Monthly resolved biannual precipitation oxygen isoscape for Switzerland

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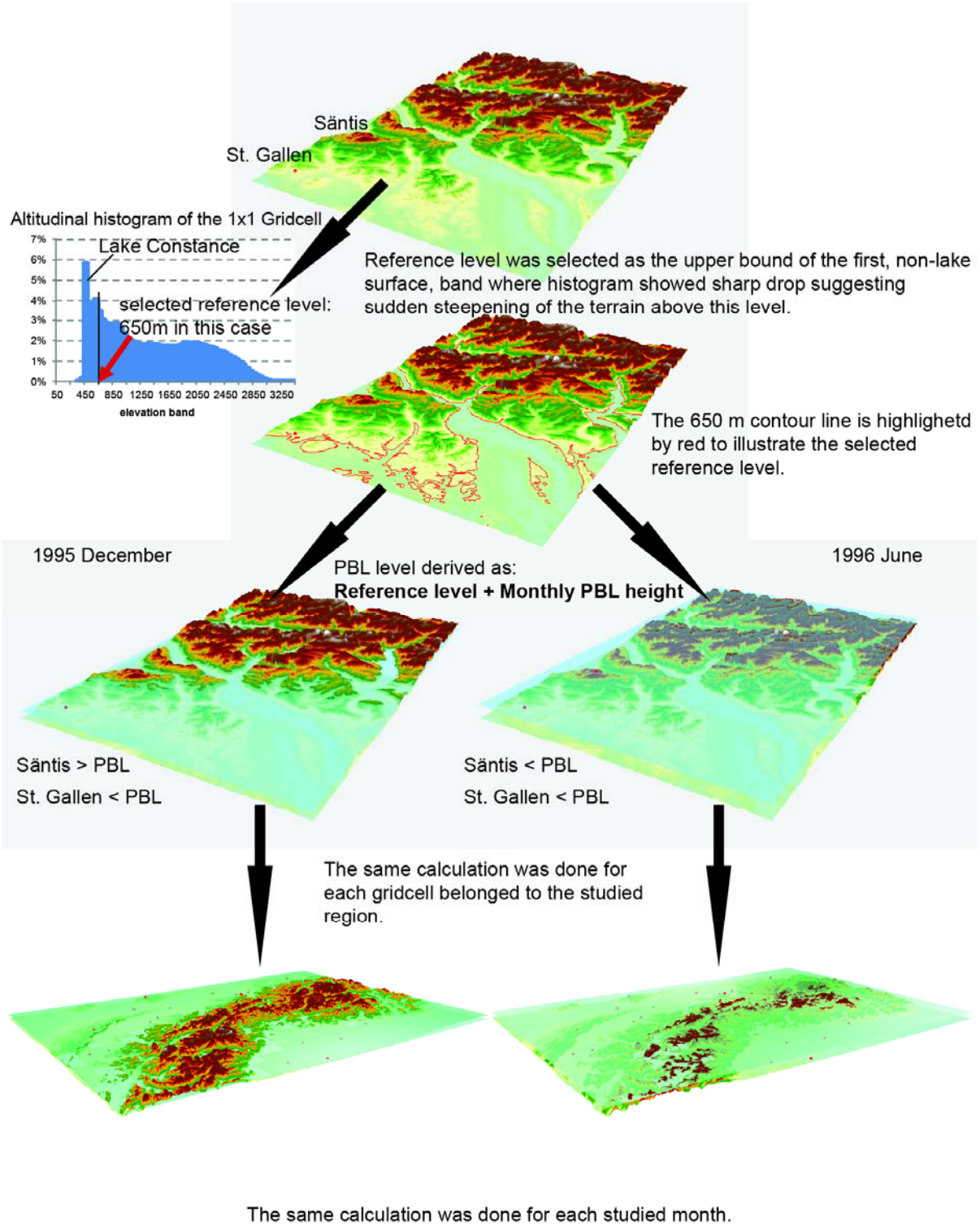

Fig. S1. Graphical illustration of the PBL derivation. For illustration purpose a winter (1995 Dec) and a summer (1996 June) months are selected.

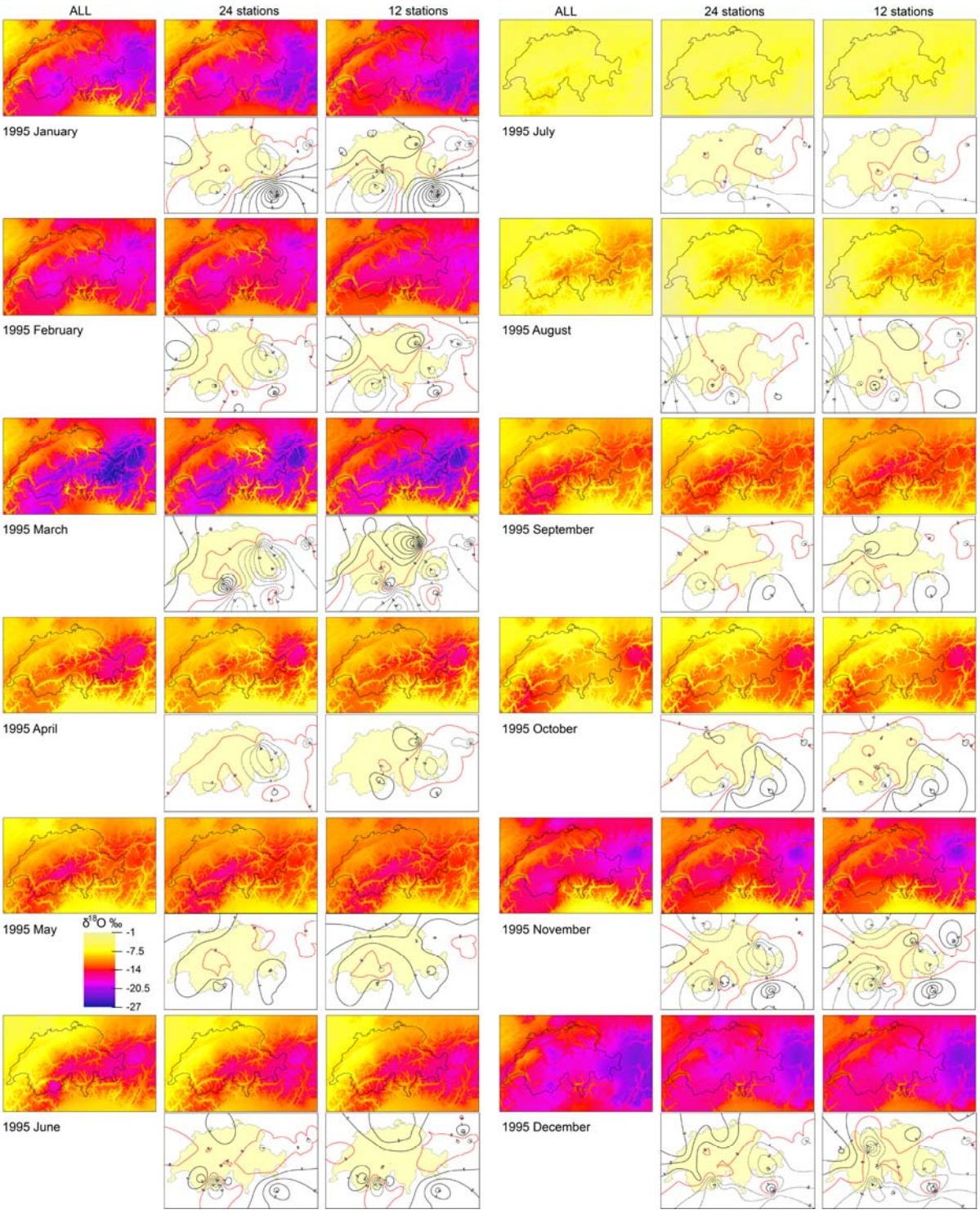

Fig. S2. Precipitation oxygen isoscapes for Switzerland derived for 1995. Left map shows the isoscape obtained using all available stations for each monthly set of maps. The longest 24 and 12 stations used for the middle and right maps, respectively. The difference map obtained after GRID computed with reduced dataset was subtracted from the full one are shown below the corresponding subset derived map. Isolines for positive values are shown by full line; while for negative values are shown by dashed line. The zero isoline is red.

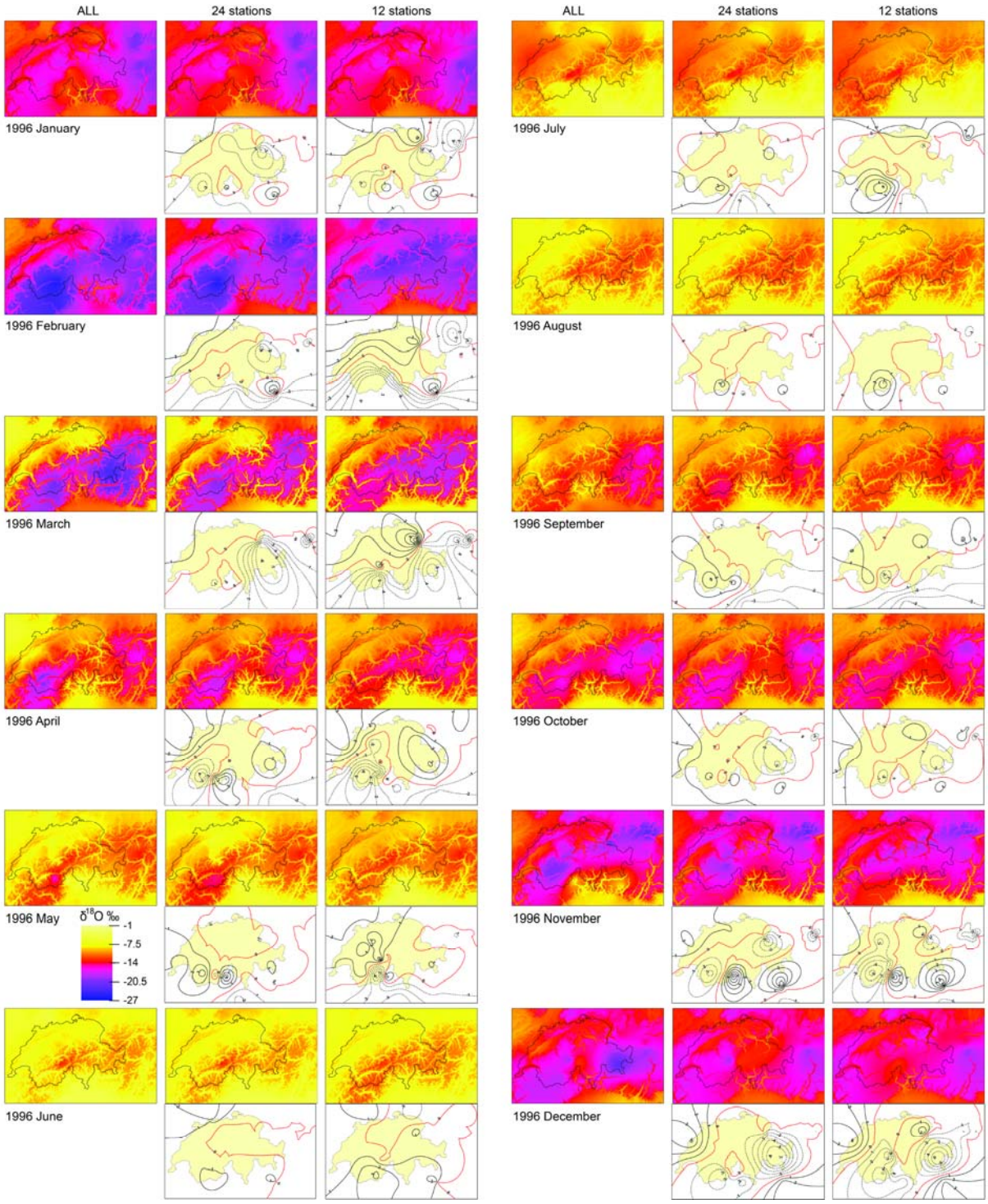

Fig. S3. Precipitation oxygen isoscapes for Switzerland derived for 1996. Left map shows the isoscape obtained using all available stations for each monthly set of maps. The longest 24 and 12 stations used for the middle and right maps, respectively. The difference map obtained after GRID computed with reduced dataset was subtracted from the full one are shown below the corresponding subset derived map. Isolines for positive values are shown by full line; while for negative values are shown by dashed line. The zero isoline is red.

Table S1. Basic geographical information of the stations.

Name	**lon_WGS (deg)**	**lat_WGS (deg)**	**Elev (m a.s.l.)**	**Reference**
Basel	7.582	47.541	319	Network of the Division of Climate and Environmantal Physics, University of Bern
Burgdorf	7.634	47.062	556	
Visp	7.881	46.286	664	
St. Gallen	9.417	47.429	805	
Grindelwald	8.042	46.624	1048	
St. Niklaus - Grächen	7.800	46.171	1450	
Kl. Scheidegg	7.963	46.585	2065	
Säntis	9.344	47.250	2470	
Jungfraujoch	7.985	46.548	3570	
Suhr	8.079	47.367	397	Swiss National Network for Isotopes in the Water Cycle (Schürch et al. 2003)
Nyon	6.230	46.380	436	
Vaduz	9.523	47.127	460	
Sion	7.341	46.220	482	
LaBrevine	6.609	46.982	1042	
Pontresina	9.901	46.492	1742	
Locarno*	8.787	46.172	379	
Bern*	7.439	46.951	567	
Meiringen*	8.178	46.727	632	
Guttanen*	8.292	46.656	1055	
Grimsel*	8.332	46.571	1950	
Weil am Rhein	7.601	47.602	249	IAEA-GNIP network (IAEA 2010)
Konstanz	9.179	47.691	447	
Garmisch-Partenkirchen	11.070	47.480	720	
Hohenpeissenberg	11.009	47.801	977	
Feldberg-Schwarzwald	8.006	47.873	1493	

Thonon des Bains	6.473	46.373	385	
Bregenz	9.742	47.491	430	Austrian Network of Isotopes in Precipitation (Kralik et al. 2003)
Innsbruck	11.354	47.259	580	
Haiming	10.883	47.247	695	
Schoppernau	10.002	47.316	835	
Reutte	10.750	47.494	870	
Scharnitz	11.250	47.383	964	
Langenfeld	10.970	47.069	1180	
Obergurgl	11.026	46.867	1940	
Patscherkofel	11.460	47.208	2245	
Bellinzago	8.644	45.570	190	Longinelli and Selmo, 2003
Sarnico	9.958	45.668	197	
Pallanza	8.551	45.923	208	
Boario-Darfo	10.182	45.880	208	
Graniga	8.199	46.131	1100	
Presolana	10.099	45.929	1290	
Aosta	7.355	45.742	563	Longinelli and Selmo, 2006
Introd	7.183	45.695	880	

Schürch, M., Kozel, R., Schotterer, U., Tripet, J.P., 2003. Observation of isotopes in the water cycle – the Swiss National Network (NISOT). Environ. Geol. 45, 1–11.

IAEA, 2010. Global Network of Isotopes in Precipitation. The GNIP Database. www.isohis.iaea.org.

Kralik, M., Papesch, W., Stichler, W., 2003. Austrian Network of Isotopes in Precipitation (ANIP): Quality assurance and climatological phenomenon in one of the oldest and densest networks in the world. Isot. Hydrol. and Integr. Water Resour. Manag, C&S Paper series. 23, 146–149.

Longinelli, A., Selmo E., 2003. Isotopic composition of precipitation in Italy: a first overall map. J. Hydrol. 270, 75–88.

Longinelli, A., Selmo E., 2006. Isotopic composition of precipitation in Northern Italy: Reverse effects of anomalous climatic events. J. Hydrol. 329, 471–476.

Stations with asteriks belong also to the GNIP global network.