

Figure 5A data
5-year averages

top	bottom	Guliya Tibet $\delta^{18}\text{O}$	Puruogangri Tibet $\delta^{18}\text{O}$	Dunde Tibet $\delta^{18}\text{O}$	Dasuopu Tibet $\delta^{18}\text{O}$	Quelccaya Peru $\delta^{18}\text{O}$	Huascarán Peru $\delta^{18}\text{O}$	Sajama Bolivia $\delta^{18}\text{O}$
1999	1995		-13.01			-16.19		
1994	1990		-14.36		-16.66	-16.60		-15.60
1989	1985	-14.00	-12.21		-19.27	-17.01	-17.20	-17.31
1984	1980	-12.62	-13.68	-9.67	-17.88	-17.30	-17.46	-18.30
1979	1975	-13.54	-15.00	-9.62	-17.40	-17.84	-17.86	-18.50
1974	1970	-12.44	-12.53	-10.03	-17.94	-19.23	-18.48	-19.17
1969	1965	-13.57	-13.06	-9.83	-17.25	-16.03	-15.84	-15.89
1964	1960	-14.15	-14.42	-9.91	-18.69	-17.44	-17.05	-16.84
1959	1955	-14.41	-13.00	-9.55	-18.56	-16.92	-16.90	-16.51
1954	1950	-13.32	-14.75	-8.35	-17.26	-18.48	-18.78	-14.98
1949	1945	-12.92	-14.26	-9.66	-16.40	-17.89	-16.86	-15.97
1944	1940	-15.57	-14.93	-10.36	-17.88	-15.85	-17.40	-16.98
1939	1935	-14.79	-14.11	-10.45	-18.54	-15.62	-15.88	-17.69
1934	1930	-15.17	-13.75	-10.74	-18.27	-18.34	-18.08	-16.27
1929	1925	-14.74	-12.76	-10.06	-19.60	-16.96	-16.39	-18.22
1924	1920	-17.06	-12.30	-10.97	-18.43	-18.47	-18.16	-17.58
1919	1915	-14.45	-13.55	-10.55	-18.85	-18.30	-18.46	-17.21
1914	1910	-13.88	-15.04	-11.28	-20.71	-17.48	-17.69	-18.43
1909	1905	-14.86	-15.99	-10.72	-18.66	-17.49	-18.04	-15.10
1904	1900	-16.98	-16.01	-10.00	-18.51	-17.25	-17.54	-17.39
1899	1895	-14.96	-15.02	-10.58	-19.70	-17.80	-19.02	-18.89
1894	1890	-13.73	-16.13	-10.00	-20.77	-19.04	-18.97	-17.31
1889	1885	-14.54	-14.81	-9.75	-19.03	-18.01	-17.71	-16.31
1884	1880	-14.10	-14.90	-10.74	-18.26	-17.83	-16.43	-17.60
1879	1875	-15.68	-13.62	-11.03	-18.69	-18.14	-15.73	-21.18
1874	1870	-15.73	-13.52	-10.03	-18.60	-19.50	-17.38	-17.59
1869	1865	-15.15	-14.80	-9.63	-19.32	-17.97	-16.51	-18.82
1864	1860	-15.81	-14.36	-12.45	-21.08	-18.91	-18.55	-16.83
1859	1855	-12.22	-14.44	-10.98	-19.91	-17.95	-17.38	-15.91
1854	1850	-13.63	-15.34	-11.85	-18.05	-18.50	-18.26	-18.21
1849	1845	-15.14	-15.56	-11.42	-19.43	-17.97	-18.15	-16.20
1844	1840	-14.98	-15.38	-10.34	-20.00	-17.72	-17.78	-16.51
1839	1835	-16.41	-14.41	-11.06	-20.41	-18.35	-16.34	-16.65
1834	1830	-14.80	-13.19	-10.61	-19.54	-17.87	-18.21	-15.43
1829	1825	-13.91	-14.80	-10.74	-17.94	-16.86	-16.41	-17.28
1824	1820	-16.55	-15.56	-10.91	-20.77	-19.58	-16.86	-22.68
1819	1815	-14.58	-16.16	-11.59	-20.93	-20.24	-19.64	-18.89
1814	1810	-15.63	-16.49	-9.78	-20.41	-19.25	-17.02	-18.53
1809	1805	-14.20	-15.45	-11.04	-19.69	-18.39	-16.77	-16.89
1804	1800	-14.57	-15.13	-10.70	-19.56	-18.17	-17.47	-18.01
1799	1795	-13.39	-14.18	-11.62	-17.63	-18.87	-16.27	-14.45
1794	1790	-13.34	-15.53	-10.76	-19.71	-17.63	-16.51	-15.81
1789	1785	-12.48	-15.01	-10.25	-21.28	-18.74	-15.90	-16.47
1784	1780	-13.53	-13.59	-10.75	-21.76	-18.37	-17.56	-17.31

Figure 5A data
5-year averages

top	bottom	Guliya Tibet $\delta^{18}\text{O}$	Puruogangri Tibet $\delta^{18}\text{O}$	Dunde Tibet $\delta^{18}\text{O}$	Dasuopu Tibet $\delta^{18}\text{O}$	Quelccaya Peru $\delta^{18}\text{O}$	Huascarán Peru $\delta^{18}\text{O}$	Sajama Bolivia $\delta^{18}\text{O}$
1779	1775	-13.33	-13.36	-11.75	-21.69	-19.45	-18.35	-17.14
1774	1770	-14.68	-16.43	-10.76	-20.39	-18.09	-18.54	-17.36
1769	1765	-11.52	-15.29	-10.16	-20.56	-18.85	-16.91	-18.34
1764	1760	-13.89	-14.41	-11.04	-21.61	-18.52	-17.56	-18.09
1759	1755	-12.95	-15.07	-9.89	-18.96	-20.09	-19.12	-15.31
1754	1750	-14.08	-15.97	-10.30	-20.30	-18.71	-17.66	-17.87
1749	1745	-13.48	-14.51	-10.39	-19.99	-18.07	-17.29	-16.75
1744	1740	-14.54	-16.43	-10.66	-18.60	-18.86	-18.93	-19.76
1739	1735	-14.93	-14.91	-11.83	-21.98	-18.19	-19.52	-20.23
1734	1730	-12.85	-15.81	-10.26	-22.00	-20.59	-19.10	-16.82
1729	1725	-15.45	-15.96	-10.70	-19.66	-18.89	-20.20	-16.17
1724	1720	-14.39	-14.31	-10.59	-19.87	-16.52	-19.94	-18.24
1719	1715	-14.70	-14.47	-11.48	-20.76	-19.62	-19.46	-18.08
1714	1710	-13.04	-15.02	-11.30	-20.60	-17.28	-19.67	-18.64
1709	1705	-11.59	-13.95	-11.19	-19.89	-18.83	-18.67	-19.58
1704	1700	-12.33	-14.40	-11.51	-19.97	-19.32	-17.64	-17.32
1699	1695	-14.79	-14.65	-10.89	-19.43	-19.45	-19.01	-16.64
1694	1690	-13.09	-15.43	-12.31	-19.42	-18.27	-18.50	-16.88
1689	1685	-16.75	-14.13	-10.68	-19.76	-18.80	-18.85	-17.73
1684	1680	-12.72	-15.98	-11.21	-19.41	-18.70	-19.25	-17.57
1679	1675	-11.94	-14.95	-11.88	-18.99	-19.23	-18.94	-16.27
1674	1670	-15.47	-14.27	-11.48	-19.57	-19.06	-19.00	-16.94
1669	1665	-15.82	-14.65	-10.66	-21.00	-19.57	-19.01	-15.13
1664	1660	-15.42	-15.50	-10.87	-20.25	-19.06	-19.25	-17.99
1659	1655	-15.28	-14.22	-10.45	-20.33	-16.97	-19.12	-19.89
1654	1650	-15.93	-13.96	-11.05	-21.12	-18.47	-19.26	-16.44
1649	1645	-15.07	-13.41	-10.47	-19.94	-17.31	-19.19	-18.15
1644	1640	-13.32	-14.18	-10.31	-19.96	-19.63	-19.34	-17.00
1639	1635	-12.99	-14.04	-10.12	-19.61	-17.27	-19.52	-16.54
1634	1630	-14.74	-14.70	-10.45	-20.46	-18.79	-19.06	-18.79
1629	1625	-12.21	-16.73	-10.11	-20.67	-19.58	-19.98	-20.38
1624	1620	-15.73	-14.73	-10.86	-21.02	-18.11	-18.79	-20.57
1619	1615	-13.34	-14.45	-11.55	-21.74	-18.20	-19.23	-16.10
1614	1610	-13.02	-14.99	-10.47	-20.85	-18.71	-18.49	-13.00
1609	1605	-14.53	-14.37	-11.18	-20.51	-17.61	-19.47	-14.63
1604	1600	-11.99	-14.98		-21.04	-19.90	-19.71	-17.79

Notes:

Guliya: Core 2

Puruogangri: Average of Cores 1 & 2

Dunde: Core 1

Dasuopu: Core 3

Notes:

Quelccaya: 1999 - 1985 from 2003 Summit core

Quelccaya: 1983 - 1600 from average of 1983

Summit core & Core 1

1984 is from a pit at the Summit site

Huascarán: Core 2

Sajama: Core 2

Data shown in Figure 5B

5-year averages
accumulation

top	bottom	China Guliya Tibet m w.e.	China Puruogangri Tibet m w.e.	China Dunde Tibet m w.e.	China Dasuopu Tibet m w.e.	Peru Quelccaya m w.e.
1999	1995		0.379			1.516
1994	1990		0.180		0.672	1.271
1989	1985	0.310	0.477		0.744	1.411
1984	1980	0.257	0.290	0.314	0.789	1.310
1979	1975	0.324	0.456	0.464	0.861	1.135
1974	1970	0.319	0.299	0.512	1.003	1.227
1969	1965	0.391	0.391	0.470	0.743	1.305
1964	1960	0.237	0.435	0.494	0.795	1.394
1959	1955	0.353	0.437	0.484	0.719	1.268
1954	1950	0.383	0.368	0.448	0.906	1.317
1949	1945	0.155	0.358	0.446	0.900	1.415
1944	1940	0.336	0.381	0.464	1.084	1.148
1939	1935	0.297	0.392	0.402	1.051	1.220
1934	1930	0.332	0.375	0.377	0.757	1.436
1929	1925	0.358	0.328	0.464	1.041	1.319
1924	1920	0.277	0.381	0.499	0.870	1.475
1919	1915	0.234	0.270	0.635	1.188	1.350
1914	1910	0.262	0.217	0.509	0.931	1.321
1909	1905	0.235	0.263	0.554	0.804	1.196
1904	1900	0.383	0.473	0.415	0.953	1.243
1899	1895	0.466	0.277	0.392	0.940	1.317
1894	1890	0.256	0.346	0.308	1.111	1.258
1889	1885	0.303	0.438	0.432	1.057	1.294
1884	1880	0.211	0.214	0.553	0.752	1.218
1879	1875	0.221	0.166	0.411	1.496	1.513
1874	1870	0.208	0.432	0.312	1.229	1.222
1869	1865	0.257	0.238	0.314	1.166	1.292
1864	1860	0.214	0.291	0.377	1.200	1.250
1859	1855	0.250	0.257	0.295	1.516	1.152
1854	1850	0.176	0.337	0.333	1.060	1.148
1849	1845	0.313	0.348	0.378	1.226	1.091
1844	1840	0.218	0.281	0.343	1.389	1.038
1839	1835	0.255	0.240	0.520	1.233	1.234
1834	1830	0.248	0.187	0.378	1.021	1.050
1829	1825	0.379	0.205	0.363	1.228	1.121
1824	1820	0.277	0.212	0.412	1.164	1.069
1819	1815	0.270	0.214	0.386	1.234	1.145
1814	1810	0.155	0.280	0.404	1.102	1.032
1809	1805	0.253	0.264	0.415	0.682	1.061
1804	1800	0.173	0.415	0.296	0.747	1.104
1799	1795	0.204	0.249	0.353	0.787	1.120
1794	1790	0.241	0.328	0.530	0.621	1.103
1789	1785	0.298	0.391	0.341	0.782	1.072
1784	1780	0.266	0.306	0.412	0.962	1.068

Data shown in Figure 5B

5-year averages
accumulation

top	bottom	China Guliya Tibet m w.e.	China Puruogangri Tibet m w.e.	China Dunde Tibet m w.e.	China Dasuopu Tibet m w.e.	Peru Quelccaya m w.e.
1779	1775	0.321	0.342	0.445	0.614	1.175
1774	1770	0.366	0.383	0.446	0.703	1.081
1769	1765	0.224	0.362	0.419	0.596	1.033
1764	1760	0.426	0.435	0.443	0.738	1.088
1759	1755	0.421	0.370	0.411	0.616	1.165
1754	1750	0.312	0.451	0.514	0.630	1.165
1749	1745	0.325	0.394	0.474	0.775	1.182
1744	1740	0.356	0.396	0.497	0.734	1.194
1739	1735	0.383	0.431	0.381	0.720	1.264
1734	1730	0.449	0.337	0.410	0.699	1.245
1729	1725	0.280	0.449	0.474	0.843	1.231
1724	1720	0.255	0.251	0.481	0.929	1.155
1719	1715	0.234	0.351	0.446	0.773	1.281
1714	1710	0.239	0.286	0.539	0.782	1.227
1709	1705	0.308	0.330	0.463	0.635	1.310
1704	1700	0.280	0.487	0.489	0.881	1.428
1699	1695	0.461	0.503	0.463	0.705	1.288
1694	1690	0.258	0.367	0.404	0.776	1.324
1689	1685	0.367	0.490	0.486	0.676	1.382
1684	1680	0.351	0.329	0.430	0.562	1.388
1679	1675	0.304	0.370	0.502	0.876	1.645
1674	1670	0.365	0.359	0.425	0.763	1.516
1669	1665	0.258	0.565	0.497	0.626	1.513
1664	1660	0.362	0.448	0.387	0.873	1.747
1659	1655	0.410	0.497	0.406	0.721	1.515
1654	1650	0.202	0.305	0.377	0.825	1.584
1649	1645	0.525	0.370	0.409	0.717	1.558
1644	1640	0.409	0.468	0.394	0.731	1.721
1639	1635	0.346	0.322	0.363	0.698	1.652
1634	1630	0.345	0.402	0.454	0.656	1.750
1629	1625	0.384	0.371	0.478	0.621	1.695
1624	1620	0.359	0.457	0.484	0.760	1.636
1619	1615	0.381	0.527	0.480	0.765	1.187
1614	1610	0.259	0.530	0.421	0.761	1.413
1609	1605	0.364	0.383	0.466	0.868	1.454
1604	1600	0.258	0.496		0.730	1.515

Notes:

Guliya: Core 2

Puruogangri: Cores 2

Dunde: Core 1

Dasuopu: Average of Cores 2 & 3

Notes:

Quelccaya: 1999 - 1985 from 2003 Summit core

Quelccaya: 1983 - 1600 from average of 1983

Summit core & Core 1 and 1984 is

from a pit at the Summit site

Figure 5C
5-year composites

Figure 5D

Figure 5e

top	bottom	Tibetan composite average $\delta^{18}\text{O}$	Tibetan composite average A_n	Andean composite average $\delta^{18}\text{O}$	Andean composite average A_n	Tropical composite average $\delta^{18}\text{O}$	Tropical composite average A_n
1999	1995	1.63	0.23	2.01	1.16	1.82	0.69
1994	1990	1.30	-1.43	1.37	-0.15	1.34	-0.79
1989	1985	0.96	0.26	0.69	0.60	0.82	0.43
1984	1980	1.24	-0.87	0.31	0.05	0.77	-0.41
1979	1975	0.85	0.43	-0.02	-0.88	0.41	-0.22
1974	1970	1.43	0.34	-0.79	-0.39	0.32	-0.03
1969	1965	1.28	0.36	1.69	0.03	1.48	0.20
1964	1960	0.52	0.13	0.68	0.51	0.60	0.32
1959	1955	0.98	0.39	0.97	-0.17	0.97	0.11
1954	1950	1.43	0.38	0.24	0.10	0.84	0.24
1949	1945	1.34	-0.40	0.78	0.62	1.06	0.11
1944	1940	0.12	0.53	1.07	-0.81	0.60	-0.14
1939	1935	0.31	0.16	1.43	-0.43	0.87	-0.13
1934	1930	0.28	-0.20	0.22	0.73	0.25	0.27
1929	1925	0.59	0.40	0.74	0.11	0.67	0.26
1924	1920	0.17	0.22	-0.12	0.94	0.02	0.58
1919	1915	0.42	0.65	-0.08	0.27	0.17	0.46
1914	1910	-0.46	-0.17	0.15	0.11	-0.15	-0.03
1909	1905	-0.29	-0.11	0.75	-0.55	0.23	-0.33
1904	1900	-0.42	0.59	0.49	-0.31	0.04	0.14
1899	1895	-0.22	0.23	-0.43	0.10	-0.32	0.16
1894	1890	-0.27	-0.37	-0.48	-0.22	-0.37	-0.30
1889	1885	0.34	0.42	0.42	-0.03	0.38	0.20
1884	1880	0.20	-0.38	0.58	-0.44	0.39	-0.41
1879	1875	0.03	-0.16	-0.07	1.15	-0.02	0.50
1874	1870	0.41	-0.15	-0.24	-0.41	0.09	-0.28
1869	1865	0.21	-0.58	0.26	-0.04	0.23	-0.31
1864	1860	-1.15	-0.30	-0.22	-0.27	-0.68	-0.28
1859	1855	0.27	-0.22	0.62	-0.79	0.45	-0.51
1854	1850	-0.17	-0.62	-0.29	-0.81	-0.23	-0.72
1849	1845	-0.63	0.20	0.33	-1.12	-0.15	-0.46
1844	1840	-0.29	-0.23	0.45	-1.41	0.08	-0.82
1839	1835	-0.65	0.26	0.64	-0.35	-0.01	-0.05
1834	1830	0.29	-0.68	0.51	-1.34	0.40	-1.01
1829	1825	0.33	-0.03	0.96	-0.96	0.65	-0.49
1824	1820	-0.98	-0.22	-1.17	-1.24	-1.08	-0.73
1819	1815	-1.03	-0.26	-1.40	-0.83	-1.21	-0.54
1814	1810	-0.57	-0.54	-0.24	-1.44	-0.41	-0.99
1809	1805	-0.34	-0.70	0.45	-1.28	0.05	-0.99
1804	1800	-0.18	-0.92	0.08	-1.05	-0.05	-0.98
1799	1795	0.33	-1.01	0.95	-0.97	0.64	-0.99
1794	1790	-0.10	-0.21	0.99	-1.06	0.45	-0.63
1789	1785	0.07	-0.38	0.68	-1.22	0.37	-0.80
1784	1780	-0.05	-0.24	0.14	-1.24	0.04	-0.74

Figure 5C
5-year composites

Figure 5D

Figure 5e

top	bottom	Tibetan composite average $\delta^{18}\text{O}$	Tibetan composite average A_n	Andean composite average $\delta^{18}\text{O}$	Andean composite average A_n	Tropical composite average $\delta^{18}\text{O}$	Tropical composite average A_n
1779	1775	-0.29	-0.24	-0.40	-0.67	-0.35	-0.45
1774	1770	-0.72	0.12	-0.06	-1.17	-0.39	-0.52
1769	1765	0.36	-0.61	-0.04	-1.43	0.16	-1.02
1764	1760	-0.40	0.49	-0.07	-1.14	-0.23	-0.33
1759	1755	0.54	0.03	-0.45	-0.72	0.05	-0.35
1754	1750	-0.31	0.30	-0.11	-0.72	-0.21	-0.21
1749	1745	0.21	0.21	0.43	-0.63	0.32	-0.21
1744	1740	-0.30	0.35	-0.93	-0.57	-0.62	-0.11
1739	1735	-1.07	0.09	-0.98	-0.19	-1.03	-0.05
1734	1730	-0.35	0.13	-0.92	-0.29	-0.63	-0.08
1729	1725	-0.58	0.29	-0.55	-0.37	-0.57	-0.04
1724	1720	0.03	-0.20	-0.14	-0.78	-0.06	-0.49
1719	1715	-0.55	-0.31	-0.97	-0.10	-0.76	-0.20
1714	1710	-0.28	-0.11	-0.39	-0.39	-0.34	-0.25
1709	1705	0.45	-0.22	-0.80	0.06	-0.18	-0.08
1704	1700	0.06	0.49	-0.19	0.69	-0.07	0.59
1699	1695	-0.15	0.82	-0.48	-0.06	-0.32	0.38
1694	1690	-0.52	-0.34	-0.01	0.13	-0.26	-0.10
1689	1685	-0.39	0.53	-0.46	0.44	-0.42	0.49
1684	1680	-0.19	-0.29	-0.51	0.48	-0.35	0.09
1679	1675	0.06	0.29	-0.32	1.86	-0.13	1.08
1674	1670	-0.42	0.04	-0.42	1.17	-0.42	0.60
1669	1665	-0.57	0.37	-0.21	1.15	-0.39	0.76
1664	1660	-0.64	0.26	-0.71	2.40	-0.68	1.33
1659	1655	-0.16	0.45	-0.40	1.16	-0.28	0.80
1654	1650	-0.58	-0.74	-0.20	1.53	-0.39	0.40
1649	1645	0.16	0.48	-0.17	1.39	0.00	0.93
1644	1640	0.35	0.34	-0.71	2.26	-0.18	1.30
1639	1635	0.59	-0.42	0.09	1.89	0.34	0.74
1634	1630	-0.20	0.08	-0.74	2.42	-0.47	1.25
1629	1625	-0.14	0.17	-1.59	2.13	-0.87	1.15
1624	1620	-0.65	0.51	-0.82	1.81	-0.73	1.16
1619	1615	-0.51	0.76	-0.04	-0.60	-0.27	0.08
1614	1610	-0.02	0.15	0.66	0.61	0.32	0.38
1609	1605	-0.34	0.38	0.40	0.83	0.03	0.60
1604	1600	0.09	0.08	-1.07	1.16	-0.49	0.62