

Table S1. Information on the 152 maximum latewood density (MXD) chronologies selected for the study. Positive longitude values are east of the prime meridian and negative values are west of the prime meridian. The period is the common interval of the meteorological data and MXD chronologies for analysis.

Location	Filename	Site name	Latitu de (°)	Longitu de (°)	Altitu de (m)	Species	Period
America	ak006	Denali National-Park	63.4	-149.35	750	Picea glauca (Moench) Voss	1903-19 83
America	ak007	Glenn Highway	61.2	-149.35	100	Picea glauca (Moench) Voss	1903-19 83
America	ak009	Slana bei Tok	62.5	-143.55	600	Picea glauca (Moench) Voss	1910-19 83
America	ak011	Mt.Billy Mitchell	61.2	-145.15	300	Picea glauca (Moench) Voss	1910-19 83
America	ak072	Windy Wolf	61.46	-141.38	1036	Picea glauca (Moench) Voss	1913-19 97
America	ak075	Hawkins Hill	61.09	-142.05	1030	Picea glauca (Moench) Voss	1911-19 97
America	ak115	Seward Composite	65.1	-162.15		Picea glauca (Moench) Voss	1908-20 01
America	ak117	Northern Alaska Composit	67	-152		Picea glauca (Moench) Voss	1903-19 90
America	ak132	Firth River	68.39	-141.38	790	Picea glauca (Moench) Voss	1901-20 02
America	co553	Pike Peaks	39.33	-105.03	3600	Picea engelmannii Parry ex Engelm.	1901-19 83
America	co574	Niwot Ridge C	40.05	-105.55	3400	Picea engelmannii Parry ex Engelm.	1901-19 82
America	id007	Cascade Radar St. Payette	44.43	-116.08	2140	Picea engelmannii Parry ex Engelm.	1901-19 83
America	me010	Elephant Mountain	44.77	-70.77	930	Picea rubens Sarg.	1901-19 76
America	me015	Traveler Mountain	46.07	-68.85	952	Picea rubens Sarg.	1901-19 76
America	nm569	Ski Valley Wheeler Peak	36.58	-105.5	3120	Picea engelmannii Parry ex Engelm.	1901-19 83
America	or042	Crater Lake	42.97	-122.17	2200	Tsuga mertensiana (Bong.) Carriere	1901-19 83
America	ut511	Ceadar Breaks	37.58	-113.85	3120	Picea engelmannii Parry ex Engelm.	1901-19 83
America	wy024	Granite Pass Hunt Mountain	44.78	-107.87	2820	Picea engelmannii Parry ex Engelm.	1901-19 83
Austria	aust005	Katscherpass	47.03	13.63	1800	Picea abies (L.) H. Karst.	1901-19 75

Austria	aust006	Mariazell Gemeindealpe	47.78	15.3	1380	Picea abies (L.) H. Karst.	1901-19 75
Bosnia and Herzegovina	yugo004	Jahorina	43.75	18.63	1700	Picea abies (L.) H. Karst.	1901-19 81
Bosnia and Herzegovina	yugo005	Cakor Pass	42.63	19.93	1750	Picea omorika (Pancic) Purk.	1901-19 81
Britain	brit017	Ballochbuie	56.95	-3.32	381	Pinus sylvestris L.	1901-19 78
Britain	brit019	Franchise Wood	50.95	-1.68	100	Pinus sylvestris L.	1901-19 76
Britain	brit024	Glen Affric	57.28	-4.92	300	Pinus sylvestris L.	1901-19 78
Britain	brit026	Coulin	57.53	-5.35	250	Pinus sylvestris L.	1901-19 78
Bulgaria	bulg001	Vihren National Park	41.77	23.38	1920	Pinus leucodermis Ant.	1901-19 81
Bulgaria	bulg002	Sipenski prohod, Kazanla	42.73	25.33	1300	Picea abies (L.) H. Karst.	1922-19 81
Bulgaria	bulg003	Vihren Peak	41.42	23.3	2150	Pinus heldreichii Christ	1901-20 08
Canada	cana038	Bruno Lake	51.37	-95.5	1000	Picea glauca (Moench) Voss	1901-19 88
Canada	cana041	High Stone Lake	50.24	-91.27	1300	Picea glauca (Moench) Voss	1901-19 88
Canada	cana042	Armstrong	50.18	-89.03	1120	Picea glauca (Moench) Voss	1915-19 88
Canada	cana043	Armstrong (eben)	50.18	-89.03	1120	Picea glauca (Moench) Voss	1915-19 88
Canada	cana045	Willow Lake	62.1	-119.08	620	Picea mariana(Mill.) Britton,	1901-19 88
Canada	cana053	Pethai-Peninsula	62.41	-110.58	1400	Picea glauca (Moench) Voss	1913-19 88
Canada	cana058	Austin Lake	62.1	-110.05	850	Picea glauca (Moench) Voss	1913-19 88
Canada	cana060	Churchill	58.4	-93.5	50	Picea glauca (Moench) Voss	1932-19 88
Canada	cana065	Eastmain River	52.02	-77.51	450	Picea mariana(Mill.) Britt	1903-19 88
Canada	cana068	Fishing Creek	52.01	-82.84	200	Picea mariana(Mill.) Britt	1905-19 88
Canada	cana069	Churchill	58.4	-93.29	50	Larix laricina (Du Roi) K. Koch	1901-19 88

Canada	cana070	Charlie Lake	60.02	-100.26	1055	Picea mariana(Mill.) Britt	1901-19 88
Canada	cana075	Lac Chevrillon	50.01	-74.27	1200	Picea mariana(Mill.) Britt	1914-19 88
Canada	cana076	Eastmain River	52.02	-77.51	450	Picea mariana(Mill.) Britt	1904-19 88
Canada	cana077	Coats River	55.44	-76.09	1000	Picea mariana(Mill.) Britton,	1942-19 88
Canada	cana079	Webequie	53.04	-87.2	645	Picea glauca (Moench) Voss	1942-19 88
Canada	cana098	Vermilion Pass	51.1	-116.1	1500	Picea engelmannii Parry ex Engelm.	1901-19 83
Canada	cana113	Arrowsmith Mountain	49.09	-125.14	1020	Psuga mettensiana(Bong) Carriere	1901-19 84
Canada	cana171	Athabasca Glacier	52.25	-117.25	2000	Picea engelmannii Parry ex Engelm.	1901-19 94
Canada	cana321	Eagle Fecal/Ptarmigan Merge	69.3	-127.5		Picea glauca (Moench) Voss	1949-19 93
Canada	cana421	Sunshine Meadows	51.04	-115.47	2250	Larix lyallii Parl.	1901-19 87
China	byg	Baiyanggou	43.6	86.4	2617	Picea schrenkiana Fisch. & C.A.Mey.	1956-20 09
China	dl	Dalujiao	43.9	85.1	2600	Picea schrenkiana Fisch. & C.A.Mey.	1956-20 12
China	gns	Gongnais	43.2	84.6	2601	Picea schrenkiana Fisch. & C.A.Mey.	1956-20 08
China	kg	Kuangou	43.6	89.6	2530	Picea schrenkiana Fisch. & C.A.Mey.	1956-20 15
China	ql	Qiaolaketiereke	42.8	81.7	2760	Picea schrenkiana Fisch. & C.A.Mey.	1956-20 14
China	st	Shitougou	43.8	85.6	2606	Picea schrenkiana Fisch. & C.A.Mey.	1956-20 12
Cyprus	cypr001	Troodos	34.93	32.87		Pinus nigra J.F. Arnold	1901-19 80
Cyprus	cypr002	Troodos (Mittel)	34.93	32.87	1820	Pinus nigra J.F. Arnold	1901-19 81
Cyprus	cypr004	Plano Platres	34.9	32.9	1600	Pinus nigra J.F.	1901-19

		(Feucht)				Arnold	81
Cyprus	cypr006	Ceader Valley (Feucht)	34.98	32.68	1200	Cedrus libani A. Rich.	1901-19 81
Cyprus	cypr008	Ceader Valley (Mittel-T)	34.98	32.68	1380	Cedrus libani A. Rich.	1901-19 81
Cyprus	cypr009	Ceader Valley (Trocken)	34.98	32.68	1280	Cedrus libani A. Rich.	1901-19 81
Cyprus	cypr012	Ceadar Valley (mittel-f)	34.98	32.68	1370	Cedrus libani A. Rich.	1901-19 82
Czech Republic	czec001	Krkonoše Mountains Upper Labe Valley Northern Slope	50.75	15.55	1000	Picea abies (L.) H. Karst.	1901-19 91
Czech Republic	czec002	Krkonoše Mountains Upper Labe Valley Southern Slope	50.75	15.55	1150	Picea abies (L.) H. Karst.	1901-19 89
Finland	finl014	Haaparava National Park	62.58	31.17	145	Pinus sylvestris L.	1901-19 78
Finland	finl015	Koliberg	63.1	25.48	300	Picea abies (L.) H. Karst.	1901-19 78
France	fran015	Col D'Allos	44.27	6.57	1900	Abies alba Mill.	1901-19 75
France	fran022	Llipodere	42.45	2.38	1950	Pinus mughus Scop.	1901-19 77
France	fran026	Arette Col St. Marti	42.98	-0.75	1500	Abies alba Mill.	1901-19 77
France	fran027	Col de Sorba Mount Renoso	42.07	9.2	1400	Pinus nigra J.F. Arnold	1901-19 80
France	fran032	Aubure	48.57	8	1080	Picea abies (L.) H. Karst.	1904-19 94
France	fran034	Lac de Bourget	45.53	5.44	1340	Picea abies (L.) H. Karst.	1901-19 75
Germany	germ020	Andreasberg Harz Schluff	51.72	10.57	900	Picea abies (L.) H. Karst.	1901-19 78
Germany	germ045	Sulzbach-Tal	47.83	7.7	390	Abies alba Mill.	1901-19 95
Germany	germ054	Munstertal	47.85	7.78	490	Abies alba Mill.	1901-19 95
Greece	gree001	Katara Pass Metsovan	39.8	21.22	1750	Pinus leucodermis Ant.	1901-19 81
Greece	gree004	Menalon Oros	37.63	22.28	1620	Abies cephalonica Loudon	1901-19 81
Italy	ital006	Cortina d'Ampezzo	46.53	12.07	1820	Picea abies (L.) H. Karst.	1901-19 75
Italy	ital009	Abetone	44.12	10.7	1400	Abies alba Mill.	1901-19 80
Italy	ital012	Ceppo Bosque di Martense	42.68	13.43	1700	Abies alba Mill.	1901-19 80
Italy	ital013	Aetna Linguaglossa	37.78	15.05	1800	Pinus nigra J.F. Arnol	1901-19 80

Italy	ital014	Blumone Malga	45.88	10.42	1650	Picea abies (L.) H. Karst.	1901-1980
Japan	japa013	Moshiri	44.21	142.11	320	Picea glehnii(Fr.Schmidt) Mast.	1901-1999
Japan	japa008	Mount Asasahi	43.77	142.55	1350	Picea glehnii(Fr.Schmidt) Mast.	1901-1997
Japan	japa015	Onnebetsu	43.13	145.28	69	Picea glehnii(Fr.Schmidt) Mast.	1901-1998
Nepal	nepa001	Ghorepanipass Annapurne	28.42	83.75	3220	Abies spectabilis (D. Don) Spach	1901-1978
Nepal	nepa002	Kalingchok Gebirge	27.75	86.08	3720	Abies spectabilis (D. Don) Spach	1901-1978
Norse	norw006	Veolia	61.42	8.98	880	Pinus sylvestris L.	1901-1978
North Macedonia	yugo006	Pelister National Park	41.02	21.18	1900	Pinus peuce Griseb	1901-1981
Pakistan	Chandanwani	Chandanwani	34.25	75.92	3200	Abies pindrow (Royle ex D. Don) Royle	1901-1981
Pakistan	Gulmarg	Gulmarg	35.08	74.3	2740	Abies pindrow (Royle ex D. Don) Royle	1901-1980
Pakistan	Khillanmarg	Khillanmarg	35.08	74.33	3125	Abies pindrow (Royle ex D. Don) Royle	1901-1981
Pakistan	Sarbal	Sarbal	34.5	75.75	3110	Abies pindrow (Royle ex D. Don) Royle	1901-1981
Pakistan	Sonmarg	Sonmarg	34.58	75.55	3125	Abies pindrow (Royle ex D. Don) Royle	1901-1980
Pakistan	Thijwas A	Thijwas A	34.65	75.47	3200	Abies pindrow (Royle ex D. Don) Royle	1901-1981
Pakistan	Thijwas B	Thijwas B	34.58	75.53	3400	Abies pindrow (Royle ex D. Don) Royle	1901-1981
Poland	pola027x	DolinaSuchejwody	49.15	20.02	1480	Picea abies (L.) H. Karst.	1901-2004
Romania	roma003	Roncan Gium Vau	47.45	25.47	1480	Picea abies (L.) H. Karst.	1901-1981
Romania	roma004	Capra, Mt.Agarasului	45.55	24.67	1600	Picea abies (L.) H. Karst.	1901-1981
Russia	russ020	Baikalsee, Irkutsk	53.6	105	700	Pinus sylvestris L.	1901-1978
Russia	russ027	Indikyakha-River	68.25	80.18	60	Larix sibirica Ledeb.	1932-19

							90
Russia	russ028	Kulumbe River	67.58	88.55	160	Larix sibirica Ledeb.	1901-19 90
Russia	russ029	Ikon River	70.31	89.3	50	Larix gmelinii(Rupr.)Kuzen.	1931-19 90
Russia	russ047	Kedvaran	64.15	53.34	70	Picea obobata ledeb.	1901-19 90
Russia	russ050	Zhigansk	66.31	122.2	180	Pinus sylvestris L.	1901-19 91
Russia	russ055	Khotugn-Uladan-Tukulan	63.23	125.48	100	Pinus sylvestris L.	1901-19 91
Russia	russ061	Kedvaran	64.25	53.57	70	Larix sibirica Ledeb.	1901-19 91
Russia	russ062	Kedvaran	64.25	53.57	70	Pinus sylvestris L.	1901-19 90
Russia	russ063	Ayandina River	68.42	143.17	45	Larix gmelinii (Rupr.) Kuzen.	1901-19 91
Russia	russ077	Ary-Ongorbynf-River	71.7	118.58	140	Larix gmelinii (Rupr.) Kuzen.	1926-19 90
Russia	russ087	Alagea River	68.45	147.58	140	Larix gmelinii (Rupr.) Kuzen.	1928-19 91
Russia	russ088	Balshoia Anui	66.22	165.42	500	Larix gmelinii (Rupr.) Kuzen.	1928-19 91
Russia	russ094	Ayakli River	69.53	97.53	550	Larix gmelinii (Rupr.) Kuzen.	1933-19 90
Russia	russ099	Denezkin Kamen Mountain	60.57	59.55	720	Pinus sylvestris L.	1901-19 92
Russia	russ106	Batagay,Chandon-river	70.25	138.17	80	Larix gmelinii (Rupr.) Kuzen.	1929-19 91
Russia	russ108	Baraii River	63.65	133.78	200	Larix gmelinii (Rupr.) Kuzen.	1901-19 91
Russia	russ118	Iremel Mountain	54.88	58.88	990	Pinus sylvestris L.	1901-19 93
Russia	russ125	Alakurtti	66.98	30.25	200	Pinus sylvestris L.	1901-19 92
Russia	russ129	Ceminsky pass (Altai)	51	85.63	1450	Larix sibirica Ledeb.	1901-19 94
Russia	russ132	Andryuschkine	69.28	154.77	50	Larix gmelinii (Rupr.) Kuzen.	1927-19 91
Russia	russ135	Aktasch Valley	50.42	87.58	2000	Larix gmelinii (Rupr.) Kuzen.	1901-19 94
Russia	russ145	Adycha river	65.8	137.25	800	Larix gmelinii (Rupr.) Kuzen.	1901-19 91
Russia	russ146	Adycha river	65.8	137.25	800	Larix gmelinii	1927-19

						(Rupr.) Kuzen.	91
Russia	russ147	Balygichan Ebene	62.13	155.03	700	Larix gmelinii (Rupr.) Kuzen.	1901-19 94
Russia	russ150	Sarekungey	41.4	76.26	2800	Picea schrenkiana Fisch. & C.A. Mey.	1901-19 95
Russia	russ151	Sarekungey,j	41.4	76.26	2800	Picea schrenkiana Fisch. & C.A. Mey.	1901-19 95
Russia	russ152	Sarejmek	41.6	75.15	2800	Picea schrenkiana Fisch. & C.A. Mey.	1901-19 95
Russia	russ155	Under vangapur river	62.56	76.23	180	Pinus sylvestris L.	1901-19 94
Russia	russ173	Tschita	56.5	118.5	700	Pinus sylvestris L.	1940-19 96
Russia	russ174	White-River	61.51	93.24	120	Picea obovata Ledeb.	1926-19 94
Russia	russ175	Nirukda	61.56	95.09	160	Picea obovata Ledeb.	1932-19 94
Russia	russ224	Polar Urals	66.49	65.35	190	Larix sibirica Ledeb.	1901-20 01
Russia	russ225	Polar Urals	66.49	65.35	190		1901-20
Slovakia	svk001	Dolina Mengusowska	49.09	20.04	1450	Pinus sylvestris L. Larix decidua Mill.	06 1901-20 04
Slovenia (Poland)	pola020	Gasienicowy	49.25	19.92	1500	Picea abies (L.) H. Karst.	1901-19 64
Spain	spai005	Alcala de Selva	40.38	-0.67	1960	Pinus mughus Scop.	1901-19 78
Spain	spai058	Calvero, S.d.Gredos	40.27	-5.6	1400		1923-19
Spain	spai069	Port de Cabus	42.32	-1.25	2450	Pinus sylvestris L. Pinus uncinata Mill.ex Mirb.	77 1901-20 05
Sweden	swed011	Gallejour Glommerstark	65.17	19.47	480	Picea abies (L.) H. Karst.	1901-19 78
Sweden	swed013	Duvberg	62.07	14.33	550	Picea abies (L.) H. Karst.	1901-19 78
Sweden	swed017	Arjeplog	66.07	17.98	600	Picea abies (L.) H. Karst.	1901-19 78
Sweden	swed330	Kiruna	67.54	20.06	430		1901-20
Switzerlan d	swit107	Arosa GR Rot Tritt North	46.8	9.68	1940	Pinus sylvestris L. Picea abies (L.) H. Karst.	06 1901-19 75
Switzerlan d	swit108	Arosa GR Arlenwald South	46.8	9.68	2000	Picea abies (L.) H. Karst.	1901-19 75
Switzerlan d	swit119	Bannwald North	46.33	7.63	1240		1901-19
Switzerlan d	swit165	Balmberg SO Feucht	47.25	7.53	1180	Abies alba Mill. Picea abies (L.) H. Karst.	80 1901-19 82
Switzerlan	swit170	Crete de la Neige	46.16	5.56	1700	Pinus mughus	1901-19

d						Scop.	87
Switzerlan	swit172	Beatenberg, BE	46.7	7.77	1560		1901-19
d						Pinus sylvestris L.	88