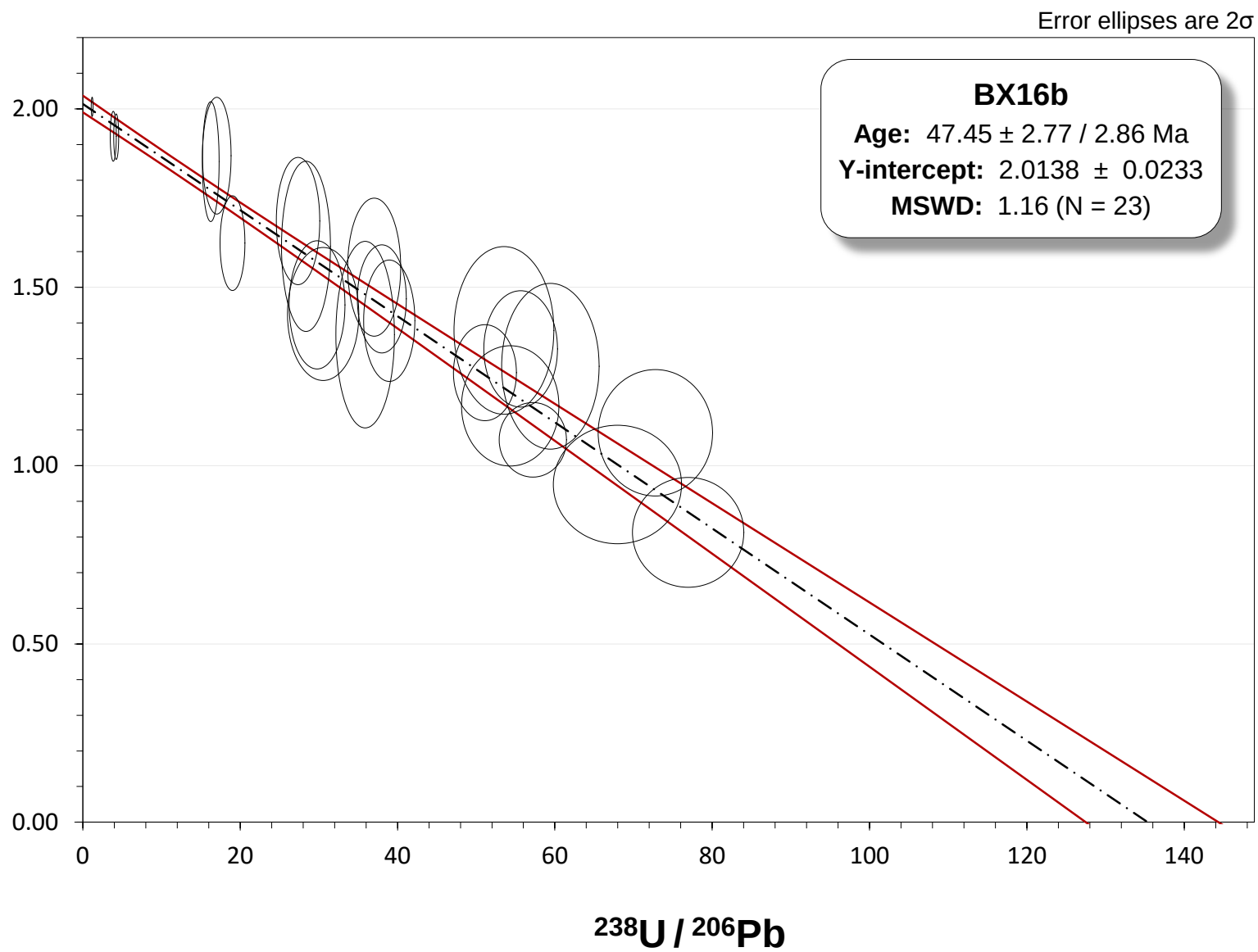


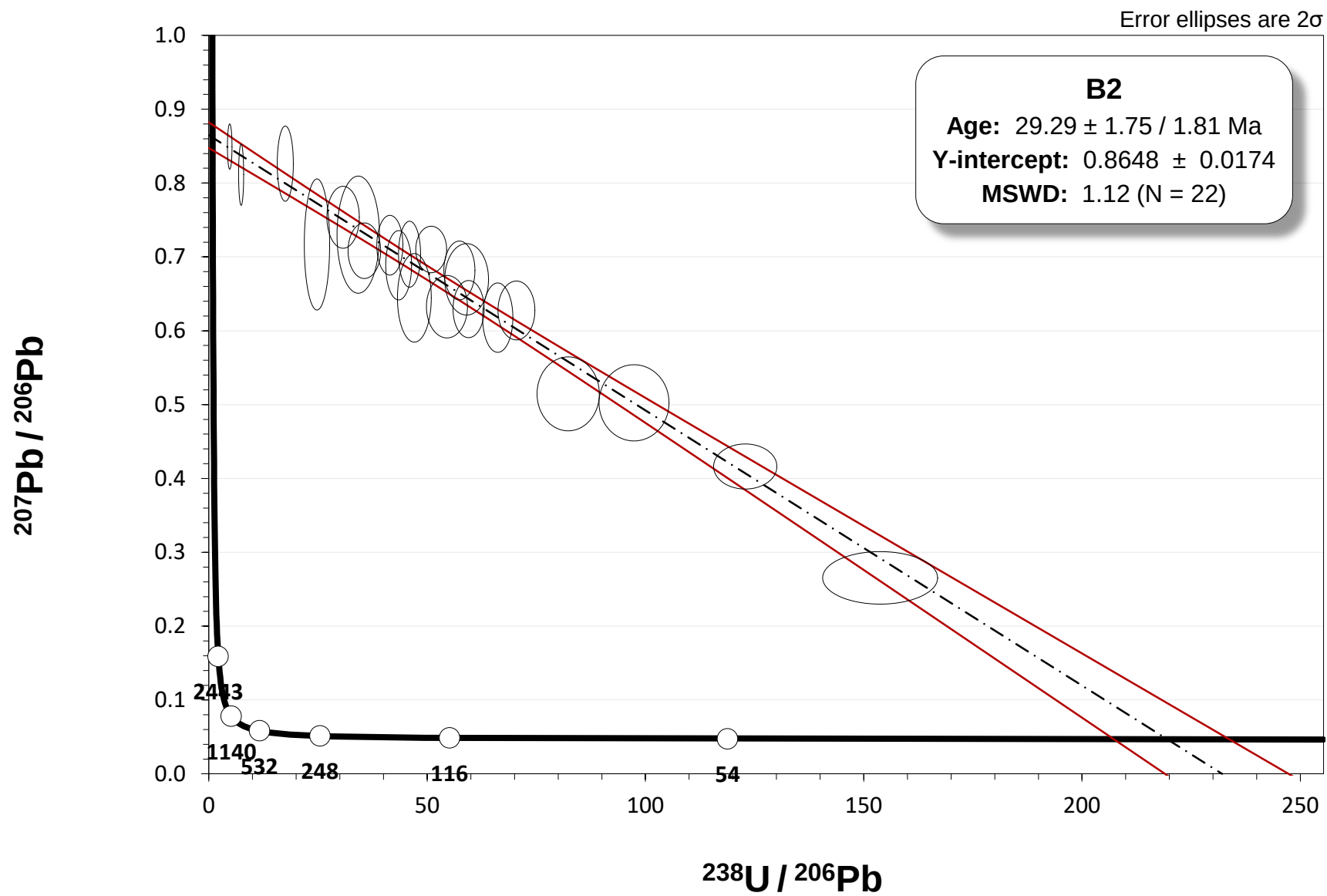
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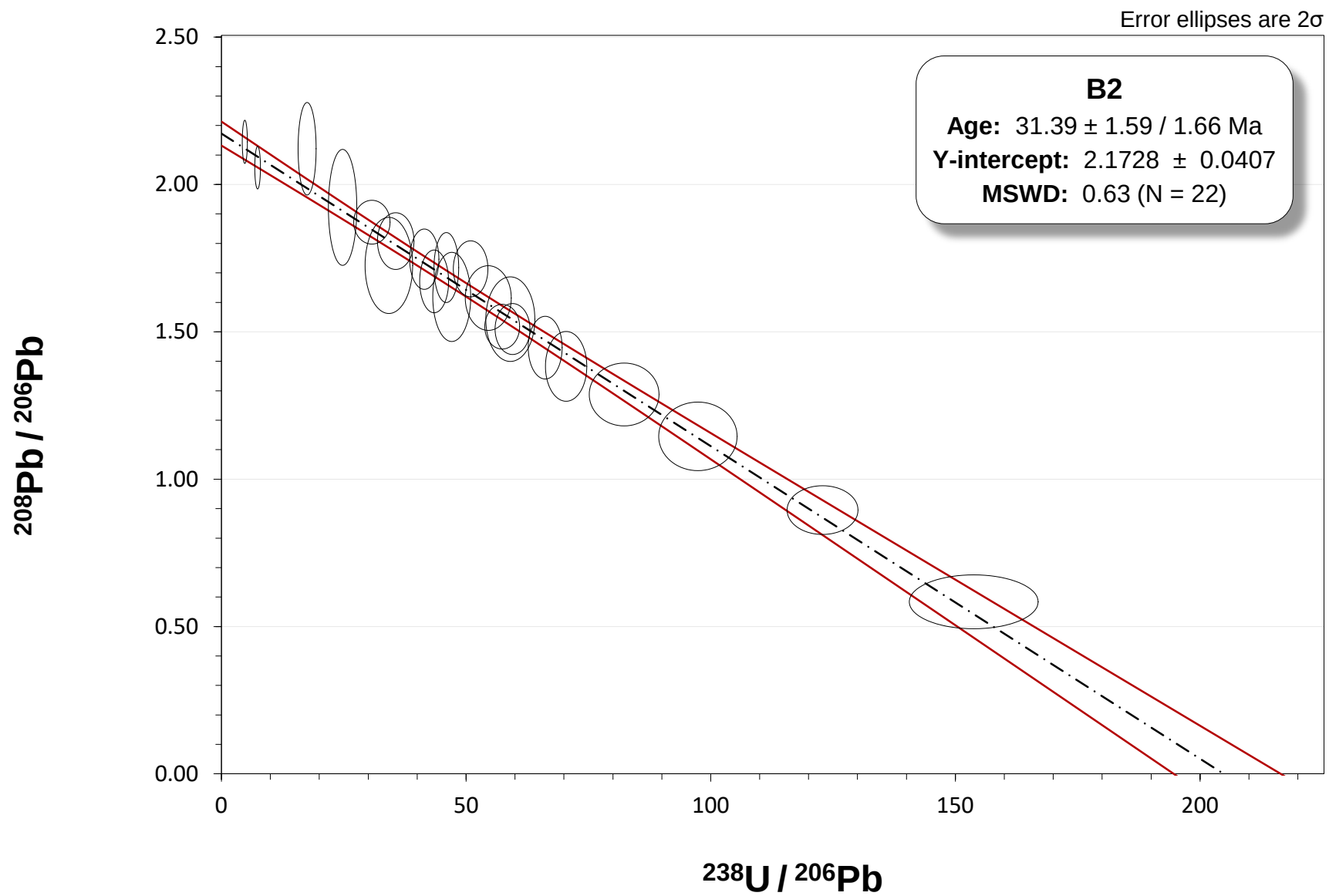




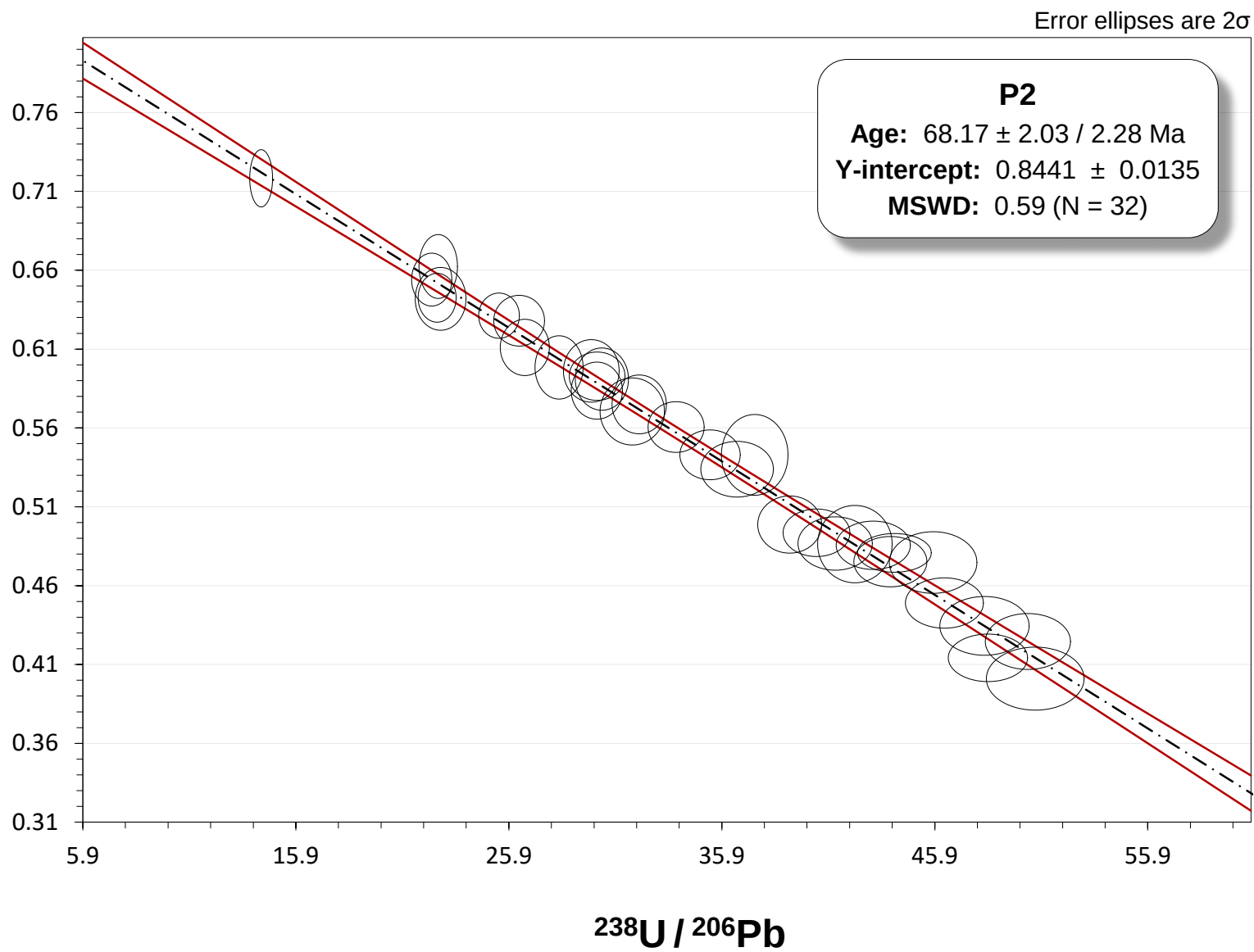
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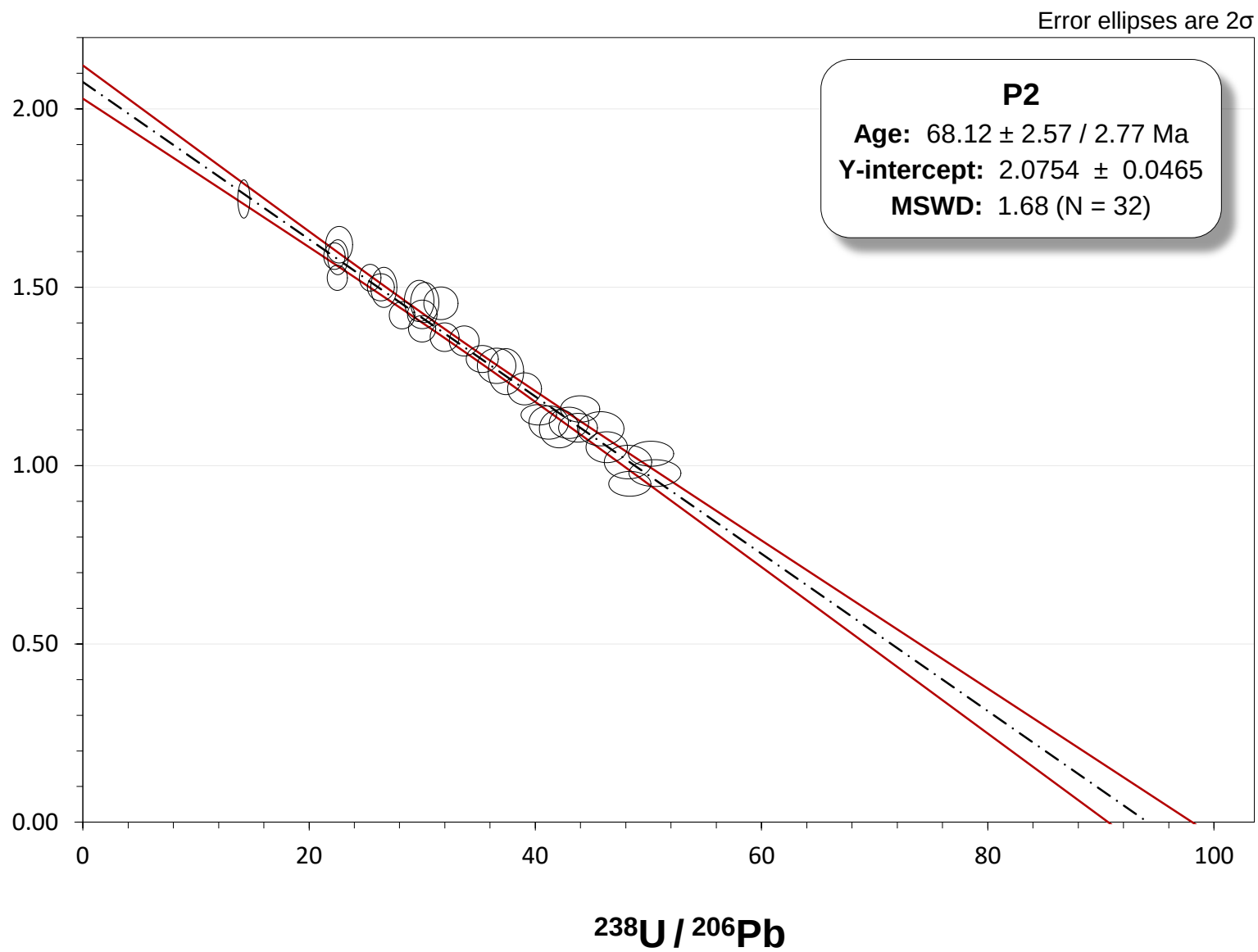


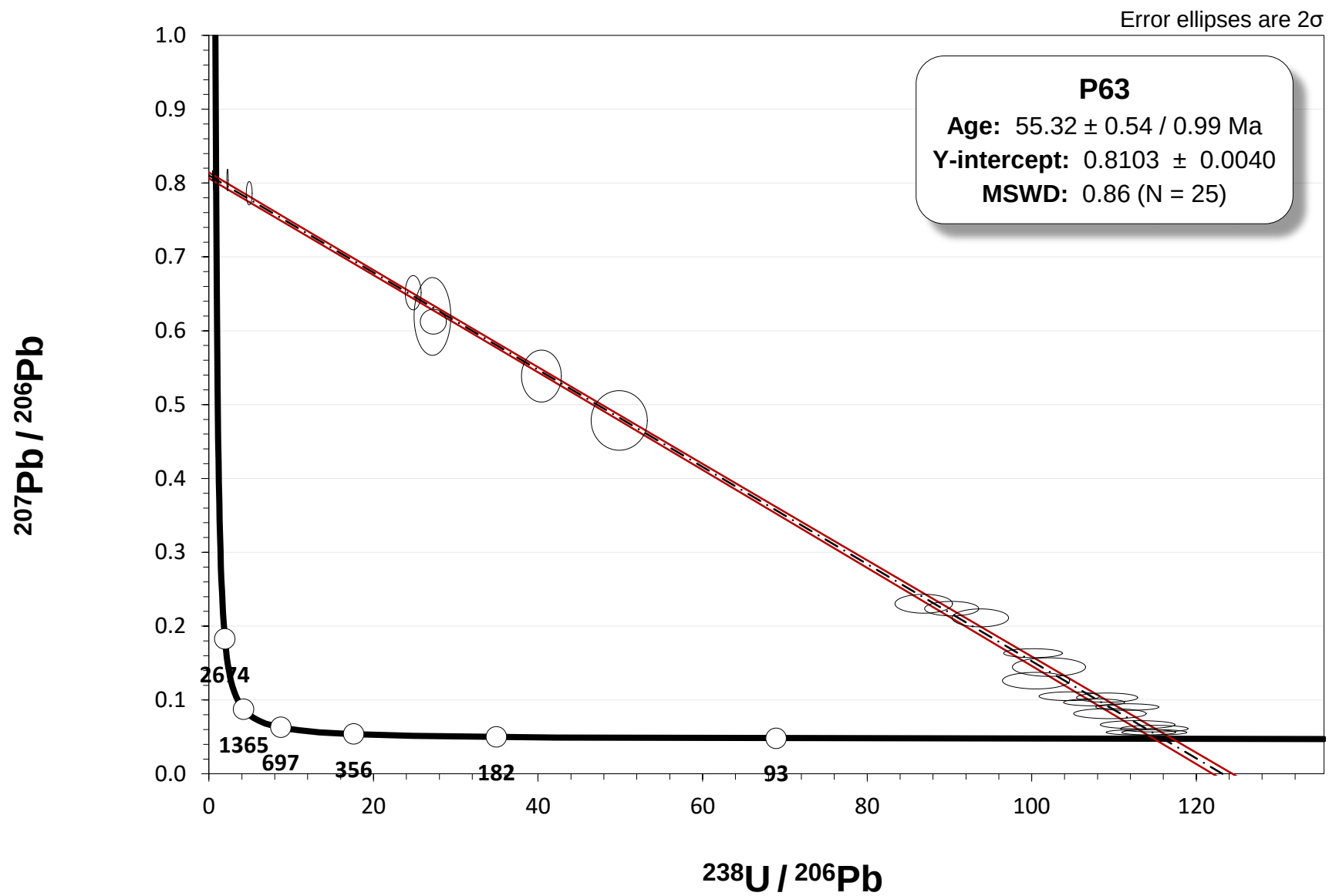


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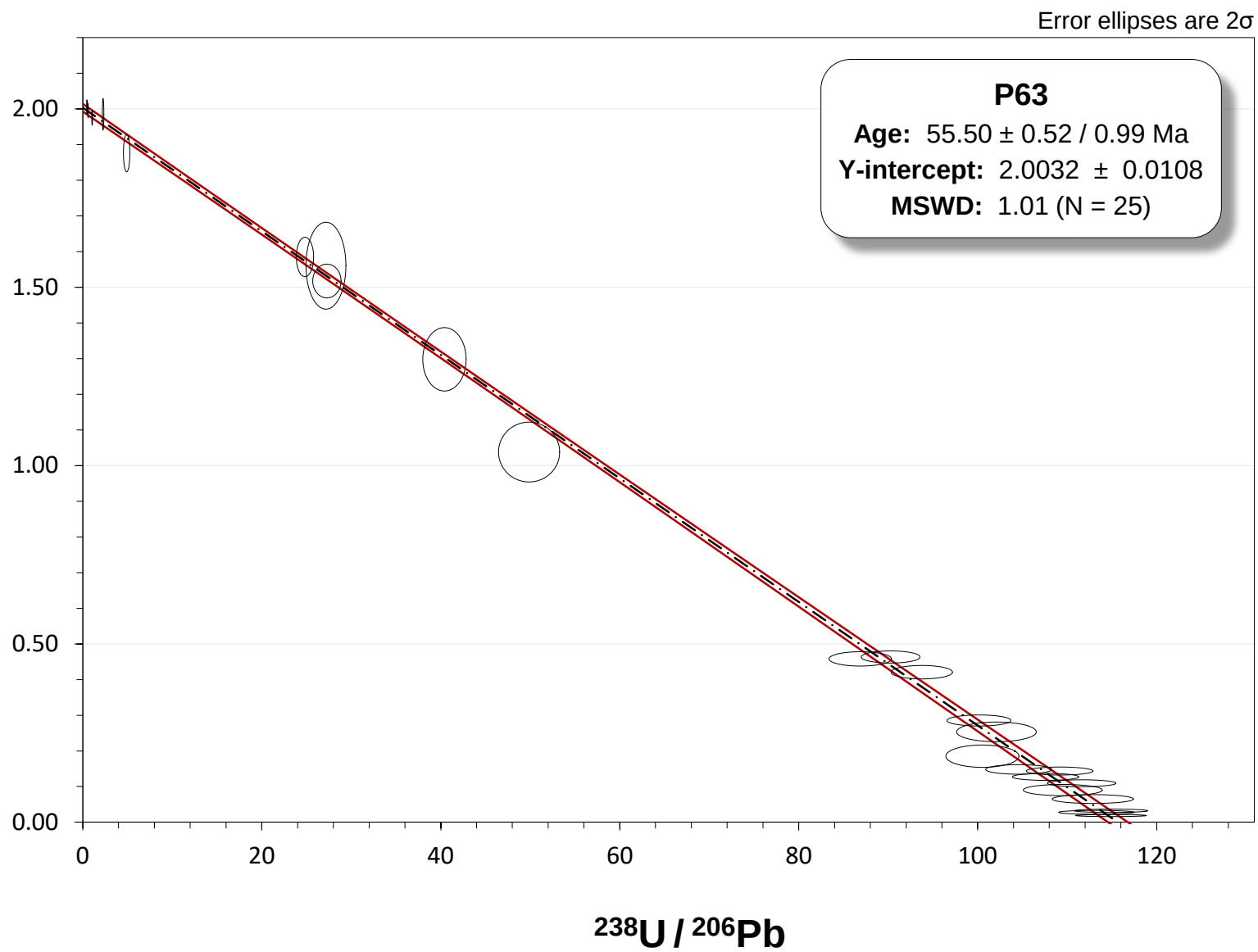


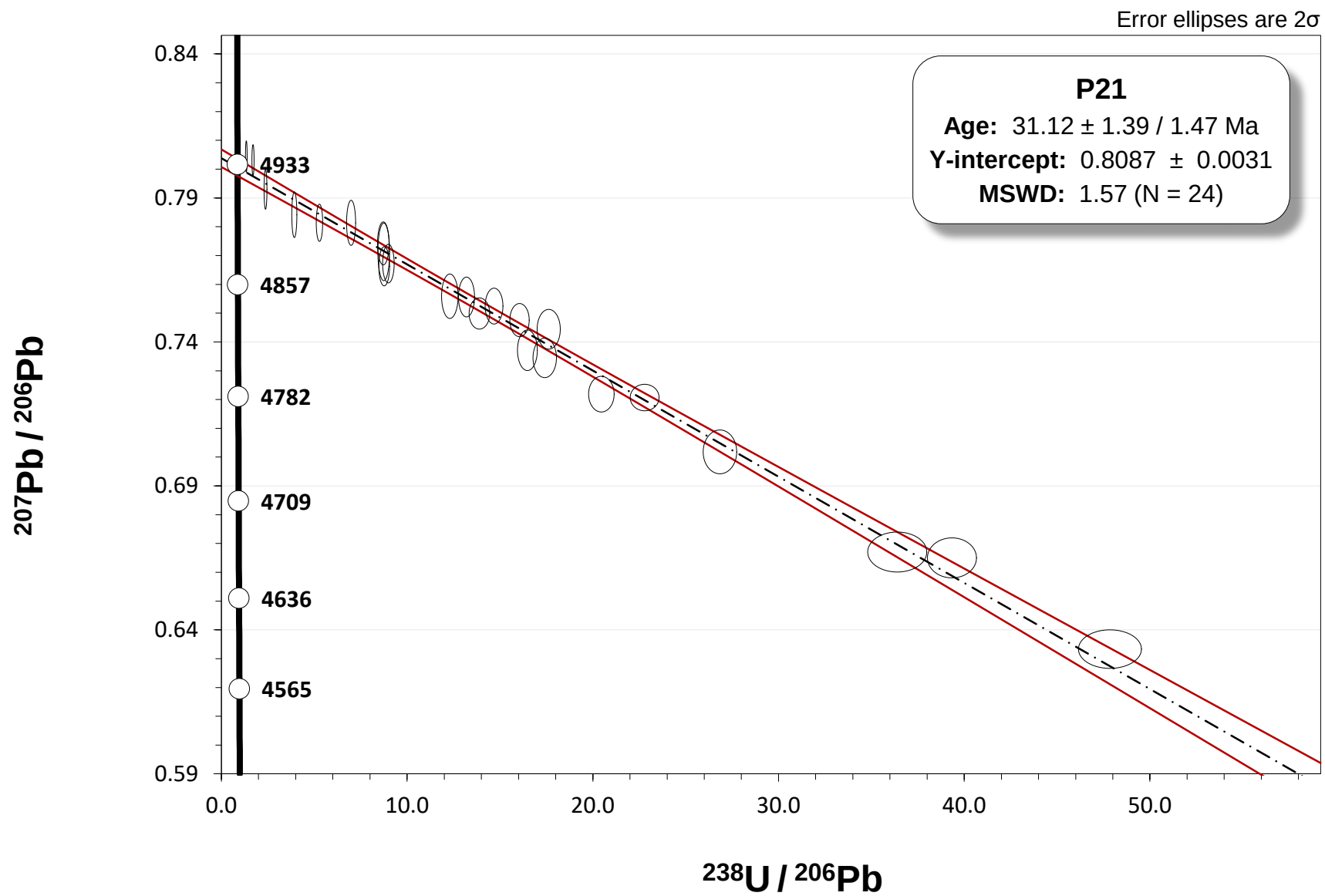
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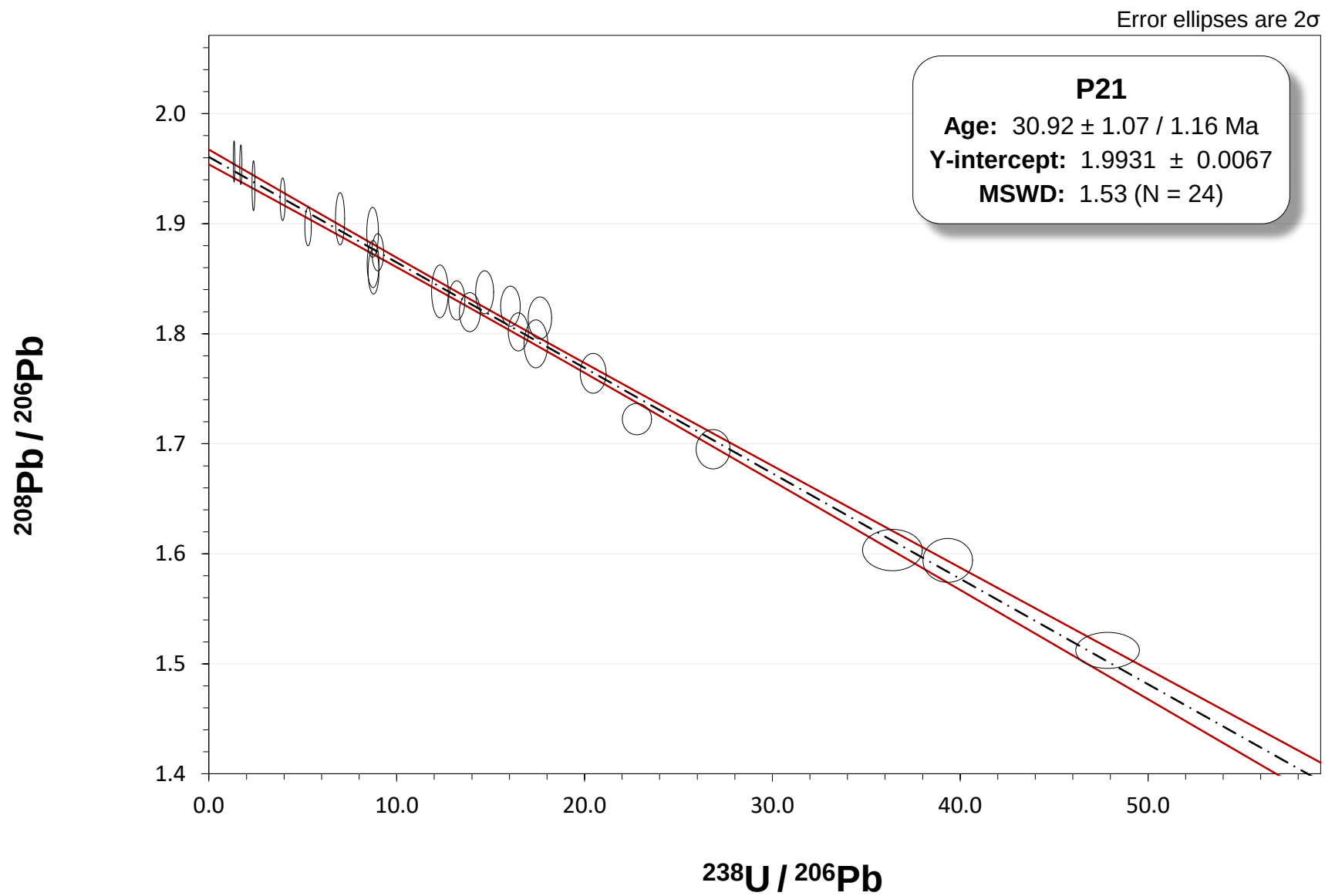




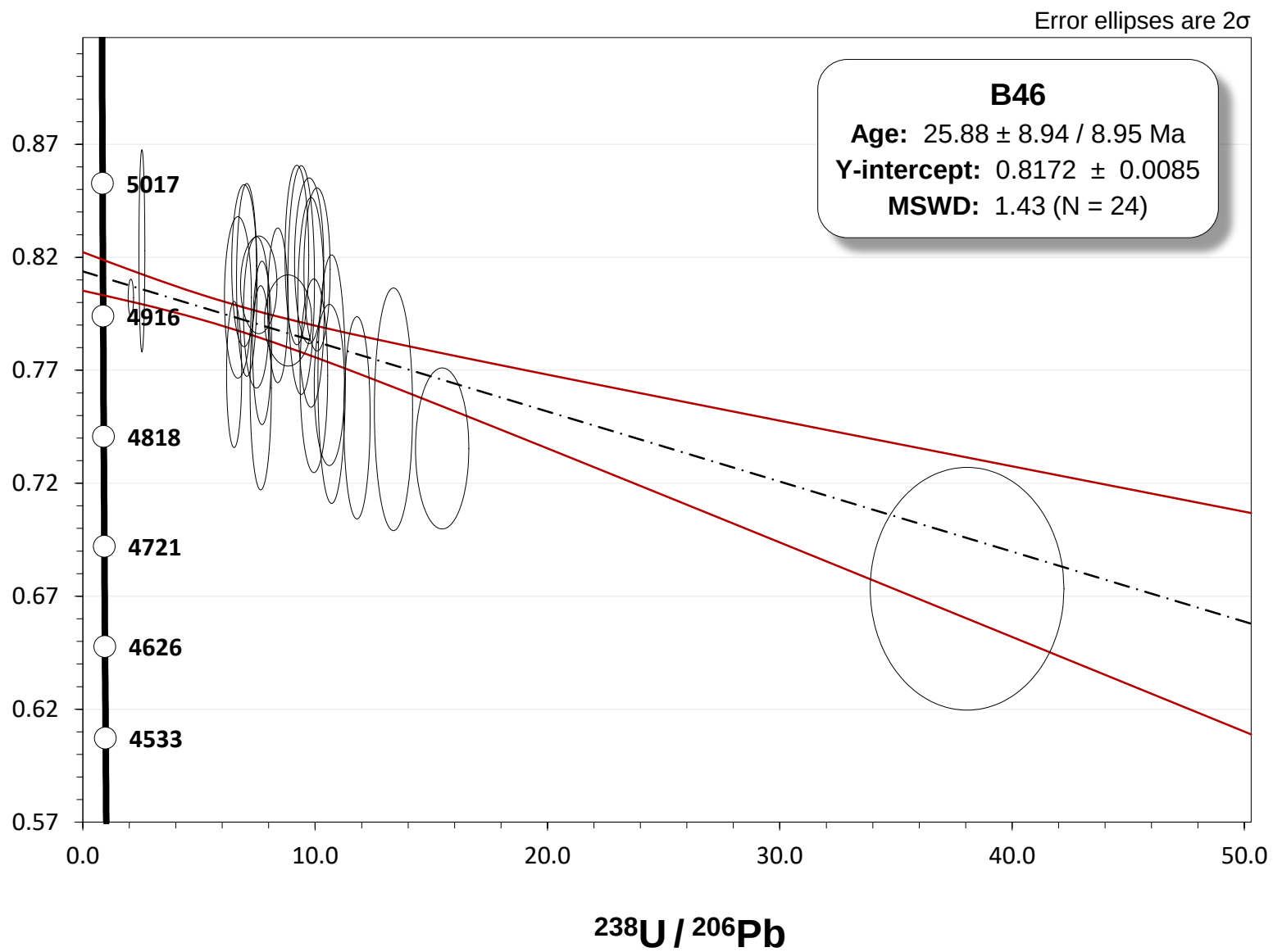
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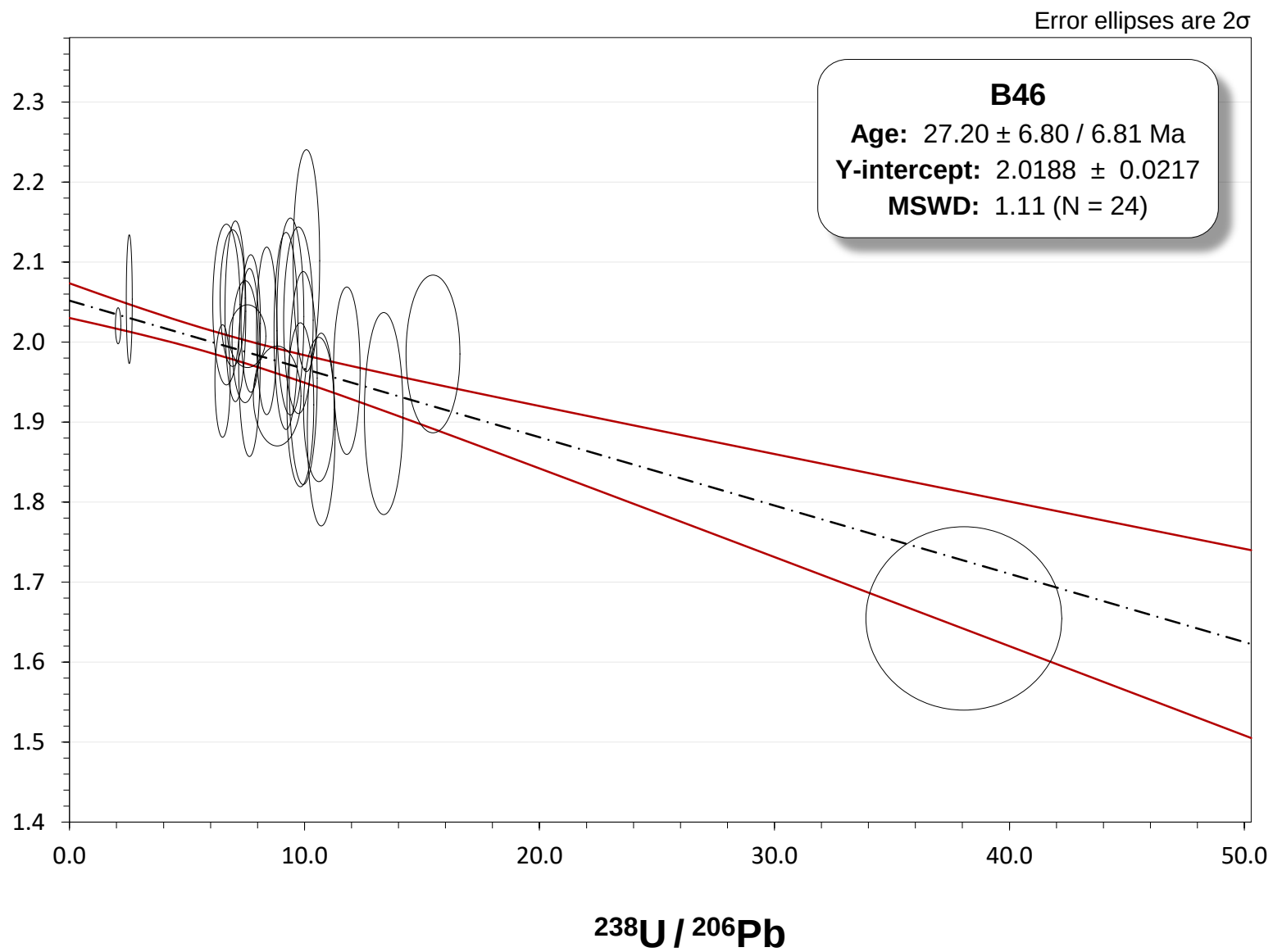




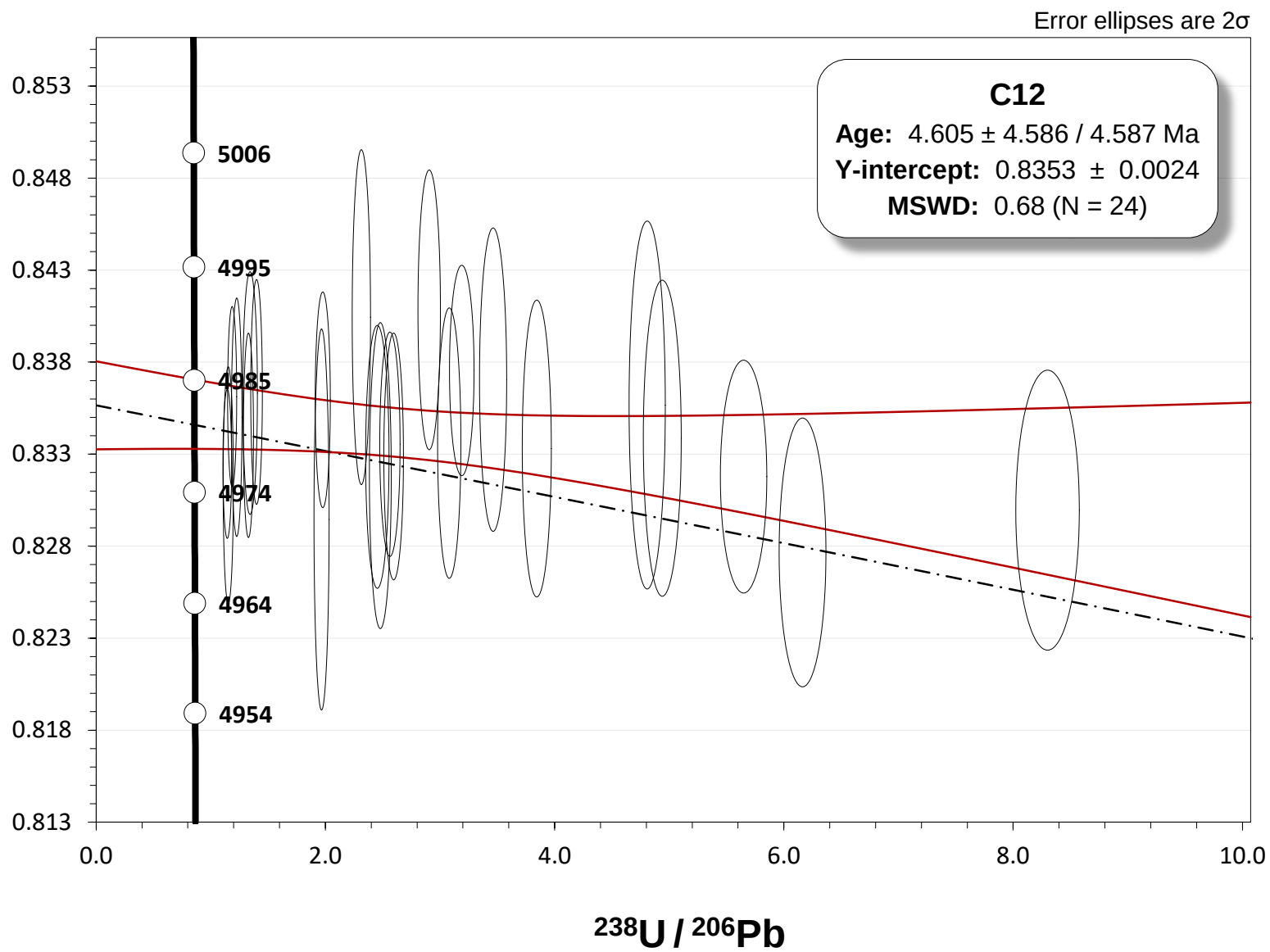
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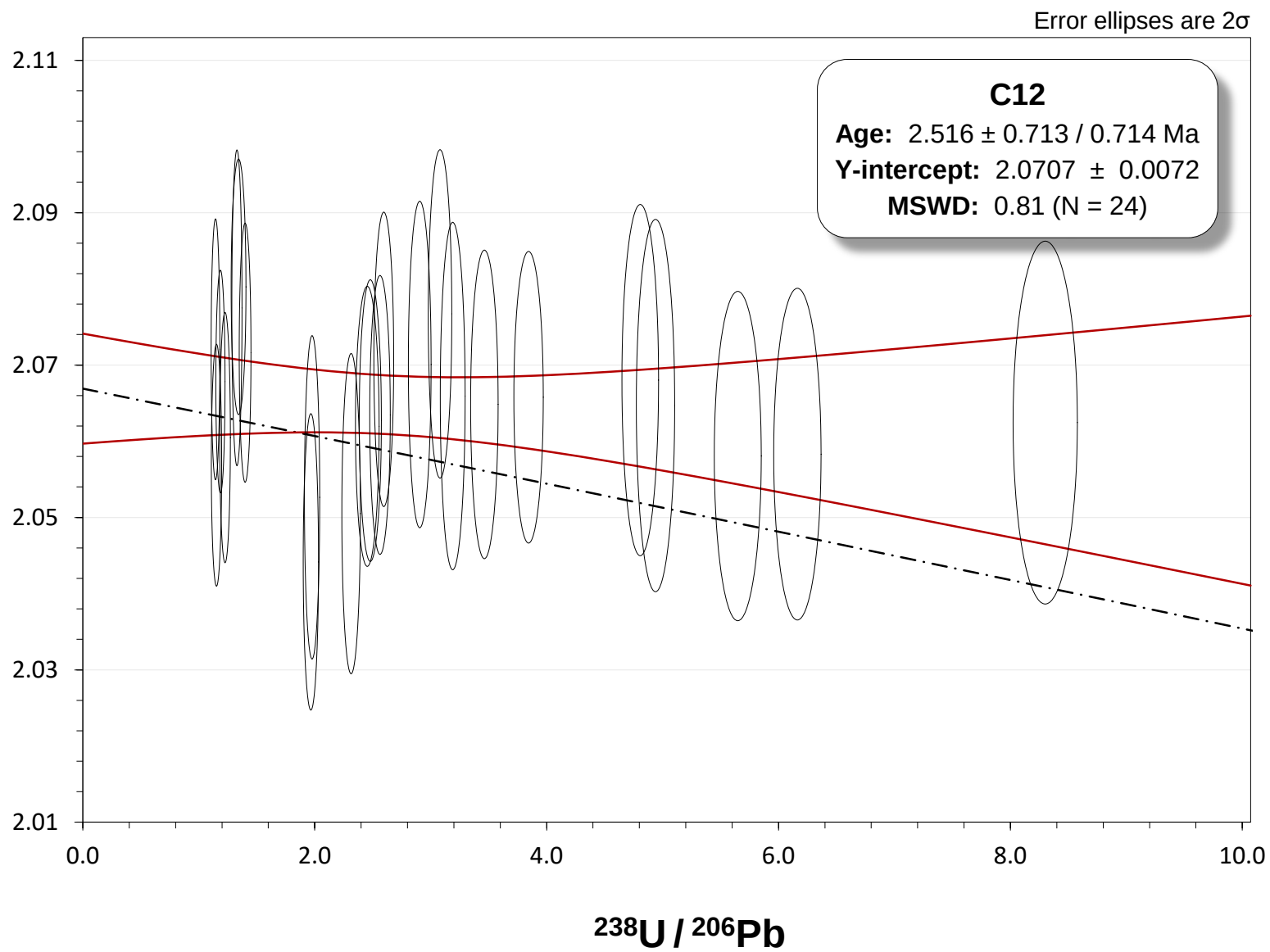
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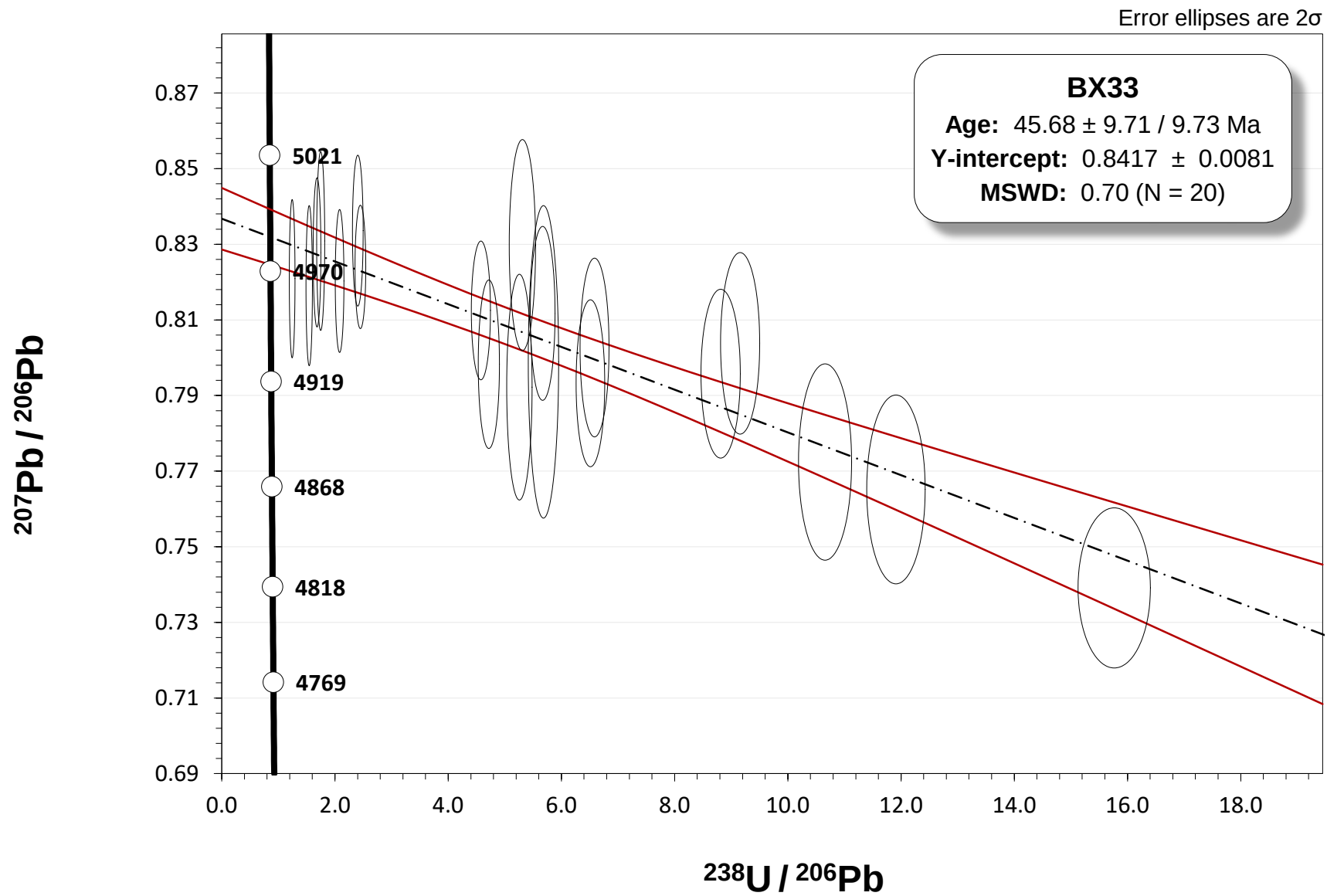


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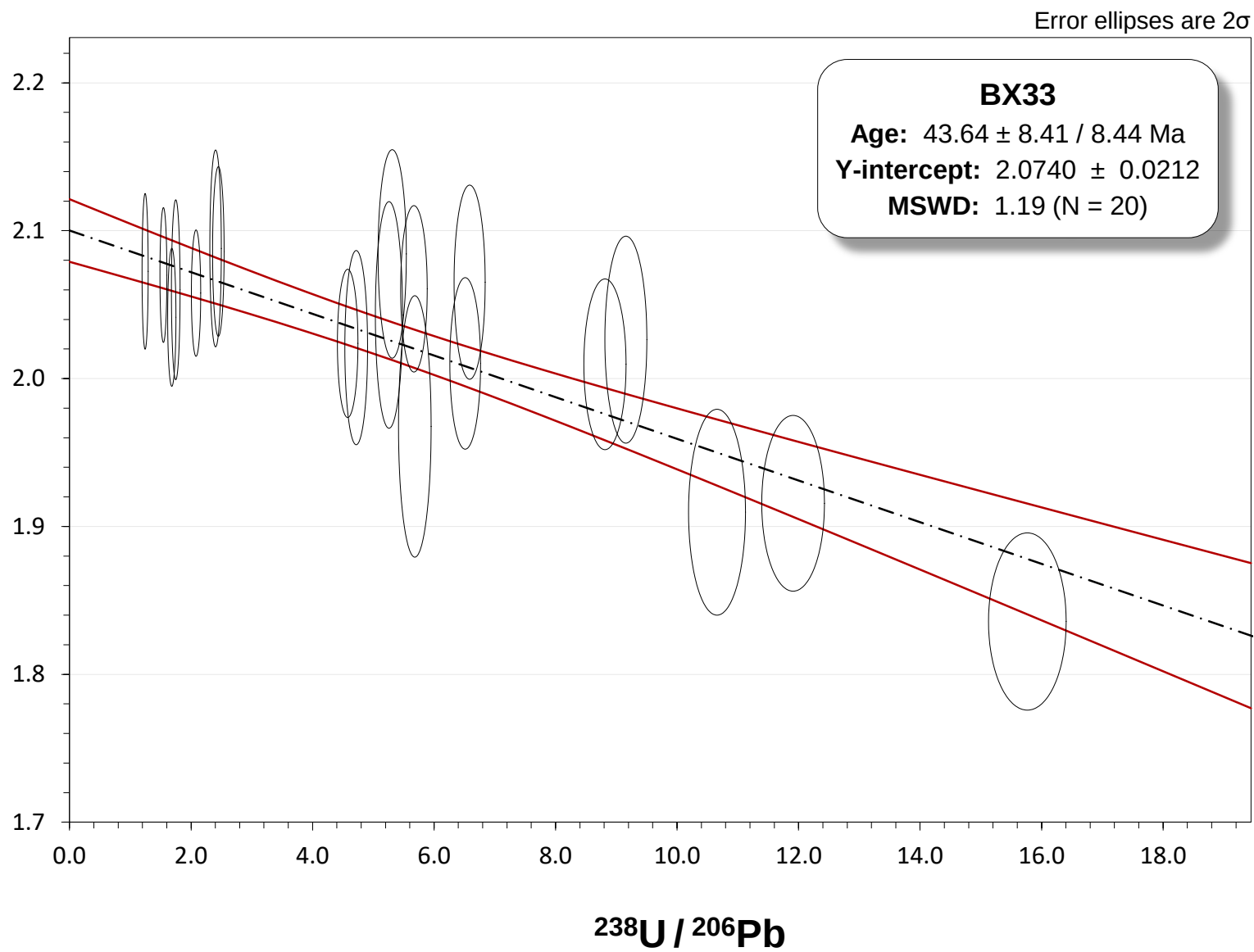


$^{208}\text{Pb} / ^{206}\text{Pb}$





$^{208}\text{Pb} / ^{206}\text{Pb}$



Sequence 2

grain	name / sample	²⁰⁷ Pb ^a (cps)	U ^b (ppm)	Pb ^b (ppm)	²³² Th ^b ²³⁸ U	²³⁸ U ^c ²⁰⁶ Pb	±2σ (%)	²⁰⁷ Pb ^c ²⁰⁶ Pb	±2σ (%)	²⁰⁸ Pb ^c ²⁰⁶ Pb	±2σ (%)	rho ^d
U007	GIS4	10647	0.10	0.069	0.00050	5.038	4.0	0.8213	1.6	2.055	2.0	0.00
U008	GIS4	1173	0.067	0.008	0.027	27.27	6.2	0.7345	7.2	1.783	5.4	0.00
U009	GIS4	3990	0.047	0.025	0.00072	6.302	4.6	0.8101	2.8	2.014	2.9	0.00
U010	GIS4	25421	0.087	0.16	0.83	1.897	8.9	0.8277	1.3	2.022	1.7	0.00
U011	GIS4	596	0.088	0.004	0.016	56.53	5.9	0.5806	7.9	1.427	8.3	0.00
U012	GIS4	9530	0.068	0.060	0.0011	3.838	4.7	0.8252	2.2	2.035	2.2	0.00
U013	GIS4	857	0.11	0.006	0.00073	52.10	5.0	0.6332	6.0	1.379	5.0	0.00
U014	GIS4	1606	0.13	0.011	0.0022	38.28	6.8	0.6902	4.3	1.605	4.7	0.00
U015	GIS4	2924	0.24	0.020	0.067	34.85	5.8	0.6759	3.9	1.686	4.4	0.00
U016	GIS4	11357	0.26	0.060	0.14	18.69	7.8	0.7708	2.5	1.863	3.0	0.00
U017	GIS4	259510	0.48	1.6	2.33	1.027	3.3	0.8343	0.58	2.059	0.82	0.00
U018	GIS4	1527	0.092	0.010	0.00047	27.82	5.8	0.7370	5.7	1.813	5.1	0.00
U019	GIS4	9945	0.067	0.065	0.10	3.472	6.5	0.8219	1.9	2.037	2.1	0.00
U020	GIS4	28835	0.12	0.19	0.63	2.295	12	0.8160	1.5	2.023	1.3	0.00
U022	GIS4	4203	0.086	0.028	0.00055	10.01	4.0	0.7929	3.6	1.945	3.0	0.00
U023	GIS4	5178	0.048	0.033	0.010	4.829	4.1	0.8089	2.4	2.051	2.8	0.00
U024	GIS4	517	0.040	0.003	0.0032	35.32	8.3	0.7110	10	1.712	8.5	0.00
U025	GIS4	14799	0.081	0.094	0.57	2.987	6.0	0.8353	1.7	2.046	1.8	0.00
U026	GIS4	32219	0.12	0.21	0.43	2.013	4.3	0.8300	1.2	2.061	1.3	0.00
U027	GIS4	12283	0.065	0.078	0.34	2.852	4.5	0.8415	1.8	2.075	2.0	0.00
U028	GIS4	8502	0.12	0.056	0.00039	6.996	3.9	0.8011	2.2	1.973	2.0	0.00
U029	GIS4	9778	0.043	0.064	0.0033	2.292	3.7	0.8325	1.7	2.069	2.5	0.00
U030	GIS4	5843	0.073	0.039	0.0023	6.421	5.8	0.8027	2.5	2.034	2.7	0.00
U031	GIS4	3312	0.047	0.021	0.025	7.257	4.2	0.8108	3.4	2.027	2.6	0.00
U032	GIS4	777	0.13	0.006	0.011	60.08	5.3	0.5552	5.5	1.407	6.6	0.00
U039	GIS4	2470	0.12	0.017	0.020	22.82	5.0	0.7245	4.2	1.747	3.5	0.00
U040	GIS4	5094	0.16	0.034	0.015	15.40	4.2	0.7845	2.7	1.948	2.6	0.00
U041	GIS4	4628	0.072	0.027	0.00030	10.15	7.6	0.7766	4.0	1.939	4.1	0.00
U042	GIS4	21460	0.050	0.12	0.018	1.621	9.3	0.8284	1.3	2.036	1.8	0.00
U043	GIS4b	5709	0.63	0.039	0.044	45.58	3.9	0.6538	2.7	1.553	2.6	0.00
U044	GIS4b	21979	0.16	0.14	0.081	3.769	4.2	0.8291	1.3	2.016	1.6	0.00
U045	GIS4b	1949	0.70	0.016	0.065	95.04	4.3	0.4318	4.4	0.9248	4.7	0.00
U046	GIS4b	4353	0.66	0.030	0.029	58.44	8.2	0.6088	3.7	1.409	3.1	0.00
U047	GIS4b	10689	0.49	0.071	0.030	21.98	4.3	0.7627	1.6	1.844	2.0	0.00
U048	GIS4b	8287	0.64	0.055	0.064	35.40	5.8	0.6939	2.9	1.648	2.4	0.00
U049	GIS4b	2971	0.71	0.022	0.053	77.47	3.9	0.5269	3.3	1.183	3.6	0.00
U050	GIS4b	7301	0.42	0.050	0.023	26.35	3.6	0.7236	1.9	1.772	2.3	0.00
U051	GIS4b	4717	0.32	0.033	0.098	29.75	4.3	0.7075	2.8	1.723	2.7	0.00
U052	GIS4b	6804	1.0	0.048	0.034	56.28	4.8	0.6024	2.4	1.421	2.9	0.00
U053	GIS4b	3276	1.0	0.025	0.059	88.77	4.0	0.4590	3.3	1.008	3.4	0.00
U054	GIS4b	6506	0.11	0.042	0.0075	8.305	3.7	0.8029	1.9	1.958	2.8	0.00
U055	Q29	545	0.38	0.006	0.0087	96.75	4.7	0.2274	7.7	0.4419	7.7	0.00
U056	Q29	517	0.38	0.005	0.0070	103.3	4.6	0.2196	6.4	0.4075	8.7	0.00
U057	Q29	632	0.60	0.008	0.041	107.7	4.6	0.1816	6.5	0.3817	7.2	0.00
U058	Q29	606	0.71	0.008	0.031	111.4	4.1	0.1572	7.8	0.2890	7.0	0.00
U059	Q29	534	0.29	0.006	0.014	94.03	5.1	0.2768	7.0	0.5951	8.0	0.00
U060	Q29	567	0.34	0.006	0.029	97.69	5.3	0.2491	7.3	0.5543	7.5	0.00
U061	Q29	596	0.32	0.006	0.028	92.94	4.4	0.2771	5.6	0.6601	7.2	0.00
U062	Q29	598	0.29	0.006	0.0053	88.24	5.3	0.2994	6.6	0.6427	7.2	0.00
U063	Q29	927	0.20	0.007	0.011	61.26	5.8	0.4653	5.1	0.9949	6.8	0.00
U064	Q29	558	0.13	0.004	0.071	65.91	5.6	0.4414	8.5	1.028	8.4	0.00
U065	Q29	757	0.17	0.006	0.019	65.38	5.3	0.4684	5.5	1.047	7.2	0.00
U066	Q29	8989	2.0	0.084	2.90	64.50	5.3	0.4591	3.2	1.163	4.6	0.00
U073	Q29	3470	2.1	0.046	2.93	101.4	7.2	0.2663	12	0.5894	14	0.00
U074	Q29	631	1.5	0.017	1.74	132.2	3.9	0.09129	7.0	0.1263	17	0.00
U075	Q29	44925	1.4	0.31	2.10	13.98	5.7	0.7470	1.3	1.853	1.6	0.00

U076	Q29	18014	1.7	0.13	1.64	39.59	9.2	0.6210	3.2	1.510	4.1	0.00
U077	Q29	9150	1.2	0.074	3.77	48.79	7.5	0.5582	3.1	1.405	5.0	0.00
U078	Q29	8	0.049	0.001	0.0010	136.1	11	0.03455	88	0.1642	67	0.00
U079	Q29	1451	0.60	0.013	0.00015	84.74	4.4	0.3389	3.7	0.7527	4.9	0.00
U080	Q29	478	0.53	0.006	0.0091	115.6	4.0	0.1696	7.8	0.3388	7.9	0.00
U081	Q29	332	0.26	0.004	0.0052	99.97	5.1	0.2062	9.2	0.4280	9.6	0.00
U082	Q29	233	0.56	0.005	0.17	132.6	4.5	0.09484	11	0.1175	17	0.00
U083	Q29	630	0.87	0.009	0.24	122.4	4.8	0.1517	7.2	0.2630	10	0.00
U084	Q29	596	0.61	0.007	0.010	114.2	4.2	0.1798	5.5	0.3654	7.2	0.00
U085	Q29	700	0.46	0.007	0.0049	100.0	4.2	0.2488	5.8	0.4952	8.7	0.00
U086	Q29	5909	1.3	0.045	0.018	66.56	7.0	0.4572	5.4	1.073	5.9	0.00
U087	Q29	730	1.2	0.011	0.00041	123.3	4.0	0.1220	6.1	0.1831	7.6	0.00
U088	Q27	47	0.11	0.001	0.024	125.5	8.5	0.08655	24	0.1511	45	0.00
U089	Q27	178	0.16	0.002	0.062	109.9	6.0	0.1888	13	0.3058	15	0.00
U090	Q27	822	0.15	0.006	0.076	58.93	7.3	0.4780	7.1	1.147	6.5	0.00
U091	Q27	948	0.16	0.007	0.056	55.99	5.7	0.5423	6.0	1.289	5.8	0.00
U092	Q27	1497	0.20	0.011	0.12	49.91	6.7	0.5622	6.0	1.227	4.4	0.00
U093	Q27	819	0.22	0.007	0.048	67.76	6.7	0.4095	6.5	0.9148	9.0	0.00
U094	Q27	559	0.099	0.004	0.026	55.43	5.6	0.4945	8.6	1.169	7.5	0.00
U095	Q27	305	0.19	0.003	0.033	98.99	6.2	0.2632	11	0.4800	10	0.00
U096	Q27	973	0.061	0.007	0.035	25.85	5.9	0.6783	7.3	1.702	5.3	0.00
U097	Q27	220	0.091	0.002	0.020	85.26	7.7	0.3510	13	0.7114	14	0.00
U098	Q27	1252	0.068	0.008	0.038	25.02	6.0	0.7266	7.0	1.709	5.3	0.00
U099	Q27	117	0.14	0.002	0.065	116.5	7.6	0.1676	18	0.2367	37	0.00
U100	Q27	276	0.13	0.002	0.037	94.91	6.8	0.3083	12	0.7053	13	0.00
U101	Q27	633	0.20	0.005	0.029	77.16	7.5	0.3867	8.4	0.8945	11	0.00
U108	Q27	224	0.16	0.002	0.029	111.0	6.5	0.2407	11	0.5221	15	0.00
U109	Q27	647	0.24	0.005	0.11	87.54	6.5	0.3805	7.4	0.7046	10	0.00
U110	Q27	310	0.11	0.003	0.032	88.74	8.0	0.3744	14	0.8611	13	0.00
U111	Q27	133	0.12	0.002	0.027	107.8	6.3	0.1786	15	0.3548	19	0.00
U112	Q27	3066	0.069	0.021	0.024	10.83	9.8	0.7859	3.0	1.934	4.4	0.00
U113	Q27	326	0.12	0.003	0.024	80.18	6.6	0.3590	10	0.8373	9.6	0.00
U114	Q27	132	0.14	0.002	0.023	111.2	6.6	0.1812	14	0.4234	15	0.00
U115	Q27	951	0.078	0.007	0.035	32.69	5.0	0.6417	6.1	1.569	5.3	0.00
U116	Q27	303	0.067	0.002	0.024	66.55	7.7	0.4687	13	1.097	12	0.00
U117	Q27	332	0.21	0.003	0.045	101.2	5.4	0.2634	9.3	0.5787	9.2	0.00
U118	Q27	201	0.16	0.002	0.019	111.2	5.6	0.2250	11	0.4524	13	0.00
U173	G3	222	0.15	0.002	0.0075	105.4	6.6	0.2726	14	0.4445	15	0.00
U174	G3	232	0.26	0.003	0.026	127.2	5.2	0.1863	9.7	0.3372	16	0.00
U175	G3	333	0.42	0.005	0.047	121.7	5.9	0.1672	10	0.3766	14	0.00
U176	G3	401	0.46	0.005	0.019	126.3	5.2	0.1902	6.5	0.3399	8.8	0.00
U177	G3	240	0.46	0.004	0.024	138.0	4.8	0.1205	10	0.2310	13	0.00
U178	G3	94	0.12	0.001	0.012	132.7	8.0	0.1873	19	0.4095	26	0.00
U179	G3	177	0.77	0.012	0.026	152.1	4.6	0.06030	13	0.04500	29	0.00
U180	G3	180	0.65	0.004	0.017	150.7	5.4	0.07303	13	0.05466	23	0.00
U181	G3	166	0.66	0.004	0.017	153.2	5.1	0.06688	14	0.05326	30	0.00
U182	G3	337	0.55	0.005	0.0049	132.7	4.5	0.1461	9.7	0.2428	13	0.00
U183	G3	990	0.34	0.008	0.022	84.59	6.2	0.4092	7.8	0.9061	7.0	0.00
U184	G3	2425	0.43	0.019	0.0084	54.41	10	0.5427	5.2	1.300	5.9	0.00
U185	G3	185	0.26	0.003	0.0050	131.4	5.9	0.1495	13	0.2811	19	0.00
U186	G3	331	0.15	0.003	0.48	88.03	6.8	0.3436	12	0.8261	11	0.00
U187	G3	538	0.23	0.005	0.0050	83.39	6.4	0.3418	8.6	0.8176	9.7	0.00
U188	G3	697	0.36	0.007	0.026	97.81	6.4	0.3152	7.6	0.6680	11	0.00
U189	G3	497	0.44	0.006	0.032	113.5	5.1	0.2162	10	0.4573	9.4	0.00
U190	G3	273	0.14	0.003	0.14	91.03	8.1	0.3235	13	0.7057	11	0.00
U191	G3	319	0.28	0.004	0.012	110.8	5.8	0.2214	10	0.4230	11	0.00
U192	G3	628	0.30	0.006	0.0073	92.35	5.1	0.3384	9.0	0.7388	7.8	0.00
U193	G3	300	0.31	0.004	0.011	122.0	5.4	0.2040	9.2	0.3836	13	0.00
U200	G3	286	0.52	0.005	0.011	133.4	4.9	0.1278	10	0.2321	12	0.00
U201	G3	555	0.95	0.009	0.072	133.5	3.8	0.1351	6.6	0.2430	11	0.00
U202	G3	1500	0.47	0.013	0.019	72.28	5.3	0.4028	5.3	0.9228	5.2	0.00

U204	G3	6577	0.10	0.048	0.095	6.546	5.5	0.7191	2.7	1.747	2.5	0.00
U206	G3	87	0.27	0.002	0.0089	148.9	5.1	0.08093	17	0.06263	39	0.00
U207	G3	1487	0.22	0.012	0.018	48.09	6.4	0.5716	6.5	1.343	5.8	0.00
U208	G3	348	0.11	0.003	0.24	69.54	7.0	0.4054	8.2	0.8748	13	0.00
U209	G3	194	0.48	0.004	0.013	144.1	4.9	0.1025	14	0.1452	18	0.00
U210	G3	140	0.29	0.002	0.0062	137.6	5.6	0.1138	13	0.1625	15	0.00
U211	G3	777	0.33	0.023	0.017	87.24	4.9	0.3590	6.5	0.8094	7.1	0.00
U213	G3	191	0.10	0.002	0.097	96.13	9.5	0.3032	14	0.5925	11	0.00
U214	G3	448	0.054	0.004	0.14	41.17	9.4	0.5978	10.0	1.398	13	0.00
U215	G3b	6226	3.6	0.064	0.018	95.73	3.6	0.2874	2.9	0.6384	3.5	0.00
U216	G3b	6827	2.6	0.061	0.017	84.55	4.2	0.3551	4.2	0.7812	4.1	0.00
U218	G3b	43799	3.0	0.34	0.017	23.65	3.5	0.6067	1.0	1.453	1.2	0.00
U219	G3b	10120	3.2	0.090	0.018	73.62	4.5	0.3969	3.2	0.9177	3.4	0.00
U220	G3b	53616	2.3	0.41	0.065	16.01	4.0	0.6401	0.98	1.557	1.2	0.00
U221	G3b	4174	4.4	0.051	0.014	119.0	3.5	0.1979	2.8	0.3992	3.0	0.00
U222	G3b	448	1.0	0.008	0.011	140.7	4.6	0.1102	9.6	0.1283	18	0.00
U223	G3b	3354	0.71	0.029	0.0078	55.77	3.8	0.4654	3.6	1.117	3.0	0.00
U224	G3b	41988	1.2	0.32	0.016	10.36	3.7	0.6590	0.99	1.606	1.0	0.00
U225	G3b	20776	0.89	0.16	0.0098	15.46	3.3	0.6422	1.5	1.552	1.3	0.00
U226	G3b	55163	2.4	0.43	0.020	15.50	3.5	0.6296	0.96	1.525	1.0	0.00
U227	G3b	25602	2.5	0.21	0.017	31.69	3.3	0.5656	1.4	1.356	1.3	0.00
U228	G3b	2215	0.86	0.021	0.013	78.64	4.3	0.3609	3.6	0.8412	3.6	0.00
U229	G3b	7155	3.8	0.071	0.021	92.50	4.1	0.3029	5.0	0.6823	4.4	0.00
U231	G3b	2116	0.87	0.020	0.019	81.26	3.9	0.3506	3.4	0.7803	5.3	0.00
U232	G3b	2157	0.41	0.018	0.011	53.19	4.9	0.5021	4.8	1.136	5.0	0.00
U233	G3b	3226	0.40	0.026	0.0039	38.17	4.2	0.5545	3.8	1.314	3.3	0.00
U234	G3b	1541	0.68	0.014	0.013	86.12	3.6	0.3443	3.5	0.7124	5.2	0.00
U235	G3b	2894	0.91	0.026	0.0092	72.32	4.2	0.4031	3.5	0.9599	3.4	0.00
U236	G3b	2963	0.73	0.026	0.021	61.60	4.6	0.4436	3.4	1.044	3.7	0.00
U237	P4	98485	0.89	0.73	0.013	3.991	3.5	0.7914	0.66	1.952	0.96	0.00
U244	P4	125870	1.1	0.92	0.0093	3.935	3.3	0.7923	0.69	1.952	0.86	0.00
U245	P4	60586	2.1	0.47	0.0061	13.69	3.3	0.7072	0.82	1.748	1.1	0.00
U246	P4	20177	3.5	0.18	0.00055	43.99	3.3	0.4569	1.3	1.076	1.5	0.00
U247	P4	83860	1.4	0.61	0.0081	7.928	3.5	0.7596	0.86	1.866	1.3	0.00
U248	P4	31689	2.3	0.25	0.0029	24.39	3.3	0.6144	1.0	1.512	1.3	0.00
U249	P4	26436	2.6	0.22	0.0047	30.67	3.4	0.5720	0.97	1.367	1.7	0.00
U250	P4	25639	2.1	0.21	0.0024	26.68	3.2	0.5942	1.4	1.447	1.5	0.00
U251	P4	34942	3.0	0.28	0.0023	27.63	3.2	0.5837	0.98	1.418	1.2	0.00
U252	P4	28055	1.9	0.23	0.00031	23.51	3.4	0.6226	1.3	1.508	1.3	0.00
U253	P4	30750	2.9	0.25	0.0060	29.40	4.3	0.5743	1.3	1.380	1.6	0.00
U254	P4	29301	2.8	0.24	0.0032	29.80	3.5	0.5696	1.3	1.386	1.2	0.00
U255	P4	32309	7.6	0.30	0.00007	50.91	3.2	0.3920	1.1	0.9176	1.1	0.00
U256	P4	40548	3.4	0.33	0.00004	27.54	3.3	0.5972	1.0	1.444	1.1	0.00
U257	P4	30315	5.7	0.27	0.00002	45.62	3.4	0.4442	1.1	1.034	1.3	0.00
U258	P4	24976	3.2	0.21	0.0013	36.40	3.4	0.5152	1.2	1.214	1.4	0.00
U259	P4	141616	0.11	1.1	0.12	0.3554	4.3	0.8285	0.68	2.052	0.91	0.00
U260	P4	297456	0.015	2.2	25.5	0.02316	3.5	0.8289	0.57	2.048	0.72	0.00
U261	P4	129540	0.010	0.97	7.03	0.03472	3.7	0.8285	0.66	2.039	0.86	0.00
U262	P4	155784	0.008	1.2	28.9	0.02285	4.3	0.8307	0.63	2.040	0.89	0.00
U263	MGT9	12832	0.100	0.097	0.0037	3.411	3.5	0.8121	2.4	1.970	2.2	0.00
U264	MGT9	6943	0.050	0.052	0.00048	3.212	4.7	0.8287	2.7	1.997	2.4	0.00
U265	MGT9	2676	0.067	0.019	0.00001	12.12	10	0.8167	4.2	1.986	4.6	0.00
U266	MGT9	2787	0.14	0.021	0.00024	22.51	4.7	0.8095	4.0	1.905	4.8	0.00
U267	MGT9	5808	0.11	0.044	0.00037	8.099	3.5	0.8247	2.4	2.044	2.5	0.00
U268	MGT9	8524	0.10	0.065	0.00091	5.223	3.5	0.8116	1.9	2.018	2.2	0.00
U269	MGT9	5613	0.12	0.043	0.00073	9.526	5.0	0.8204	2.4	2.049	2.9	0.00
U270	MGT9	11024	0.17	0.084	0.012	6.751	3.5	0.8024	2.2	2.007	2.1	0.00
U271	MGT9	5093	0.14	0.039	0.0013	12.19	3.7	0.8020	2.6	2.018	2.5	0.00
U272	MGT9	2749	0.054	0.021	0.00067	8.703	5.5	0.8351	4.1	2.063	4.0	0.00
U273	MGT9	10211	0.19	0.078	0.019	8.341	3.4	0.8091	2.0	2.040	1.8	0.00
U274	MGT9	19304	0.17	0.15	0.089	3.845	4.0	0.8237	1.6	2.029	1.6	0.00

U275	MGT9	7087	0.13	0.054	0.024	7.983	3.9	0.8033	2.2	1.999	1.8	0.00
U276	MGT9	16723	0.11	0.13	0.00059	3.003	3.6	0.8230	1.3	2.035	1.6	0.00
U277	MGT9	20210	0.066	0.16	0.0014	1.428	4.1	0.8134	1.6	2.058	1.4	0.00
U278	MGT9	3082	0.024	0.025	0.0055	3.669	5.7	0.8087	3.6	2.020	4.1	0.00
U279	MGT9	1863	0.086	0.014	0.00031	20.23	4.9	0.7890	4.7	2.001	4.2	0.00
U280	MGT9	3073	0.28	0.024	0.0021	38.59	5.5	0.7571	4.2	1.854	2.8	0.00
U281	MGT9	1062	0.25	0.009	0.16	82.63	5.6	0.6685	6.5	1.676	7.0	0.00
U282	MGT9	96843	0.14	0.75	23.6	0.6518	3.7	0.8196	0.72	2.041	0.90	0.00
U289	MGT9	4390	0.17	0.034	0.023	16.29	4.2	0.8057	3.3	2.022	2.8	0.00
U290	MGT9	1130	0.16	0.009	0.00006	56.86	5.2	0.7391	5.3	1.766	5.7	0.00
U291	MGT9	6481	0.17	0.050	0.043	11.47	3.6	0.8200	2.2	2.049	2.7	0.00
U292	MGT9b	1029	0.87	0.010	0.00010	189.9	7.3	0.3899	9.2	1.016	8.2	0.00
U293	MGT9b	75	0.68	0.002	0.00004	330.5	5.9	0.06842	16	0.08677	42	0.00
U294	MGT9b	199	0.86	0.003	0.00005	309.3	5.2	0.1368	12	0.2238	16	0.00
U295	MGT9b	7087	0.60	0.056	0.0011	34.08	4.6	0.7597	2.0	1.860	1.9	0.00
U296	MGT9b	2719	0.33	0.023	0.00068	43.33	7.8	0.6881	4.0	1.793	3.3	0.00
U297	MGT9b	1678	0.50	0.014	0.00071	91.72	5.3	0.6064	4.8	1.397	5.7	0.00
U298	MGT9b	1479	0.79	0.013	0.00065	142.1	5.1	0.4981	5.0	1.201	5.2	0.00
U299	MGT9b	420	0.041	0.003	0.0060	36.89	9.3	0.7787	9.1	1.833	10	0.00
U300	MGT9b	944	0.22	0.008	0.00046	79.86	5.8	0.6516	5.7	1.561	6.2	0.00
U301	MGT9b	423	0.16	0.004	0.00057	116.5	6.7	0.5679	9.2	1.339	10.0	0.00
U302	MGT9b	5187	0.15	0.040	0.0090	12.24	5.4	0.8169	3.1	2.008	3.4	0.00
U303	MGT9b	125	0.46	0.002	0.0027	307.7	6.6	0.1483	12	0.3663	15	0.00
U304	MGT9b	104	0.30	0.001	0.00007	289.2	7.9	0.1800	18	0.4082	19	0.00
U305	MGT9b	164	0.35	0.002	0.00019	279.1	8.2	0.2480	13	0.4581	18	0.00
U306	MGT9b	2584	0.34	0.021	0.00078	48.80	5.0	0.6961	3.1	1.828	3.6	0.00
U307	MGT9b	2544	0.52	0.021	0.0011	70.70	4.8	0.6582	5.1	1.591	2.9	0.00
U308	MGT9b	1239	0.51	0.011	0.00068	118.0	4.5	0.5526	5.5	1.359	5.5	0.00
U309	MGT9b	2474	0.60	0.021	0.00064	78.05	4.8	0.6233	4.5	1.578	3.8	0.00
U310	MGT9b	7898	0.35	0.067	0.0010	15.95	20	0.7823	4.1	1.930	4.2	0.00
U311	MGT9b	2280	0.48	0.019	0.00065	77.22	4.2	0.6906	4.2	1.670	3.1	0.00
U312	MGT9b	2489	0.12	0.020	0.00033	19.46	8.4	0.7530	5.5	1.908	7.3	0.00
U313	MGT9b	3273	0.032	0.026	0.00071	4.213	7.6	0.8215	3.3	2.042	3.9	0.00
U314	MGT9b	407	0.48	0.004	0.00030	216.8	7.8	0.3434	9.8	0.7417	12	0.00
U315	MGT9b	181	0.060	0.002	0.0010	98.39	9.9	0.5945	14	1.386	17	0.00
U316	MGT9b	240	0.26	0.002	0.00005	216.0	8.6	0.3475	15	0.6807	16	0.00
U317	MGT9b	335	0.34	0.003	0.00006	204.0	7.3	0.3928	9.3	0.8798	11	0.00
U318	MGT9b	581	0.17	0.005	0.00012	94.40	10.0	0.6202	7.3	1.405	8.9	0.00
U319	BX16	481	0.055	0.004	0.084	40.24	8.4	0.6145	8.6	1.609	9.9	0.00
U320	BX16	147	0.036	0.001	0.18	60.11	13	0.4949	19	1.297	15	0.00
U321	BX16	127	0.036	0.001	0.11	75.18	9.5	0.4425	17	1.095	19	0.00
U322	BX16	398	0.022	0.003	0.073	21.07	8.0	0.7201	10	1.701	12	0.00
U323	BX16	272	0.055	0.002	0.072	62.51	7.3	0.5174	11	1.221	15	0.00
U324	BX16	7307	0.038	0.057	0.13	2.269	4.4	0.8499	2.3	2.067	2.5	0.00
U325	BX16	1258	0.046	0.010	0.098	14.11	7.0	0.7641	6.9	1.913	6.5	0.00
U326	BX16	323	0.022	0.002	0.23	27.34	12	0.7602	14	1.580	12	0.00
U327	BX16	1945	0.042	0.015	0.11	9.655	9.0	0.8009	4.0	1.982	4.5	0.00
U334	BX16	6576	0.030	0.053	0.089	1.941	4.3	0.8245	2.7	2.045	1.9	0.00
U335	BX16	10585	0.031	0.083	0.084	1.307	3.9	0.8467	2.2	2.087	2.3	0.00
U336	BX16	656	0.029	0.005	0.13	17.26	9.6	0.7367	9.1	1.853	9.4	0.00
U337	BX16	2198	0.042	0.016	0.17	10.01	12	0.7840	4.4	2.053	5.3	0.00
U338	BX16	355	0.020	0.003	0.23	19.71	8.6	0.7218	12	1.735	12	0.00
U339	BX16	802	0.040	0.009	0.10	21.37	8.5	0.7458	7.7	1.916	7.3	0.00
U340	BX16	314	0.063	0.003	0.11	52.76	8.0	0.5355	14	1.142	14	0.00
U341	BX16	9710	0.045	0.078	0.098	2.017	6.4	0.8354	2.2	2.066	2.3	0.00
U342	BX16	1165	0.048	0.010	0.14	15.15	10	0.7537	6.0	1.737	6.1	0.00
U343	BX16	643	0.017	0.005	0.066	12.01	9.4	0.7507	8.9	2.150	7.8	0.00
U344	BX16	426	0.039	0.004	0.12	31.94	7.4	0.6592	8.3	1.676	11	0.00
U345	BX16	3130	0.032	0.025	0.12	4.355	7.3	0.8130	4.2	1.926	3.5	0.00
U346	BX16	517	0.044	0.004	0.11	29.96	8.1	0.6815	8.3	1.611	9.4	0.00
U347	BX16	340	0.038	0.003	0.18	35.99	8.2	0.6787	14	1.659	12	0.00

U348	BX16b	4749	0.042	0.038	0.37	3.867	9.9	0.7818	3.2	1.923	3.6	0.00
U349	BX16b	274	0.054	0.003	0.12	51.11	7.8	0.5192	10	1.260	11	0.00
U350	BX16b	129	0.057	0.001	0.098	76.94	9.2	0.3557	16	0.8127	19	0.00
U351	BX16b	155	0.033	0.001	0.23	54.33	11	0.4952	19	1.167	14	0.00
U352	BX16b	293	0.037	0.003	0.13	38.01	8.2	0.5556	12	1.467	10	0.00
U353	BX16b	231	0.043	0.002	0.12	55.65	8.4	0.5400	12	1.327	12	0.00
U354	BX16b	126	0.032	0.001	0.18	59.43	10	0.4493	17	1.278	18	0.00
U355	BX16b	944	0.047	0.008	0.22	19.02	8.3	0.6879	6.5	1.624	8.2	0.00
U356	BX16b	454	0.019	0.004	1.15	16.26	6.6	0.7357	9.1	1.852	9.1	0.00
U357	BX16b	349	0.043	0.003	0.62	37.03	9.1	0.5815	11	1.556	12	0.00
U358	BX16b	123	0.016	0.001	0.81	35.88	10	0.5578	16	1.367	19	0.00
U359	BX16b	259	0.021	0.002	1.03	29.77	12	0.6058	12	1.451	12	0.00
U360	BX16b	7148	0.072	0.057	0.47	4.239	7.4	0.7975	2.8	1.922	3.3	0.00
U361	BX16b	39762	0.11	0.32	0.54	1.181	9.8	0.8142	1.2	2.006	1.3	0.00
U362	BX16b	392	0.026	0.003	0.90	27.35	10	0.6691	11	1.686	11	0.00
U363	BX16b	303	0.023	0.002	0.25	30.55	15	0.5749	14	1.425	13	0.00
U364	BX16b	133	0.039	0.001	0.20	67.96	12	0.4775	15	0.9469	18	0.00
U365	BX16b	258	0.032	0.002	0.18	38.95	8.4	0.6082	11	1.406	12	0.00
U366	BX16b	435	0.016	0.003	0.17	17.03	11	0.7659	9.2	1.869	8.8	0.00
U367	BX16b	240	0.020	0.002	0.21	28.36	11	0.6450	12	1.615	15	0.00
U368	BX16b	151	0.030	0.002	0.20	53.53	12	0.5633	16	1.379	17	0.00
U369	BX16b	205	0.054	0.002	0.11	57.20	7.5	0.4515	13	1.072	9.7	0.00
U370	BX16b	165	0.054	0.002	0.16	72.78	10.0	0.4343	16	1.092	16	0.00
U402	B2	368	0.12	0.004	0.22	82.31	8.7	0.5145	9.7	1.287	8.3	0.00
U403	B2	535	0.17	0.005	0.56	97.38	8.2	0.5024	10	1.145	10	0.00
U404	B2	1187	0.19	0.010	0.45	57.39	6.2	0.6816	5.8	1.517	5.0	0.00
U405	B2	174	0.21	0.002	0.76	153.8	8.6	0.2654	13	0.5839	16	0.00
U406	B2	4116	0.19	0.029	0.25	30.75	12	0.7537	5.6	1.872	4.0	0.00
U407	B2	2095	0.26	0.017	0.18	50.93	6.9	0.7100	4.4	1.714	5.5	0.00
U408	B2	949	0.21	0.009	0.17	66.17	5.2	0.6178	7.6	1.446	7.4	0.00
U409	B2	447	0.27	0.005	0.13	122.9	5.9	0.4162	7.3	0.8951	9.2	0.00
U410	B2	1815	0.16	0.015	0.20	35.62	10	0.7084	5.3	1.808	5.3	0.00
U411	B2	1058	0.16	0.009	0.36	59.49	6.0	0.6294	6.1	1.510	5.7	0.00
U412	B2	829	0.15	0.008	0.25	54.54	8.6	0.6326	6.7	1.615	6.8	0.00
U413	B2	914	0.12	0.008	0.23	43.47	6.8	0.6887	6.8	1.671	6.4	0.00
U414	B2	1288	0.14	0.011	0.44	41.46	7.2	0.7158	5.6	1.747	5.9	0.00
U415	B2	628	0.15	0.006	0.38	70.45	6.0	0.6275	6.4	1.383	8.6	0.00
U416	B2	510	0.091	0.004	0.18	59.04	8.5	0.6696	7.2	1.543	9.3	0.00
U417	B2	1351	0.034	0.008	0.30	17.51	11	0.8263	6.2	2.121	7.4	0.00
U418	B2	2459	0.047	0.021	0.20	7.390	7.8	0.8113	5.1	2.057	3.5	0.00
U419	B2	330	0.022	0.003	0.50	24.76	12	0.7168	12	1.922	10	0.00
U420	B2	604	0.050	0.005	0.20	34.22	14	0.7301	11	1.725	9.5	0.00
U421	B2	3954	0.038	0.045	0.49	4.778	11	0.8494	3.6	2.145	3.4	0.00
U422	B2	542	0.085	0.005	0.41	47.07	8.2	0.6446	9.3	1.618	9.3	0.00
U424	B2	959	0.12	0.008	0.29	45.97	5.5	0.7037	6.3	1.718	6.9	0.00
U425	P2	3416	0.42	0.032	0.00011	33.71	3.9	0.5621	2.9	1.349	3.1	0.00
U426	P2	6802	0.58	0.063	0.00010	25.40	3.8	0.6327	2.3	1.527	2.5	0.00
U427	P2	4278	0.32	0.041	0.00029	22.66	5.3	0.6434	3.1	1.619	3.2	0.00
U428	P2	1650	0.30	0.016	0.00009	42.11	4.2	0.4879	5.0	1.103	4.9	0.00
U429	P2	4042	0.43	0.038	0.00003	29.99	4.0	0.5852	3.1	1.383	2.7	0.00
U430	P2	2522	0.30	0.025	0.00066	31.66	4.8	0.5720	3.7	1.455	3.1	0.00
U431	P2	6358	0.46	0.059	0.0055	22.24	4.2	0.6556	2.6	1.587	2.3	0.00
U432	P2	2370	0.59	0.026	0.0031	50.23	4.0	0.4261	4.2	1.033	3.4	0.00
U433	P2	3959	0.35	0.037	0.00001	26.61	4.3	0.6126	2.9	1.500	3.7	0.00
U434	P2	4212	0.44	0.040	0.00002	30.01	4.4	0.5943	2.6	1.424	2.8	0.00
U435	P2	3776	0.41	0.036	0.00000	30.23	4.1	0.5925	3.3	1.457	3.9	0.00
U436	P2	4055	0.80	0.042	0.00000	43.96	3.9	0.4823	2.5	1.159	3.2	0.00
U437	P2	4604	0.41	0.043	0.00002	26.34	4.5	0.6295	2.6	1.500	2.5	0.00
U438	P2	2808	0.29	0.027	0.00002	29.73	4.4	0.5977	3.3	1.462	4.0	0.00
U445	P2	4766	0.35	0.044	0.00036	22.54	4.0	0.6639	3.0	1.584	3.1	0.00
U446	P2	6541	0.28	0.060	0.00005	14.23	3.8	0.7198	2.5	1.747	3.1	0.00

U447	P2	3671	0.37	0.035	0.00056	28.22	4.0	0.5999	3.3	1.421	2.7	0.00
U448	P2	1747	0.36	0.018	0.00021	45.78	4.5	0.4762	4.1	1.103	4.3	0.00
U449	P2	2259	0.34	0.022	0.00024	37.40	4.2	0.5445	4.7	1.263	5.1	0.00
U450	P2	3494	0.61	0.035	0.00014	40.31	3.9	0.4951	3.0	1.142	2.5	0.00
U451	P2	5851	0.45	0.055	0.00014	22.49	4.0	0.6441	2.4	1.526	2.3	0.00
U452	P2	2892	0.58	0.030	0.00005	43.77	3.9	0.4767	3.3	1.106	3.6	0.00
U453	P2	3512	0.42	0.034	0.00020	31.98	4.0	0.5765	3.2	1.360	2.9	0.00
U454	P2	2598	0.38	0.026	0.00019	36.58	4.7	0.5354	3.3	1.280	3.9	0.00
U455	P2	3137	0.53	0.032	0.00038	39.05	3.8	0.5003	3.6	1.215	3.7	0.00
U456	P2	2200	0.52	0.023	0.00023	48.19	4.4	0.4360	4.3	1.010	4.7	0.00
U457	P2	2455	0.55	0.026	0.00015	46.31	4.0	0.4505	3.5	1.051	4.1	0.00
U458	P2	3846	0.55	0.039	0.0011	35.31	4.0	0.5445	2.9	1.299	2.9	0.00
U459	P2	2530	0.64	0.027	0.00040	48.35	3.9	0.4158	3.6	0.9488	3.7	0.00
U460	P2	2207	0.40	0.023	0.019	41.18	4.2	0.4883	3.5	1.121	4.2	0.00
U461	P2	1835	0.51	0.021	0.0015	50.58	4.5	0.4026	5.0	0.9789	3.8	0.00
U462	P2	2776	0.53	0.028	0.0021	42.97	4.1	0.4871	3.1	1.120	3.9	0.00
U463	P63	1471	1.4	0.021	0.00048	93.76	3.7	0.2112	5.8	0.4207	4.5	0.00
U464	P63	564	0.095	0.006	0.0035	40.41	6.0	0.5386	6.5	1.298	6.8	0.00
U465	P63	2080	1.8	0.030	0.0024	90.27	3.6	0.2237	4.4	0.4633	3.7	0.00
U466	P63	96325	0.27	0.91	0.0039	1.041	3.8	0.8012	0.88	1.975	1.1	0.00
U467	P63	658	2.7	0.022	0.00058	114.9	3.6	0.06123	7.3	0.03212	15	0.00
U468	P63	8681	0.83	0.085	0.0046	27.27	5.8	0.6123	2.7	1.517	3.1	0.00
U469	P63	472	0.11	0.005	0.056	49.87	6.8	0.4785	8.4	1.038	8.1	0.00
U470	P63	6355	0.087	0.057	0.0045	4.895	7.3	0.7863	2.0	1.876	2.8	0.00
U471	P63	3286	0.27	0.031	0.0018	24.82	3.9	0.6515	3.6	1.585	3.5	0.00
U472	P63	12323	0.075	0.11	0.020	2.261	3.8	0.8042	1.8	1.985	2.2	0.00
U473	P63	285	1.1	0.009	0.0016	112.9	4.0	0.06659	8.2	0.06504	19	0.00
U474	P63	33706	0.053	0.31	0.029	0.5819	3.9	0.8015	1.3	1.995	1.0	0.00
U475	P63	58261	0.073	0.53	0.038	0.4596	3.3	0.8100	0.88	2.005	1.0	0.00
U476	P63	1057	2.3	0.024	0.00050	104.6	3.5	0.1051	5.6	0.1480	9.0	0.00
U477	P63	1162	0.97	0.017	0.0082	86.88	4.0	0.2304	5.5	0.4580	4.4	0.00
U478	P63	426	1.3	0.012	0.00042	109.5	4.0	0.08158	8.4	0.09021	17	0.00
U479	P63	1443	3.9	0.037	0.00054	111.6	3.4	0.09046	4.9	0.1093	8.8	0.00
U480	P63	1088	1.9	0.022	0.019	100.5	4.1	0.1262	8.9	0.1852	17	0.00
U481	P63	1486	2.0	0.025	0.0035	100.1	3.6	0.1634	3.7	0.2853	5.4	0.00
U482	P63	748	3.4	0.027	0.00013	114.9	3.4	0.05620	6.5	0.01870	15	0.00
U483	P63	1036	2.4	0.024	0.00036	109.2	3.4	0.1032	6.0	0.1436	7.8	0.00
U484	P63	749	0.075	0.008	0.0065	27.16	8.2	0.6194	8.5	1.560	7.8	0.00
U485	P63	446	2.0	0.016	0.00040	113.3	3.7	0.05626	6.6	0.02778	19	0.00
U486	P63	424	0.66	0.008	0.00013	102.1	4.4	0.1446	8.7	0.2534	11	0.00
U487	P63	1329	3.3	0.032	0.0010	107.6	3.4	0.09686	4.9	0.1272	7.7	0.00
U488	P21	74779	5.2	0.70	0.00009	22.79	3.4	0.7256	0.63	1.755	0.81	0.00
U489	P21	70196	1.8	0.65	0.57	8.992	3.5	0.7721	0.87	1.907	0.89	0.00
U490	P21	65714	1.3	0.61	0.0012	6.984	3.5	0.7862	0.99	1.937	1.2	0.00
U491	P21	84992	0.57	0.79	0.0011	2.374	3.3	0.7979	0.86	1.967	1.2	0.00
U492	P21	64518	1.6	0.60	0.12	8.765	3.3	0.7712	0.88	1.889	1.1	0.00
U493	P21	68559	3.0	0.64	0.0011	14.68	3.3	0.7573	0.82	1.870	1.0	0.00
U500	P21	68659	2.5	0.65	0.012	12.30	3.6	0.7608	1.0	1.871	1.3	0.00
U501	P21	72230	1.1	0.68	0.14	5.279	3.3	0.7863	0.82	1.930	0.90	0.00
U502	P21	99862	0.38	0.93	0.019	1.341	3.3	0.8093	0.67	1.989	0.94	0.00
U503	P21	52444	2.5	0.50	0.034	16.05	3.2	0.7525	0.77	1.858	0.98	0.00
U504	P21	163338	0.77	1.5	0.00066	1.701	3.4	0.8080	0.66	1.986	0.91	0.00
U505	P21	80108	3.3	0.76	0.022	13.89	4.0	0.7548	0.72	1.852	0.96	0.00
U506	P21	50807	1.3	0.47	0.0011	8.741	3.6	0.7762	1.3	1.896	1.1	0.00
U507	P21	54536	2.9	0.52	0.00026	17.62	3.5	0.7493	0.92	1.847	1.0	0.00
U508	P21	52187	0.59	0.49	0.060	3.927	3.5	0.7891	1.0	1.955	0.99	0.00
U509	P21	50822	1.3	0.48	0.021	8.716	3.6	0.7791	0.96	1.925	1.2	0.00
U510	P21	56710	3.0	0.54	0.00023	17.41	3.6	0.7393	0.93	1.823	1.2	0.00
U511	P21	51141	2.0	0.48	0.022	13.20	3.3	0.7605	0.91	1.863	0.96	0.00
U512	P21	53692	2.7	0.51	0.00003	16.48	3.2	0.7420	0.95	1.834	0.94	0.00
U513	P21	50235	4.3	0.48	0.00029	26.84	3.4	0.7067	1.1	1.728	1.0	0.00

U514	P21	45473	7.8	0.45	0.00019	47.85	3.5	0.6382	1.0	1.545	1.1	0.00
U515	P21	58708	3.7	0.57	0.00040	20.46	3.4	0.7268	0.85	1.797	1.0	0.00
U516	P21	52158	6.9	0.51	0.0096	39.34	3.4	0.6699	1.0	1.627	1.2	0.00
U517	P21	65656	8.1	0.65	0.00080	36.39	4.4	0.6719	1.0	1.636	1.1	0.00
U518	B46	3876	0.072	0.035	0.66	7.471	7.4	0.7991	4.2	1.968	3.9	0.00
U519	B46	1988	0.035	0.018	1.07	6.675	8.7	0.8057	4.4	2.014	5.0	0.00
U520	B46	1216	0.023	0.011	1.41	7.655	6.0	0.7657	5.9	1.942	6.1	0.00
U521	B46	1286	0.034	0.012	2.43	9.399	6.1	0.8134	6.2	1.999	6.2	0.00
U522	B46	2419	0.017	0.023	2.26	2.541	5.0	0.8263	5.4	2.021	4.0	0.00
U524	B46	1076	0.14	0.010	0.099	38.06	11	0.6768	7.9	1.622	7.1	0.00
U525	B46	1376	0.060	0.013	0.55	15.47	7.4	0.7389	4.8	1.952	5.0	0.00
U526	B46	1120	0.031	0.011	2.09	10.08	5.6	0.8181	4.4	2.069	6.7	0.00
U527	B46	45190	0.28	0.44	0.37	2.066	5.6	0.8056	1.0	1.987	1.1	0.00
U528	B46	1667	0.040	0.015	1.23	9.739	6.4	0.8219	4.5	1.994	5.8	0.00
U529	B46	1443	0.045	0.014	1.11	10.61	6.1	0.7670	4.7	1.883	4.8	0.00
U530	B46	2384	0.045	0.023	1.13	6.511	5.0	0.7716	4.2	1.918	3.7	0.00
U531	B46	1189	0.035	0.012	1.30	9.944	6.0	0.7710	5.6	1.922	6.9	0.00
U532	B46	841	0.033	0.008	1.44	13.37	6.2	0.7562	7.1	1.878	6.7	0.00
U533	B46	6786	0.13	0.062	0.47	7.572	10	0.8113	2.7	1.974	2.0	0.00
U534	B46	2033	0.053	0.019	1.14	9.212	5.5	0.8245	4.8	1.981	6.2	0.00
U535	B46	1198	0.034	0.011	1.18	9.823	5.8	0.8035	5.8	1.889	5.4	0.00
U536	B46	2875	0.058	0.027	0.51	7.058	6.3	0.8134	5.2	2.005	5.6	0.00
U537	B46	3582	0.065	0.033	0.54	6.940	7.7	0.8197	4.4	2.022	4.2	0.00
U538	B46	6205	0.12	0.051	0.083	8.835	11	0.7955	2.5	1.900	3.3	0.00
U539	B46	1888	0.041	0.018	0.47	7.712	5.3	0.7856	4.6	1.990	4.3	0.00
U540	B46	2229	0.053	0.022	0.71	8.390	5.2	0.8022	4.3	1.981	5.3	0.00
U541	B46	1273	0.047	0.013	2.23	11.80	4.8	0.7524	5.9	1.931	5.4	0.00
U542	B46	774	0.025	0.007	2.53	10.71	5.5	0.7695	7.1	1.858	6.5	0.00
U543	C12	119462	0.47	1.1	1.48	1.399	3.6	0.8360	0.73	2.075	0.82	0.00
U544	C12	146761	0.47	1.4	1.98	1.144	3.3	0.8321	0.49	2.076	0.83	0.00
U545	C12	169247	0.58	1.6	1.66	1.227	3.7	0.8347	0.78	2.064	0.80	0.00
U546	C12	170122	0.55	1.6	1.98	1.153	3.9	0.8310	0.77	2.061	0.77	0.00
U547	C12	324875	1.1	3.1	0.83	1.187	3.3	0.8358	0.59	2.072	0.71	0.00
U548	C12	189501	0.69	1.8	0.75	1.343	4.8	0.8360	0.79	2.084	0.80	0.00
U555	C12	50195	0.34	0.49	0.93	2.314	3.5	0.8401	1.1	2.054	1.0	0.00
U556	C12	106402	0.73	1.0	0.85	2.453	4.2	0.8325	0.86	2.066	0.89	0.00
U557	C12	103424	1.00	0.99	0.52	3.463	3.4	0.8367	0.99	2.069	0.98	0.00
U558	C12	109988	0.82	1.1	0.72	2.596	3.3	0.8325	0.81	2.074	0.93	0.00
U559	C12	59808	0.65	0.58	0.49	3.844	3.3	0.8330	0.97	2.070	0.92	0.00
U560	C12	60683	0.53	0.59	0.51	3.081	3.3	0.8332	0.88	2.080	1.0	0.00
U561	C12	72509	0.52	0.71	0.94	2.479	3.8	0.8315	1.0	2.066	0.89	0.00
U562	C12	49431	1.2	0.48	0.14	8.300	3.3	0.8296	0.92	2.066	1.2	0.00
U563	C12	76185	0.43	0.74	1.13	1.977	3.3	0.8356	0.70	2.056	1.0	0.00
U564	C12	54348	0.45	0.53	0.94	2.906	3.4	0.8405	0.90	2.074	1.0	0.00
U565	C12	75592	0.42	0.73	1.14	1.967	3.4	0.8291	1.2	2.048	0.95	0.00
U566	C12	38985	0.53	0.38	0.33	4.807	3.3	0.8353	1.2	2.072	1.1	0.00
U567	C12	42949	0.60	0.42	0.29	4.939	3.4	0.8335	1.0	2.068	1.2	0.00
U568	C12	66643	1.0	0.64	0.28	5.648	3.6	0.8314	0.76	2.062	1.0	0.00
U569	C12	48195	0.85	0.47	0.19	6.163	3.3	0.8273	0.88	2.062	1.1	0.00
U570	C12	71641	0.66	0.70	0.30	3.190	3.4	0.8372	0.68	2.070	1.1	0.00
U571	C12	186047	0.71	1.8	0.32	1.329	3.3	0.8337	0.67	2.081	1.00	0.00
U572	C12	92395	0.68	0.91	0.67	2.563	3.5	0.8332	0.73	2.067	0.89	0.00
U573	BX33	6483	0.046	0.065	0.0010	2.449	3.9	0.8290	2.0	2.060	2.8	0.00
U574	BX33	6030	0.080	0.059	0.0012	4.578	3.7	0.8175	2.2	1.998	2.5	0.00
U575	BX33	7634	0.034	0.075	0.0038	1.545	3.7	0.8240	2.6	2.044	2.2	0.00
U576	BX33	4865	0.095	0.048	0.028	6.513	3.9	0.7982	2.8	1.984	2.9	0.00
U577	BX33	2866	0.14	0.029	0.0024	15.77	4.1	0.7441	2.8	1.810	3.3	0.00
U578	BX33	3971	0.061	0.039	0.00034	5.311	4.4	0.8348	3.3	2.058	3.4	0.00
U579	BX33	4277	0.16	0.043	0.012	11.91	4.3	0.7701	3.2	1.890	3.1	0.00
U580	BX33	3697	0.12	0.037	0.0056	10.66	4.4	0.7774	3.3	1.883	3.7	0.00
U581	BX33	4305	0.072	0.043	0.0036	5.669	3.9	0.8167	2.8	2.035	2.8	0.00

U582	BX33	3714	0.059	0.037	0.0010	5.258	4.3	0.7972	3.7	2.017	3.8	0.00
U583	BX33	3702	0.099	0.037	0.0068	8.813	3.9	0.8008	2.8	1.984	2.9	0.00
U584	BX33	1949	0.034	0.019	0.00021	5.683	4.7	0.8039	5.1	1.942	4.6	0.00
U585	BX33	7116	0.026	0.071	0.0045	1.244	4.0	0.8259	2.5	2.046	2.6	0.00
U586	BX33	5950	0.030	0.059	0.029	1.748	4.1	0.8358	2.8	2.034	3.0	0.00
U587	BX33	8216	0.040	0.080	0.29	1.683	4.1	0.8328	2.4	2.015	2.3	0.00
U588	BX33	7509	0.046	0.075	0.00007	2.082	3.7	0.8253	2.3	2.032	2.1	0.00
U589	BX33	4345	0.085	0.044	0.024	6.585	3.9	0.8077	2.9	2.039	3.2	0.00
U590	BX33	3739	0.10	0.038	0.015	9.157	3.8	0.8088	3.0	2.000	3.5	0.00
U591	BX33	5177	0.075	0.053	0.024	4.718	4.0	0.8033	2.8	1.995	3.3	0.00
U592	BX33	6213	0.044	0.062	0.00040	2.403	3.9	0.8386	2.4	2.062	3.2	0.00
RM ₀ (n=28) ^e		219904	0.82	2.3	0.91	1.238	2.4	0.8710	0.55	2.101	0.48	0.00
RM ₁ (n=26) ^e		11742	4.1	0.20	0.00040	22.68	6.4	0.1213	32	0.1796	57	0.00
RM ₂ (n=25) ^e		231851	1.9	1.6	0.00002	315.8	258	0.7544	41	1.817	43	0.00

^a Within run background-corrected mean ²⁰⁷Pb signal in cps (counts per second).

^b U and Pb concentrations and Th/U ratio were calculated relative to the primary reference material.

^c Corrected for background, within-run fractionation and subsequently normalised to the primary reference material (ID-TIMS value/measured value).

^d Rho is the ²⁰⁶Pb/²³⁸U - ²⁰⁷Pb/²⁰⁶Pb uncertainty correlation coefficient.

^e RM₁: Reference material 1.

RM₀

A001	NIST-614	279772	0.87	2.5	0.90	1.224	0.49	0.8699	0.25	2.096	0.43	0.00
A002	NIST-614	266950	0.85	2.4	0.91	1.258	0.47	0.8731	0.39	2.103	0.31	0.00
A033	NIST-614	264277	0.81	2.4	0.92	1.223	0.41	0.8719	0.39	2.105	0.43	0.00
A034	NIST-614	247591	0.80	2.3	0.91	1.248	0.35	0.8704	0.34	2.109	0.37	0.00
A067	NIST-614	254197	0.80	2.3	0.91	1.226	0.50	0.8714	0.44	2.103	0.38	0.00
A068	NIST-614	247012	0.79	2.3	0.92	1.239	0.38	0.8695	0.41	2.093	0.39	0.00
A102	NIST-614	250267	0.81	2.3	0.91	1.235	0.49	0.8710	0.33	2.100	0.18	0.00
A103	NIST-614	243714	0.82	2.3	0.91	1.252	0.34	0.8706	0.20	2.100	0.37	0.00
A146	NIST-614	235315	0.80	2.3	0.91	1.239	0.37	0.8713	0.40	2.100	0.40	0.00
A147	NIST-614	237673	0.83	2.3	0.90	1.257	0.58	0.8702	0.38	2.106	0.51	0.00
A194	NIST-614	242554	0.83	2.4	0.91	1.209	0.42	0.8716	0.37	2.105	0.37	0.00
A195	NIST-614	226384	0.81	2.3	0.91	1.251	0.49	0.8688	0.43	2.097	0.33	0.00
A238	NIST-614	253261	0.89	2.6	0.90	1.211	0.58	0.8693	0.35	2.092	0.55	0.00
A239	NIST-614	224760	0.82	2.3	0.91	1.243	0.39	0.8728	0.47	2.103	0.41	0.00
A283	NIST-614	213124	0.81	2.3	0.91	1.238	0.52	0.8697	0.35	2.104	0.42	0.00
A284	NIST-614	214472	0.82	2.3	0.91	1.257	0.39	0.8724	0.44	2.104	0.38	0.00
A328	NIST-614	211338	0.84	2.4	0.91	1.249	0.44	0.8766	0.30	2.108	0.29	0.00
A329	NIST-614	204393	0.81	2.3	0.91	1.236	0.36	0.8673	0.45	2.096	0.46	0.00
A383	NIST-614	218210	0.87	2.5	0.91	1.224	0.55	0.8763	0.52	2.100	0.53	0.00
A384	NIST-614	201027	0.84	2.4	0.91	1.250	0.42	0.8695	0.36	2.104	0.44	0.00
A439	NIST-614	197965	0.82	2.4	0.91	1.218	0.49	0.8719	0.31	2.099	0.36	0.00
A440	NIST-614	186424	0.82	2.3	0.91	1.250	0.48	0.8690	0.42	2.108	0.39	0.00
A494	NIST-614	178029	0.80	2.3	0.91	1.224	0.50	0.8689	0.47	2.095	0.43	0.00
A495	NIST-614	177352	0.81	2.3	0.91	1.252	0.59	0.8701	0.35	2.102	0.42	0.00
A549	NIST-614	172673	0.82	2.3	0.91	1.237	0.46	0.8654	0.38	2.090	0.31	0.00
A550	NIST-614	169797	0.80	2.3	0.91	1.244	0.34	0.8737	0.31	2.107	0.33	0.00
A593	NIST-614	170090	0.83	2.4	0.90	1.220	0.54	0.8726	0.34	2.104	0.41	0.00
A594	NIST-614	168699	0.84	2.4	0.91	1.253	0.55	0.8725	0.26	2.103	0.34	0.00
		219904	0.82	2.3	0.91	1.238	2.4	0.8710	0.55	2.101	0.48	0.00

RM₁

B003	WC-1	16927	4.2	0.23	0.00065	22.01	3.4	0.1372	3.8	0.2206	5.2	0.00
B004	WC-1	10585	3.5	0.16	0.00021	23.46	3.3	0.1094	2.7	0.1471	4.9	0.00
B035	WC-1	15526	3.8	0.21	0.00026	21.65	3.4	0.1396	3.2	0.2294	4.7	0.00
B036	WC-1	8436	3.4	0.15	0.00024	23.79	3.3	0.09302	2.5	0.1042	5.2	0.00
B069	WC-1	14835	4.5	0.23	0.00036	22.61	3.5	0.1197	3.7	0.1869	6.5	0.00
B070	WC-1	8275	3.2	0.15	0.00032	23.31	3.5	0.09694	2.9	0.1182	5.6	0.00
B104	WC-1	16819	4.6	0.24	0.00073	22.26	3.4	0.1357	3.6	0.2249	6.3	0.00

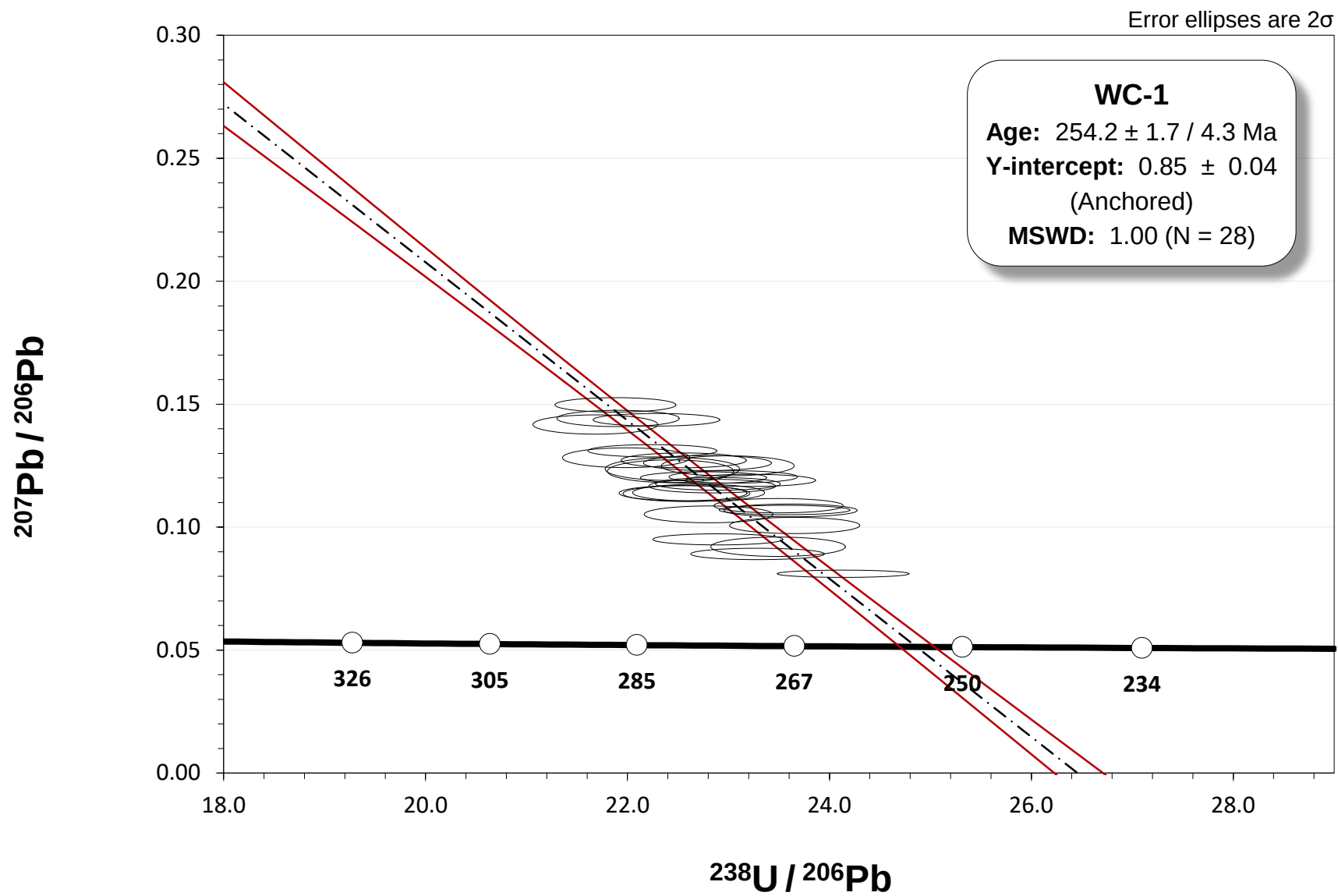
B105	WC-1	8507	3.0	0.14	0.00022	22.83	3.3	0.1090	2.2	0.1480	3.0	0.00
B148	WC-1	12900	5.1	0.23	0.00082	23.83	3.3	0.1016	2.1	0.1238	3.4	0.00
B149	WC-1	10647	3.8	0.18	0.00036	23.30	3.4	0.1095	4.4	0.1394	7.3	0.00
B196	WC-1	11049	4.5	0.20	0.00058	23.71	3.3	0.1013	2.0	0.1320	4.1	0.00
B197	WC-1	9465	3.5	0.17	0.00022	22.65	3.6	0.1082	2.4	0.1455	4.6	0.00
B240	WC-1	11705	4.5	0.21	0.00047	23.53	3.3	0.1094	4.7	0.1430	7.6	0.00
B241	WC-1	9580	3.2	0.16	0.00009	22.86	3.3	0.1220	3.4	0.1798	6.1	0.00
B285	WC-1	14703	4.2	0.23	0.00040	22.27	3.3	0.1451	3.9	0.2449	5.8	0.00
B286	WC-1	11922	3.5	0.19	0.00060	22.33	3.4	0.1419	4.2	0.2317	6.4	0.00
B330	WC-1	12164	4.4	0.22	0.00026	22.31	3.3	0.1206	3.5	0.1750	5.4	0.00
B331	WC-1	6915	3.0	0.14	0.00024	22.70	3.3	0.1037	3.2	0.1369	6.8	0.00
B385	WC-1	13247	4.6	0.26	0.00035	21.84	3.5	0.1288	3.4	0.1948	5.1	0.00
B386	WC-1	8202	3.8	0.18	0.00030	23.23	3.3	0.1014	3.6	0.1320	6.7	0.00
B441	WC-1	12023	5.5	0.27	0.00023	22.82	3.4	0.1060	2.1	0.1443	3.7	0.00
B442	WC-1	15362	3.9	0.24	0.00035	20.92	3.5	0.1780	5.0	0.3253	7.4	0.00
B496	WC-1	11337	4.3	0.23	0.00043	21.75	3.3	0.1310	2.6	0.2066	2.9	0.00
B497	WC-1	12411	4.8	0.25	0.00063	23.02	3.4	0.1330	2.1	0.2228	4.0	0.00
B551	WC-1	10680	4.4	0.23	0.00033	22.35	3.5	0.1268	2.8	0.1861	4.2	0.00
B552	WC-1	11067	4.2	0.22	0.00060	22.40	3.4	0.1441	3.2	0.2272	4.5	0.00
		11742	4.1	0.20	0.00040	22.68	6.4	0.1213	32	0.1796	57	0.00

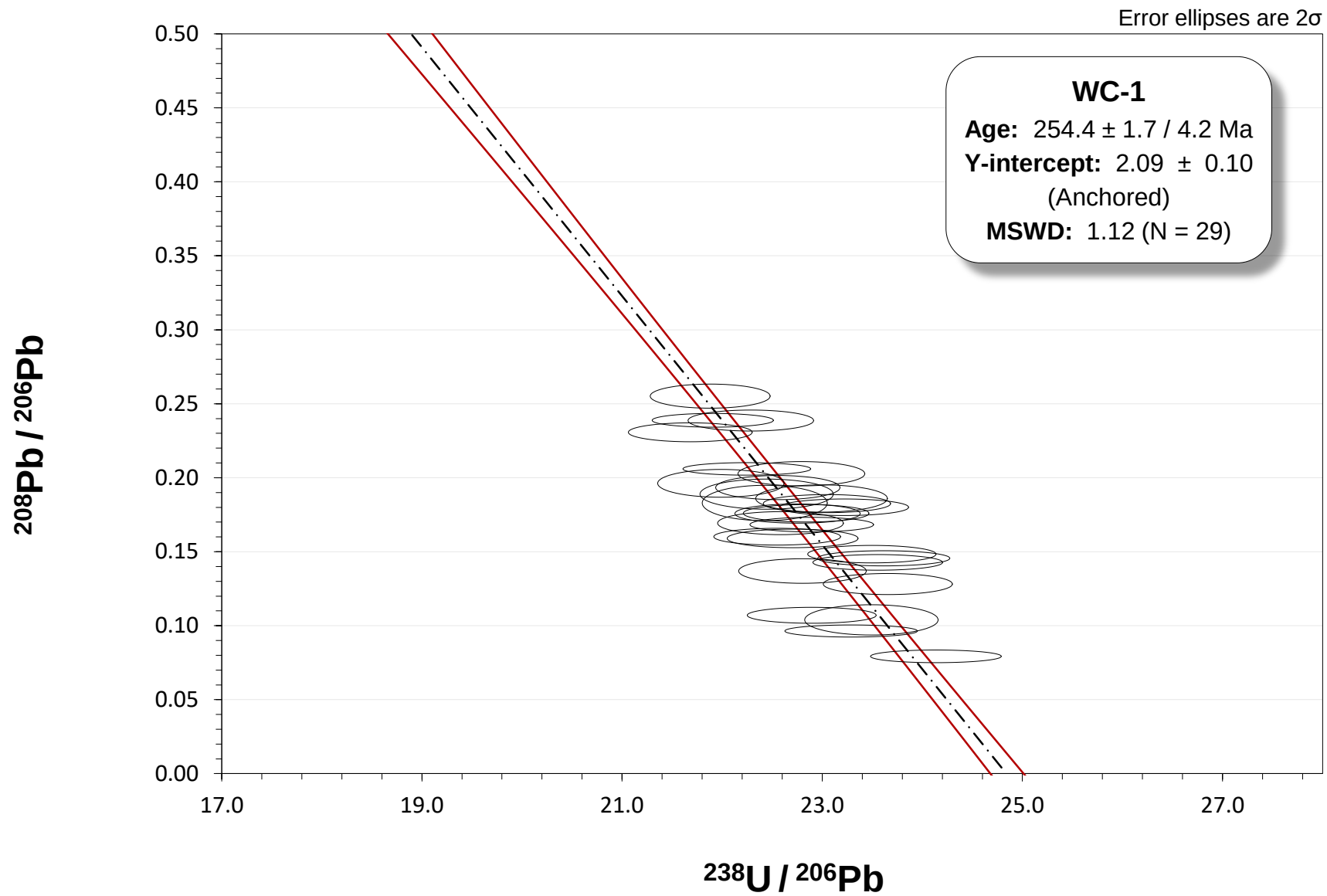
RM ₂												
C005	ASH15D	1725	1.1	0.012	0.00001	321.1	6.4	0.7390	5.2	1.799	4.0	0.00
C006	ASH15D	122225	0.81	0.71	0.00005	4.326	13	0.8714	1.3	2.114	1.6	0.00
C037	ASH15D	198912	2.3	1.2	0.00007	6.506	7.4	0.8692	0.72	2.114	1.0	0.00
C038	ASH15D	578208	1.8	3.2	0.00003	2.396	7.6	0.8705	0.78	2.103	1.1	0.00
C071	ASH15D	417	1.5	0.003	0.00001	1058	7.3	0.4569	10	1.132	11	0.00
C072	ASH15D	527931	1.8	3.2	0.00001	2.214	8.8	0.8733	0.64	2.115	1.1	0.00
C106	ASH15D	9723	1.9	0.063	0.00000	101.6	9.9	0.8398	2.5	2.044	2.0	0.00
C107	ASH15D	675	1.3	0.005	0.00000	731.1	12	0.6039	14	1.465	14	0.00
C150	ASH15D	5790	1.5	0.038	0.00001	134.4	6.1	0.8515	2.9	1.962	3.5	0.00
C198	ASH15D	2942	1.7	0.039	0.00014	439.6	23	0.6834	7.4	1.616	7.8	0.00
C199	ASH15D	363627	2.8	2.2	0.00000	5.161	8.6	0.8729	0.64	2.106	0.99	0.00
C242	ASH15D	1678	2.1	0.012	0.00003	552.1	14	0.6594	5.4	1.508	7.6	0.00
C243	ASH15D	468237	1.9	3.2	0.00000	2.237	11	0.8733	0.82	2.131	1.6	0.00
C287	ASH15D	651	2.4	0.006	0.00000	1035	6.4	0.4912	8.2	1.133	8.4	0.00
C288	ASH15D	1337060	2.3	9.9	0.00002	0.8303	5.3	0.8750	0.70	2.137	1.0	0.00
C332	ASH15D	13442	2.1	0.10	0.00000	69.27	15	0.8502	1.9	2.045	1.7	0.00
C333	ASH15D	764325	2.4	5.4	0.00003	1.737	9.2	0.8744	0.81	2.128	1.3	0.00
C387	ASH15D	802381	1.2	6.3	0.00001	0.6958	6.4	0.8801	0.68	2.157	1.2	0.00
C388	ASH15D	671	4.5	0.007	0.00000	1312	5.7	0.3965	6.6	0.9183	7.6	0.00
C443	ASH15D	738	1.2	0.007	0.00000	534.5	7.9	0.6581	7.8	1.584	10	0.00
C444	ASH15D	9242	1.4	0.076	0.00003	70.08	16	0.8603	2.2	2.066	2.9	0.00
C498	ASH15D	748	2.3	0.007	0.00000	790.3	6.1	0.5622	6.8	1.324	8.0	0.00
C499	ASH15D	433	1.1	0.004	-0.00001	701.6	7.2	0.6028	8.4	1.512	8.7	0.00
C553	ASH15D	28619	1.3	0.26	0.00001	17.92	9.7	0.8674	1.5	2.092	1.7	0.00
C554	ASH15D	555871	1.8	4.8	0.00006	1.420	11	0.8774	0.68	2.123	1.2	0.00
		231851	1.9	1.6	0.00002	315.8	258	0.7544	41	1.817	43	0.00

LA-ICP-MS U-Th-Pb data report

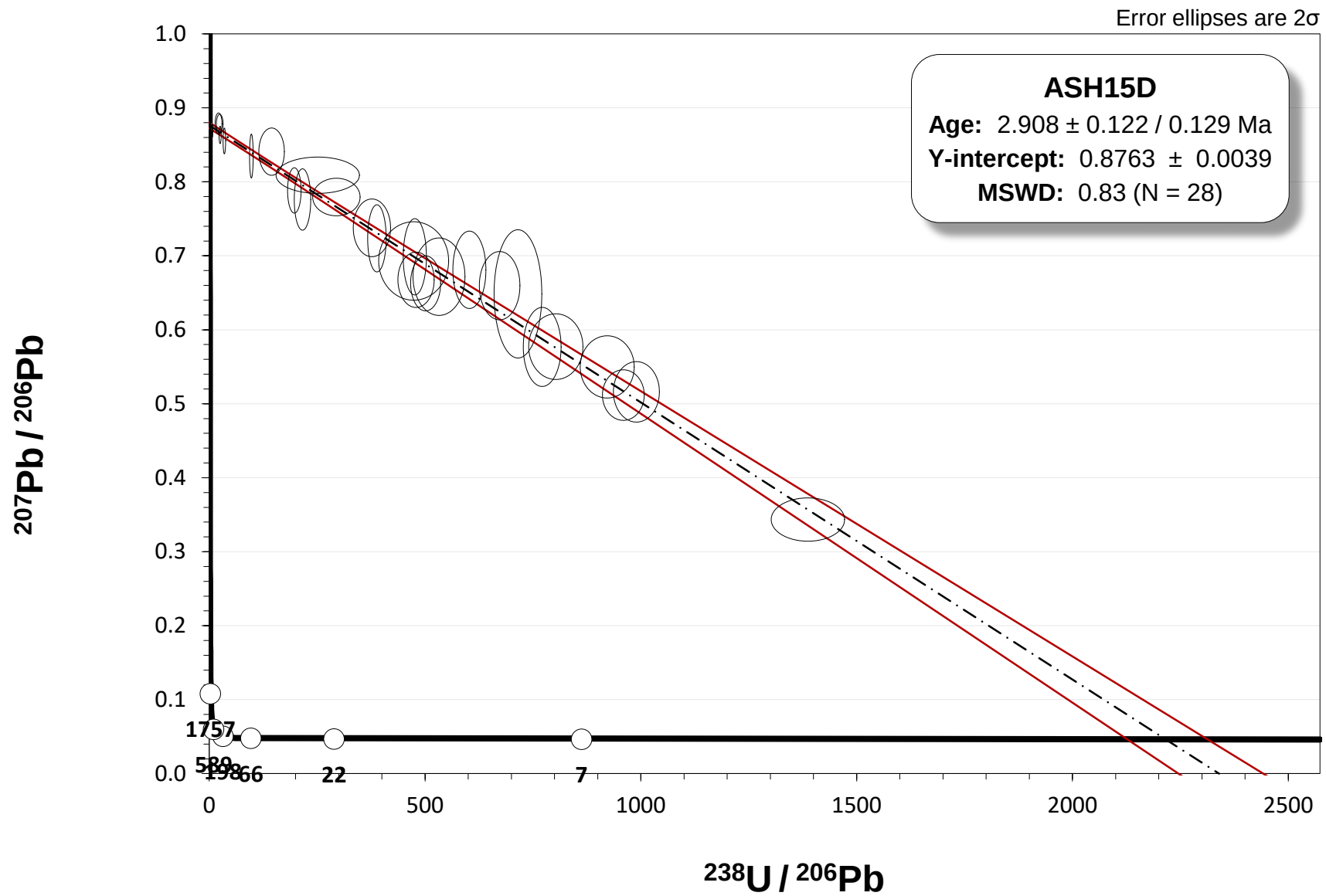
Laboratory & Sample Preparation	
Laboratory name	FIERCE, Frankfurt Isotope & Element Research Center Goethe Univesität, Frankfurt am Main
Sample type/mineral	Carbonate
Sample preparation	25 mm polished resin mounts
Imaging	Petrographic microscope & 2400 dpi digital scan
Laser ablation system	
Make, Model & type	RESolution ArF excimer laser (COMpex Pro 102)
Ablation cell	Two-volume ablation cell (Laurin Technic S155)
Laser wavelength	193 nm
Pulse width	20 ns
Fluence	2 J/cm ²
Repetition rate	12 Hz
Pre-ablation	4 pulses (same parameters as main ablation)
Ablation duration	18 s
Ablation rate	~ 0.6 µm/s
Spot shape & size	Square, 213 µm (side)
Sampling mode	Static spot ablation
Gasses	Sample cell: He. Funnel: He + Ar. Tubbing: He + Ar + N
Gas flows	He (300 ml/min), Ar (1100 ml/min), N (5 ml/min).
ICP-MS Instrument	
Make, Model & type	ThermoScientific ElementXr sector field ICP-MS
Sample introduction	Ablation aerosol
RF power	1300 W
Detection system	Secondary electron multiplier (with conversion dynode at -8kV). Simultaneous analogue and counting (pulse) modes of detection (conversion factors calculated per mass and applied offline). Magnetic field fixed. Detection by peak jumping with electrostatic analyzer.
Masses measured	206, 207, 208, 232, 238
Dwell times	206: 6.4 ms, 207: 7.5 ms, 208: 3.0 ms, 232: 2.0 ms, 238: 4.6 ms
Samples per peak/integration type	4 for all masses/average
Total time per run	99 ms
Number of runs/total time	370 / 36.6 s
Acquisition mode	Trigger from laser (20 s after pre-ablation), background: 18 s, ablation: 18 s
Dead time	29 ns
Data Processing	
Gas blank	20 s on-peak zero subtracted.
Calibration strategy	NIST SRM-614 used as primary standard, WC-1, ASH15D, NAMA & Calgrun used as secondary reference materials (validation).
Reference Material (RM) information	Soda-lime glass NIST SRM-614, WC-1 (Roberts et al., 2017), ASH15D (Vaks et al., 2003), NAMA (in-house dolomite RM), Calgrun (in-house calcite RM)
Data processing / LIEF correction	In-house VBA spreadsheet program (Gerdes and Zeh, 2006, 2009). Intercept method for LIEF correction, assumes cPb corrected WC-1 and samples behave identically.
Mass discrimination	²⁰⁷ Pb/ ²⁰⁶ Pb (0.2%) and ²⁰⁶ Pb/ ²³⁸ U (5%) normalised to primary standard
Common-Pb correction	No common-Pb correction applied to the data.
Uncertainty level & propagation	Ages are quoted at 2s absolute, propagation by quadratic addition.
Quality control / Validation	Sequence 2: WC-1: 254.3 ± 2.1 Ma (2s, MSWD = 1.00, n = 26) ASH15D: 2.936 ± 0.147 Ma (2s, MSWD = 0.71, n = 25) (Ages are the ²⁰⁶ Pb/ ²³⁸ U lower intercept ages of the calculated regressions with the concordia curve in the Tera-Wasserburg space)
Other information	

Sequence of analysis 3

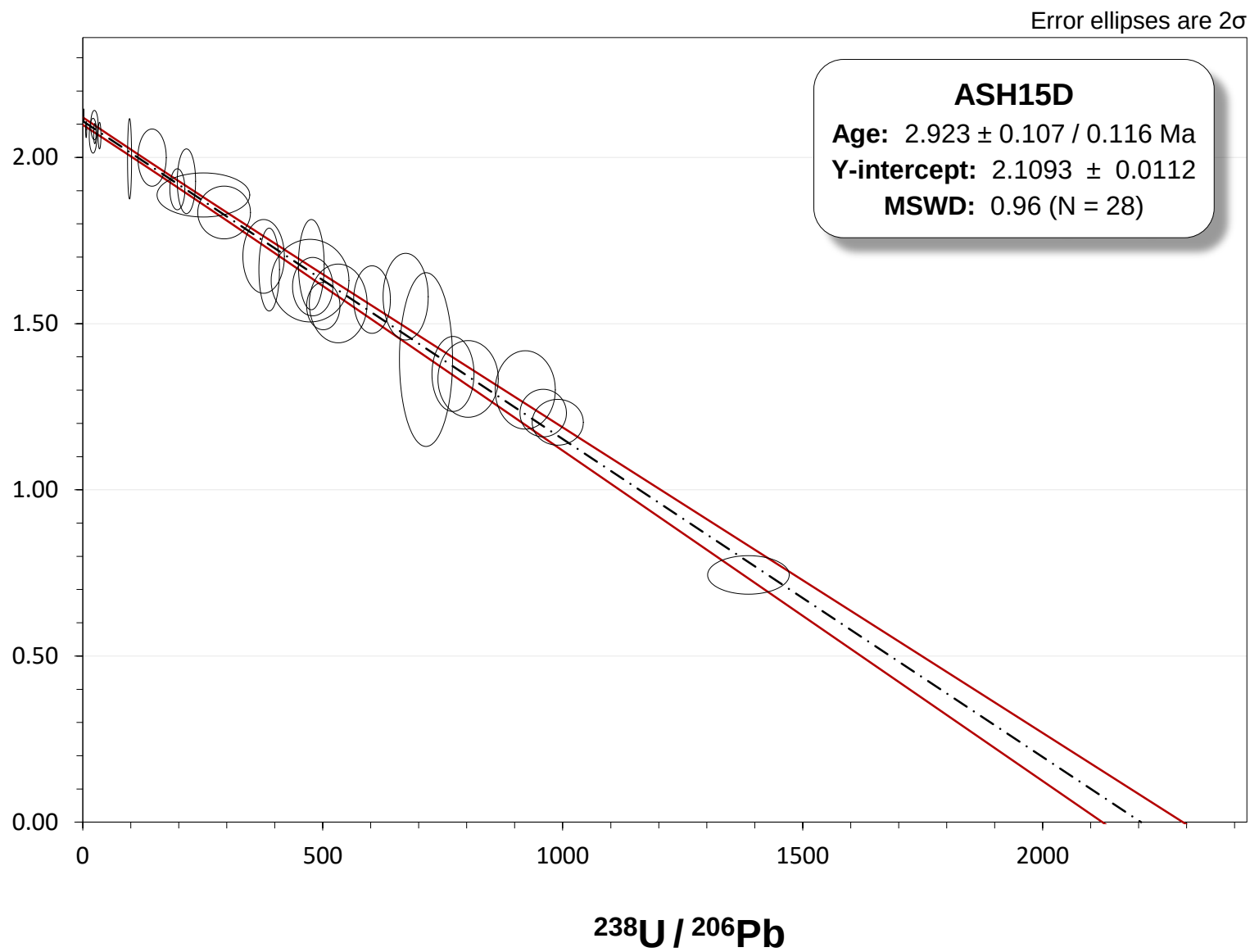


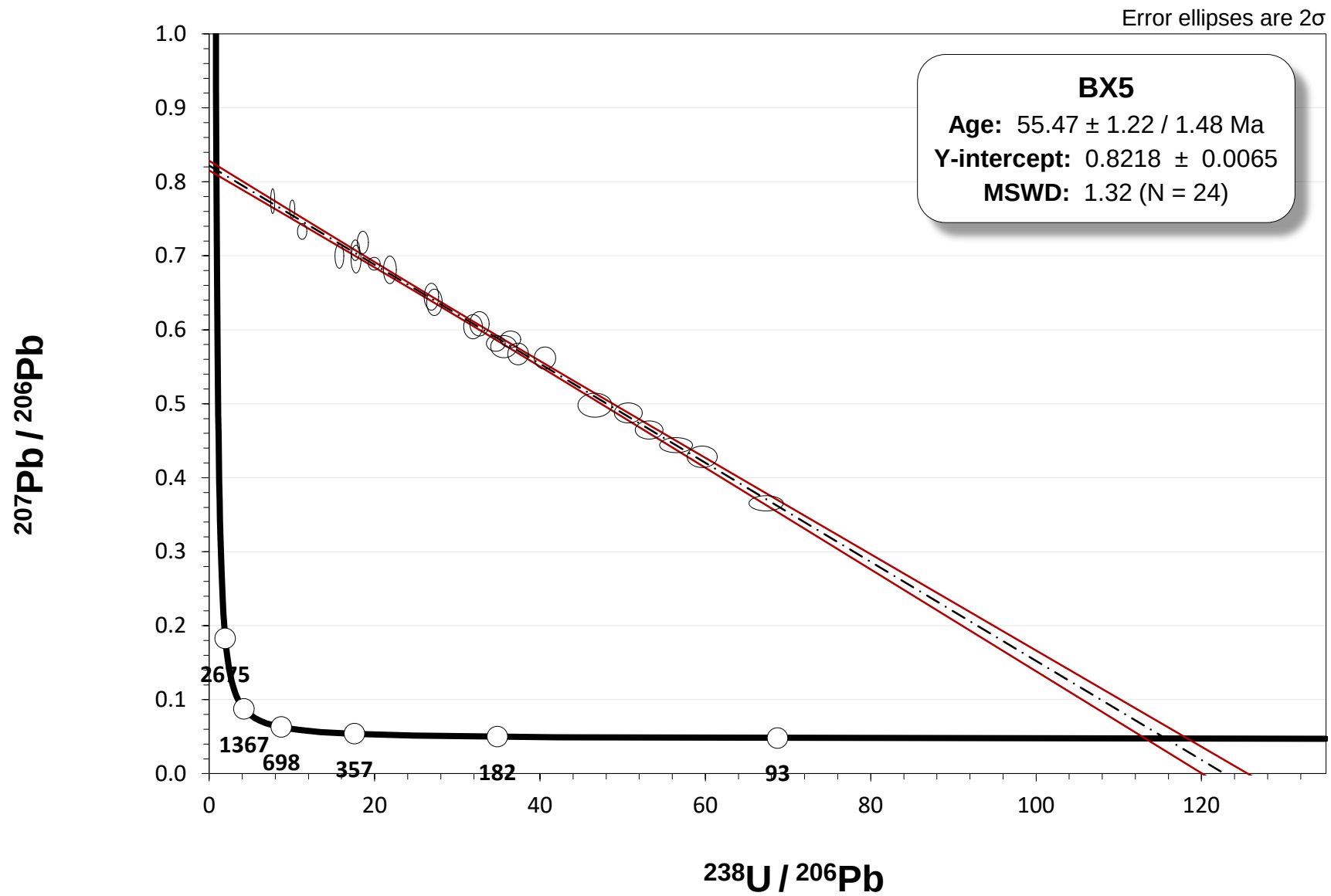


Sec RM1

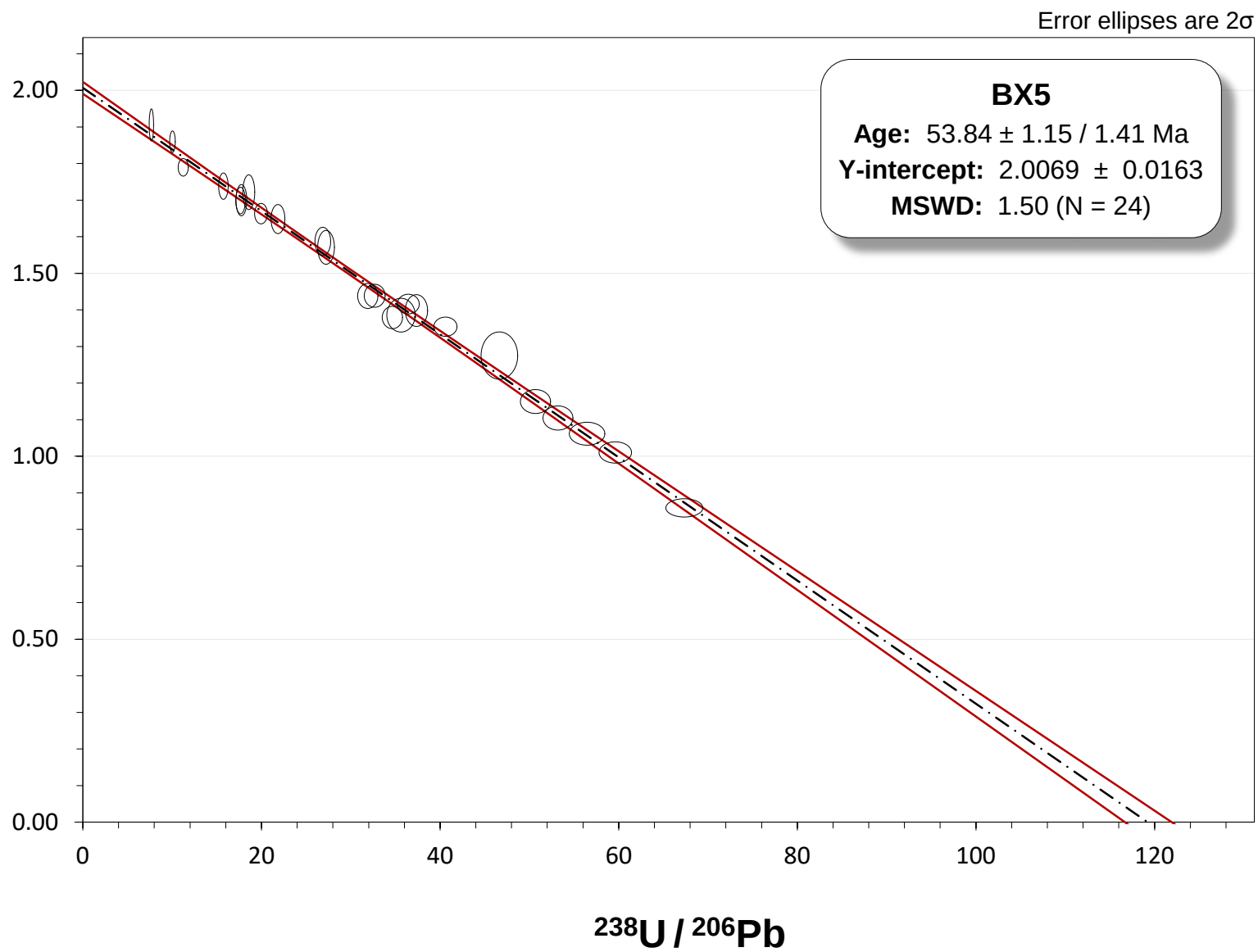


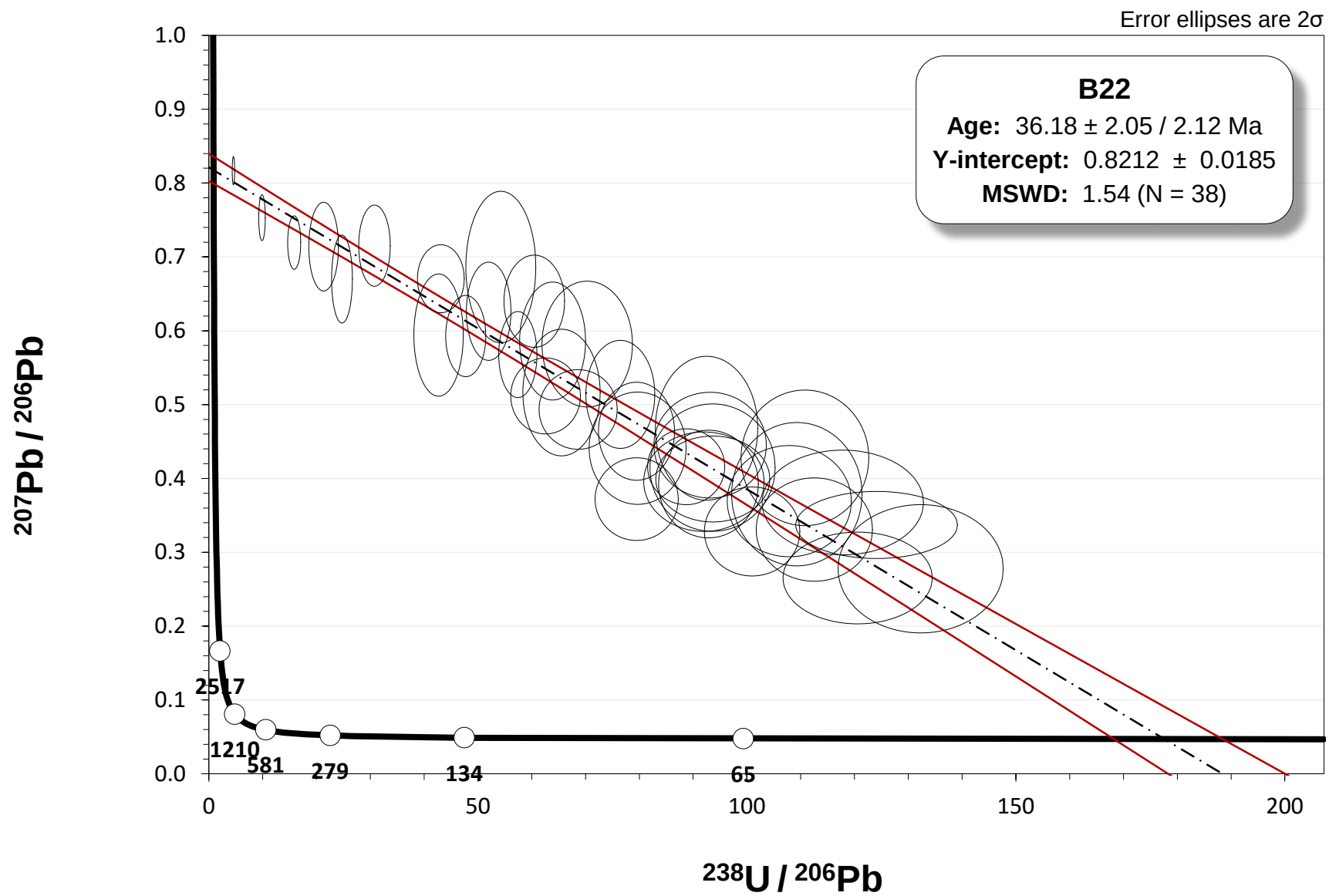
$^{208}\text{Pb} / ^{206}\text{Pb}$



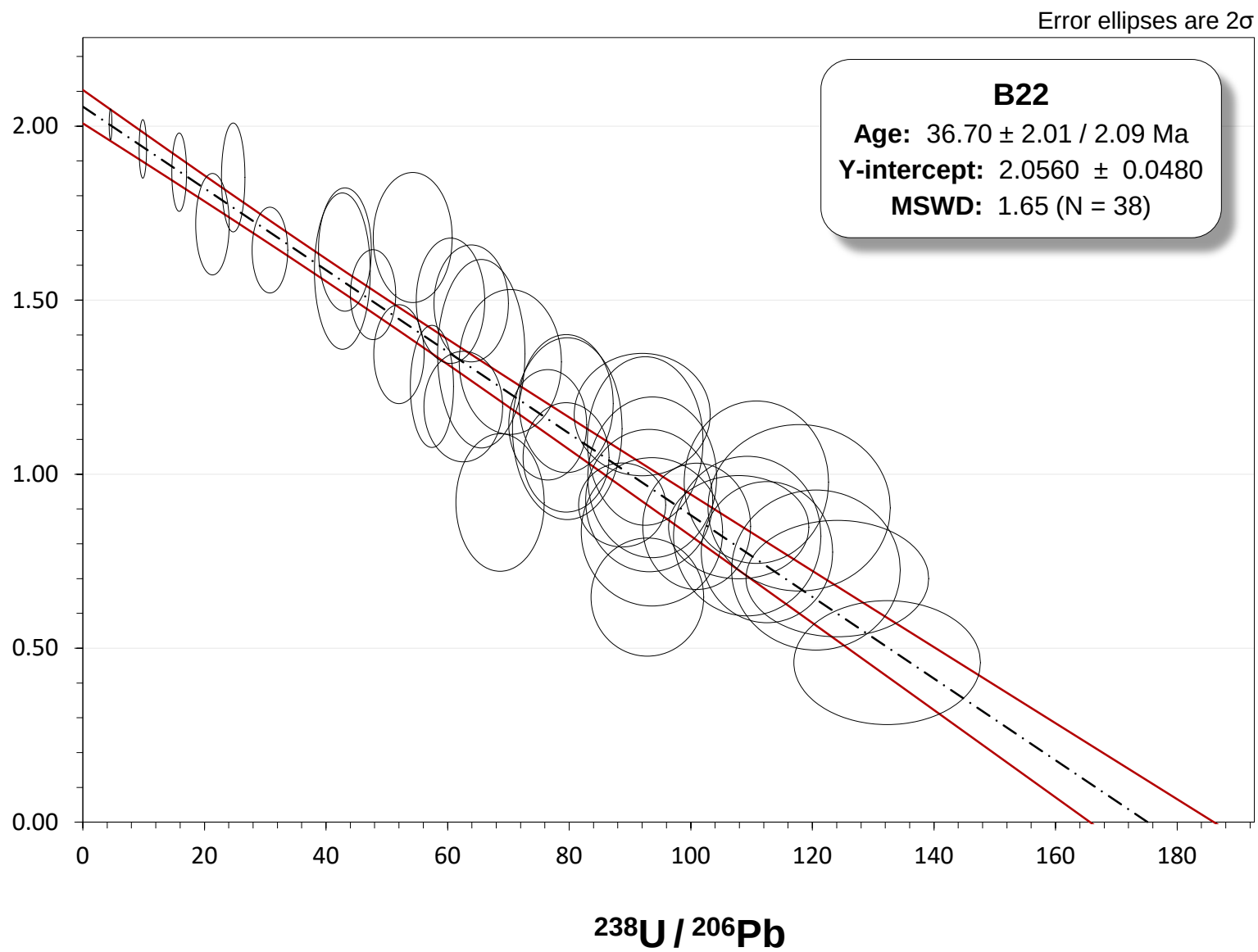


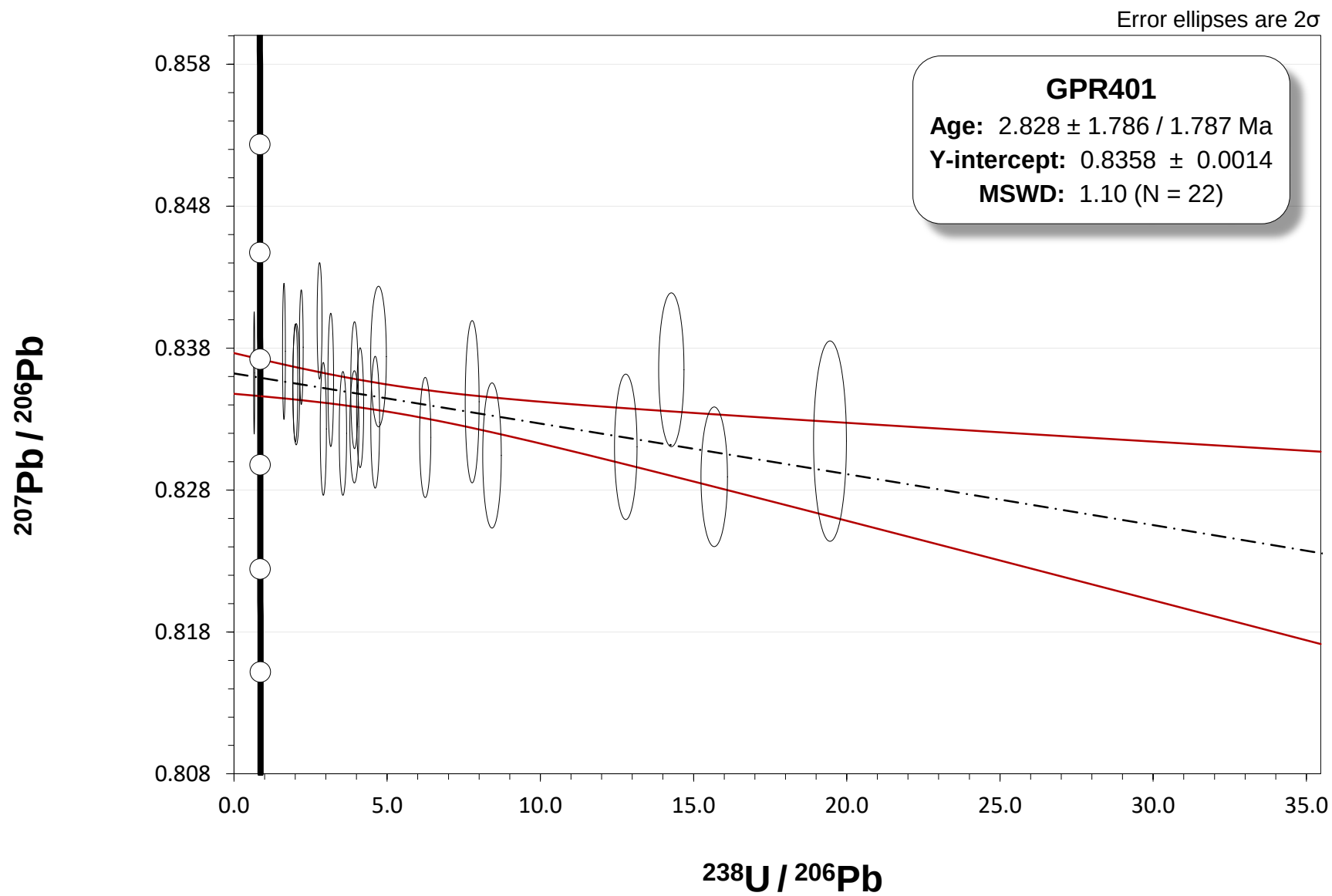
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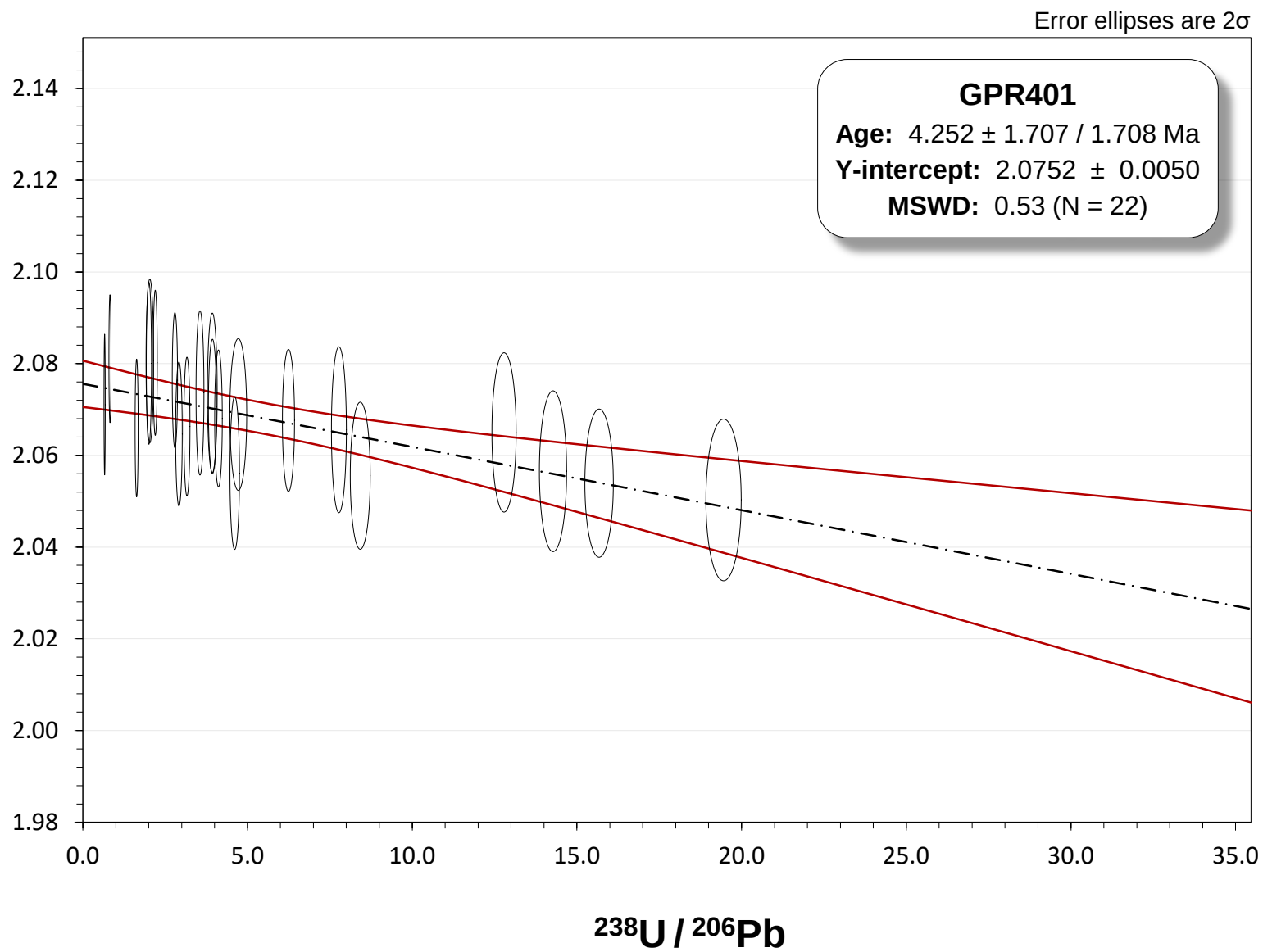


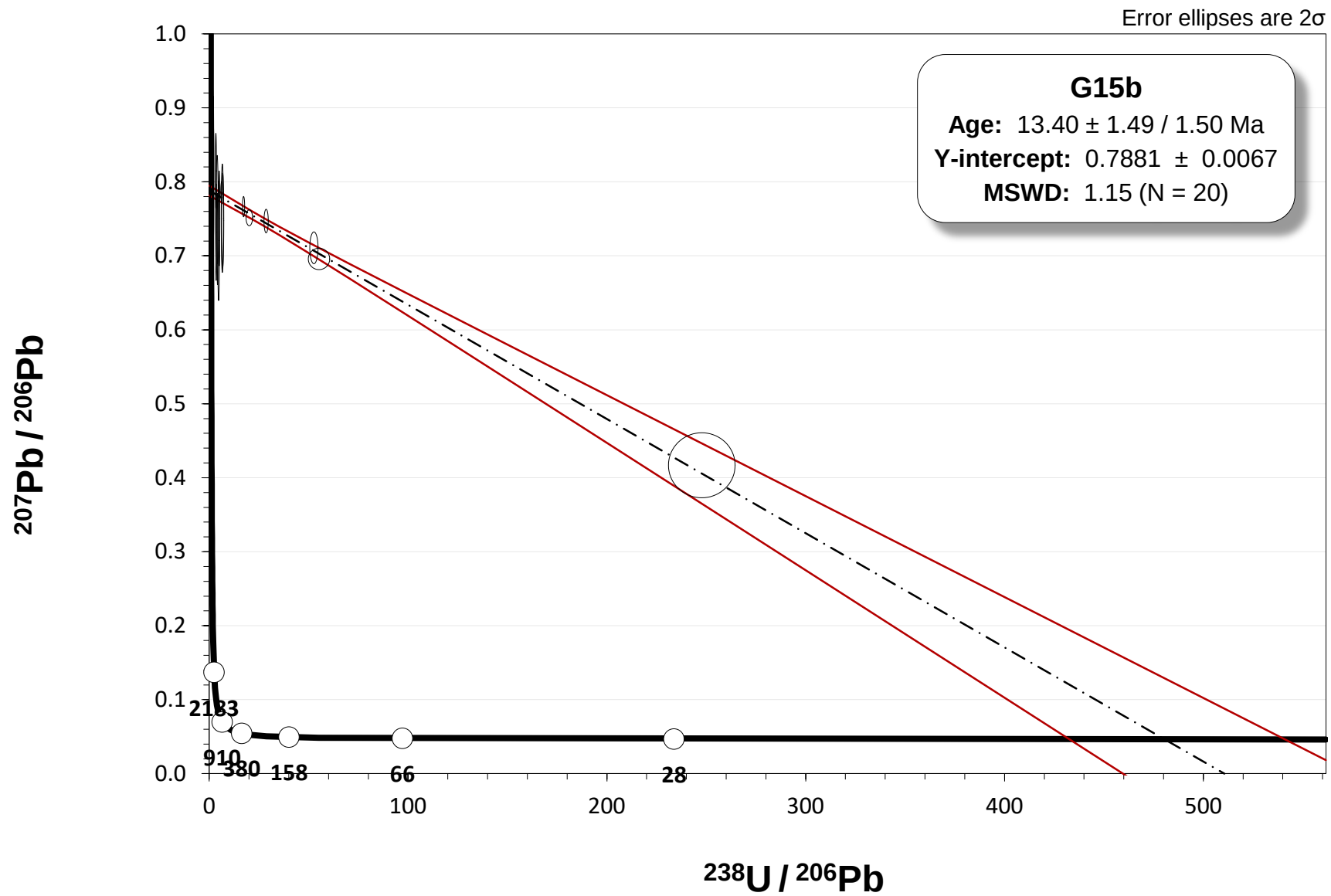
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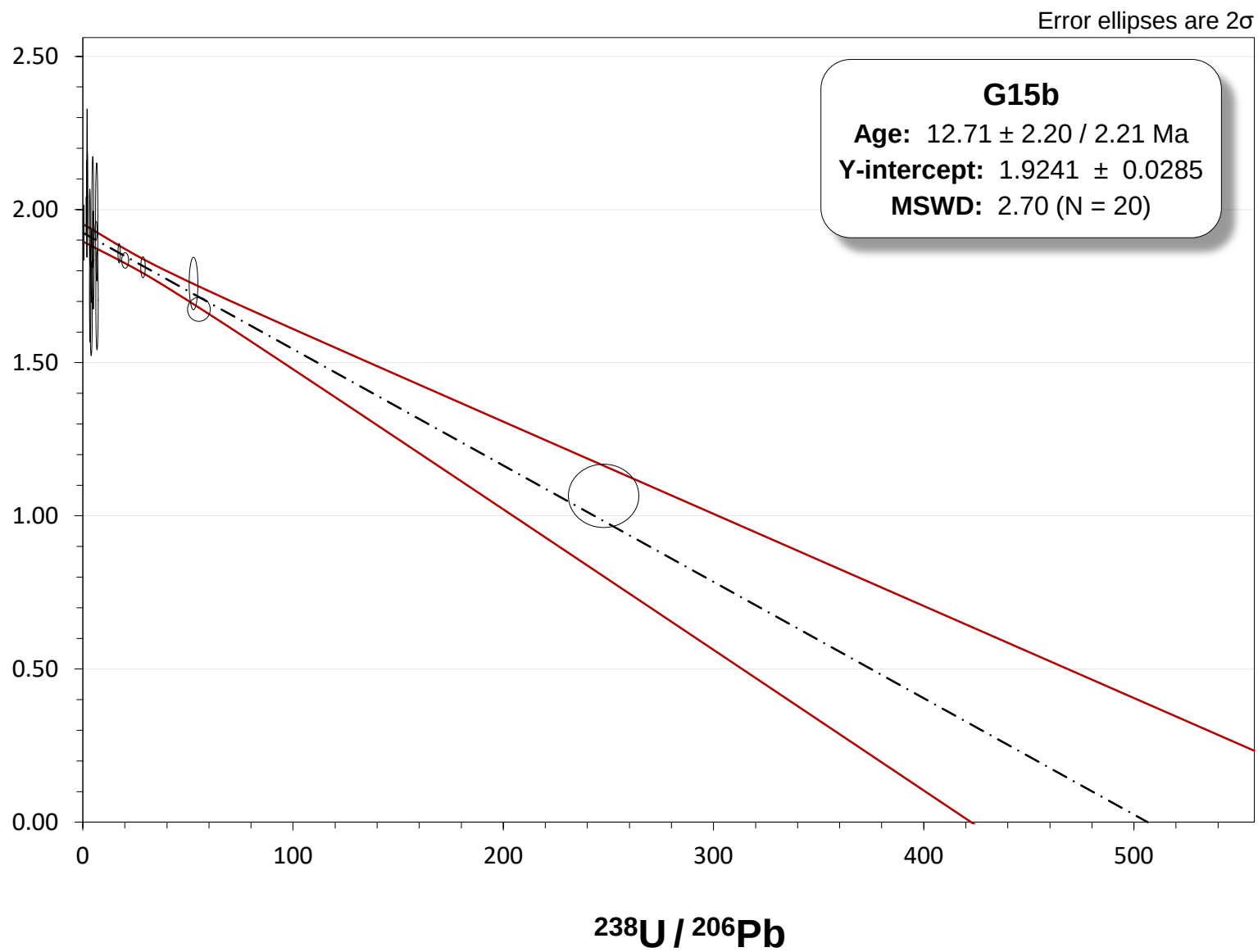


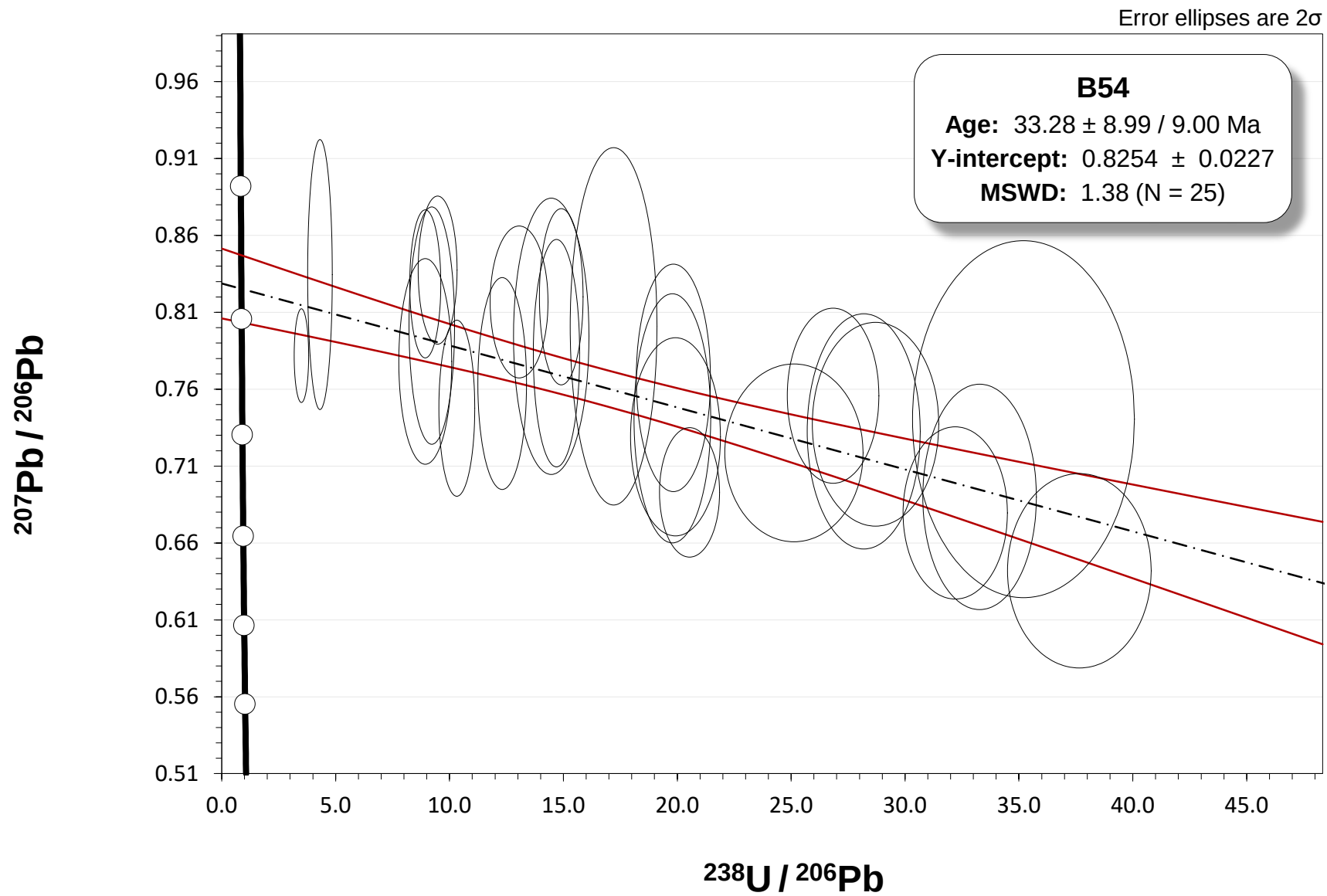
$^{208}\text{Pb} / ^{206}\text{Pb}$



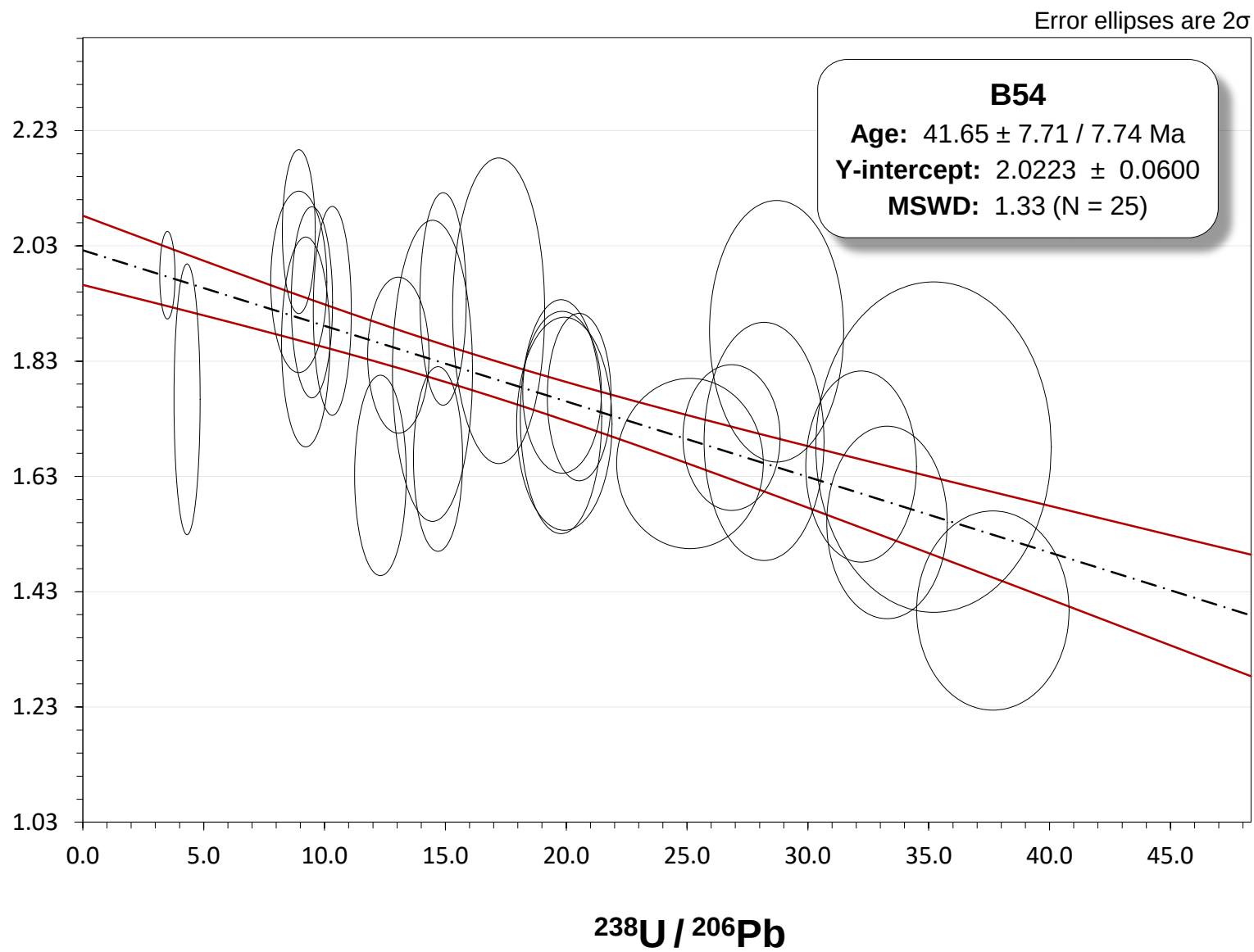


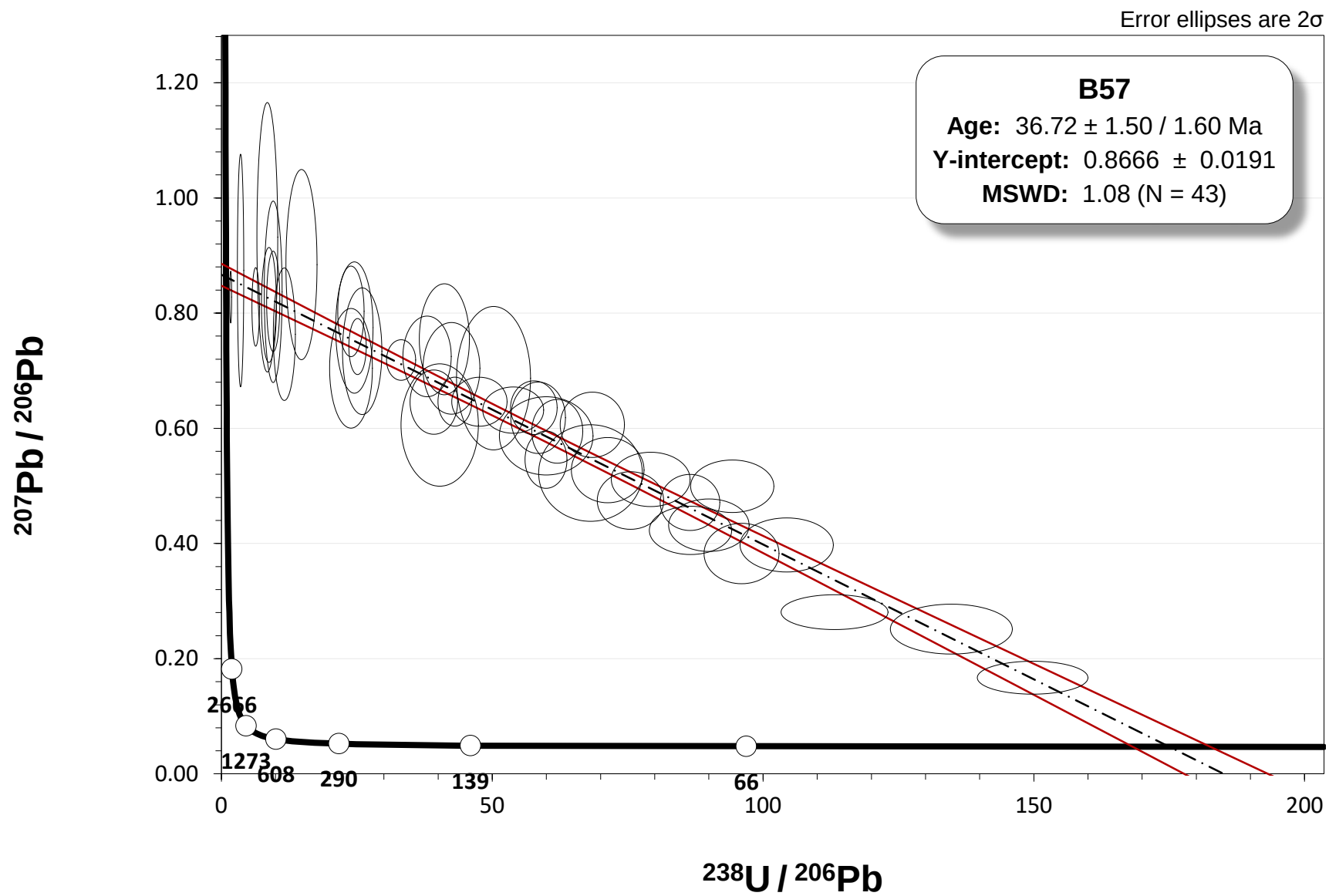
$^{208}\text{Pb} / ^{206}\text{Pb}$



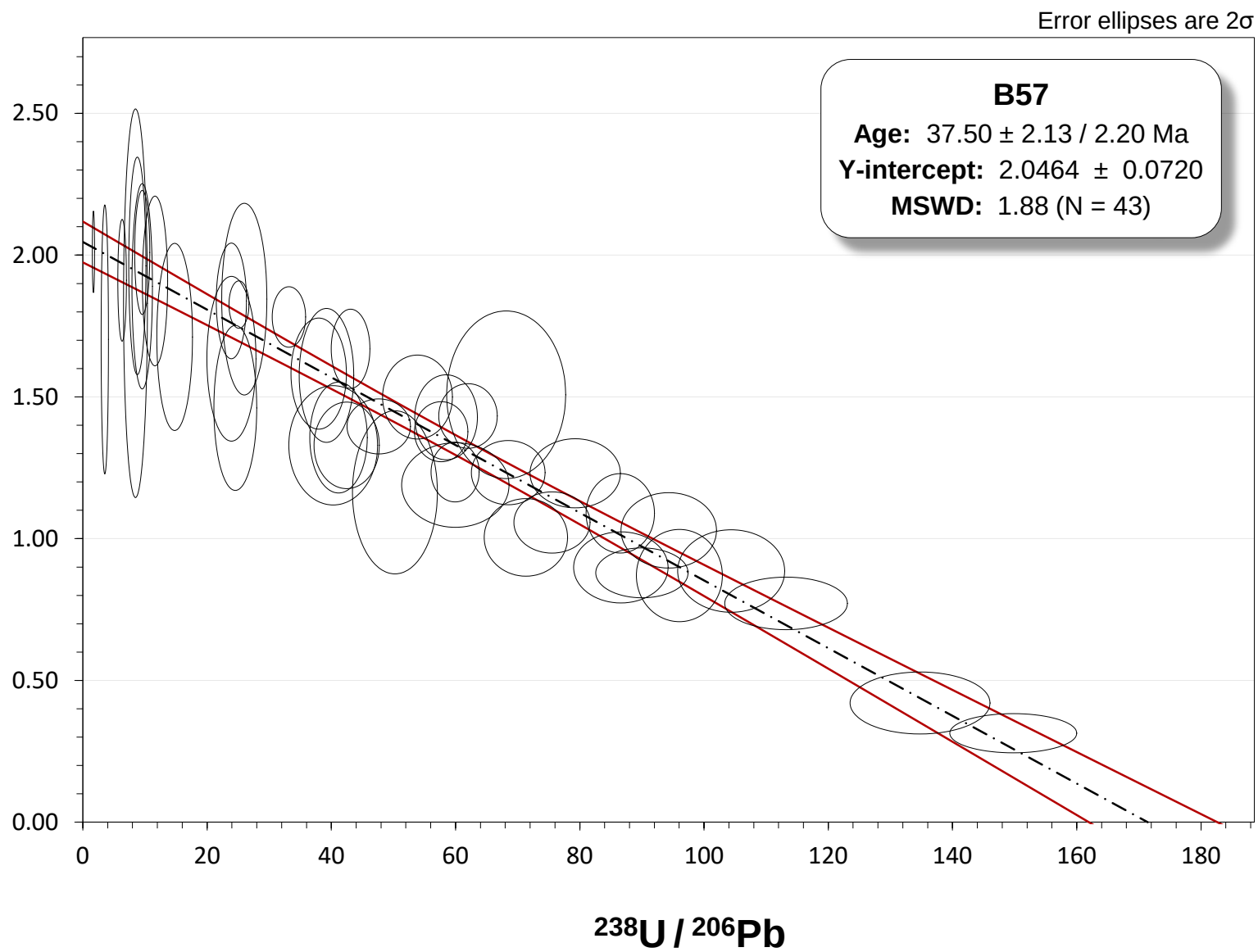


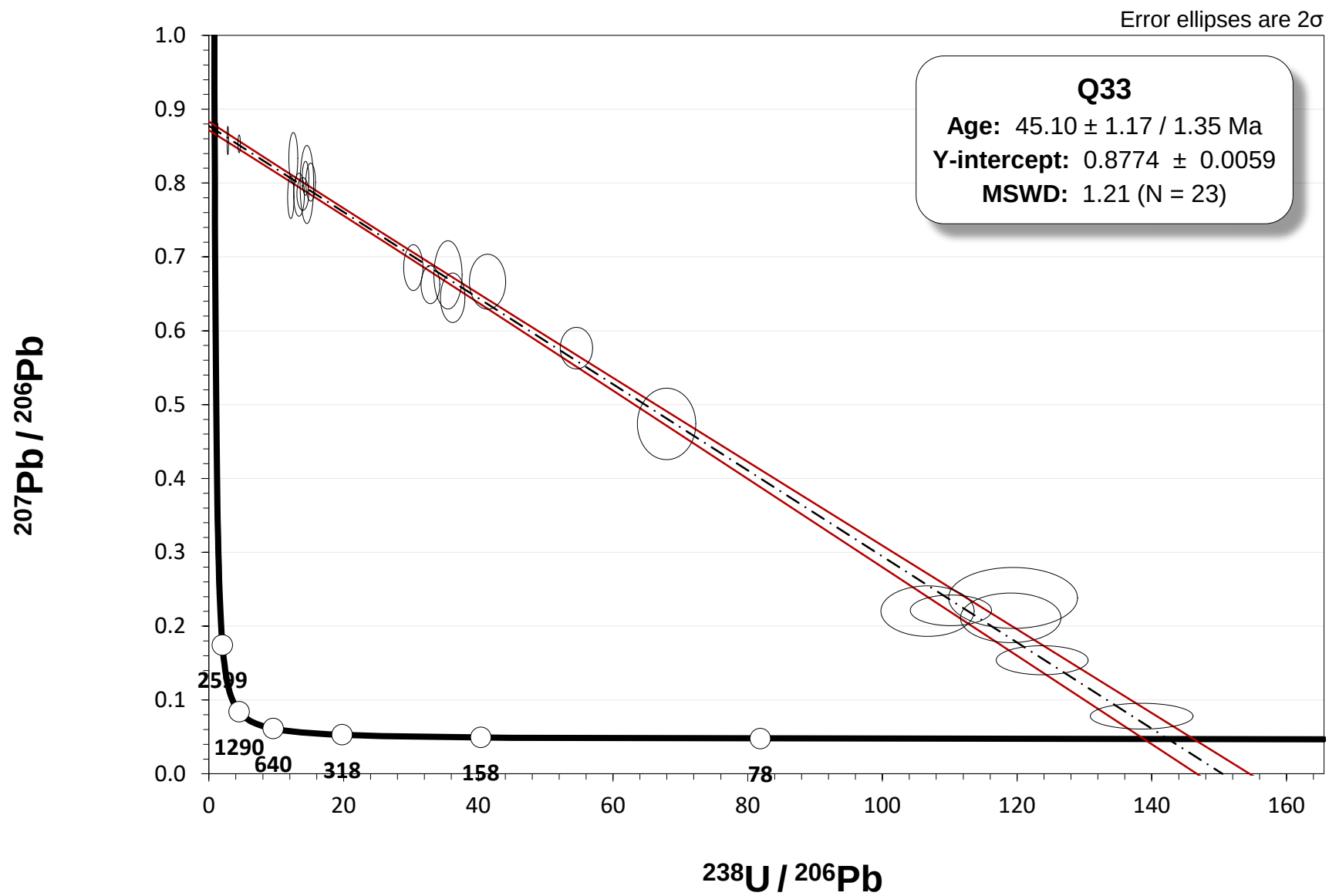
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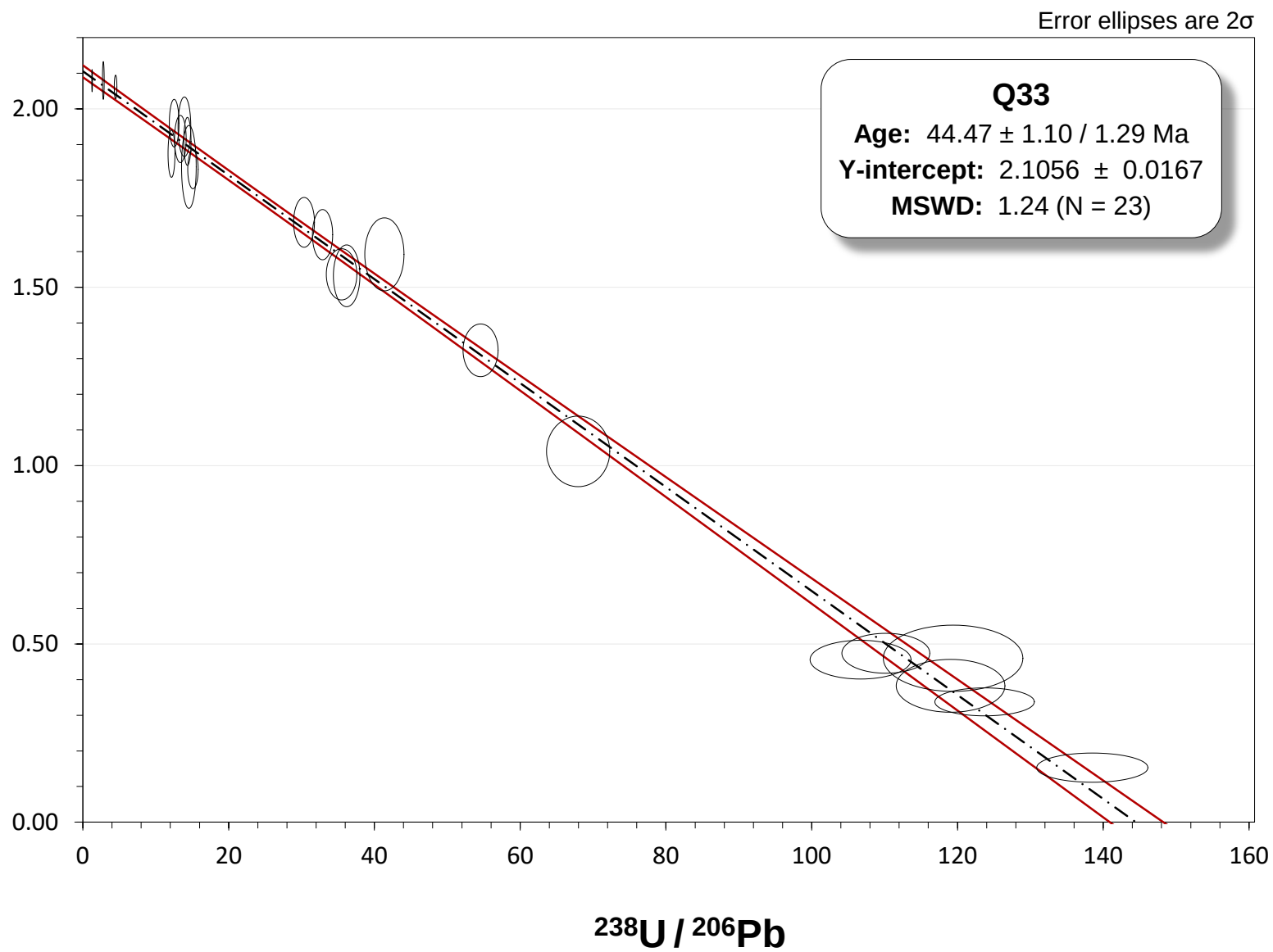


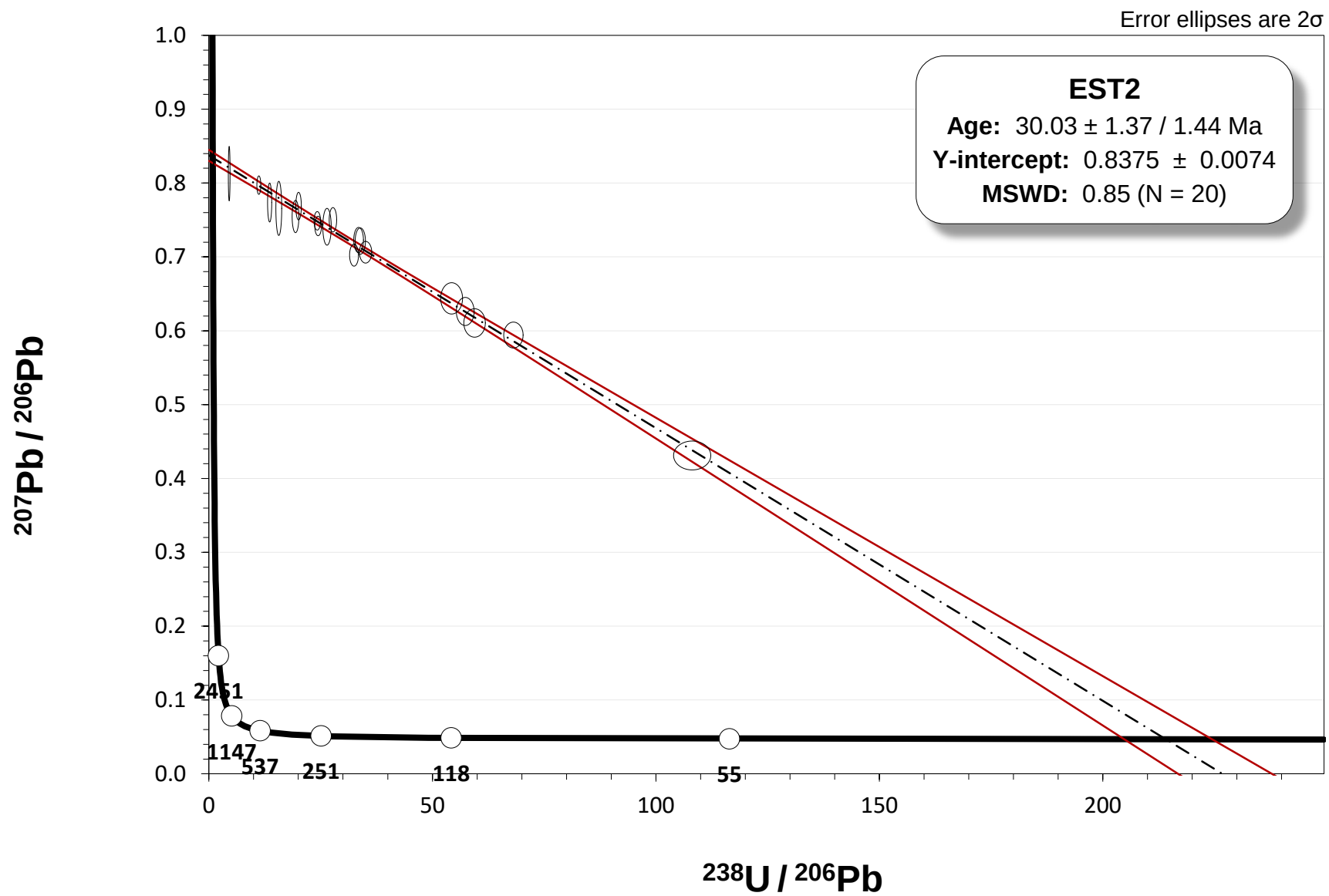
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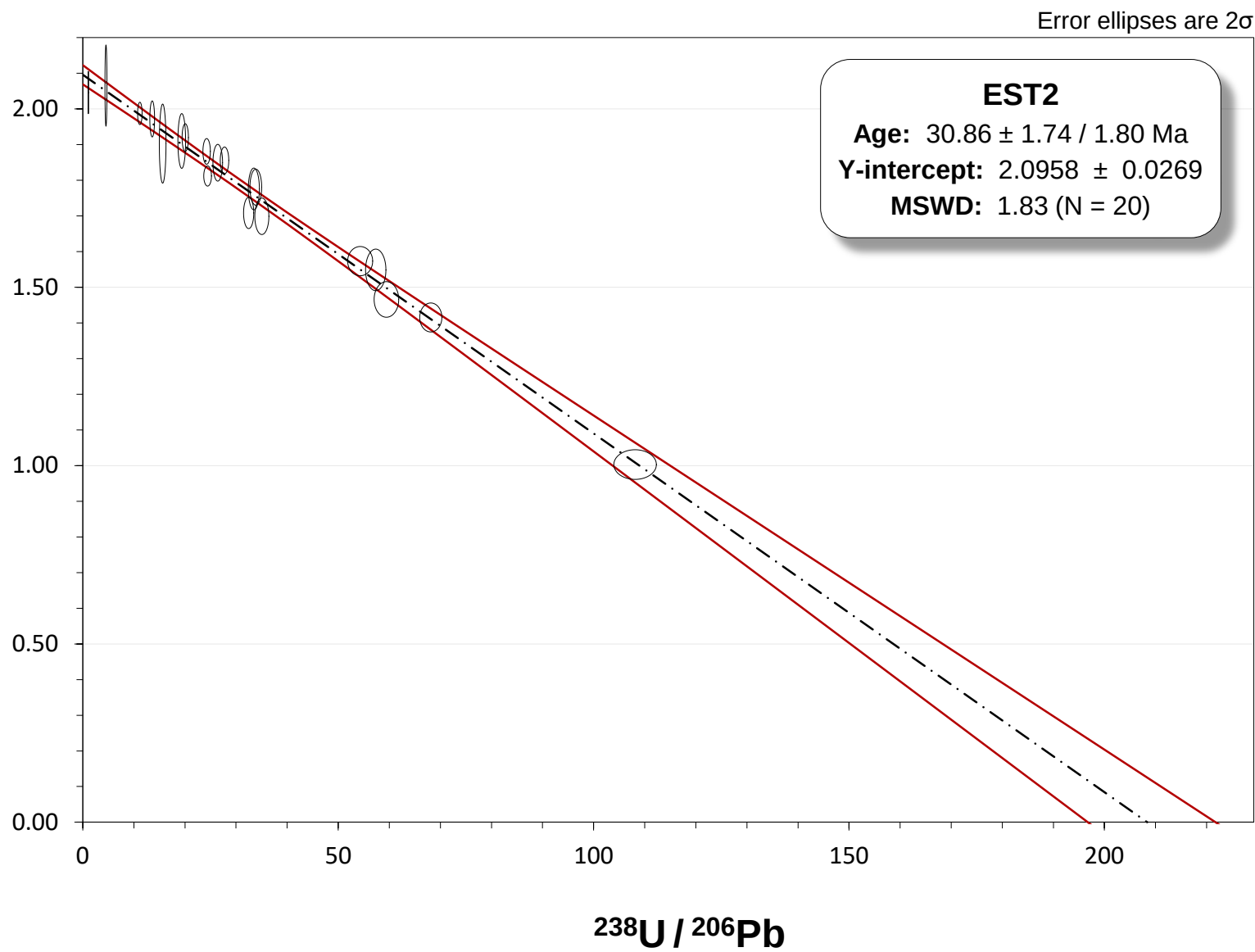


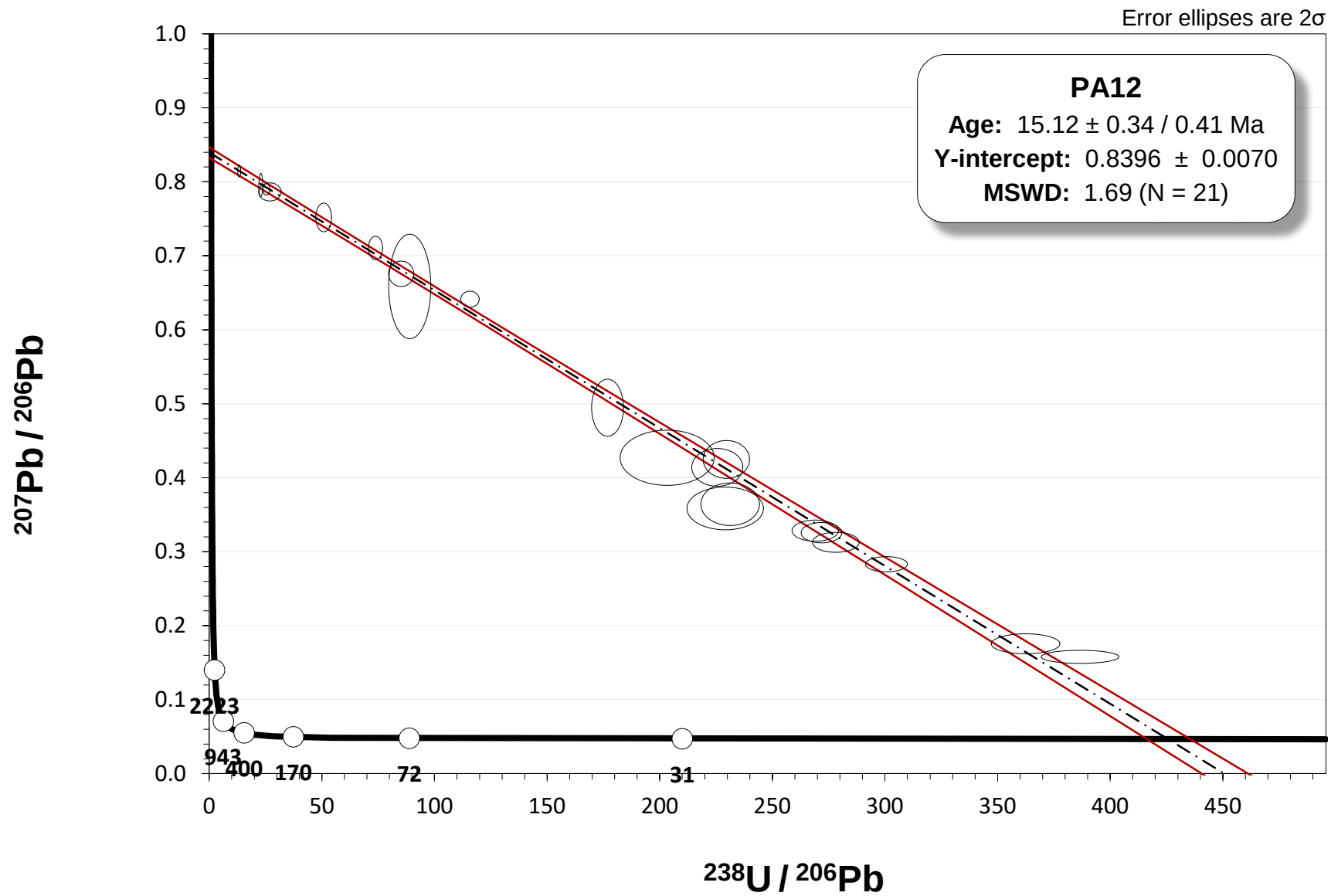
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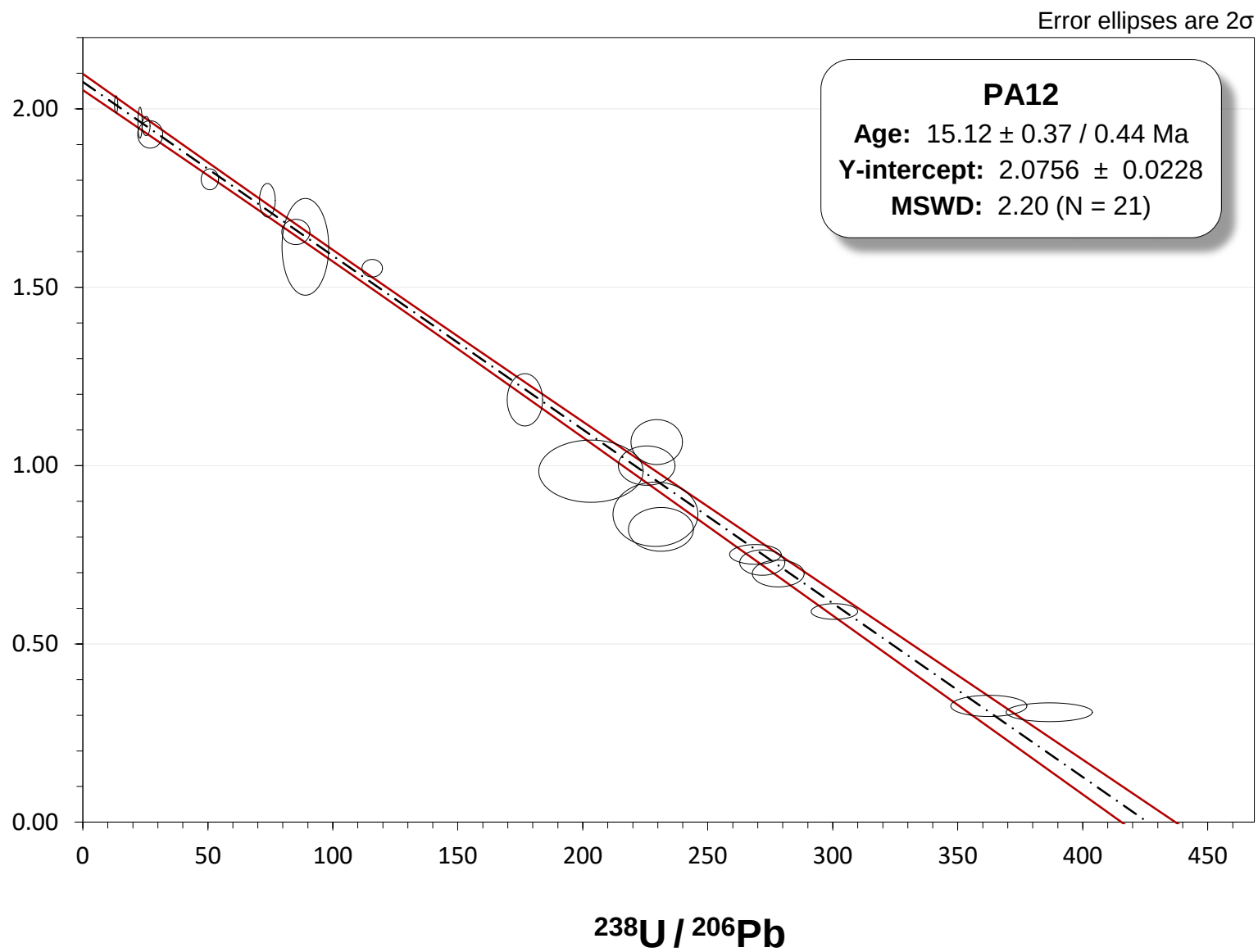


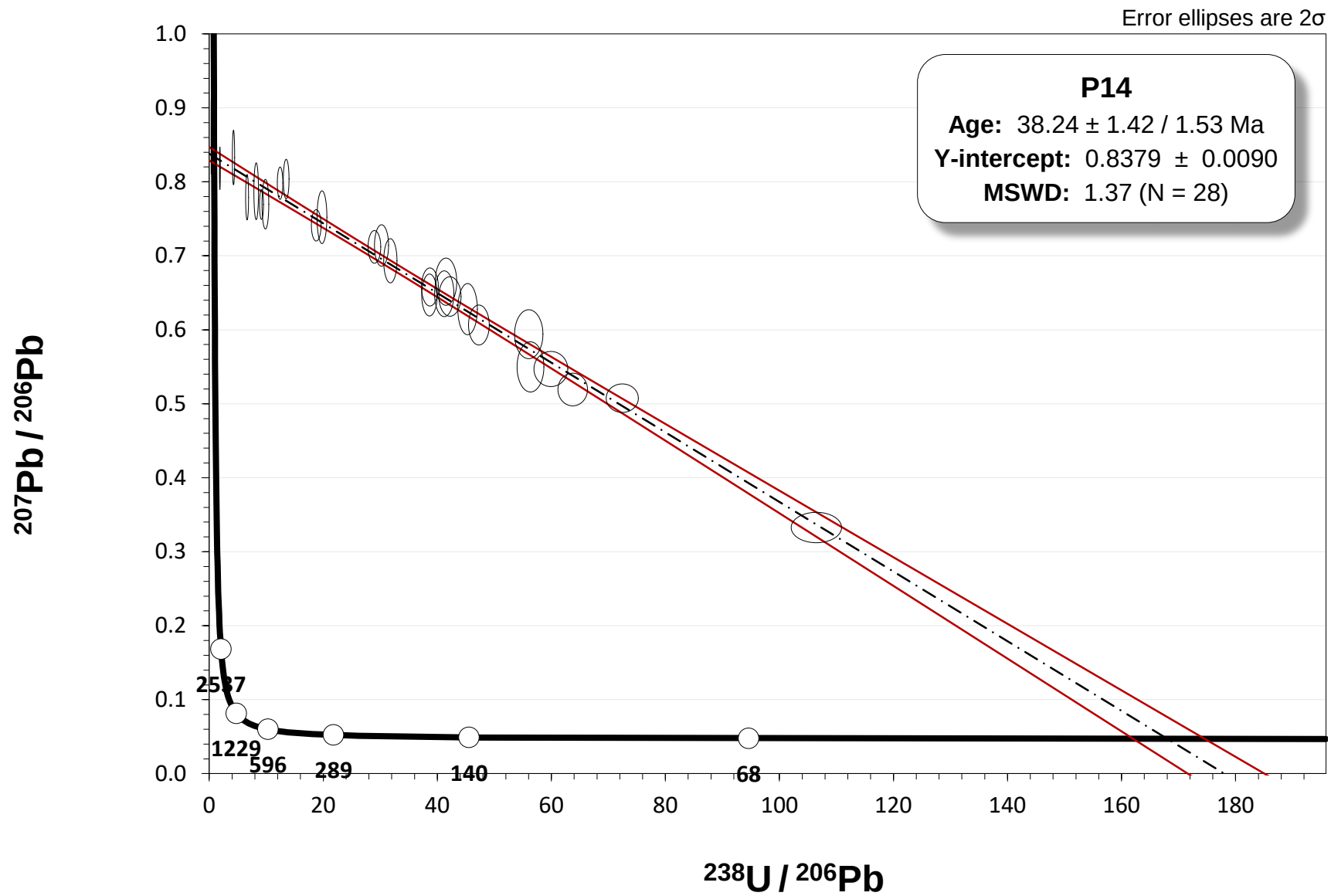
$^{208}\text{Pb} / ^{206}\text{Pb}$

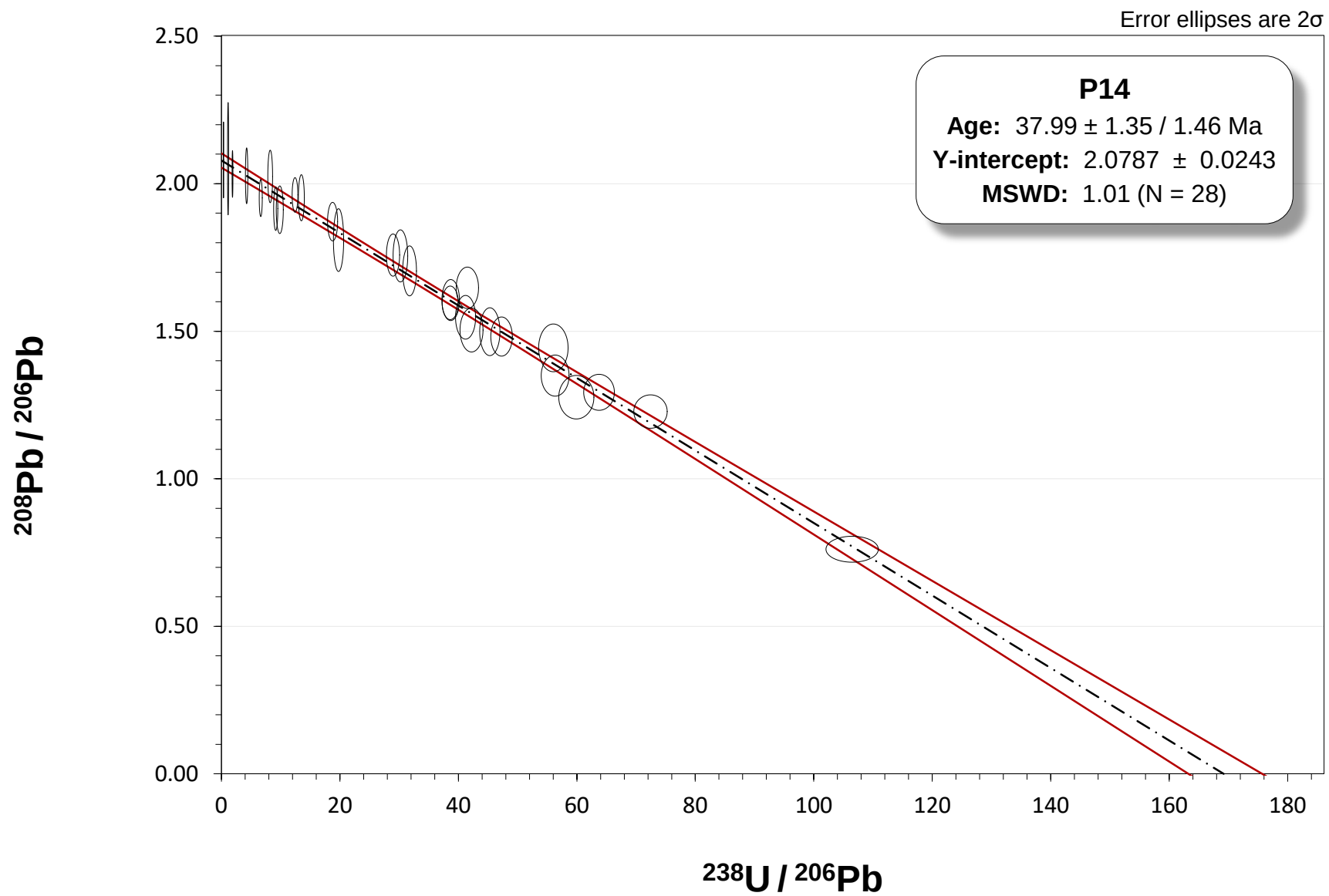


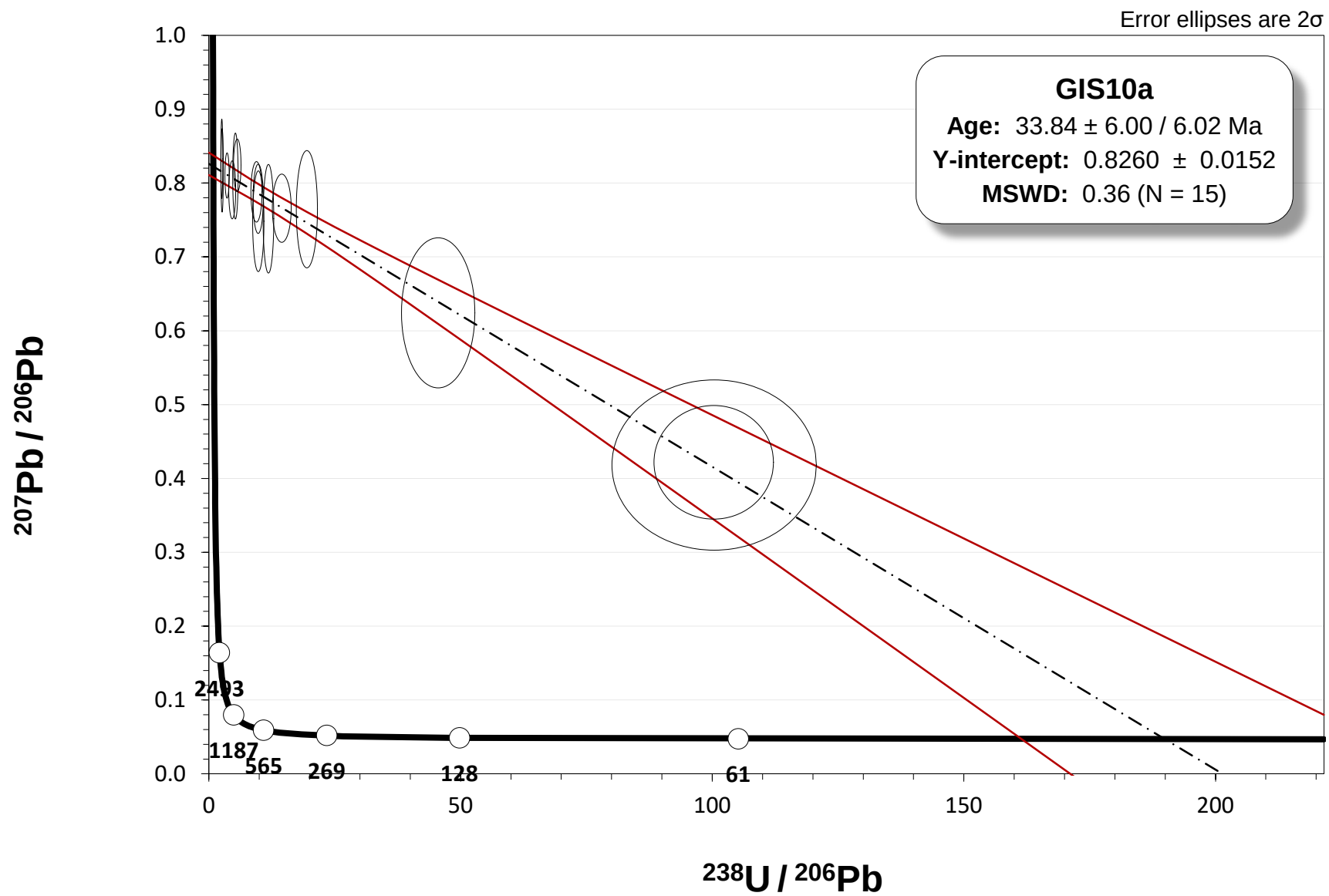


$^{208}\text{Pb} / ^{206}\text{Pb}$

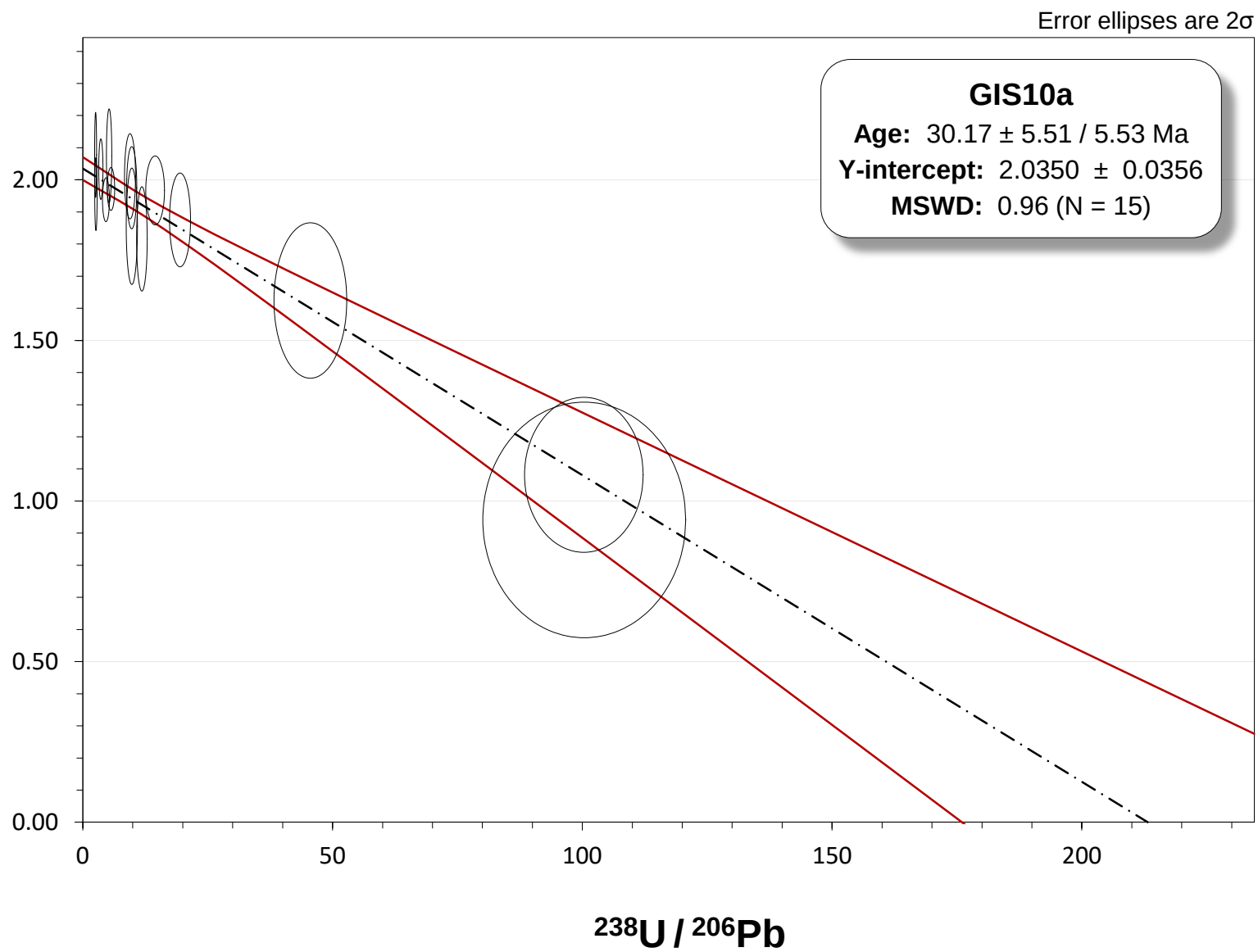




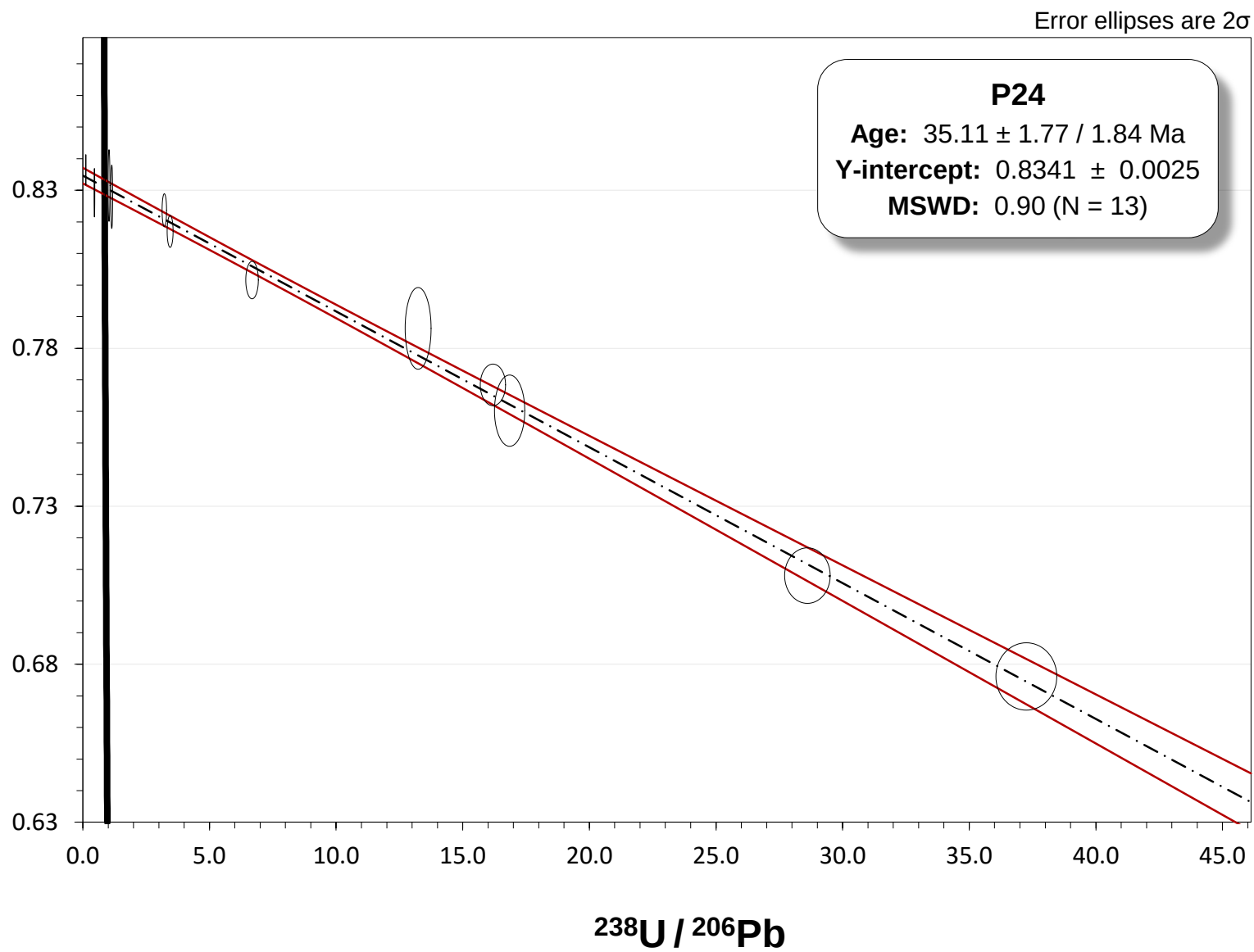




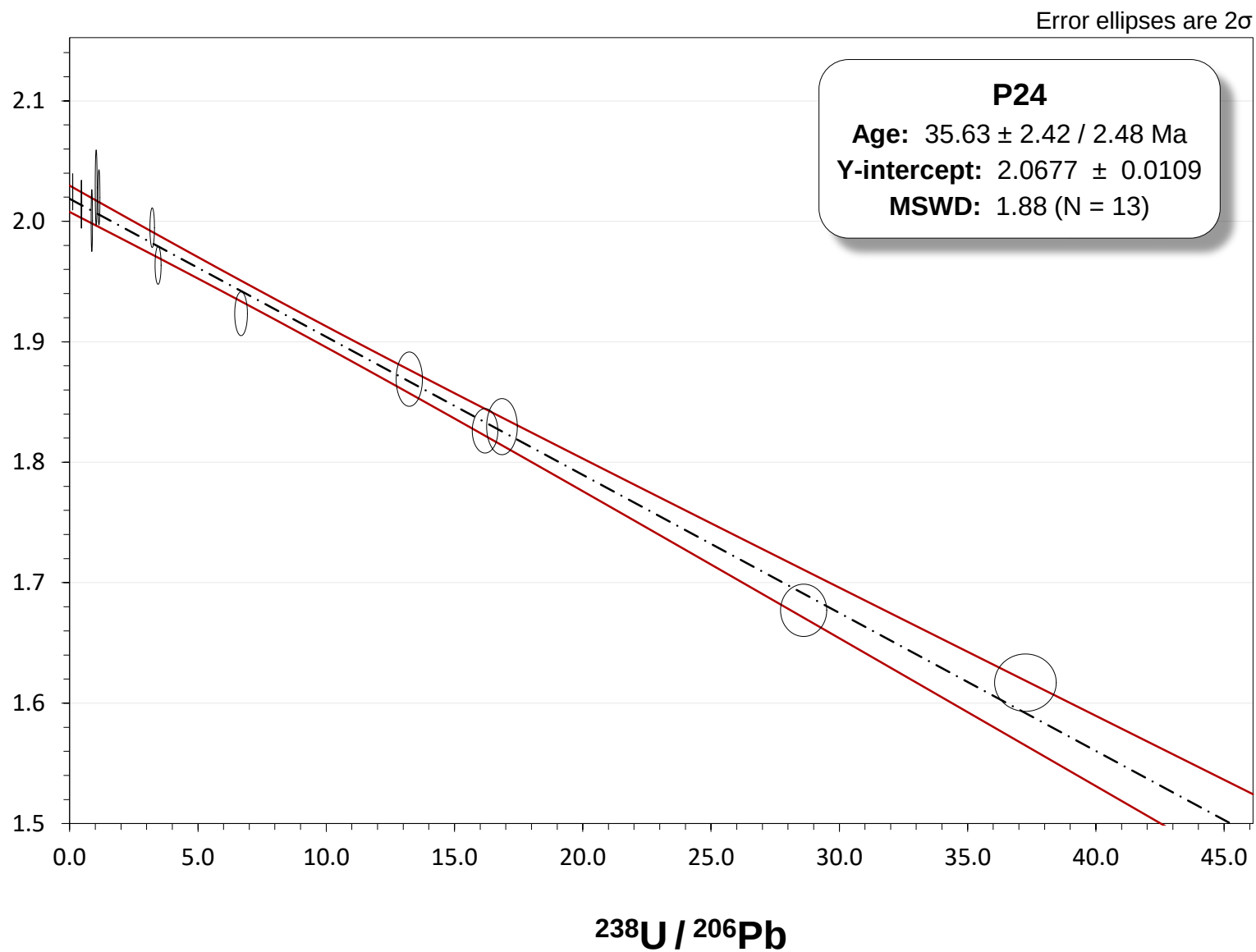
$^{208}\text{Pb} / ^{206}\text{Pb}$



$^{207}\text{Pb} / ^{206}\text{Pb}$



$^{208}\text{Pb} / ^{206}\text{Pb}$



Sequence 3

grain	name / sample	²⁰⁷ Pb ^a (cps)	U ^b (ppm)	Pb ^b (ppm)	²³² Th ^b ²³⁸ U	²³⁸ U ^c ²⁰⁶ Pb	±2σ (%)	²⁰⁷ Pb ^c ²⁰⁶ Pb	±2σ (%)	²⁰⁸ Pb ^c ²⁰⁶ Pb	±2σ (%)	rho ^d
U088	BX5	9045	0.81	0.059	0.0016	35.62	4.5	0.5771	2.6	1.386	3.3	0.00
U089	BX5	4482	0.82	0.032	0.017	56.46	3.5	0.4441	2.3	1.062	3.0	0.00
U090	BX5	4885	0.46	0.032	0.0038	37.35	3.3	0.5673	2.6	1.398	3.1	0.00
U091	BX5	6232	1.0	0.043	0.012	53.20	3.1	0.4645	2.6	1.105	3.0	0.00
U092	BX5	10894	0.39	0.065	0.026	18.58	3.6	0.7181	2.1	1.722	2.8	0.00
U093	BX5	5498	0.33	0.035	0.0015	26.87	3.3	0.6447	2.8	1.587	2.4	0.00
U094	BX5	31160	0.67	0.19	0.19	11.24	5.0	0.7330	1.5	1.790	1.3	0.00
U095	BX5	7619	0.66	0.050	0.015	34.66	3.3	0.5816	1.8	1.379	2.2	0.00
U096	BX5	5516	0.26	0.034	0.012	21.85	3.6	0.6810	2.7	1.648	2.4	0.00
U097	BX5	7671	1.0	0.053	0.00051	46.64	4.4	0.4981	3.3	1.275	5.1	0.00
U098	BX5	12370	0.24	0.075	0.0053	10.03	3.1	0.7633	1.6	1.860	1.6	0.00
U099	BX5	10646	1.0	0.068	0.014	40.60	3.2	0.5618	2.7	1.354	1.9	0.00
U100	BX5	7286	0.27	0.045	0.0037	17.75	3.4	0.6955	2.7	1.700	2.5	0.00
U101	BX5	8830	0.69	0.057	0.013	32.68	3.6	0.6081	2.7	1.439	2.2	0.00
U108	BX5	5084	0.78	0.035	0.014	50.68	3.3	0.4876	2.8	1.150	2.8	0.00
U109	BX5	4696	0.29	0.030	0.0088	27.23	3.4	0.6371	2.8	1.571	2.9	0.00
U110	BX5	4453	1.2	0.035	0.0084	67.35	3.1	0.3655	2.8	0.8590	2.9	0.00
U111	BX5	7727	0.11	0.048	0.0021	7.674	3.2	0.7739	2.2	1.906	2.3	0.00
U112	BX5	3370	0.70	0.025	0.0018	59.62	3.0	0.4283	3.4	1.011	2.9	0.00
U113	BX5	9465	0.32	0.060	0.0026	15.74	3.4	0.6996	2.3	1.738	2.1	0.00
U114	BX5	10630	0.39	0.066	0.0026	17.66	3.0	0.7075	2.0	1.699	2.1	0.00
U115	BX5	7947	0.59	0.051	0.0028	31.90	3.6	0.6041	2.7	1.438	2.4	0.00
U116	BX5	10703	0.96	0.070	0.016	36.44	3.4	0.5871	1.9	1.416	1.9	0.00
U117	BX5	17793	0.75	0.11	0.090	19.95	3.6	0.6893	1.2	1.663	1.7	0.00
U118	B22	136	0.036	0.001	0.036	79.51	9.7	0.3720	15	1.203	16	0.00
U119	B22	48	0.038	0.000	0.036	132.3	12	0.2777	31	0.4586	39	0.00
U120	B22	144	0.043	0.001	0.052	88.71	8.1	0.4159	12	0.9115	13	0.00
U121	B22	95	0.033	0.001	0.031	92.86	10.0	0.3925	19	0.6468	26	0.00
U122	B22	95	0.045	0.001	0.021	112.5	9.6	0.3308	21	0.7759	26	0.00
U123	B22	117	0.038	0.001	0.029	93.16	11	0.4451	16	0.9242	22	0.00
U124	B22	563	0.025	0.004	0.11	21.32	13	0.7139	8.4	1.718	8.5	0.00
U125	B22	117	0.028	0.001	0.066	79.69	11	0.4410	17	1.131	23	0.00
U126	B22	71	0.035	0.001	0.026	124.1	12	0.3370	13	0.7001	24	0.00
U127	B22	56	0.037	0.001	0.027	120.6	12	0.2652	23	0.7245	32	0.00
U128	B22	114	0.041	0.001	0.059	110.8	11	0.4279	21	0.9770	24	0.00
U129	B22	216	0.039	0.002	0.091	62.58	10	0.5118	10	1.194	13	0.00
U130	B22	85	0.027	0.001	0.16	93.62	12	0.4147	21	0.8344	26	0.00
U131	B22	139	0.030	0.001	0.14	79.48	8.9	0.4639	14	1.048	15	0.00
U132	B22	101	0.047	0.001	0.18	101.0	8.8	0.3282	18	0.8502	21	0.00
U133	B22	175	0.040	0.001	0.17	76.47	8.4	0.5139	14	1.142	14	0.00
U134	B22	479	0.038	0.003	0.18	43.11	10	0.6705	6.9	1.645	11	0.00
U135	B22	341	0.036	0.002	0.12	52.00	8.0	0.6264	11	1.345	11	0.00
U136	B22	1529	0.046	0.010	0.39	15.85	7.6	0.7194	5.0	1.868	6.0	0.00
U137	B22	707	0.044	0.004	0.19	30.77	9.5	0.7152	7.7	1.644	7.5	0.00
U138	B22	163	0.033	0.001	0.11	68.63	11	0.4934	11	0.9187	22	0.00
U139	B22	106	0.030	0.001	0.075	92.51	10	0.4680	21	1.095	22	0.00
U140	B22	471	0.024	0.003	0.100	24.73	7.8	0.6700	8.9	1.853	8.4	0.00
U141	B22	164	0.018	0.001	0.12	42.69	11	0.5942	14	1.583	14	0.00
U142	B22	90	0.040	0.001	0.081	107.9	11	0.3693	20	0.8477	17	0.00
U143	B22	301	0.034	0.002	0.10	54.26	12	0.6863	15	1.680	11	0.00
U144	B22	113	0.020	0.001	0.17	65.54	11	0.5164	17	1.346	20	0.00
U145	B22	143	0.027	0.001	0.13	70.32	12	0.5820	15	1.322	16	0.00
U152	B22	90	0.034	0.001	0.11	109.3	11	0.3787	26	0.8221	28	0.00
U153	B22	7543	0.063	0.046	0.19	4.554	5.0	0.8168	2.3	2.005	2.2	0.00
U154	B22	2559	0.050	0.016	0.22	9.865	6.2	0.7531	4.1	1.935	4.3	0.00
U155	B22	455	0.050	0.003	0.085	47.74	7.8	0.5928	9.3	1.516	8.5	0.00

U156	B22	205	0.032	0.001	0.026	63.88	9.6	0.5861	14	1.491	11	0.00
U157	B22	123	0.038	0.001	0.029	93.66	11	0.3993	15	0.9911	23	0.00
U158	B22	84	0.040	0.001	0.028	117.8	13	0.3675	19	0.9034	26	0.00
U159	B22	330	0.046	0.002	0.072	60.48	9.3	0.6400	9.8	1.498	12	0.00
U160	B22	340	0.050	0.002	0.25	57.42	6.2	0.5677	10	1.252	14	0.00
U161	B22	144	0.041	0.001	0.14	92.01	12	0.3957	17	1.171	15	0.00
U162	GPR401	222665	3.1	1.4	0.018	7.774	2.9	0.8338	0.69	2.065	0.88	0.00
U163	GPR401	536285	0.64	3.3	0.077	0.6609	2.8	0.8358	0.52	2.071	0.74	0.00
U164	GPR401	203103	3.1	1.3	0.037	8.422	3.6	0.8300	0.62	2.055	0.78	0.00
U165	GPR401	762988	3.9	4.8	0.026	2.794	2.9	0.8395	0.49	2.076	0.71	0.00
U166	GPR401	181169	4.7	1.1	0.010	14.27	2.9	0.8360	0.65	2.056	0.85	0.00
U169	GPR401	563111	3.0	3.5	0.033	2.917	3.4	0.8319	0.56	2.064	0.76	0.00
U170	GPR401	526790	3.8	3.3	0.017	3.935	3.1	0.8349	0.54	2.070	0.71	0.00
U171	GPR401	531549	3.1	3.3	0.017	3.160	2.9	0.8353	0.56	2.066	0.73	0.00
U172	GPR401	485471	3.1	3.0	0.014	3.556	3.4	0.8316	0.52	2.073	0.86	0.00
U173	GPR401	178507	0.54	1.1	0.047	1.633	2.8	0.8373	0.57	2.066	0.73	0.00
U174	GPR401	273095	3.1	1.7	0.013	6.243	2.9	0.8313	0.51	2.067	0.75	0.00
U175	GPR401	241839	2.1	1.5	0.050	4.610	3.1	0.8323	0.56	2.056	0.81	0.00
U177	GPR401	362925	10	2.3	0.0070	15.67	2.8	0.8285	0.59	2.054	0.79	0.00
U178	GPR401	1567183	2.3	9.8	0.23	0.8234	3.9	0.8351	0.46	2.081	0.67	0.00
U180	GPR401	1179710	4.0	7.1	0.014	2.033	5.6	0.8350	0.51	2.080	0.86	0.00
U181	GPR401	419328	3.6	2.7	0.017	4.719	5.4	0.8370	0.59	2.068	0.80	0.00
U182	GPR401	1082161	4.4	6.8	0.032	2.198	2.8	0.8376	0.48	2.080	0.76	0.00
U183	GPR401	110278	4.0	0.69	0.012	19.45	2.8	0.8310	0.85	2.050	0.86	0.00
U184	GPR401	225708	5.3	1.4	0.019	12.79	2.9	0.8306	0.62	2.065	0.84	0.00
U185	GPR401	712493	5.4	4.5	0.033	4.118	2.8	0.8334	0.51	2.068	0.72	0.00
U187	GPR401	779023	5.7	4.9	0.017	3.930	3.8	0.8320	0.48	2.073	0.84	0.00
U189	GPR401	1092971	4.0	6.8	0.022	2.005	3.9	0.8351	0.50	2.080	0.85	0.00
U259	G15b	360	0.005	0.002	-0.00132	6.585	8.4	0.7508	9.8	1.959	9.8	0.00
U260	G15b	572	0.006	0.004	0.0019	4.987	6.7	0.7506	8.5	1.835	8.7	0.00
U262	G15b	548	0.002	0.004	0.0040	2.129	9.4	0.7998	9.4	2.042	7.2	0.00
U263	G15b	619	0.006	0.004	0.00022	3.961	13	0.7623	9.6	1.676	9.2	0.00
U264	G15b	583	0.005	0.004	0.0026	4.153	6.7	0.7226	8.5	1.814	6.5	0.00
U265	G15b	786	0.003	0.005	0.017	1.938	11	0.8263	6.3	2.003	7.9	0.00
U266	G15b	483	0.004	0.003	0.0071	3.482	9.6	0.7319	8.9	1.725	9.1	0.00
U267	G15b	970	0.007	0.006	-0.00001	3.332	7.7	0.8149	6.2	1.942	6.4	0.00
U269	G15b	388	0.004	0.003	0.0043	4.711	8.9	0.7205	11	1.992	9.1	0.00
U271	G15b	447	0.007	0.003	-0.00064	6.737	8.4	0.7476	8.6	1.704	9.5	0.00
U272	G15b	13087	0.75	0.087	0.092	28.61	3.8	0.7470	2.1	1.812	1.9	0.00
U273	G15b	22311	0.22	0.13	0.13	6.288	8.1	0.7864	1.8	1.931	1.6	0.00
U274	G15b	1991	0.002	0.014	0.38	0.5104	5.7	0.7876	3.6	1.925	4.7	0.00
U275	G15b	6064	0.021	0.042	0.0080	1.625	4.7	0.7859	2.3	1.979	3.2	0.00
U276	G15b	28660	1.2	0.19	0.056	20.13	8.2	0.7515	1.4	1.834	1.4	0.00
U277	G15b	8542	1.1	0.059	0.040	55.20	9.8	0.6958	2.1	1.674	2.3	0.00
U278	G15b	16052	0.60	0.11	0.20	17.26	3.2	0.7665	1.8	1.857	1.7	0.00
U279	G15b	2459	0.30	0.017	0.066	52.64	3.9	0.7108	3.0	1.758	4.9	0.00
U280	G15b	318	0.31	0.003	0.00056	247.7	6.8	0.4169	11	1.065	9.7	0.00
U281	G15b	621	0.002	0.004	0.0026	2.027	7.0	0.8354	9.6	2.123	9.7	0.00
U289	B54	499	0.030	0.003	1.74	26.84	7.5	0.7524	7.6	1.697	7.4	0.00
U290	B54	296	0.034	0.003	1.78	37.65	8.4	0.6385	9.9	1.397	12	0.00
U291	B54	323	0.027	0.002	1.09	33.27	7.5	0.6866	11	1.550	11	0.00
U292	B54	668	0.036	0.005	1.81	20.54	6.4	0.6895	6.1	1.768	8.2	0.00
U293	B54	422	0.024	0.003	1.71	28.70	9.7	0.7338	9.0	1.882	12	0.00
U294	B54	417	0.033	0.003	1.37	32.20	7.1	0.6762	8.3	1.647	10	0.00
U295	B54	585	0.034	0.004	1.74	25.12	12	0.7152	8.1	1.652	8.9	0.00
U296	B54	548	0.016	0.004	2.69	14.70	6.9	0.7801	9.5	1.660	9.6	0.00
U297	B54	334	0.023	0.003	2.31	28.19	8.8	0.7292	10	1.691	12	0.00
U298	B54	567	0.013	0.004	2.87	10.32	7.6	0.7443	7.7	1.917	9.5	0.00
U299	B54	438	0.020	0.003	1.90	19.92	9.9	0.7257	8.9	1.721	11	0.00
U300	B54	693	0.013	0.007	2.46	9.478	9.0	0.8341	5.8	1.932	8.6	0.00
U301	B54	775	0.020	0.005	2.34	13.05	9.7	0.8134	6.1	1.840	7.4	0.00

U302	B54	608	0.012	0.004	2.48	8.935	13	0.7747	8.6	1.968	8.0	0.00
U303	B54	841	0.015	0.006	2.28	8.935	7.6	0.8251	5.8	2.055	6.9	0.00
U304	B54	317	0.015	0.002	2.27	19.78	8.5	0.7377	11	1.734	12	0.00
U305	B54	156	0.014	0.001	2.25	35.20	14	0.7371	16	1.681	17	0.00
U306	B54	334	0.003	0.002	0.71	4.312	13	0.8312	11	1.764	13	0.00
U307	B54	552	0.011	0.004	1.49	9.222	11	0.7980	9.7	1.863	9.8	0.00
U308	B54	331	0.009	0.002	0.031	12.31	8.7	0.7603	9.1	1.632	11	0.00
U309	B54	627	0.018	0.004	1.75	14.91	6.4	0.8168	7.0	1.938	9.5	0.00
U310	B54	442	0.020	0.003	1.65	19.83	8.2	0.7640	9.7	1.776	7.9	0.00
U311	B54	2454	0.013	0.015	1.72	3.497	9.1	0.7785	3.9	1.979	3.8	0.00
U312	B54	240	0.007	0.002	2.74	14.47	11	0.7910	11	1.813	14	0.00
U313	B54	280	0.010	0.002	4.73	17.20	11	0.7975	15	1.917	14	0.00
U314	B57	205	0.10	0.002	0.13	104.4	8.3	0.3974	12	0.8859	16	0.00
U315	B57	184	0.093	0.002	0.13	96.03	7.2	0.3826	14	0.8699	19	0.00
U316	B57	198	0.12	0.002	0.12	113.2	8.7	0.2808	11	0.7717	12	0.00
U317	B57	281	0.11	0.003	0.25	86.61	8.8	0.4228	9.9	0.8987	14	0.00
U318	B57	2409	0.087	0.014	0.21	25.13	6.4	0.7419	6.5	1.826	4.6	0.00
U319	B57	742	0.11	0.006	0.19	47.64	11	0.6461	6.6	1.396	6.9	0.00
U320	B57	360	0.021	0.003	0.053	23.91	10	0.8030	9.8	1.839	11	0.00
U321	B57	525	0.088	0.004	0.24	57.69	7.5	0.6358	7.3	1.377	7.7	0.00
U322	B57	243	0.086	0.002	0.23	94.32	8.2	0.4994	9.1	1.029	13	0.00
U323	B57	317	0.099	0.003	0.27	79.26	9.2	0.5113	9.2	1.231	9.9	0.00
U324	B57	277	0.11	0.003	0.21	90.00	8.3	0.4318	11	0.8795	10.0	0.00
U325	B57	490	0.11	0.004	0.090	68.48	8.7	0.6061	9.4	1.233	9.2	0.00
U326	B57	309	0.095	0.003	0.12	86.52	6.4	0.4713	10	1.089	13	0.00
U327	B57	86	0.098	0.001	0.16	134.8	8.4	0.2513	17	0.4205	26	0.00
U334	B57	108	0.17	0.001	0.12	149.8	6.8	0.1670	17	0.3139	22	0.00
U335	B57	549	0.067	0.004	0.18	43.10	7.2	0.6463	6.6	1.670	8.4	0.00
U336	B57	1373	0.11	0.010	0.11	33.17	8.1	0.7185	4.9	1.782	6.0	0.00
U337	B57	492	0.085	0.004	0.14	53.87	10	0.6316	6.4	1.499	9.9	0.00
U338	B57	391	0.12	0.003	0.077	75.52	8.1	0.4746	11	1.057	10	0.00
U339	B57	445	0.100	0.004	0.15	62.00	7.6	0.5947	9.3	1.433	7.9	0.00
U340	B57	431	0.083	0.003	0.068	59.93	6.5	0.5455	9.1	1.235	8.5	0.00
U341	B57	642	0.078	0.004	0.15	58.48	8.6	0.6183	10	1.428	10	0.00
U342	B57	123	0.004	0.001	0.00047	14.78	19	0.8842	19	1.712	19	0.00
U343	B57	229	0.065	0.002	0.35	71.32	9.4	0.5274	11	1.004	14	0.00
U344	B57	189	0.023	0.002	0.078	41.16	11	0.7546	13	1.357	14	0.00
U345	B57	440	0.007	0.003	0.0091	6.323	11	0.8108	8.4	1.911	11	0.00
U346	B57	1057	0.004	0.008	0.13	1.705	11	0.8279	5.4	2.012	7.1	0.00
U347	B57	120	0.034	0.001	0.10	68.15	14	0.5223	16	1.507	20	0.00
U348	B57	230	0.059	0.002	0.14	59.97	14	0.5869	12	1.189	13	0.00
U349	B57	260	0.035	0.002	0.11	39.22	11	0.6455	8.6	1.576	15	0.00
U350	B57	292	0.031	0.002	0.059	37.97	12	0.7248	9.7	1.582	12	0.00
U351	B57	323	0.033	0.002	0.042	42.47	12	0.7041	11	1.329	11	0.00
U352	B57	150	0.017	0.001	0.026	40.30	18	0.6057	18	1.329	16	0.00
U353	B57	172	0.013	0.001	0.051	23.92	17	0.7042	15	1.634	18	0.00
U354	B57	126	0.022	0.001	0.021	50.24	14	0.6870	18	1.163	25	0.00
U355	B57	80	0.002	0.012	0.0097	8.473	23	0.9317	25	1.830	37	0.00
U356	B57	109	0.003	0.011	-0.00027	9.553	17	0.8370	19	1.890	19	0.00
U357	B57	172	0.006	0.001	0.00078	11.61	18	0.7634	15	1.909	16	0.00
U358	B57	302	0.007	0.002	0.0037	9.562	13	0.8204	11	2.009	11	0.00
U359	B57	177	0.014	0.002	0.022	24.54	14	0.7749	15	1.461	20	0.00
U360	B57	120	0.010	0.001	0.00077	25.99	14	0.7339	15	1.845	18	0.00
U361	B57	148	0.004	0.001	0.0045	8.772	16	0.8142	12	1.962	20	0.00
U362	B57	73	0.001	0.001	0.00092	3.533	17	0.8740	23	1.703	28	0.00
U363	Q33	2050	0.18	0.016	0.092	32.89	4.2	0.6624	3.9	1.647	4.3	0.00
U364	Q33	173	0.25	0.003	0.090	123.7	5.5	0.1539	13	0.3375	12	0.00
U365	Q33	172	0.17	0.002	0.13	119.1	6.3	0.2113	16	0.3825	19	0.00
U366	Q33	495	0.13	0.004	0.19	67.95	6.4	0.4739	10	1.040	9.5	0.00
U367	Q33	983	0.093	0.007	0.38	35.50	5.9	0.6756	6.8	1.536	4.7	0.00
U368	Q33	1271	0.13	0.010	0.16	36.19	5.0	0.6447	5.2	1.532	5.7	0.00

U369	Q33	4027	0.11	0.029	0.21	12.16	3.9	0.7807	3.7	1.875	3.5	0.00
U370	Q33	190	0.16	0.002	0.091	106.7	6.5	0.2204	16	0.4558	12	0.00
U371	Q33	39339	0.10	0.28	0.31	1.266	3.3	0.8720	1.1	2.079	1.5	0.00
U372	Q33	4212	0.13	0.030	0.13	14.34	3.5	0.8066	2.8	1.909	3.5	0.00
U373	Q33	305	0.27	0.004	0.098	110.2	5.5	0.2214	9.4	0.4737	12	0.00
U374	Q33	6386	0.19	0.047	0.078	13.93	6.3	0.7853	2.8	1.950	4.3	0.00
U375	Q33	3987	0.13	0.029	0.15	15.10	4.7	0.8012	3.2	1.831	3.0	0.00
U376	Q33	2146	0.16	0.016	0.11	30.35	4.7	0.6855	4.5	1.682	4.2	0.00
U377	Q33	2764	0.082	0.020	0.32	13.38	6.0	0.7842	3.7	1.916	3.5	0.00
U378	Q33	174	0.15	0.002	0.15	119.4	8.0	0.2382	17	0.4597	20	0.00
U379	Q33	2853	0.078	0.021	0.32	12.53	5.3	0.8336	4.2	1.960	3.4	0.00
U380	Q33	1564	0.049	0.011	1.82	14.54	6.9	0.7981	6.6	1.837	6.3	0.00
U381	Q33	1210	0.14	0.010	0.15	41.37	6.5	0.6664	5.6	1.592	6.4	0.00
U382	Q33	10772	0.063	0.077	0.70	2.807	4.1	0.8577	2.2	2.080	2.6	0.00
U389	Q33	19216	0.18	0.14	0.084	4.487	4.0	0.8531	1.4	2.061	1.6	0.00
U390	Q33	1429	0.24	0.011	0.077	54.57	4.4	0.5765	4.9	1.323	5.6	0.00
U391	Q33	66	0.21	0.002	0.15	138.5	5.5	0.07812	22	0.1530	27	0.00
U392	EST2	6257	0.56	0.048	0.00003	35.05	3.9	0.7063	2.1	1.699	3.0	0.00
U393	EST2	7897	0.48	0.061	0.00002	24.43	3.1	0.7419	1.8	1.812	1.6	0.00
U395	EST2	6584	0.56	0.051	0.00010	32.47	3.1	0.7024	2.1	1.708	2.6	0.00
U399	EST2	6209	0.015	0.054	0.0053	1.083	4.1	0.8395	2.6	2.046	2.9	0.00
U402	EST2	5996	0.51	0.046	0.00057	33.86	3.4	0.7214	2.5	1.781	2.8	0.00
U403	EST2	2468	1.1	0.023	0.0014	108.1	3.9	0.4311	4.5	1.003	4.1	0.00
U404	EST2	3612	0.64	0.029	0.00019	59.43	4.0	0.6106	3.2	1.466	3.4	0.00
U405	EST2	5315	0.83	0.043	0.00022	54.30	4.5	0.6439	3.3	1.573	2.6	0.00
U406	EST2	6247	0.43	0.049	0.00024	27.74	3.0	0.7503	2.2	1.856	2.0	0.00
U407	EST2	23452	0.59	0.18	0.11	11.17	3.9	0.7972	1.6	1.987	1.6	0.00
U408	EST2	4821	0.16	0.038	0.00000	13.58	3.4	0.7736	3.4	1.972	2.6	0.00
U409	EST2	1713	0.018	0.013	0.00021	4.532	4.2	0.8128	4.5	2.065	5.5	0.00
U410	EST2	1513	0.057	0.012	0.00003	15.63	4.2	0.7658	4.8	1.903	5.8	0.00
U411	EST2	6831	0.58	0.053	0.00008	33.48	3.2	0.7229	2.4	1.776	3.3	0.00
U412	EST2	3081	0.52	0.026	0.00007	57.34	3.5	0.6261	3.0	1.549	3.8	0.00
U413	EST2	3981	0.85	0.033	0.00091	68.12	3.2	0.5942	3.0	1.415	2.9	0.00
U414	EST2	10031	0.61	0.079	0.00000	24.24	3.0	0.7489	1.7	1.881	1.9	0.00
U415	EST2	11640	0.57	0.097	0.00001	20.05	3.1	0.7688	2.4	1.920	2.0	0.00
U416	EST2	3979	0.19	0.031	0.00006	19.37	3.9	0.7548	2.9	1.910	4.0	0.00
U417	EST2	3792	0.25	0.032	0.00011	26.42	3.6	0.7408	3.4	1.849	2.8	0.00
U418	PA12	16009	3.8	0.13	0.040	85.21	6.6	0.6757	2.5	1.655	2.1	0.00
U419	PA12	1040	1.1	0.010	0.026	229.6	4.5	0.4248	6.0	1.066	5.9	0.00
U420	PA12	3905	3.0	0.033	0.051	203.3	10	0.4270	8.7	0.9842	8.9	0.00
U421	PA12	8888	1.6	0.069	0.036	73.81	4.3	0.7106	2.2	1.744	2.7	0.00
U422	PA12	2558	3.9	0.026	0.056	269.0	3.8	0.3285	4.4	0.7509	3.7	0.00
U423	PA12	2153	2.5	0.022	0.095	229.1	7.4	0.3585	8.1	0.8635	10	0.00
U424	PA12	1100	4.2	0.016	0.028	362.4	4.2	0.1755	7.7	0.3262	9.1	0.00
U425	PA12	9071	3.0	0.073	0.029	115.8	3.5	0.6413	1.7	1.553	1.6	0.00
U426	PA12	890	0.66	0.015	0.017	176.8	4.0	0.4947	7.8	1.184	6.2	0.00
U427	PA12	859	0.97	0.009	0.021	225.6	5.0	0.4140	6.2	0.9999	5.5	0.00
U428	PA12	724	0.16	0.005	0.030	89.02	10	0.6586	11	1.613	8.4	0.00
U429	PA12	8593	0.53	0.071	0.072	22.87	3.7	0.7957	2.0	1.961	2.2	0.00
U430	PA12	27563	1.9	0.23	0.062	25.30	6.3	0.7899	0.98	1.952	1.4	0.00
U431	PA12	9488	1.3	0.078	0.029	50.81	6.9	0.7519	2.6	1.803	1.6	0.00
U432	PA12	1762	3.2	0.020	0.025	271.8	3.3	0.3257	4.2	0.7280	4.9	0.00
U433	PA12	42232	1.5	0.35	0.071	13.31	4.9	0.8146	0.99	2.013	1.2	0.00
U434	PA12	20190	1.6	0.17	0.029	26.94	19	0.7863	1.6	1.928	2.0	0.00
U435	PA12	2448	3.2	0.026	0.039	231.3	5.6	0.3642	7.9	0.8211	7.5	0.00
U436	PA12	1763	4.0	0.021	0.023	300.7	3.1	0.2831	3.6	0.5908	3.7	0.00
U437	PA12	666	3.5	0.011	0.015	386.6	4.5	0.1579	5.6	0.3084	8.5	0.00
U438	PA12	1296	2.5	0.015	0.020	278.2	3.7	0.3127	4.3	0.6972	5.4	0.00
U445	P14	1870	0.11	0.016	-0.00002	19.77	4.4	0.7522	4.7	1.809	5.9	0.00
U446	P14	1581	0.25	0.014	0.00003	45.31	3.8	0.6279	5.5	1.498	5.4	0.00
U447	P14	2278	0.066	0.020	0.00010	9.847	6.0	0.7698	4.4	1.912	4.2	0.00

U448	P14	1249	0.28	0.012	0.00000	56.34	4.2	0.5498	6.2	1.350	5.2	0.00
U449	P14	1646	0.28	0.015	0.00006	47.29	3.8	0.6065	4.5	1.482	4.5	0.00
U450	P14	1450	0.30	0.013	0.00003	56.03	4.4	0.5940	5.6	1.444	5.6	0.00
U451	P14	4304	0.24	0.037	0.0021	18.76	4.5	0.7412	2.9	1.871	3.5	0.00
U452	P14	4139	0.14	0.035	0.00009	12.42	3.9	0.7981	2.7	1.962	3.0	0.00
U453	P14	4483	0.12	0.038	0.0011	9.165	3.8	0.7693	2.6	1.915	3.9	0.00
U454	P14	1505	0.21	0.014	0.00001	41.52	4.5	0.6650	4.8	1.647	4.3	0.00
U455	P14	1724	0.039	0.015	0.00064	8.231	4.9	0.7872	4.9	2.025	4.4	0.00
U456	P14	1961	0.002	0.016	-0.00054	0.3499	7.4	0.8614	5.9	2.081	6.2	0.00
U457	P14	646	0.002	0.005	0.021	1.124	8.3	0.8731	7.8	2.085	9.1	0.00
U458	P14	3174	0.016	0.027	0.00012	1.867	3.8	0.8183	3.5	2.033	3.9	0.00
U459	P14	5539	0.027	0.028	0.0077	4.253	4.7	0.8329	4.4	2.027	4.7	0.00
U460	P14	2003	0.29	0.018	0.00005	42.22	4.6	0.6450	4.1	1.504	4.9	0.00
U461	P14	1705	0.45	0.017	0.00003	63.75	4.1	0.5193	4.3	1.293	4.7	0.00
U462	P14	841	0.59	0.010	0.00002	106.5	4.1	0.3327	6.2	0.7613	5.8	0.00
U463	P14	2874	0.29	0.025	0.00048	31.76	3.7	0.6933	4.3	1.705	5.0	0.00
U464	P14	3756	0.071	0.033	0.0043	6.636	3.9	0.7792	3.9	1.952	3.2	0.00
U465	P14	2389	0.31	0.022	0.0074	38.70	3.8	0.6579	3.9	1.606	4.3	0.00
U466	P14	2905	0.39	0.027	0.0077	38.62	3.5	0.6470	4.4	1.596	3.6	0.00
U467	P14	4109	0.15	0.035	0.00009	13.49	3.7	0.8037	3.3	1.952	4.0	0.00
U468	P14	2342	0.34	0.022	0.0026	41.21	4.1	0.6487	4.8	1.547	4.8	0.00
U469	P14	3784	0.34	0.033	0.00032	28.97	3.8	0.7121	3.1	1.758	4.1	0.00
U470	P14	2833	0.26	0.025	0.00001	30.21	4.1	0.7140	3.9	1.755	5.0	0.00
U471	P14	2254	0.69	0.022	0.00000	72.43	3.9	0.5075	3.8	1.228	4.6	0.00
U472	P14	1303	0.32	0.013	0.00000	59.91	5.0	0.5470	4.3	1.277	5.8	0.00
U473	GIS10a	1521	0.036	0.013	0.43	9.441	12	0.7881	5.2	2.011	6.6	0.00
U474	GIS10a	1337	0.051	0.011	0.19	14.47	13	0.7660	6.0	1.967	5.5	0.00
U475	GIS10a	382	0.013	0.003	0.0091	11.82	9.0	0.7517	9.8	1.816	8.9	0.00
U476	GIS10a	1158	0.011	0.008	0.64	5.258	10	0.8096	7.2	2.075	7.0	0.00
U477	GIS10a	4052	0.018	0.025	0.45	3.600	12	0.8102	3.8	2.033	4.6	0.00
U478	GIS10a	4006	0.031	0.028	0.58	4.625	15	0.7908	5.0	1.938	3.5	0.00
U479	GIS10a	5822	0.059	0.041	0.63	5.627	13	0.8241	4.3	1.972	3.4	0.00
U480	GIS10a	1389	0.007	0.011	0.32	2.620	9.1	0.8172	6.9	1.956	5.8	0.00
U481	GIS10a	516	0.023	0.017	0.11	19.46	11	0.7646	10	1.875	7.8	0.00
U482	GIS10a	284	0.033	0.002	0.015	45.55	16	0.6243	16	1.624	15	0.00
U483	GIS10a	559	0.014	0.004	0.32	9.809	11	0.7483	9.1	1.855	9.8	0.00
U484	GIS10a	1152	0.029	0.010	0.70	9.782	10	0.7786	6.0	1.975	6.5	0.00
U485	GIS10a	132	0.044	0.001	0.064	100.3	12	0.4219	18	1.082	22	0.00
U486	GIS10a	45	0.020	0.000	0.027	100.4	20	0.4182	28	0.9411	39	0.00
U487	GIS10a	1079	0.008	0.009	0.28	2.555	7.6	0.8328	6.5	2.078	6.4	0.00
U575	P24	69088	3.5	0.64	0.024	16.19	3.1	0.7678	0.86	1.875	0.98	0.00
U576	P24	25467	3.3	0.24	0.029	37.25	3.2	0.6755	1.6	1.666	1.4	0.00
U577	P24	33072	3.1	0.31	0.022	28.61	3.1	0.7075	1.2	1.726	1.3	0.00
U579	P24	33741	1.8	0.31	0.018	16.85	3.5	0.7597	1.5	1.879	1.2	0.00
U580	P24	25875	1.0	0.24	0.031	13.24	3.9	0.7857	1.6	1.918	1.2	0.00
U581	P24	33472	0.11	0.31	0.22	1.141	3.3	0.8274	1.2	2.069	1.1	0.00
U582	P24	27613	0.082	0.25	0.44	1.033	3.5	0.8309	1.4	2.077	1.5	0.00
U583	P24	61042	0.080	0.56	0.56	0.4568	3.1	0.8286	0.93	2.063	0.97	0.00
U584	P24	35810	0.089	0.33	0.60	0.8626	3.1	0.8317	1.1	2.050	1.3	0.00
U585	P24	121460	2.4	1.1	0.073	6.681	3.7	0.8010	0.74	1.972	0.92	0.00
U586	P24	252891	2.3	2.3	0.080	3.217	2.7	0.8231	0.63	2.044	0.80	0.00
U587	P24	175716	1.8	1.6	0.18	3.446	3.4	0.8164	0.62	2.013	0.78	0.00
U588	P24	330157	0.11	3.0	1.01	0.1179	3.1	0.8359	0.58	2.073	0.73	0.00
RM ₀ (n=28) ^g		239434	0.82	2.3	0.91	1.238	2.0	0.8710	0.53	2.101	0.77	0.00
RM ₁ (n=28) ^g		10635	3.6	0.17	0.00049	22.81	5.3	0.1173	29	0.1707	51	0.00
RM ₂ (n=28) ^g		31850	1.6	0.20	0.00001	441.6	164	0.7132	38	1.684	41	0.00

^a Within run background-corrected mean ²⁰⁷Pb signal in cps (counts per second).

^b U and Pb concentrations and Th/U ratio were calculated relative to the primary reference material

^c and T b concentrations and Th/U ratio were calculated relative to the primary reference material.

^c Corrected for background, within-run fractionation and subsequently normalised to the primary reference material (ID-TIMS value/measured value).

^d Rho is the ²⁰⁶Pb/²³⁸U - ²⁰⁷Pb/²⁰⁶Pb uncertainty correlation coefficient.

^e RM₁: Reference material 1.

RM₀

A001	NIST-614	310087	0.86	2.4	0.91	1.233	0.56	0.8701	0.40	2.092	0.46	0.00
A002	NIST-614	308961	0.86	2.4	0.92	1.236	0.62	0.8699	0.26	2.102	0.36	0.00
A033	NIST-614	276190	0.78	2.2	0.88	1.241	1.1	0.8733	0.32	2.110	0.62	0.00
A034	NIST-614	286673	0.81	2.3	0.91	1.243	0.75	0.8737	0.46	2.107	0.45	0.00
A067	NIST-614	260795	0.75	2.1	0.88	1.239	0.74	0.8694	0.40	2.099	0.68	0.00
A068	NIST-614	289053	0.85	2.3	0.95	1.256	0.48	0.8688	0.28	2.091	0.47	0.00
A102	NIST-614	270358	0.79	2.3	0.90	1.219	0.68	0.8710	0.35	2.108	0.60	0.00
A103	NIST-614	265815	0.78	2.2	0.90	1.223	0.77	0.8696	0.44	2.097	0.50	0.00
A146	NIST-614	279510	0.85	2.4	0.93	1.237	0.65	0.8712	0.42	2.105	0.45	0.00
A147	NIST-614	287471	0.89	2.5	0.94	1.261	0.43	0.8710	0.34	2.096	0.32	0.00
A194	NIST-614	264830	0.83	2.3	0.91	1.249	0.52	0.8768	0.38	2.118	0.42	0.00
A195	NIST-614	259939	0.82	2.3	0.90	1.226	0.81	0.8713	0.35	2.112	0.52	0.00
A238	NIST-614	272281	0.90	2.5	0.93	1.254	0.52	0.8696	0.41	2.096	0.29	0.00
A239	NIST-614	243040	0.78	2.2	0.87	1.227	0.76	0.8726	0.40	2.095	0.40	0.00
A283	NIST-614	241441	0.80	2.3	0.90	1.226	0.66	0.8712	0.46	2.092	0.48	0.00
A284	NIST-614	229746	0.77	2.2	0.88	1.230	1.00	0.8660	0.41	2.086	0.69	0.00
A328	NIST-614	240572	0.85	2.4	0.93	1.245	0.55	0.8708	0.46	2.105	0.37	0.00
A329	NIST-614	226514	0.78	2.2	0.89	1.222	0.72	0.8710	0.52	2.104	0.63	0.00
A383	NIST-614	241642	0.90	2.5	0.95	1.259	0.46	0.8692	0.26	2.088	0.44	0.00
A384	NIST-614	216565	0.80	2.2	0.90	1.241	0.47	0.8701	0.38	2.113	0.44	0.00
A439	NIST-614	194598	0.84	2.2	0.90	1.229	0.52	0.8737	0.40	2.104	0.44	0.00
A440	NIST-614	196946	0.87	2.3	0.91	1.255	0.45	0.8716	0.43	2.109	0.43	0.00
A494	NIST-614	175562	0.79	2.1	0.90	1.226	0.64	0.8665	0.35	2.092	0.46	0.00
A495	NIST-614	187391	0.86	2.3	0.94	1.244	0.44	0.8750	0.37	2.105	0.44	0.00
A549	NIST-614	176287	0.83	2.2	0.92	1.234	0.56	0.8733	0.38	2.105	0.48	0.00
A550	NIST-614	163937	0.76	2.0	0.88	1.225	0.62	0.8715	0.41	2.108	0.40	0.00
A593	NIST-614	170070	0.82	2.2	0.91	1.251	0.52	0.8710	0.43	2.096	0.47	0.00
A594	NIST-614	167886	0.81	2.1	0.91	1.235	0.51	0.8688	0.46	2.099	0.65	0.00
		239434	0.82	2.3	0.91	1.238	2.0	0.8710	0.53	2.101	0.77	0.00

RM₁

B003	WC-1	12126	3.3	0.16	0.00016	23.22	2.8	0.1190	2.1	0.1801	3.1	0.00
B004	WC-1	12658	3.9	0.18	0.00038	23.62	2.8	0.1068	2.4	0.1456	3.5	0.00
B035	WC-1	9318	3.1	0.14	0.00019	23.66	2.7	0.1007	3.3	0.1282	5.6	0.00
B036	WC-1	14593	3.2	0.17	0.00047	22.29	2.8	0.1436	1.8	0.2387	3.0	0.00
B069	WC-1	13060	3.4	0.17	0.00045	22.44	3.0	0.1236	3.8	0.1889	5.4	0.00
B070	WC-1	10975	3.1	0.15	0.00031	22.90	2.7	0.1176	2.2	0.1683	2.9	0.00
B104	WC-1	10449	2.7	0.14	0.00028	21.99	2.9	0.1282	3.1	0.1962	4.8	0.00
B105	WC-1	11332	3.6	0.17	0.00027	23.50	2.7	0.1087	2.7	0.1484	4.0	0.00
B148	WC-1	12758	3.0	0.16	0.00026	21.68	2.9	0.1417	2.8	0.2307	2.8	0.00
B149	WC-1	12015	3.1	0.16	0.00018	22.25	2.9	0.1310	1.9	0.2060	2.0	0.00
B196	WC-1	11127	4.6	0.20	0.00081	23.29	2.8	0.08909	2.6	0.09641	4.2	0.00
B197	WC-1	15591	3.5	0.20	0.0011	21.88	2.7	0.1497	2.0	0.2552	3.2	0.00
B240	WC-1	9715	4.0	0.18	0.00046	23.49	2.8	0.09202	4.3	0.1039	9.8	0.00
B241	WC-1	14690	4.3	0.22	0.00023	22.79	2.8	0.1261	2.4	0.2027	4.1	0.00
B285	WC-1	9095	3.3	0.15	0.00010	23.55	2.8	0.1070	1.8	0.1428	3.7	0.00
B286	WC-1	11152	3.6	0.18	0.00009	23.05	2.8	0.1204	2.1	0.1825	3.3	0.00
B330	WC-1	11575	3.8	0.19	0.00026	22.75	2.8	0.1201	2.0	0.1758	3.7	0.00
B331	WC-1	10989	3.5	0.18	0.00031	22.43	2.8	0.1227	3.8	0.1829	6.5	0.00
B385	WC-1	10160	3.6	0.18	0.00081	22.84	2.7	0.1167	2.4	0.1760	3.3	0.00
B386	WC-1	9322	3.0	0.15	0.00021	22.56	2.8	0.1272	2.4	0.1934	4.2	0.00
B441	WC-1	8055	3.5	0.17	0.00022	22.58	2.8	0.1136	2.8	0.1693	4.6	0.00
B442	WC-1	7610	3.3	0.16	0.00016	22.55	2.8	0.1138	2.7	0.1602	3.5	0.00
B496	WC-1	9064	4.4	0.21	0.0013	22.80	2.8	0.1052	3.2	0.1370	6.1	0.00
B497	WC-1	11231	3.8	0.21	0.00043	21.91	2.8	0.1442	2.3	0.2388	1.9	0.00
B551	WC-1	7186	4.1	0.18	0.0012	22.90	2.8	0.09502	2.4	0.1070	5.0	0.00
B552	WC-1	7259	3.4	0.16	0.0013	22.70	2.9	0.1140	3.0	0.1590	3.9	0.00
B595	WC-1	6626	4.7	0.19	0.0013	24.14	2.7	0.08104	1.8	0.07929	5.4	0.00
B596	WC-1	8048	3.6	0.17	0.00033	22.99	2.9	0.1249	3.3	0.1860	4.9	0.00

		10635	3.6	0.17	0.00049	22.81	5.3	0.1173	29	0.1707	51	0.00
RM₂												
C005	ASH15D	1110	1.1	0.006	0.00001	501.2	6.9	0.6628	5.6	1.553	4.6	0.00
C006	ASH15D	2759	1.6	0.015	0.00000	376.8	11	0.7378	5.3	1.702	6.5	0.00
C037	ASH15D	549	1.2	0.003	0.00000	922.0	6.8	0.5498	7.6	1.301	9.1	0.00
C038	ASH15D	854	0.66	0.005	0.00000	388.4	5.5	0.7236	6.3	1.663	7.5	0.00
C071	ASH15D	964	1.2	0.006	0.00000	602.7	6.4	0.6811	7.7	1.572	6.5	0.00
C072	ASH15D	6681	2.4	0.039	0.00000	197.0	8.0	0.7884	3.9	1.904	3.2	0.00
C106	ASH15D	566	1.1	0.004	0.00001	802.9	7.8	0.5772	7.7	1.334	8.6	0.00
C107	ASH15D	541124	1.8	3.1	0.00003	2.094	12	0.8753	0.67	2.128	0.86	0.00
C150	ASH15D	40847	1.8	0.25	0.00001	25.02	10.0	0.8634	1.4	2.072	1.5	0.00
C151	ASH15D	1062	1.1	0.007	0.00002	476.2	5.6	0.6987	7.4	1.678	8.1	0.00
C198	ASH15D	1053	1.0	0.007	0.00002	473.5	17	0.6930	7.7	1.629	7.6	0.00
C199	ASH15D	861	2.5	0.006	0.00000	989.7	5.4	0.5161	7.9	1.203	5.7	0.00
C242	ASH15D	483	3.2	0.004	0.00000	1387	6.1	0.3435	8.5	0.7440	7.8	0.00
C243	ASH15D	1694	1.2	0.009	0.00000	672.7	7.0	0.6596	7.0	1.581	8.2	0.00
C287	ASH15D	929	2.6	0.007	0.00000	959.4	5.0	0.5117	6.7	1.231	5.8	0.00
C288	ASH15D	16649	1.7	0.069	0.00000	251.3	38	0.8089	3.0	1.887	3.5	0.00
C332	ASH15D	5292	2.3	0.031	0.00000	294.5	19	0.7795	3.3	1.834	4.3	0.00
C333	ASH15D	1621	1.9	0.012	0.00000	479.0	8.8	0.6676	5.6	1.611	5.5	0.00
C387	ASH15D	52308	1.1	0.28	0.00000	21.35	37	0.8787	1.6	2.065	2.5	0.00
C388	ASH15D	2724	1.4	0.021	0.00000	215.9	8.8	0.7761	5.3	1.928	5.0	0.00
C443	ASH15D	782	2.3	0.007	0.00000	771.3	5.7	0.5768	9.3	1.349	8.4	0.00
C444	ASH15D	20107	1.7	0.16	0.00000	34.82	8.5	0.8553	2.0	2.066	1.9	0.00
C498	ASH15D	641	1.1	0.006	0.00000	532.2	11	0.6718	7.8	1.561	7.6	0.00
C499	ASH15D	3913	1.1	0.029	0.00000	144.3	20	0.8408	3.8	2.000	4.3	0.00
C553	ASH15D	118467	2.0	0.97	0.00004	6.980	16	0.8692	1.0	2.084	1.2	0.00
C554	ASH15D	61946	1.8	0.39	0.00001	24.14	32	0.8783	1.5	2.097	2.1	0.00
C597	ASH15D	291	0.74	0.003	0.00000	715.1	7.7	0.6485	13	1.392	19	0.00
C598	ASH15D	5514	1.6	0.050	0.00000	97.42	4.3	0.8349	3.6	1.996	6.1	0.00
		31850	1.6	0.20	0.00001	441.6	164	0.7132	38	1.684	41	0.00

LA-ICP-MS U-Th-Pb data report

Laboratory & Sample Preparation	
Laboratory name	FIERCE, Frankfurt Isotope & Element Research Center Goethe Univesität, Frankfurt am Main
Sample type/mineral	Carbonate
Sample preparation	25 mm polished resin mounts
Imaging	Petrographic microscope & 2400 dpi digital scan
Laser ablation system	
Make, Model & type	RESolution ArF excimer laser (COMpex Pro 102)
Ablation cell	Two-volume ablation cell (Laurin Technic S155)
Laser wavelength	193 nm
Pulse width	20 ns
Fluence	2 J/cm ²
Repetition rate	12 Hz
Pre-ablation	4 pulses (same parameters as main ablation)
Ablation duration	18 s
Ablation rate	~ 0.6 µm/s
Spot shape & size	Square, 213 µm (side)
Sampling mode	Static spot ablation
Gasses	Sample cell: He. Funnel: He + Ar. Tubbing: He + Ar + N
Gas flows	He (300 ml/min), Ar (1100 ml/min), N (5 ml/min).
ICP-MS Instrument	
Make, Model & type	ThermoScientific ElementXr sector field ICP-MS
Sample introduction	Ablation aerosol
RF power	1300 W
Detection system	Secondary electron multiplier (with conversion dynode at -8kV). Simultaneous analogue and counting (pulse) modes of detection (conversion factors calculated per mass and applied offline). Magnetic field fixed. Detection by peak jumping with electrostatic analyzer.
Masses measured	206, 207, 208, 232, 238
Dwell times	206: 6.4 ms, 207: 7.5 ms, 208: 3.0 ms, 232: 2.0 ms, 238: 4.6 ms
Samples per peak/integration type	4 for all masses/average
Total time per run	99 ms
Number of runs/total time	370 / 36.6 s
Acquisition mode	Trigger from laser (20 s after pre-ablation), background: 18 s, ablation: 18 s
Dead time	29 ns
Data Processing	
Gas blank	20 s on-peak zero subtracted.
Calibration strategy	NIST SRM-614 used as primary standard, WC-1, ASH15D, NAMA & Calgrun used as secondary reference materials (validation).
Reference Material (RM) information	Soda-lime glass NIST SRM-614, WC-1 (Roberts et al., 2017), ASH15D (Vaks et al., 2003), NAMA (in-house dolomite RM), Calgrun (in-house calcite RM)
Data processing / LIEF correction	In-house VBA spreadsheet program (Gerdes and Zeh, 2006, 2009). Intercept method for LIEF correction, assumes cPb corrected WC-1 and samples behave identically.
Mass discrimination	²⁰⁷ Pb/ ²⁰⁶ Pb (0.2%) and ²⁰⁶ Pb/ ²³⁸ U (5%) normalised to primary standard
Common-Pb correction	No common-Pb correction applied to the data.
Uncertainty level & propagation	Ages are quoted at 2s absolute, propagation by quadratic addition.
Quality control / Validation	Sequence 3: WC-1: 254.2 ± 1.7 Ma (2s, MSWD = 1.0, n = 28) ASH15D: 2.908 ± 0.122 Ma (2s, MSWD = 0.83, n = 28) (Ages are the ²⁰⁶ Pb/ ²³⁸ U lower intercept ages of the calculated isochrons with the concordia curve in the Tera-Wasserburg space)
Other information	