SLOVAK ACADEMY OF SCIENCES
Geophysical Institute

Yearbook
of radiation and meteorological measurements
2012

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2013

Editor: RNDr. D. Bilčík

OBSERVATORIES:

SKALNATÉ PLESO:	$\phi = 49^o\ 11'$ N,	$\lambda = 20^o\ 14'$ E,	H = 1778 m a.s.l.
STARÁ LESNÁ:	$\phi = 49^o\ 09'$ N,	$\lambda = 20^o\ 17'$ E,	H = 810 m a.s.l.

GEOPHYSICAL INSTITUTE
OF THE SLOVAK ACADEMY OF SCIENCES

Department of Atmospheric Physics

CONTENTS

INTRODUCTION

The meteorological observatories (MO) of the Geophysical Institute of the Slovak Academy of Sciences are characterized as follows:

- MO Skalnaté Pleso represents a slope station in the south side of the High Tatras
- MO Stará Lesná represents a valley position of the Poprad-hollow.

The panorama of the horizon of these observatories is shown in Fig. 1 and Fig. 2.

The year-book contains tables of daily and monthly sums of radiation elements

- *global radiation*
- *diffuse radiation*
- *global UV-B radiation*
- *back atmospheric radiation*
- *long-wave radiation balance*
- *radiation balance*
- *sunshine duration*

and tables of daily and monthly averages of

- *air temperature*
- *relative air humidity*
- *atmospheric pressure*
- *soil temperature at 2 cm depth*
- *soil temperature at 20 cm depth.*

Notice: There are three values in the tables:

- without brackets if all 24 hour values were valid;
- with brackets if the number of the valid hour values was greater or equal 16;
- without value if the number of valid hour values was less than 16.

Measurements and recording of radiation fluxes, air temperature, relative air humidity, atmospheric pressure, and soil temperatures were realized by the central measurement data system ESM 200. The 10 minute scanning interval of the local time is used for each sensor. These data are stored in the central measurement station. The hourly averages, each calculated from 6 instant values, are loaded on magnetic medium.

The global and diffuse radiation is measured by pyranometer with galvanic thermels.

The global UV-B radiation is measured by the UV- biometer Solar Light, model 501A at the station Skalnaté Pleso. The relative spectral sensitivity of the instrument is close to the Erythema Action Spectrum (CIE, 1987). At the station Stará Lesná, the global UV-B radiation is measured by the UV-biometer, manufactured by the Yankee Environmental Systems, INC. The spectral response is similar to the Erythemal action spectrum (CIE, 1987). Stability of both UV- biometers is checked every year by their comparison with the Slovak national standard instrument for the broadband UV-biometers (UV- biometer Solar Light, model 501) under clear sky-condition by solar zenith angles lower than 50º.

For the measurement of long-wave radiation fluxes and radiation balance the Schulze balance meters are used. Subsequently, the radiation balance, downward atmospheric radiation and long-wave radiation balance are calculated.

The calibrations of pyranometers and radiation balance meters in short-wave spectral range are performed by the Sun-shade method with help of the Linke-Feussner actinometer as a standard instrument. This actinometer is calibrated against the Slovak national standard instrument - the Angström pyrheliometer held by the Slovak Hydrometeorological Institute.

The sunshine duration is measured by the Campbell-Stokes heliograph with green tape. The method utilized in the Slovak Hydrometeorological Institute is used by evaluation of the tapes.

The air temperature and relative air humidity are measured with sheltered electronic thermometer and hygrometer, respectively at 2 m level above the surface. For air temperature the Kroneis NTC sensor, YSI 44212 type is used. The relative air humidity is measured by the Vaisala sensor, MHP35D type.

The air pressure measurements are carried out with an electronic barometer in the building of the MO.

For the soil temperature measurements the thermal probes with platinum resistance thermometers Pt 100 are used.

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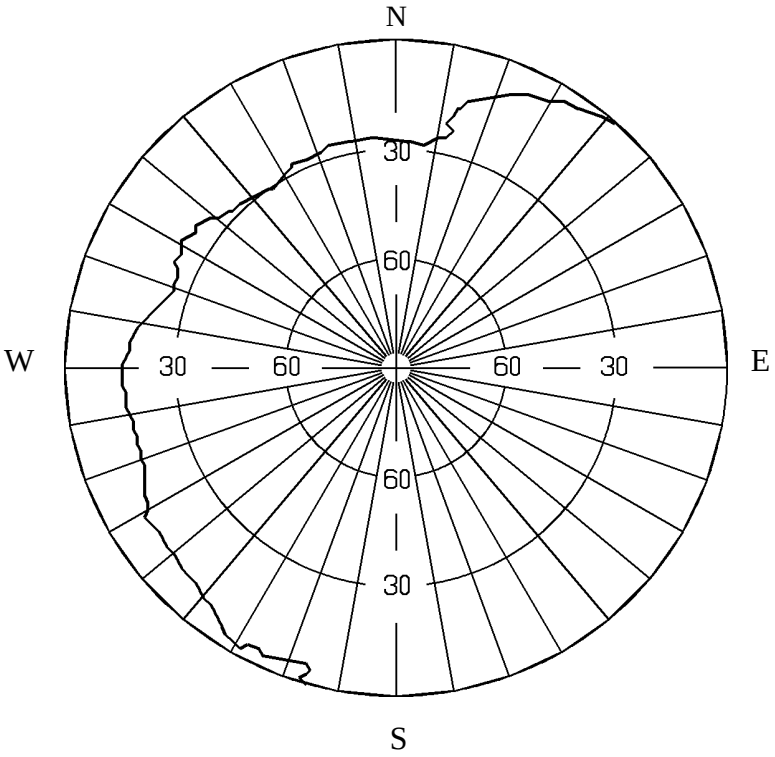

Fig. 1. Panorama of the horizon of Skalnaté Pleso

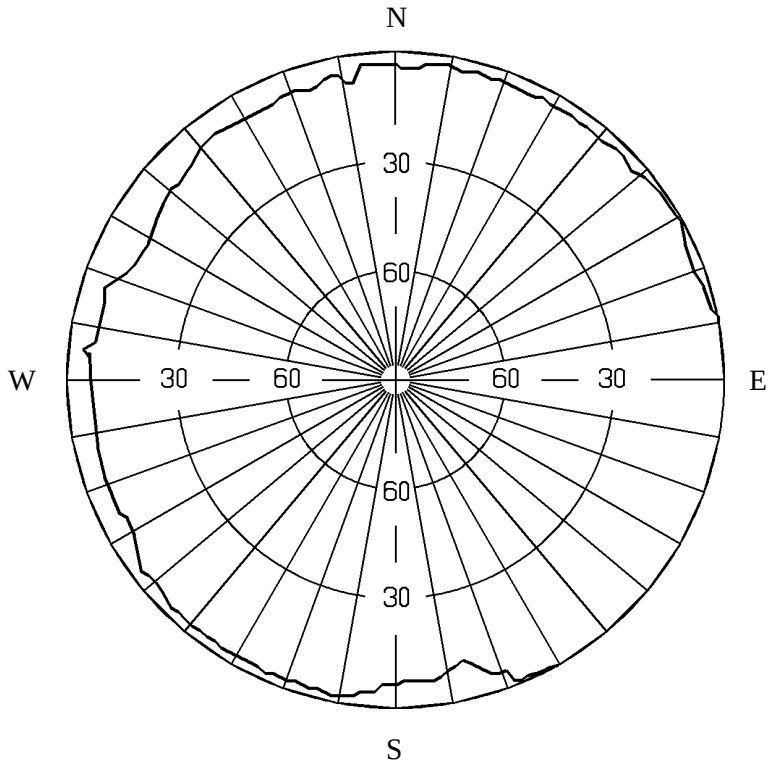

Fig. 2. Panorama of the horizon of Stará Lesná

Skalnaté Pleso

Daily and monthly sums of global radiation [J/cm^2]

Year 2012

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	361	1073	1460	1667	2053	948	1716	1724	881	637	70	142
2	380	892	1507	1833	1962	1813	1704	2097	1870	445	362	201
3	296	790	1560	1338	1524	2255	2030	1689	1677	419	821	371
4	352	377	1531	1989	1122	546	1192		1481	1237	669	346
5	239	982	1590	984	1001	464	2440	861	1471	1255	93	347
6	149	570	1616	1078	1810	763	1788	2326	844	1447	433	654
7	721	547	1599	1497	504	1112		1590	1661	234	386	362
8	235	665	1417	1892	1542	893		(897)	511	622	605	324
9	413	(312)	624	2678	2528	942		1045	1506	1438	314	503
10	279	1269	1708	2460	2239	986		1278	1887	898	697	400
11	341	1031	1078	1779	2694	574	1324	312	2030	647	708	436
12	637	1021	1818	585	1646	1088	948	1188	1519	1007	270	269
13	408	1070	1763	1513	2650	987	1030	1412	240	517	215	650
14	272	578	1565	610	1184	622	2110	567	569	659	789	291
15	326	472	1470	1018	858	1541	599	832	819	584	748	128
16	838	795	1802	679	831	2008	1198	1306	481	61	734	548
17	533	409	1819	990	2544	2082	585	728	1689	1117	661	455
18	469	849	1771	1194	2763	2734		1276	1622	1200	640	277
19	478	774	1012	722	2369	1444	(2036)	2463	935	1184	372	220
20	429	607	1843	2001	2892	2050		2413	446	1177	704	350
21	676	1219	1811	620	1973	1564	(1173)	1526	1767	1155	618	524
22	464	1190	1060	1869	1726	962	1915	1619	640	1131	248	528
23	723	518	1600	1336	1246	993	2975	1214	1169	1088	219	321
24	374	1137	1420	1159	1472	1764	2494	1557	1371	542	495	180
25	628	1492	1553	1721	3194	454	528		565	724	529	301
26	512	436	1995	2686	2678	1797	689	1223	897	325	501	186
27	897	1320	1601	2722	2251	2009	1229	496	776	109	446	465
28	780	843	1405	2804	977	1111		2354	1164	269	258	281
29	1084	1627	1508	2837	1299	1355		1353	1422	282		550
30	1150		434	2808	888	1501	963	1493	538	909	304	549
31	1104		1108		1213		1206	1728		862		547
Sum	16549	(24863)	46049	49068	55632	39361	(33870)	(40568)	34450	24184	(13910)	11705

Skalnaté Pleso

Daily and monthly sums of diffuse radiation [J/cm^2]

Year 2012

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	287	199	981	1042	612	711	739	556	166	463	68	129
2	265	156	237	1358	626	1039	888	568	392	345	296	182
3	152	262	197	852	670	839	764	555	347	396	313	339
4	263	342	238	665	650	445	611		281	523	325	286
5	222	392	220	797	669	397	812	597	294	462	91	300
6	89	475	506	889	964	610	588	679	142	132	316	106
7	232	426	490	1087	407	819		890	315	229	350	206
8	194	452	743	1084	1102	670		(595)	86	414	341	275
9	337	(232)	550	306	919	680		610	290	181	277	200
10	243	466	340	355	899	744		663	362	536	352	280
11	239	177	871	872	762	487	683	270	386	469	420	266
12	241	178	652	495	606	821	669	761	292	370	249	259
13	222	168	508	659	762	649	656	775	50	381	207	197
14	210	518	1009	518	870	521	628	437	83	510	107	259
15	271	422	339	821	719	960	486	581	140	416	96	123
16	307	593	185	553	659	630	796	918	96	57	103	227
17	405	342	260	812	1229	416	523	562	317	327	138	309
18	391	709	315	876	564	490		758	307	123	146	259
19	385	644	601	576	569	717	(624)	211	177	104	345	218
20	313	535	201	833	466	819		274	352	93	244	250
21	335	226	464	507	819	794	(595)	815	700	97	172	94
22	396	253	651	844	911	743	1192	651	115	102	230	218
23	309	445	616	788	703	735	509	745	206	154	210	265
24	329	957	514	851	884	779	783	549	274	410	267	177
25	504	629	321	971	579	391	437		94	485	223	286
26	395	377	423	391	524	987	554	646	178	314	282	180
27	153	835	724	392	960	905	819	374	155	107	318	298
28	214	652	842	284	637	755		151	217	255	234	276
29	165	613	933	307	844	890		769	288	256		128
30	164		362	271	629	867	689	548	88	518	280	85
31	154		910		790		437	590		237		178
Sum	8388	(12675)	16203	21057	23005	21309	(15482)	(17098)	7190	9467	(6998)	6853

Skalnaté Pleso

Daily and monthly sums of global UVB radiation [mJ/cm^2]

Year 2012

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	25	49	117	148	281	159	290	258	129	89	6	11
2	25	45	119	212	268	272	280	317	232	61	20	18
3	19	43	116	145	161	324	309	226	222	62	49	19
4	25	31	115	212	152	86	155		194	126	48	21
5	14	48	111	113	149	76	391	132	204	130	9	20
6	8	33	108	146	221	119	262	330	113	148	31	21
7	25	30	100	170	62	171		216	248	31	27	13
8	14	36	106	221	199	157		(144)	88	69	46	18
9	20	(12)	69	219	349	144		158	218	141	23	21
10	22	47	158	261	307	163		191	249	81	49	19
11	27	56	99	207	404	104	235	54	252	45	39	20
12	33	54	162	71	262	167	173	190	197	93	30	15
13	18	66	180	188	393	127	166	181	30	49	15	19
14	15	44	157	79	186	98	375	82	90	71	42	13
15	16	31	154	150	152	205	599	113	98	72	42	9
16	26	55	181	104	136	318	166	183	60	8	42	25
17	27	60	193	146	380	349	116	138	199	96	37	23
18	28	58	184	148	359	440		192	198	117	40	19
19	34	62	105	92	324	237	(324)	377	122	118	29	14
20	29	59	167	225	397	317		379	63	113	32	18
21	32	108	180	98	284	285	(212)	245	194	108	30	24
22	27	112	144	227	257	178	278	236	81	103	17	21
23	39	60	167	201	150	138	418	206	153	101	19	21
24	26	110	155	163	229	239	370	254	195	61	27	14
25	27	108	169	217	417	79	96		87	80	29	25
26	26	39	191	367	364	228	120	166	110	31	30	18
27	41	77	184	392	260	305	195	82	88	16	28	24
28	39	63	142	389	130	179		342	106	28	16	18
29	47	117	132	389	165	208		233	148	30		28
30	48		64	387	130	240	157	209	70	57	21	28
31	49		127		177		167	243		57		23
Sum	849	(1713)	4355	6090	7704	6113	(5853)	(6078)	4440	2392	(872)	599

Skalnaté Pleso

Daily and monthly sums of downward atmospheric radiation [J/cm^2]

Year 2012

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	(2041)	(1421)	(1351)	(1315)	(1722)	(2144)	(2090)	(1980)	3224	3332	3690	3095
2	2332	(1373)	(1168)	(1394)	(1809)	(1498)	(2009)	(1798)	(2457)	3451	3392	3096
3	(2280)	(1412)	(1522)	(1606)	(1871)		(1968)	(2046)	(2587)	3270	(2957)	2977
4	(2231)	(1636)	(1497)	(1735)	(2003)	2557	(2357)		(2485)	(2726)	3106	2921
5	2181	(1436)	(1457)	(1861)	(1881)	2417	(1860)	(2998)	(2699)	(2578)	3551	2924
6	2235	(1699)	(1307)	(1827)	(1639)	2082	(2114)		(2738)	(2689)	2978	2554
7	(1724)	(1893)	(1369)	(1616)	(2355)	(1878)			(2316)	3580	2965	2560
8	2149	(1720)	(1408)	(1318)	(1588)	2233		(1604)	(3225)	2840	2837	2593
9	(1908)	(1464)	(1735)			2192		(2190)	(2587)	(2341)	3080	(2509)
10	2045	(1382)	(1462)		(1633)	(2041)		(2033)	(2387)	(2589)	2841	2778
11	2048	(1467)	(1764)	(1684)		2385	(2042)	2661	(2373)	(2810)	(3141)	2672
12	(1804)	(1502)	(1505)	1974	(1917)	(1926)	(2078)	(2091)	(2587)	(2591)	3495	2861
13	(1895)	(1524)	(1574)	(1662)		(2010)	(1947)	(1703)	3469	(3102)	3340	2394
14	(1740)	(1604)	(1536)	1965	(1615)	2248	(1788)	2361	3145	(2962)	(2683)	
15	1680	(1689)	(1664)	(1817)	1850	(1550)	2293	(2386)	2789	3061	2841	3507
16	(1508)	(1786)	(1654)	1951	(2046)	(1814)	(1802)	(1899)	3054	3618	2887	3016
17	(1668)	(1827)	(1803)	(1569)	(1401)	(2012)	2202	(2410)	(2250)	(2567)	2990	2982
18	(1822)	(1588)	(1735)	(1620)				(1889)	(2490)	(2585)	3073	3172
19	(1986)	(1633)	(1788)	(1948)	(1524)	(2038)			(3062)	(2740)	3301	3291
20	(1907)	(1665)	(1533)	(1500)		(1711)		(1904)	3130	(2893)	2946	3082
21	(1729)	(1546)	(1646)	(2067)		(2206)		(2082)	(2286)	(2839)	3012	2756
22	(1906)	(1612)	(1934)		(1779)	(2229)	(1545)	(1999)	3078	(2721)	3486	2659
23	(1789)	(1865)	(1677)	(1792)	(2011)	(2002)		(2236)	(2469)	(2715)	3338	3036
24	(1897)	(1282)	(1641)	(1689)	(1869)	(1711)			(2722)	3321	3071	3469
25	(1620)	(1406)	(1738)			2595	2547		3374	3039	3235	3538
26	(1657)	(1798)	(1523)			(1495)	2432	(2208)	3104	3154	3279	3448
27	(1521)	(1400)	(1660)			(1445)	(2095)	2368	3328	3681	3327	3015
28	(1658)	(1467)	(1682)		(1956)	(2015)			(2791)	3333	3533	3181
29	(1586)	(1570)	(1583)		(1816)	(1878)		(1945)	(2699)	3109	(3461)	2733
30	(1545)		(1937)		(2101)	(1997)	(2109)	(1925)	3179	(2529)	3194	2967
31	(1486)		(1520)		(1791)		(2207)	(2200)		(2700)		2896
Sum	(57575)	(45669)	(49371)	(35910)	(40176)	(56310)	(39486)	(50914)	(84087)	(91464)	(95031)	(88680)

Skalnaté Pleso

Daily and monthly sums of long-wave radiation balance [J/cm^2]

Year 2012

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	-478	-1348	-2376	-2186	-2255	-1082	-1890	-1948	-95	132	928	642
2	-492	-1164	-2680	-2375	-2160	-2034	-1869	-2374	-1327	345	595	638
3	-393	-1034	-2103	-1690	-1694	-2513	-2239	-1879	-1141	286	93	553
4	-474	-516	-2020	-2442	-1261	-636	-1328		-854	-451	165	482
5	-333	-1268	-2063	-1233	-1144	-547	-2675	-1020	-834	-458	702	534
6	-227	-749	-2074	-1336	-2034	-871	-1978	-2567	-246	-711	400	175
7	-907	-722	-2026	-1851	-590	-1275		-(1745)	-1103	667	402	387
8	-344	-856	-1778	-2369	-1733	-1030		-(939)	174	213	91	407
9	-562	-(421)	-815	-3288	-2814	-1018		-1047	-877	-700	414	234
10	-398	-1602	-2147	-2999	-2483	-1125		-1256	-1250	-82	59	416
11	-477	-1351	-1452	-2175	-2970	-674	-1584	-246	-1363	198	-1	353
12	-1120	-1314	-2343	-763	-1830	-1263	-1184	-1168	-917	-222	548	605
13	-561	-1379	-2219	-1877	-2910	-1157	-1254	-1455	408	261	641	165
14	-565	-749	-1961	-795	-1360	-729	-2376	-571	39	15	39	
15	-551	-632	-1859	-1281	-990	-1747	-762	-768	-203	92	61	826
16	-1082	-793	-2219	-869	-963	-2245	-1405	-1278	187	632	83	406
17	-718	-555	-2202	-1263	-2997	-2291	-713	-756	-1110	-435	106	425
18	-632	-1095	-2146	-1501	-3142	-2997		-1371	-936	-525	231	588
19	-682	-1043	-1252	-916	-2640	-1592	-(2266)	-2640	-74	-490	505	776
20	-581	-787	-2249	-2441	-3186	-2273		-2520	432	-404	127	579
21	-922	-1510	-2189	-818	-2213	-1760	-(1373)	-1639	-982	-372	230	288
22	-651	-1749	-1272	-2302	-1924	-1087	-2195	-1753	141	-353	700	238
23	-1008	-839	-1897	-1659	-1409	-1148	-3315	-1285	-471	-367	606	488
24	-531	-1936	-1697	-1458	-1654	-1959	-2742	-(1719)	-652	326	397	724
25	-859	-1978	-1896	-2063	-3577	-509	-720		332	136	406	531
26	-681	-591	-2412	-3220	-2998	-1965	-839	-1323	-24	480	428	704
27	-1223	-1580	-1940	-3193	-2507	-2229	-1412	-557	82	845	483	387
28	-1052	-1069	-1679	-3234	-1119	-1264		-2583	-328	719	667	625
29	-1385	-2045	-1830	-3214	-1464	-1520		-1466	-613	623	(1384)	168
30	-1434		-637	-3092	-1014	-1678	-1155	-1611	145	-92	608	238
31	-1400		-1454		-1373		-1402	-1371		-22		280
Sum	-22723	-(32676)	-58886	-59903	-62407	-44222	-(38677)	-(42857)	-13459	286	(12099)	(13864)

Skalnaté Pleso

Daily and monthly sums of radiation balance [J/cm^2]

Year 2012

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	537	609	1450	2354	1124	8	-1	1046	2784	5201	7441	1735
2	476	550	354	2973	1155	72	-6	1027	1758	4611	6772	7251
3	259	694	926	1903	1227	92	48	1065	1550	3146	10523	9297
4	506	679	878	1683	1173	-33	8		1929	6617	6455	7817
5	409	983	887	1666	1229	-3	59	1042	1795	7043	3751	8472
6	159	957	1411	1820	1809	4	66	1340	1081	5374	8899	5661
7	591	863	1328	2328	708	2		(1623)	1404	8341	5610	3438
8	368	932	1681	2512	2019	-31		(1139)	2400	10658	1565	1364
9	679	(449)	1097	1286	1769	-120		1245	1813	8613	1338	1336
10	474	1171	1080	1248	1692	-29		1469	2667	11222	3795	7145
11	483	653	1880	1989	1460	-24	-9	685	2628	11533	1495	5557
12	287	606	1772	1026	1131	17	-69	1609	1359	9367	5067	7380
13	491	618	1401	1580	1429	0	-37	1589	797	5665	5945	3435
14	243	1035	2244	1076	1630	-12	54	896	843	1679	7799	
15	427	875	1069	1734	1306	25	-42	1234	714	1493	7221	9206
16	749	1307	755	1138	1194	32	-28	1876	592	799	9369	8707
17	850	784	842	1737	2672	24	-2	1078	1398	3341	5749	7853
18	785	1506	947	1864	1281	72		1407	2632	3334	9082	5121
19	805	1281	1283	1164	1119	-7	(58)	512	5485	4173	7575	5328
20	664	975	797	1957	926	49		595	4657	4274	8131	7497
21	824	521	1219	1074	1565	69	(13)	1516	6473	2135	5958	8178
22	817	806	1315	1989	1679	-20	65	1187	2422	2230	3004	3582
23	854	795	1351	1730	1285	-3	115	1301	1955	1878	1974	4540
24	660	1477	1150	1819	1630	14	29	(1050)	4257	3772	5596	8306
25	1106	1086	921	2033	1253	-91	-97		5883	6627	7899	5331
26	790	649	1199	1266	1105	-38	-73	1113	6493	6334	6389	6834
27	471	1629	1629	1154	1813	49	-25	642	5205	5052	3833	4846
28	640	1177	1735	879	1160	25		358	6353	6095	6940	5519
29	584	1231	1981	809	1532	3		1338	7609	7217	(7714)	2065
30	543		846	580	1114	24	-53	939	1324	9063	9400	2611
31	553		2012		1444		21	2267		7815		3823
Sum	18084	(26896)	39440	48372	43635	171	(92)	(34185)	88259	174701	(182293)	(169235)

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	0.6	7.2	3.7	1.7	9.9	0.0	7.0	7.6	0.6	1.3	0.0	0.0
2	0.7	7.5	8.9	1.4	8.4	5.8	4.7	9.6	10.5	0.8	0.6	0.0
3	1.7	5.7	9.5	4.0	5.5	7.3	8.4	6.7	8.0	0.0	4.6	0.1
4	0.2	0.0	9.6	7.2	3.1	1.0	4.5	4.4	5.5	6.6	3.9	0.8
5	0.0	5.5	9.4	0.8	2.8	0.0	8.2	0.8	5.9	7.3	0.0	0.0
6	0.0	0.1	8.8	0.1	8.0	0.2	7.4	10.0	2.1	8.9	1.3	5.8
7	3.3	0.1	9.5	2.4	0.3	2.0	5.8	7.3	8.1	0.0	0.1	0.0
8	0.0	1.2	6.3	5.9	1.9	2.6	8.0	3.9	0.8	1.7	1.5	0.0
9	0.0	1.8	0.0	10.5	10.9	2.2	6.9	3.4	6.6	9.7	0.0	2.9
10	0.0	6.0	9.0	11.4	8.8	1.0	1.4	4.6	11.2	4.6	3.0	1.0
11	1.1	7.9	0.0	4.2	11.1	0.0	3.1	0.0	11.3	1.7	2.2	0.8
12	2.2	8.1	9.2	0.0	7.1	0.6	0.8	1.1	6.6	5.7	0.2	0.0
13	0.0	7.8	9.9	5.6	7.6	3.5	2.7	5.0	0.2	0.0	0.0	3.7
14	0.0	0.0	3.9	0.0	1.3	0.0	6.6	1.1	0.0	1.4	7.6	0.7
15	0.0	0.0	7.2	0.0	0.0	4.9	0.2	1.4	1.5	0.0	7.6	0.0
16	4.5	0.3	10.1	0.0	0.3	8.3	3.0	4.2	1.5	0.0	7.5	3.9
17	0.1	0.0	8.4	0.0	4.0	8.9	0.3	0.7	8.2	6.1	7.3	1.2
18	0.0	0.1	10.3	0.2	11.3	12.7	2.4	5.0	7.7	8.6	6.1	0.0
19	0.3	0.0	3.5	0.2	9.9	5.7	6.8	12.1	2.3	8.9	0.1	0.0
20	0.4	0.0	10.4	7.9	12.1	9.1	2.5	12.1	0.0	8.9	5.9	1.0
21	3.7	7.7	9.7	0.0	8.2	2.9	0.0	3.3	9.7	8.9	5.9	6.5
22	0.0	7.7	1.8	6.3	5.1	0.3	3.8	7.1	1.7	8.9	0.3	5.2
23	4.2	0.0	8.2	2.0	4.9	1.4	13.0	2.1	3.3	8.3	0.0	0.0
24	0.0	0.0	7.5	1.3	3.7	7.5	10.3	6.2	7.3	1.7	0.8	0.0
25	1.0	3.4	9.0	4.1	11.8	0.0	0.0	6.6	0.4	3.5	0.0	0.0
26	0.0	0.0	10.2	12.3	10.6	6.5	0.1	4.9	2.8	0.0	1.8	0.0
27	7.3	0.5	7.2	12.0	7.9	7.2	3.1	1.3	2.1	0.0	0.9	2.9
28	6.7	0.0	5.9	12.6	2.1	1.8	7.1	12.0	7.0	0.0	0.0	0.0
29	7.4	0.4	2.9	12.7	3.4	3.7	6.1	1.8	8.1	0.1	0.0	6.6
30	7.0		0.0	12.9	1.6	4.2	1.4	7.7	0.0	3.4	0.0	6.5
31	7.4		0.0		3.6		4.2	7.8		6.6		6.4
Sum	59.8	79.0	210.0	139.7	187.2	111.3	139.8	161.8	141.0	123.6	69.2	56.0

Skalnaté Pleso Daily and monthly averages of air temperature [°C] Year 2012

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	-4.2	-14.2	1.3	-9.5	13.9	5.9	19.5	11.8	14.3	12.7	2.0	-7.0
2	4.0	-18.1	2.0	-3.5	14.1	3.8	18.4	14.4	16.3	10.5	2.1	-6.3
3	-0.6	-16.6	-4.9	2.0	11.5	10.7	18.7	14.7	15.9	7.1	5.2	-6.9
4	-0.3	-15.5	-5.0	5.4	8.3	10.7	16.7	13.8	13.9	8.5	5.8	-5.7
5	-4.8	-16.3	-6.3	4.2	7.2	5.3	18.6	15.0	14.1	6.5	3.0	-8.1
6	-6.8	-7.8	-11.8	4.1	7.9	4.9	17.6	18.2	7.3	11.6	-2.9	-8.5
7	-7.7	-4.3	-10.9	0.1	5.3	8.1	17.4	12.5	7.5	5.3	-2.8	-14.4
8	-6.0	-6.7	-6.9	-7.5	4.5	12.2	17.5	9.7	7.9	-1.9	3.0	-12.2
9	-7.5	-13.8	-6.4	-8.0	7.7	11.3	14.7	7.8	10.3	2.0	-1.2	-10.4
10	-6.8	-15.0	-3.4	-0.4	10.7	10.2	10.9	6.0	13.8	-1.1	4.4	-8.5
11	-4.8	-12.5	-4.8	3.6	13.5	8.2	12.2	3.9	14.3	-2.1	9.4	-9.6
12	-1.1	-10.1	-3.3	0.4	11.1	7.7	9.4	4.4	12.9	0.1	5.7	-11.6
13	-8.7	-9.6	0.4	1.2	0.3	7.3	7.4	5.2	8.9	3.5	-0.7	-11.5
14	-11.7	-12.4	-2.6	1.0	-1.1	5.9	11.3	4.6	9.9	5.4	1.1	-4.7
15	-13.3	-10.8	-1.7	2.3	2.5	7.2	7.7	6.6	6.4	6.6	4.4	-0.3
16	-14.0	-11.5	3.4	1.1	2.2	13.9	6.0	8.5	4.3	6.8	4.8	-2.0
17	-11.9	-9.4	8.2	-3.4	0.1	16.8	4.9	8.6	7.3	5.2	5.7	-2.9
18	-8.2	-8.0	6.1	-0.4	1.4	16.6	12.6	9.6	10.3	9.5	4.2	-3.4
19	-2.1	-5.0	1.2	1.4	7.0	16.2	12.6	13.3	9.3	14.4	3.3	-4.5
20	-6.2	-8.7	-0.7	3.3	10.9	16.6	9.1	18.9	0.8	15.4	4.2	-4.4
21	-8.5	-4.7	3.2	2.1	11.0	16.0	9.0	16.2	3.0	13.0	3.6	-4.3
22	-5.9	-1.5	4.0	2.6	11.4	12.9	5.9	17.0	7.5	10.4	2.3	-5.8
23	-6.6	-0.3	4.6	1.0	10.6	10.0	9.0	14.8	3.5	10.1	0.7	-3.7
24	-8.0	-0.1	4.0	1.6	8.0	11.5	15.1	15.8	10.7	7.2	1.7	1.9
25	-10.9	-4.1	2.7	2.8	4.3	9.1	12.9	16.1	9.4	4.5	5.1	8.7
26	-10.3	-9.5	0.1	6.2	4.7	6.2	12.0	13.0	11.3	-1.3	4.2	1.0
27	-7.1	-13.2	0.2	9.7	5.1	7.5	13.4	5.6	12.9	3.4	4.5	-1.7
28	-7.3	-7.4	2.3	12.8	4.3	9.7	15.5	8.9	7.3	-3.5	3.9	-3.3
29	-8.5	-2.3	-1.8	13.0	7.4	12.7	15.6	10.5	10.1	-5.7	2.2	-1.3
30	-9.6		-5.6	14.6	7.9	16.6	11.2	12.1	7.9	-5.4	-3.3	1.6
31	-11.6		-4.3		7.0		10.7	13.0		0.1		-1.6
Average	-7.0	-9.3	-1.2	2.1	7.1	10.4	12.7	11.3	9.6	5.1	2.8	-4.9

Skalnaté Pleso Daily and monthly averages of relative air humidity [%] Year 2012

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	67	23	77	87	43	84	59	75	55	74	73	94
2	61	29	42	82	41	82	78	77	58	84	92	94
3	65	20	17	65	60	76	77	76	63	92	49	68
4	70	46	22	57	79	89	71	82	83	68	73	67
5	72	75	30	84	80	94	66	82	74	68	94	90
6	88	61	48	87	72	94	70	58	89	52	87	54
7	60	54	39	85	90	91	69	78	71	89	84	87
8	88	14	45	73	87	85	78	78	91	92	54	48
9	90	53	83	54	61	93	76	87	86	63	86	38
10	89	77	39	28	62	89	85	80	53	84	37	78
11	87	33	87	51	59	91	76	93	45	90	68	86
12	58	23	66	79	68	92	88	92	55	77	90	73
13	88	28	69	75	73	90	84	79	80	82	93	65
14	88	74	82	74	92	94	75	91	89	88	34	81
15	85	74	54	92	94	88	90	94	91	76	28	93
16	77	76	35	94	91	61	90	93	91	94	31	90
17	80	85	17	94	66	56	90	92	84	80	52	86
18	78	81	34	94	78	72	85	89	76	58	77	93
19	74	72	74	90	77	72	54	64	84	26	92	74
20	59	89	41	70	54	78	84	32	84	16	85	30
21	73	26	69	85	84	78	85	63	63	28	72	46
22	86	70	71	81	85	92	81	65	44	40	91	34
23	80	65	61	87	85	92	70	73	80	46	94	80
24	82	88	55	90	90	71	54	68	77	52	61	88
25	81	75	51	78	73	89	86	70	84	90	35	29
26	73	87	33	56	62	82	92	82	62	94	74	80
27	53	80	55	65	69	78	91	81	71	94	68	71
28	52	75	63	39	81	83	78	51	83	94	88	50
29	37	58	74	31	83	83	73	47	73	90	92	10
30	25		90	27	80	80	93	63	89	92	90	35
31	30		88		82		83	49		68		59
Average	71	59	55	72	74	83	78	74	74	72	71	67

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	815.1	818.0	821.5	805.8	826.2	815.0	828.0	826.5	827.4	826.1	805.4	809.8
2	816.3	815.0	819.5	808.6	823.7	817.2	830.1	826.3	830.8	823.8	808.2	808.5
3	818.5	816.5	819.8	812.0	818.2	817.5	828.0	825.6	829.3	821.4	813.4	803.6
4	812.0	816.7	819.4	813.7	813.2	816.0	825.6	824.2	827.0	821.6	812.6	801.1
5	797.8	816.7	816.5	816.4	813.8	814.5	825.3	824.6	825.2	821.5	804.2	799.1
6	796.8	817.5	817.9	810.7	815.9	816.8	824.8	824.4	824.4	822.4	810.3	804.1
7	808.9	820.2	819.9	804.0	818.4	817.4	824.1	825.7	825.9	816.4	816.4	805.6
8	808.5	824.0	817.6	802.5	821.0	819.2	822.2	827.7	825.2	817.6	820.0	809.5
9	815.1	816.9	827.3	808.3	824.8	821.4	822.8	827.0	827.0	813.7	817.6	809.2
10	818.1	820.8	827.9	811.0	830.2	818.3	823.2	825.1	828.5	814.3	818.2	804.0
11	822.9	819.6	816.8	806.6	831.7	812.5	823.1	821.8	826.1	815.9	819.4	807.0
12	818.6	818.0	816.6	805.4	826.2	811.6	821.1	821.1	819.5	817.2	823.9	809.1
13	806.9	811.7	822.6	808.0	822.6	812.9	819.8	820.4	815.5	818.2	827.8	812.3
14	804.9	807.0	821.2	804.8	819.6	821.0	818.2	818.2	818.9	814.2	829.1	812.8
15	807.3	793.3	824.2	803.0	813.6	825.8	819.6	820.2	818.4	814.4	825.3	810.4
16	812.6	802.6	826.0	807.4	811.5	829.3	823.6	822.9	823.3	815.9	823.2	811.2
17	813.9	809.9	825.3	810.5	815.1	830.5	823.5	826.7	823.4	821.9	819.8	811.3
18	819.5	813.8	821.0	805.4	820.5	829.7	823.1	829.6	822.8	826.5	817.8	811.9
19	812.7	814.6	822.6	802.4	822.6	829.0	820.3	831.6	819.2	826.8	821.0	817.1
20	805.4	823.3	829.9	804.2	821.7	826.1	821.4	831.2	820.5	826.5	823.9	816.8
21	805.7	825.3	832.5	809.1	819.4	821.9	822.6	829.1	823.9	826.4	823.8	811.3
22	801.5	825.9	832.3	811.5	817.7	823.6	826.0	826.2	819.2	827.2	824.1	814.1
23	806.1	817.5	828.7	811.9	821.8	828.5	831.3	825.1	821.1	826.4	822.6	812.8
24	810.9	815.0	826.4	808.9	824.1	826.3	830.3	822.4	815.9	821.6	822.0	814.2
25	813.9	811.0	824.1	812.3	823.6	819.4	826.1	821.4	815.6	814.0	820.4	814.2
26	814.8	808.5	825.3	819.9	823.1	821.1	823.9	819.9	817.6	809.4	817.6	813.7
27	820.3	812.4	822.3	825.8	822.0	823.1	824.4	821.7	818.3	798.7	812.0	811.3
28	823.8	812.0	820.7	829.5	817.6	821.8	824.0	826.1	823.9	803.8	808.4	816.3
29	825.5	812.5	809.4	826.0	817.3	824.3	822.5	827.3	823.8	807.5	799.4	824.8
30	824.9		804.5	825.4	819.6	827.0	824.6	827.4	825.5	805.7	802.5	820.0
31	821.9		799.9		821.5		826.2	824.6		810.7		820.1
Average	812.9	815.0	821.3	811.0	820.6	821.3	824.2	824.9	822.8	817.7	817.0	811.2

Skalnaté Pleso Daily and monthly averages of soil temperature at 2cm depth [°C] Year 2012

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	-0.2	0.1	-0.1	-0.2	8.2	7.7	16.1	13.5	11.8	8.9	0.2	0.6
2	-0.2	0.1	-0.2	-0.2	9.3	8.5	16.4	15.3	13.7	8.4	0.4	0.5
3	-0.2	0.1	-0.2	-0.2	8.5	11.7	17.9	14.7	14.5	8.2	0.4	0.5
4	-0.2	0.1	-0.2	-0.3	7.0	10.5	15.7		13.8	7.2	1.7	0.5
5	-0.2	0.1	-0.2	-0.3	6.9	8.6	17.5	14.3	13.1	7.1	3.9	0.5
6	-0.2	0.1	-0.2	-0.3	8.0	7.7	17.5	16.7	10.7	8.2	1.3	0.4
7	-0.2	0.0	-0.3	-0.3	4.9	9.3		15.6	9.7	6.2	0.4	0.4
8	-0.1	0.0	-0.8	-0.3	6.7	10.7		(13.6)	9.8	3.2	0.3	0.4
9	-0.1	(0.0)	-1.2	-0.3	8.1	11.9		12.0	11.1	2.0	0.4	0.3
10	-0.1	0.0	-1.3	-0.3	9.9	11.2		11.2	11.2	1.8	0.2	0.2
11	-0.1	0.0	-1.4	-0.3	12.5	9.1	12.3	9.2	11.7	1.5	2.4	0.2
12	-0.1	0.0	-1.2	-0.3	12.4	9.8	12.2	9.6	11.5	1.3	4.2	0.2
13	0.0	-0.1	-1.0	-0.3	8.5	9.6	10.8	9.8	9.2	2.7	3.0	0.1
14	0.0	-0.2	-0.6	-0.3	3.8	9.0	13.8	8.5	9.7	4.7	0.4	-0.2
15	0.0	-0.3	-0.5	-0.3	5.4	9.5	12.1	9.6	9.6	4.3	-0.4	-0.5
16	0.0	-0.5	-0.4	-0.3	5.3	12.4	10.5	10.2	6.9	5.4	-0.7	-0.4
17	0.0	-0.7	-0.3	-0.3	1.4	14.5	8.9	10.5	8.0	6.2	-0.9	-0.4
18	0.0	-1.0	-0.3	-0.3	2.4	16.0		11.0	9.0	4.9	-0.7	-0.4
19	0.0	-0.9	-0.3	-0.3	7.7	14.6	(12.0)	13.0	9.1	5.1	-0.6	-0.3
20	0.0	-0.9	-0.3	-0.3	10.9	15.7		15.7	4.3	5.1	-0.5	-0.3
21	0.0	-0.9	-0.3	-0.3	11.8	15.3	(12.1)	15.8	3.7	4.6	-0.5	-0.3
22	0.0	-1.0	-0.3	-0.3	12.2	14.2	10.5	16.2	4.0	3.9	-0.3	-0.3
23	0.0	-1.1	-0.3	-0.3	10.2	12.2	12.3	15.0	5.7	4.1	-0.1	-0.4
24	0.0	-0.8	-0.3	-0.3	8.8	12.1	15.8	10.8	7.7	5.3	0.0	-0.4
25	0.0	-0.2	-0.3	-0.3	8.5	11.2	13.8		8.2	5.4	-0.2	-0.4
26	0.0	-0.2	-0.3	-0.3	9.4	10.6	12.7	14.4	7.0	3.2	-0.2	-0.4
27	0.1	-0.1	-0.3	-0.3	9.4	11.4	13.9	10.1	9.1	0.7	0.0	-0.4
28	0.1	0.0	-0.3	-0.3	6.8	12.1		10.1	8.6	1.4	1.0	-0.3
29	0.1	-0.1	-0.3	-0.3	8.3	12.7		10.8	8.1	0.5	1.5	-0.4
30	0.1		-0.3	2.2	8.1	15.1	14.3	11.6	9.0	0.7	0.7	-0.5
31	0.1		-0.3		8.8		13.3	12.5		0.7		-0.8
Average	0.0	-(0.3)	-0.5	-0.2	8.1	11.5	(13.6)	(12.5)	9.3	4.3	0.6	-0.1

Skalnaté Pleso Daily and monthly averages of soil temperature at 20cm depth [°C] Year 2012

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	0.0	0.2	-0.3	-0.4	4.3	7.5	13.8	12.9	11.0	8.1	1.0	0.8
2	0.0	0.2	-0.3	-0.3	6.3	7.1	14.3	13.6	11.5	8.0	0.8	0.7
3	0.0	0.2	-0.3	-0.3	6.8	8.6	15.3	14.1	12.4	7.8	1.1	0.7
4	0.0	0.2	-0.2	-0.3	6.0	9.4	14.9		12.5	7.3	1.5	0.7
5	0.0	0.1	-0.1	-0.3	5.7	8.7	14.8	14.0	12.0	7.2	3.2	0.6
6	0.0	0.2	0.0	-0.3	6.1	7.4	15.8	14.6	11.3	7.4	2.3	0.6
7	0.0	0.1	0.0	-0.4	5.3	7.8		15.0	9.7	6.9	1.4	0.6
8	0.1	0.1	-0.3	-0.4	5.0	8.6		(13.1)	9.6	5.1	1.1	0.6
9	0.1	(0.0)	-0.4	-0.4	5.8	10.1		12.4	10.0	3.7	1.0	0.5
10	0.1	0.0	-0.5	-0.3	7.6	10.3		11.7	10.3	3.4	0.9	0.5
11	0.1	0.0	-0.6	-0.3	9.3	8.9	12.7	10.7	10.8	3.2	1.2	0.4
12	0.1	0.0	-0.6	-0.4	10.1	9.0	12.3	9.9	10.7	2.9	3.0	0.4
13	0.1	0.0	-0.7	-0.3	8.7	8.8	11.8	10.1	9.7	3.2	3.0	0.4
14	0.1	0.0	-0.7	-0.3	5.8	8.6	12.2	9.7	9.1	4.1	1.7	0.0
15	0.1	0.0	-0.7	-0.3	4.9	8.3	12.6	9.5	9.3	4.4	0.8	-0.3
16	0.1	-0.1	-0.6	-0.3	5.3	9.9	11.2	10.0	8.0	4.8	0.4	-0.1
17	0.2	-0.1	-0.6	-0.3	3.1	11.8	10.3	10.3	7.9	5.5	0.2	0.0
18	0.2	-0.2	-0.6	-0.2	2.4	13.4		10.6	8.4	5.1	0.1	0.0
19	0.2	-0.3	-0.6	-0.1	4.5	13.3	(10.4)	11.4	8.7	5.0	0.3	0.0
20	0.2	-0.4	-0.6	-0.2	7.4	13.4		13.3	6.9	5.1	0.4	0.0
21	0.1	-0.4	-0.6	-0.3	9.2	14.0	(11.7)	14.1	5.3	4.8	0.4	0.0
22	0.1	-0.4	-0.5	-0.3	9.7	13.0	10.8	14.5	5.3	4.4	0.4	0.0
23	0.1	-0.5	-0.5	-0.3	9.5	12.0	11.0	14.2	5.8	4.2	0.6	0.0
24	0.1	-0.5	-0.5	-0.3	8.4	11.2	13.2	9.7	6.6	4.7	0.6	-0.4
25	0.1	-0.5	-0.5	-0.4	7.8	10.9	13.7		7.7	4.9	0.4	-0.3
26	0.1	-0.5	-0.5	-0.3	8.2	10.0	12.6	13.8	7.0	4.3	0.4	-0.2
27	0.2	-0.5	-0.5	-0.4	8.2	10.1	12.7	11.8	7.8	1.0	0.5	-0.1
28	0.2	-0.4	-0.5	-0.4	7.2	10.6		10.4	8.1	1.9	0.9	-0.1
29	0.2	-0.3	-0.5	-0.5	6.9	11.1		10.8	7.6	1.6	1.4	-0.1
30	0.2		-0.5	0.4	7.2	12.3	14.1	11.1	8.4	1.6	1.0	-0.3
31	0.2		-0.4		7.4		13.2	11.7		1.6		-0.5
Average	0.1	-(0.1)	-0.5	-0.3	6.8	10.2	(12.8)	(12.0)	9.0	4.6	1.1	0.2

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	458	833	1354	1176	2334	1046	2441	2201	788	676	187	76
2	247	904	762	1241	2132	2206	2265	2277	1408	384	311	166
3	193	745	1450	1475	1311	2307	1712	1949	1527	283	743	341
4	217	350	1450	1405	1201	1407	966	1837	1581	1321	358	319
5	147	760	1430	700	2202	635	2041	1225	1401	1191	65	299
6	87	344	1491	764	1822	1456	1561	2250	888	1329	624	544
7	462	577	1543	1494	711	1561	2227	2496	1705	351	308	503
8	271	657	1279	1761	920	1255	2025	1280	909	871	503	256
9	394		556	2273	2614	1108	1935	1203	1835	1231	435	336
10	125	1026	1544	2192	2363	1042		1116	1820	968	642	314
11	266	1116	306	1619	2438	727		488	1779	707	785	298
12	471	1011	1566	463	1950	840	1510	1219	1373	1083	140	260
13	238	1064	1444	1645	2240	1450	952	1494	411	426	236	498
14	38	527	1573	559	1126	872	1994	640	184	662	676	99
15	211	385	1501	701	653	1810	1076	902	945	404	656	38
16	708	464	1676	310	713	2447	1149	1842	635	102	645	233
17	271	363	1684	915	1845	2630	1058	883	1666	784	482	219
18	234	1014	1602	1093	2805	2819	1625	1602	1293	1083	330	196
19	420	624	964	1579	2407	2394	2117	2211	1059	1070	94	182
20	379	690	1752	1689	2688	2343	1516	2220	385	1080	351	289
21	786	1227	1513	657	2098	1516	532	1504	1653	1043	562	496
22	598	1223	1279	1585	2022	938	2044		548	1036	264	401
23	667	463	1343	1389	1768	1519	2571	1705	1228	474	97	180
24	588	483	1472	800	2130	2435	2268	1986	946	436	273	158
25	417	1207	1565	2014	2655	685	563	2001	692	144	448	134
26	373	472	1715	2181	2717	2166	998	1635	1084	195	205	163
27	807	1189	1162	2412	2096	2417	2064	1131	776	194	216	375
28	767	702	783	2451	1295	1087	1722	2151	1467	135	287	267
29	766		737	2438	1994	2038	565	1441	906	138	132	432
30	773		867	2493	1367	2314	1280	1793	576	419	247	412
31	843		1279		1548		2006	1558		802		419
Sum	13222	(20419)	40645	43477	58166	49471	(46783)	(48242)	33470	21022	11299	8901

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	303	184	190	749	428	833	759	608	672	496	184	73
2	226	184	652	673	579	916	934	412	697	353	306	163
3	162	283	161	669	599	881	693	598	850	271	285	321
4	190	338	235	445	701	996	536	680	810	319	322	288
5	143	357	245	561	748	566	791	912	705	425	62	278
6	80	329	250	698	560	1036	644	608	694	140	310	237
7	239	472	306	683	564	909	856	489	724	334	269	366
8	261	477	586	735	818	888	942	616	576	513	381	224
9	308		531	247	394	911	979	802	736	257	308	212
10	119	388	316	349	580	835		720	850	401	341	253
11	219	243	242	917	636	658		446	943	376	404	233
12	286	199	641	372	553	716	930	878	873	293	134	253
13	222	179	431	648	836	986	607	720	350	400	233	344
14	27	507	638	504	900	750	712	479	168	398	115	95
15	195	315	373	639	590	962	773	750	838	347	112	36
16	260	394	189	276	641	524	835	734	555	98	134	230
17	253	339	206	809	1192	349	895	733	224	309	171	216
18	222	532	310	874	396	370	905	708	504	163	177	193
19	355	590	570	1038	420	559	777	292	605	144	90	179
20	305	591	220	637	494	792	948	283	361	128	318	251
21	347	249	328	572	684	917	478	896	199	145	171	348
22	400	255	703	741	971	809	1177	649	419	135	260	288
23	267	443	425	723	786	1044	601	814	608	391	94	168
24	265	301	494	691	1235	793	756	594	473	293	251	156
25	356	259	325	799	843	612	510	629	498	141	249	131
26	354	400	355	265	669	971	712	569	642	186	202	160
27	175	338	639	336	868	707	684	646	569	190	211	330
28	189	591	555	289	735	712	550	224	185	130	258	264
29	137		518	350	823	950	510	790	476	131	112	122
30	145		694	330	998	895	835	429	414	283	234	93
31	149		827		1032		743	652		175		107
Sum	7159	(9735)	13154	17617	22272	23848	(22071)	19360	17219	8367	6698	6612

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	24	48	111	106	339	172	433	364		89	17	5
2	19	42	81	170	312	325	403	386		52	23	11
3	13	39	111	158	162	346	318	323		38	48	15
4	16	27	107	166	171	236	141	307		146	33	18
5	10	46	98	76	311	107	330	208		130	5	16
6	6	22	102	104	237	246	249	359		148	34	15
7	24	31	92	176	97	248	393	422		47	25	14
8	15	35	94	181	133	209	359	200		87	38	13
9	20		61	201	366	196	308	180		125	30	17
10	17	45	147	238	342	171		185		96	44	14
11	25	55	39	186	389	131		80		57	48	13
12	34	53	134	50	334	145	262	195		105	17	12
13	16	64	154	198	351	229	150	181		60	20	14
14	10	38	148	73	181	150	372	81		85	38	4
15	17	27	146	105	120	298	186	141		60	38	2
16	26	39	167	50	123	420	174	280		13	38	14
17	22	42	176	123	294	492	168	168		80	32	15
18	21	73	164	143	368	498	270	256		112	31	14
19	32	54	97	207	360	436	352	355	93	110	9	13
20	28	69	155	197	394	418	264	373	48	110	24	15
21	33	102	158	81	327	288	102	251	190	102	28	20
22	38	109	160	190	312	192	319		71	98	19	16
23	37	56	162	203	266	231	382	356	169	49	8	13
24	28	95	163	116	327	387	355		151	50	17	12
25	21	103	161	261	356	126	100		103	18	26	11
26	21	47	170	295	364	310	171		126	20	13	14
27	39	84	132	361	265	371	359		98	23	16	20
28	39	57	95	361	140	190	303		158	15	17	15
29	46		101	355	305	362	100		119	21	6	23
30	47		98	360	195	418	218		71	33	15	24
31	48		157		222		334			54		20
Sum	792	(1503)	3942	5491	8465	8347	(7873)	(5654)	(1396)	2235	756	442

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	2255	1572	2116	2108	2404	2766	2773	2654	3009	2856	2591	2575
2	2484	1382	2432	2163	2522	2342	2794	2674	2804	2993	2744	2519
3	2576	1547	1860	2170	2645	2619	2924	2841	2774	3003	2431	2195
4	2619	1891	1749	2373	2703	2901	3023	2779	2605	2495	2738	2158
5	2538	1686	1680	2674	2391	2942	2828	3056	2741	2400	2926	2189
6	2601	1904	1585	2766	2445	2687	2952	2784	2723	2499	2377	2001
7	2248	1944	1506	2454	2819	2761	2775	2431	2355	2886	2470	2016
8	2506	1839	1841	1956	2753	2971	2807	2672	2882	2381	2474	1966
9	2457		2397	1536	2248	3069	2620	2741	2387	2137	2580	1854
10	2486	1577	1961	1741	2449	2951		2673	2411	2234	2462	2018
11	2471	1529	2483	2294	2475	2962		2846	2480	2370	2525	2241
12	2380	1577	2004	2739	2531	2988	2801	2694	2697	2257	2862	2037
13	2467	1705	2204	2334	2123	2760	2846	2517	2935	2774	2622	1833
14	2514	2108	2069	2789	2582	2898	2397	2787	2978	2734	2127	2376
15	2310	2159	2023	2739	2823	2610	2803	2836	2698	2742	2227	2554
16	1917	2189	1675	2934	2806	2606	2653	2479	2732	3069	2280	2546
17	2197	2327	1961	2514	2291	2629	2691	2890	2295	2554	2463	2590
18	2285	2107	2087	2607	1907	2542	2584	2542	2517	2399	2582	2615
19	2322	2282	2335	2660	2240	2678	2820	2396	2634	2397	2838	2478
20	2422	2239	1872	2556	2316	2703	2575	2575	2691	2441	2679	2118
21	2190	1825	2068	2750	2602	2999	2965	2937	2091	2394	2481	1944
22	2373	1907	2329	2450	2596	2998	2294		2634	2282	2742	2073
23	2333	2414	2239	2539	2687	2886	2399	2744	2362	2606	2842	2311
24	2189	2531	2143	2754	2546	2309	2516	2468	2649	2711	2713	2465
25	2244	2195	2140	2356	2170	3002	3190	2773	2851	2890	2469	2568
26	2189	2424	1798	2085	2010	2449	3049	2818	2765	2661	2670	2607
27	1816	1878	2133	2189	2231	2387	2746	2736	2983	2789	2675	2375
28	1975	2084	2473	2313	2542	2975	2814	2218	2365	2571	2769	2265
29	1956		2454	2373	2513	2702	3204	2569	2688	2468	2797	1921
30	1818		2444	2297	2752	2818	2966	2481	2871	2206	2533	2191
31	1735		2328		2681		2700	2636		2126		2134
Sum	70872	(52821)	64390	72214	76804	82911	(80508)	(80246)	79604	79324	77690	69731

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	-265	-607	-875	-636	-1221	-479	-1105	-916	-489	-463	-201	-65
2	-186	-658	-481	-681	-1117	-955	-1033	-969	-742	-257	-187	-120
3	-165	-447	-976	-867	-780	-950	-882	-812	-830	-154	-491	-316
4	-180	-245	-924	-805	-613	-645	-574	-798	-876	-659	-382	-257
5	-151	-479	-898	-342	-1052	-258	-925	-572	-761	-661	-63	-293
6	-102	-194	-908	-279	-934	-638	-708	-1036	-499	-771	-377	-383
7	-319	-361	-1006	-593	-350	-683	-929	-1221	-906	-231	-204	-299
8	-171	-433	-785	-865	-387	-565	-870	-743	-445	-454	-308	-229
9	-236		-365	-1175	-1103	-443	-976	-666	-1028	-738	-245	-432
10	-95	-693	-897	-1129	-1054	-468		-608	-1020	-622	-371	-273
11	-189	-735	-287	-801	-1129	-334		-296	-1073	-403	-485	-199
12	-308	-730	-902	-285	-891	-374	-673	-547	-867	-602	-108	-317
13	-178	-723	-780	-741	-964	-635	-422	-776	-305	-197	-217	-439
14	-27	-356	-867	-239	-503	-386	-1074	-397	-116	-342	-549	-60
15	-166	-331	-880	-373	-298	-762	-530	-483	-536	-399	-443	-13
16	-423	-388	-1325	-148	-323	-1038	-573	-929	-418	-91	-355	-107
17	-173	-223	-1119	-371	-807	-1184	-529	-503	-976	-433	-303	-91
18	-130	-646	-1022	-395	-1237	-1291	-762	-888	-829	-639	-296	-106
19	-245	-445	-624	-520	-1082	-1133	-678	-1161	-759	-659	-56	-168
20	-245	-488	-1000	-667	-1213	-1106	-844	-1164	-261	-669	-175	-275
21	-441	-757	-930	-325	-993	-708	-264	-786	-946	-691	-304	-339
22	-343	-820	-715	-744	-1038	-518	-1099	-4846	-393	-810	-140	-219
23	-389	-331	-821	-611	-922	-622	-1088	-899	-742	-327	-50	-103
24	-413	-372	-917	-359	-974	-1282	-1162	-1092	-579	-268	-146	-126
25	-306	-784	-964	-875	-1183	-361	-291	-861	-422	-82	-279	-78
26	-277	-325	-1159	-1178	-1371	-906	-471	-682	-691	-121	-124	-104
27	-530	-748	-816	-1278	-1103	-998	-872	-572	-582	-94	-317	-314
28	-487	-452	-635	-1321	-665	-490	-781	-1081	-935	-90	-238	-374
29	-541		-522	-1380	-888	-913	-286	-791	-565	-119	-139	-434
30	-546		-368	-1370	-677	-958	-530	-991	-396	-395	-198	-455
31	-534		-561		-734		-857	-872		-552		-458
Sum	-8762	-(13769)	-25329	-21355	-27605	-22084	-(21786)	-28960	-19986	-12992	-7752	-7448

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	49	-32	-65	-74	838	366	1052	952	242	187	-70	-40
2	21	-35	79	328	772	877	938	966	465	97	60	-24
3	36	33	8	346	402	1011	666	817	487	70	98	-156
4	31	-64	5	373	448	558	289	709	480	399	-60	-118
5	-10	-77	-12	226	835	242	845	490	438	289	-12	-143
6	-3	-31	-10	333	628	598	601	925	278	362	112	-21
7	68	-61	-40	595	253	658	984	887	522	54	12	24
8	-12	-13	13	583	380	514	838	336	320	204	89	-141
9	16		-2	628	1082	448	651	341	548	237	86	-242
10	18	-40	90	616	972	376		333	546	171	136	-150
11	49	-15	-63	522	983	247		102	498	156	168	-82
12	94	-48	112	108	735	334	582	460	372	259	5	-196
13	-15	-41	253	577	872	569	370	476	85	119	-46	-168
14	-46	-44	306	219	447	329	785	143	41	181	-12	-40
15	3	-143	310	283	238	791	459	297	295	-51	74	-15
16	83	-93	139	174	269	1092	482	615	159	-7	135	-16
17	2	-49	388	511	739	1126	452	273	462	171	71	-22
18	19	-134	313	661	1082	1182	721	488	326	230	-20	-37
19	4	-116	192	987	947	969	1283	730	238	225	22	-102
20	62	-90	412	948	1083	962	599	779	71	228	118	-126
21	49	-7	296	309	822	626	199	539	468	173	131	-77
22	-3	-87	339	752	728	271	838	524	156	66	69	-33
23	-35	-18	297	685	617	689	1273	604	339	51	23	-56
24	31	-8	277	390	805	804	1270	619	281	87	68	-65
25	-32	-60	316	993	1025	224	176	855	228	14	64	-21
26	-14	-112	247	833	887	917	411	676	337	19	34	-24
27	61	-139	137	941	678	1027	859	402	185	54	-118	-141
28	51	-71	67	855	382	449	657	732	351	-5	18	-211
29	59		124	810	782	830	180	447	253	-146	-38	-191
30	39		-75	864	501	1004	516	536	170	-204	-29	-258
31	100		354		581		837	510		-35		-212
Sum	777	-(1595)	4807	16377	21811	20090	(19812)	17562	9642	3657	1188	-3106

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	3.9	8.3	1.6	3.5	11.9	0.4	10.3	10.8	0.3	2.0	0.0	0.0
2	0.3	8.3	7.9	5.7	10.1	8.7	6.6	11.6	7.3	0.0	0.0	0.0
3	1.5	4.9	10.4	7.4	5.1	6.9	6.1	8.7	7.3	0.3	4.7	0.4
4	0.2	0.0	8.9	6.2	4.2	3.6	3.3	7.5	7.7	8.7	0.5	0.8
5	0.0	6.7	10.0	1.6	7.9	0.0	7.0	1.9	6.7	6.9	0.0	0.0
6	0.0	0.0	9.4	0.1	7.9	0.0	6.0	12.4	4.1	9.6	3.7	5.3
7	4.9	1.1	10.2	4.0	0.1	5.5	7.1	12.3	8.1	0.0	0.8	2.7
8	0.0	2.3	7.1	7.7	0.1	1.9	6.6	6.5	3.5	5.5	0.9	0.0
9	1.6	1.4	0.0	11.7	10.8	0.7	6.6	5.3	11.1	8.7	1.7	3.8
10	0.0	8.2	9.2	12.3	11.8	0.0	2.2	3.6	11.2	4.7	3.1	1.8
11	2.0	9.1	0.6	2.6	12.5	0.0	3.3	0.0	12.0	4.0	2.7	0.9
12	3.9	8.5	10.1	0.9	8.8	0.2	3.1	1.5	6.2	7.2	0.0	0.0
13	0.1	9.4	8.3	7.5	8.7	3.9	1.8	7.8	0.7	0.1	0.0	5.5
14	0.0	0.0	9.8	0.0	1.8	0.3	6.1	2.3	0.0	2.7	0.0	0.0
15	0.2	0.0	9.7	0.0	0.0	11.3	1.9	1.1	2.8	0.9	7.5	0.0
16	5.7	1.0	11.1	0.0	0.0	6.3	2.5	9.5	1.0	0.0	8.1	0.0
17	0.3	0.0	11.2	0.5	2.4	11.6	1.1	0.7	11.1	5.5	4.7	0.0
18	0.0	5.0	10.3	1.7	12.0	12.5	4.5	6.4	8.3	9.5	2.3	0.0
19	0.3	0.0	4.5	4.1	10.8	10.1	8.4	12.7	1.8	9.7	0.0	0.0
20	1.1	8.7	11.2	8.4	11.7	10.6	4.5	13.9	0.1	9.7	0.4	0.0
21	5.3	8.9	10.2	0.1	10.2	2.6	0.0	4.5	10.9	9.2	5.9	6.7
22	2.8	8.9	3.6	6.1	7.0	0.2	5.2	7.9	1.9	9.7	0.0	0.6
23	5.6	0.0	7.6	4.1	7.3	3.0	12.9	5.2	5.0	1.6	0.0	0.0
24	1.1	3.5	8.9	0.3	4.9	9.3	9.7	7.6	4.7	1.5	0.1	0.0
25	1.1	8.4	9.4	7.2	12.4	0.0	0.0	8.9	2.0	0.0	2.6	0.0
26	0.0	0.3	10.3	13.1	12.4	9.5	0.0	8.0	4.7	0.0	0.0	0.0
27	8.0	6.3	5.3	12.9	8.1	10.3	7.0	3.9	0.0	0.0	0.0	1.0
28	7.8	1.6	4.4	13.3	4.1	2.1	7.3	12.6	0.0	0.0	0.4	0.0
29	8.4	9.3	1.9	13.0	5.7	5.8	8.4	2.2	0.0	0.0	0.3	6.7
30	8.4		0.9	13.4	4.1	7.4	3.4	7.9	0.0	0.0	0.0	5.9
31	8.3		3.6		6.1		7.7	6.9		7.0		7.7
Sum	82.8	130.1	227.6	169.4	220.9	144.7	160.6	212.1	140.5	124.7	50.4	49.8

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	-5.7	-14.9	4.8	-1.4	17.3	11.1	23.1	17.1	16.5	12.7	3.5	-1.5
2	-1.6	-19.6	2.4	1.6	17.8	10.3	22.1	18.5	16.9	12.3	5.8	-1.6
3	0.4	-20.7	0.4	6.2	14.2	15.7	22.4	19.1	18.2	10.9	5.9	-4.4
4	1.9	-16.6	-3.9	10.1	11.9	16.3	19.0	17.7	16.1	10.7	10.2	-6.6
5	-0.7	-15.9	-6.0	6.6	13.7	10.4	20.8	18.8	16.5	9.4	7.1	-5.0
6	-0.9	-17.2	-7.7	6.9	12.8	11.1	20.5	22.1	11.9	13.1	2.0	-7.1
7	-4.8	-11.8	-8.1	6.0	9.2	13.4	20.0	18.6	11.0	10.2	0.2	-9.5
8	-2.4	-12.9	-5.2	0.0	7.5	15.9	20.0	14.7	13.4	4.2	2.8	-12.6
9	-1.8		-1.4	-1.4	10.7	16.4	18.1	14.2	14.2	4.6	3.4	-10.2
10	-4.3	-14.0	0.0	2.1	14.2	14.7	15.1	11.9	14.6	3.9	3.8	-10.2
11	-2.1	-14.8	0.0	7.4	16.3	12.4	16.2	9.7	17.2	2.3	7.0	-7.5
12	-1.1	-13.9	1.7	7.0	13.2	12.8	15.8	11.0	18.1	3.7	6.8	-8.5
13	-1.8	-10.8	3.0	7.1	6.5	13.4	11.8	11.6	11.6	6.5	3.8	-10.6
14	-4.5	-9.2	2.4	6.7	6.5	11.5	15.5	10.2	8.5	8.8	0.3	-7.0
15	-6.2	-8.1	2.0	7.8	7.5	11.9	13.4	12.5	10.8	10.8	0.3	-3.5
16	-10.1	-5.8	3.4	6.6	7.8	16.9	11.0	13.7	9.1	11.4	-0.6	-1.7
17	-9.2	-6.9	7.7	2.0	6.3	20.5	10.3	14.0	10.9	7.3	2.4	-1.1
18	-8.0	-2.6	8.2	3.8	6.3	20.8	12.7	14.6	12.9	8.7	4.8	-0.2
19	-4.6	-2.7	5.2	7.7	10.3	20.8	16.0	16.6	14.2	8.9	4.8	-0.9
20	-1.7	-2.6	2.3	9.1	14.4	21.1	14.5	20.3	5.9	9.8	3.7	-6.8
21	-3.5	-6.0	5.8	6.6	16.7	20.4	12.2	20.6	6.4	9.4	3.3	-8.8
22	-1.4	-2.7	6.4	8.1	17.3	17.0	13.5	21.1	6.8	9.9	4.6	-10.5
23	-1.0	-1.0	7.3	7.8	17.7	15.4	15.2	19.1	7.8	5.8	4.5	-7.9
24	-3.6	2.5	7.1	7.5	15.8	16.3	18.7	18.1	10.8	6.6	3.7	-3.6
25	-4.6	3.8	7.7	8.8	11.8	14.3	17.1	19.1	12.4	6.8	2.0	-1.3
26	-7.1	-1.5	4.6	9.6	12.1	11.9	16.7	16.6	16.0	2.5	2.6	0.4
27	-10.6	-4.9	5.0	13.8	11.2	12.3	18.3	12.9	18.5	4.5	7.5	0.9
28	-7.6	-6.7	8.7	17.0	9.2	14.9	19.0	11.3	12.0	-1.1	7.4	-1.0
29	-6.4		5.5	20.0	12.2	17.5	17.3	13.3	11.2	-2.4	6.3	-6.8
30	-9.4		1.0	18.5	13.2	20.8	16.9	15.5	11.8	-2.5	1.4	-0.7
31	-12.4		2.7		12.8		16.9	16.8		0.5		-1.7
Average	-4.4	-(8.8)	2.4	7.3	12.1	15.3	16.8	15.9	12.7	6.8	4.0	-5.1

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	89	58	62	72	52	85	72	77	78	80	81	89
2	93	68	82	70	53	72	75	78	84	92	89	90
3	91	67	54	65	71	71	74	81	79	92	76	85
4	86	68	72	67	83	82	85	86	85	76	73	83
5	84	68	79	91	71	92	75	86	81	71	92	87
6	88	91	74	93	71	84	79	72	83	67	85	83
7	79	81	74	80	92	80	79	69	71	82	85	80
8	92	79	77	62	90	87	79	77	81	77	87	78
9	90		88	52	76	92	81	79	79	74	85	72
10	93	80	74	49	69	94	84	81	77	73	73	81
11	90	70	81	53	69	95	79	91	61	78	62	87
12	88	65	69	72	78	94	80	85	57	80	83	81
13	81	61	88	69	66	86	86	76	84	87	85	80
14	81	79	86	79	73	92	81	89	97	86	77	82
15	75	95	68	91	90	84	89	85	83	79	84	92
16	80	76	68	93	88	76	91	83	85	93	87	92
17	88	94	54	76	64	69	89	87	77	86	83	94
18	89	89	59	76	70	72	82	81	74	79	87	93
19	89	93	78	73	76	71	78	75	75	78	93	90
20	85	90	63	64	66	76	84	67	79	78	93	83
21	79	81	66	84	72	77	92	71	70	78	86	80
22	83	84	80	74	70	92	70	74	75	70	92	85
23	83	94	70	73	65	82	68	79	77	88	94	86
24	87	94	72	85	73	71	74	85	80	86	92	90
25	74	68	61	70	61	88	92	76	86	92	87	94
26	78	77	38	68	55	75	92	83	64	90	93	94
27	79	66	53	65	61	73	85	81	63	94	78	82
28	70	91	50	52	82	81	87	74	71	89	79	77
29	57		61	40	77	79	91	76	78	81	86	55
30	58		89	44	73	81	90	76	79	85	83	67
31	68		77		73		77	69		80		75
Average	82	(79)	70	70	72	82	82	79	77	82	84	83

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	920.2	928.1	916.8	909.2	920.2	915.9	925.1	925.9	925.6	925.7	908.3	916.6
2	919.4	927.6	925.2	910.2	918.3	919.4	928.1	925.0	929.5	923.3	910.1	914.0
3	922.3	929.0	925.4	912.1	912.8	917.2	925.6	923.9	927.4	921.5	915.9	909.6
4	914.7	927.5	925.4	912.5	908.2	915.0	923.5	924.1	925.9	921.7	914.5	906.0
5	900.5	927.7	923.5	916.2	909.4	915.2	922.6	923.1	923.6	922.6	905.7	903.5
6	900.0	927.3	926.5	909.9	912.0	917.8	922.2	921.9	924.4	921.9	915.0	910.9
7	915.1	927.3	928.5	903.2	915.7	917.0	921.0	925.3	926.9	916.5	922.1	914.6
8	913.4	931.6	924.3	905.1	919.6	917.6	920.1	928.6	924.9	921.0	924.1	918.5
9	921.7		934.5	912.4	922.3	920.7	920.0	928.5	926.5	915.3	922.0	917.5
10	925.8	931.1	934.0	913.1	927.2	917.7	922.9	926.6	927.1	916.7	923.1	909.1
11	931.3	928.5	921.7	906.4	928.2	911.5	922.5	922.8	924.1	918.5	922.2	912.5
12	925.1	925.0	922.6	904.6	923.4	910.7	920.5	922.2	916.7	919.4	927.3	915.8
13	913.7	917.9	927.4	907.7	923.2	912.5	919.9	921.2	913.9	919.2	933.9	920.6
14	913.3	913.2	926.8	902.9	918.9	922.1	916.3	918.7	918.9	914.3	935.7	921.6
15	917.3	895.9	929.5	900.7	914.1	927.1	919.1	920.2	918.3	914.3	929.3	916.0
16	923.4	908.5	928.8	907.0	913.6	929.4	924.8	923.1	924.6	915.1	926.8	915.5
17	924.2	915.5	925.7	912.7	919.4	929.4	924.8	927.1	923.6	923.3	922.7	915.9
18	929.6	918.2	921.2	905.7	923.5	928.2	923.6	930.7	922.1	927.6	920.0	916.2
19	919.2	918.6	925.1	900.7	923.0	927.0	918.5	932.0	918.2	927.3	923.8	922.3
20	910.6	930.0	935.0	903.6	919.9	923.7	920.3	928.8	923.5	926.1	926.6	922.9
21	911.9	932.3	936.1	909.7	917.9	918.8	922.0	926.5	927.1	927.0	926.8	917.8
22	905.2	931.6	934.9	912.2	915.5	921.7	927.1	923.0	920.1	928.2	927.7	921.4
23	911.7	920.9	930.2	913.0	920.1	928.6	932.7	922.3	923.0	928.6	926.5	918.7
24	917.8	917.3	928.2	910.3	924.1	925.6	929.2	920.2	915.2	923.7	926.0	917.3
25	922.9	914.0	926.6	913.5	925.5	918.4	923.9	919.7	913.6	915.4	923.6	916.4
26	923.8	913.3	930.6	920.8	924.6	921.6	923.0	918.0	916.8	912.6	920.7	916.8
27	928.9	920.9	926.2	923.2	922.7	923.9	923.7	921.8	917.3	899.2	913.8	915.4
28	931.9	918.7	923.0	925.4	917.6	921.0	922.7	926.6	924.7	908.1	910.3	922.0
29	932.9		910.6	922.1	916.8	923.0	923.8	926.7	924.2	913.3	899.6	931.1
30	933.5		906.2	920.7	919.5	924.8	924.8	926.5	926.2	911.2	906.0	924.7
31	930.9		899.7		922.4		926.5	922.8		915.4		925.2
Average	919.7	(922.1)	925.2	910.9	919.3	920.7	923.2	924.3	922.5	919.2	920.3	917.0

Skalnaté Pleso Daily and monthly averages of soil temperature at 2cm depth [°C] Year 2012

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	-0.2	0.1	-0.1	-0.2	8.2	7.7	16.1	13.5	11.8	8.9	0.2	0.6
2	-0.2	0.1	-0.2	-0.2	9.3	8.5	16.4	15.3	13.7	8.4	0.4	0.5
3	-0.2	0.1	-0.2	-0.2	8.5	11.7	17.9	14.7	14.5	8.2	0.4	0.5
4	-0.2	0.1	-0.2	-0.3	7.0	10.5	15.7		13.8	7.2	1.7	0.5
5	-0.2	0.1	-0.2	-0.3	6.9	8.6	17.5	14.3	13.1	7.1	3.9	0.5
6	-0.2	0.1	-0.2	-0.3	8.0	7.7	17.5	16.7	10.7	8.2	1.3	0.4
7	-0.2	0.0	-0.3	-0.3	4.9	9.3		15.6	9.7	6.2	0.4	0.4
8	-0.1	0.0	-0.8	-0.3	6.7	10.7		(13.6)	9.8	3.2	0.3	0.4
9	-0.1	(0.0)	-1.2	-0.3	8.1	11.9		12.0	11.1	2.0	0.4	0.3
10	-0.1	0.0	-1.3	-0.3	9.9	11.2		11.2	11.2	1.8	0.2	0.2
11	-0.1	0.0	-1.4	-0.3	12.5	9.1	12.3	9.2	11.7	1.5	2.4	0.2
12	-0.1	0.0	-1.2	-0.3	12.4	9.8	12.2	9.6	11.5	1.3	4.2	0.2
13	0.0	-0.1	-1.0	-0.3	8.5	9.6	10.8	9.8	9.2	2.7	3.0	0.1
14	0.0	-0.2	-0.6	-0.3	3.8	9.0	13.8	8.5	9.7	4.7	0.4	-0.2
15	0.0	-0.3	-0.5	-0.3	5.4	9.5	12.1	9.6	9.6	4.3	-0.4	-0.5
16	0.0	-0.5	-0.4	-0.3	5.3	12.4	10.5	10.2	6.9	5.4	-0.7	-0.4
17	0.0	-0.7	-0.3	-0.3	1.4	14.5	8.9	10.5	8.0	6.2	-0.9	-0.4
18	0.0	-1.0	-0.3	-0.3	2.4	16.0		11.0	9.0	4.9	-0.7	-0.4
19	0.0	-0.9	-0.3	-0.3	7.7	14.6	(12.0)	13.0	9.1	5.1	-0.6	-0.3
20	0.0	-0.9	-0.3	-0.3	10.9	15.7		15.7	4.3	5.1	-0.5	-0.3
21	0.0	-0.9	-0.3	-0.3	11.8	15.3	(12.1)	15.8	3.7	4.6	-0.5	-0.3
22	0.0	-1.0	-0.3	-0.3	12.2	14.2	10.5	16.2	4.0	3.9	-0.3	-0.3
23	0.0	-1.1	-0.3	-0.3	10.2	12.2	12.3	15.0	5.7	4.1	-0.1	-0.4
24	0.0	-0.8	-0.3	-0.3	8.8	12.1	15.8	10.8	7.7	5.3	0.0	-0.4
25	0.0	-0.2	-0.3	-0.3	8.5	11.2	13.8		8.2	5.4	-0.2	-0.4
26	0.0	-0.2	-0.3	-0.3	9.4	10.6	12.7	14.4	7.0	3.2	-0.2	-0.4
27	0.1	-0.1	-0.3	-0.3	9.4	11.4	13.9	10.1	9.1	0.7	0.0	-0.4
28	0.1	0.0	-0.3	-0.3	6.8	12.1		10.1	8.6	1.4	1.0	-0.3
29	0.1	-0.1	-0.3	-0.3	8.3	12.7		10.8	8.1	0.5	1.5	-0.4
30	0.1		-0.3	2.2	8.1	15.1	14.3	11.6	9.0	0.7	0.7	-0.5
31	0.1		-0.3		8.8		13.3	12.5		0.7		-0.8
Average	0.0	-(0.3)	-0.5	-0.2	8.1	11.5	(13.6)	(12.5)	9.3	4.3	0.6	-0.1

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1	0.9	0.7	1.5	5.2	13.5	15.5	19.7	20.1	18.0	13.9	6.9	6.1
2	0.9	0.7	1.6	4.5	13.9	15.4	20.1	20.1	18.2	13.9	7.5	5.8
3	1.0	0.8	1.7	5.2	13.9	15.6	20.2	20.5	18.4	14.0	7.9	5.3
4	1.0	0.9	1.7	5.9	13.4	16.2	19.7	20.8	18.6	13.4	8.1	4.8
5	1.2	0.8	1.5	6.4	13.6	15.9	19.3	20.8	18.3	13.3	8.5	4.4
6	1.5	0.3	1.5	6.9	13.7	15.4	19.8	20.8	18.1	12.9	8.2	4.0
7	1.8	0.7	1.5	7.8	13.6	15.8	19.9	21.3	17.0	13.3	7.3	3.4
8	1.9	0.7	1.4	7.9	13.2	16.1	19.9	20.6	17.4	12.6	7.1	3.1
9	1.8		1.4	7.1	13.4	16.9	20.7	19.8	17.2	11.6	7.2	2.8
10	1.6	1.9	1.5	6.7	14.1	17.1		19.2	17.1	11.2	7.2	2.2
11	1.5	2.4	1.5	7.1	14.8	16.7		18.6	17.0	10.8	7.3	2.0
12	1.4	2.6	1.2	7.5	15.3	16.5	19.6	17.9	17.1	10.4	7.6	2.0
13	1.3	2.2	1.3	7.6	14.9	16.5	19.0	17.7	16.7	10.7	7.8	1.9
14	1.2	2.0	1.2	8.1	14.2	16.7	18.6	17.3	15.9	11.0	6.6	1.6
15	1.2	1.9	1.3	8.2	13.6	16.6	18.8	17.1	15.7	11.3	5.8	1.3
16	1.2	2.0	1.7	8.4	13.3	16.9	18.0	17.2	15.3	11.3	5.5	1.5
17	1.0	2.0	2.6	8.1	13.2	18.1	17.4	17.6	15.2	11.5	5.1	1.6
18	1.1	2.2	3.6	7.6	13.2	18.8	17.4	17.4	15.2	11.0	5.5	1.8
19	1.3	2.2	4.1	8.3	13.9	19.2	17.4	17.6	15.6	10.7	5.9	1.7
20	1.6	2.0	4.0	8.7	14.6	19.4	17.9	18.2	14.6	10.8	6.3	1.6
21	1.8	1.8	4.3	9.0	15.1	19.5	17.9	18.8	13.3	10.8	6.1	1.5
22	1.9	1.6	4.9	9.0	15.4	19.3	17.5	19.2	12.9	10.8	6.2	1.8
23	1.6	1.6	5.3	9.5	15.6	18.9	17.8	19.5	12.8	10.6	6.6	2.1
24	1.5	1.7	5.6	9.9	15.7	18.9	18.4	19.3	12.7	10.6	6.8	2.1
25	1.4	1.9	6.0	10.2	15.7	18.7	19.1	19.2	13.5	10.6	6.5	1.7
26	1.5	2.0	5.8	10.6	15.7	18.1	18.7	19.5	13.5	10.2	6.1	1.7
27	1.4	1.6	5.4	11.1	15.5	17.8	19.0	19.3	14.1	9.6	6.4	1.9
28	1.6	1.4	5.4	12.0	15.2	17.9	19.3	18.3	14.4	9.0	6.7	2.1
29	1.4		5.6	12.7	15.3	18.1	19.4	18.0	14.0	7.9	6.9	2.1
30	1.1		5.2	13.0	15.8	18.8	20.4	17.9	14.3	7.6	6.5	1.8
31	0.9		5.1		15.8		20.1	17.9		7.4		1.7
Average	1.4	(1.6)	3.1	8.3	14.5	17.4	(19.0)	18.9	15.7	11.1	6.8	2.6

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