



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
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Dipartimento federale dell'interno DFI  
Ufficio federale di meteorologia e climatologia MeteoSvizzera

# Autunno e prima parte dell'inverno 2018/19

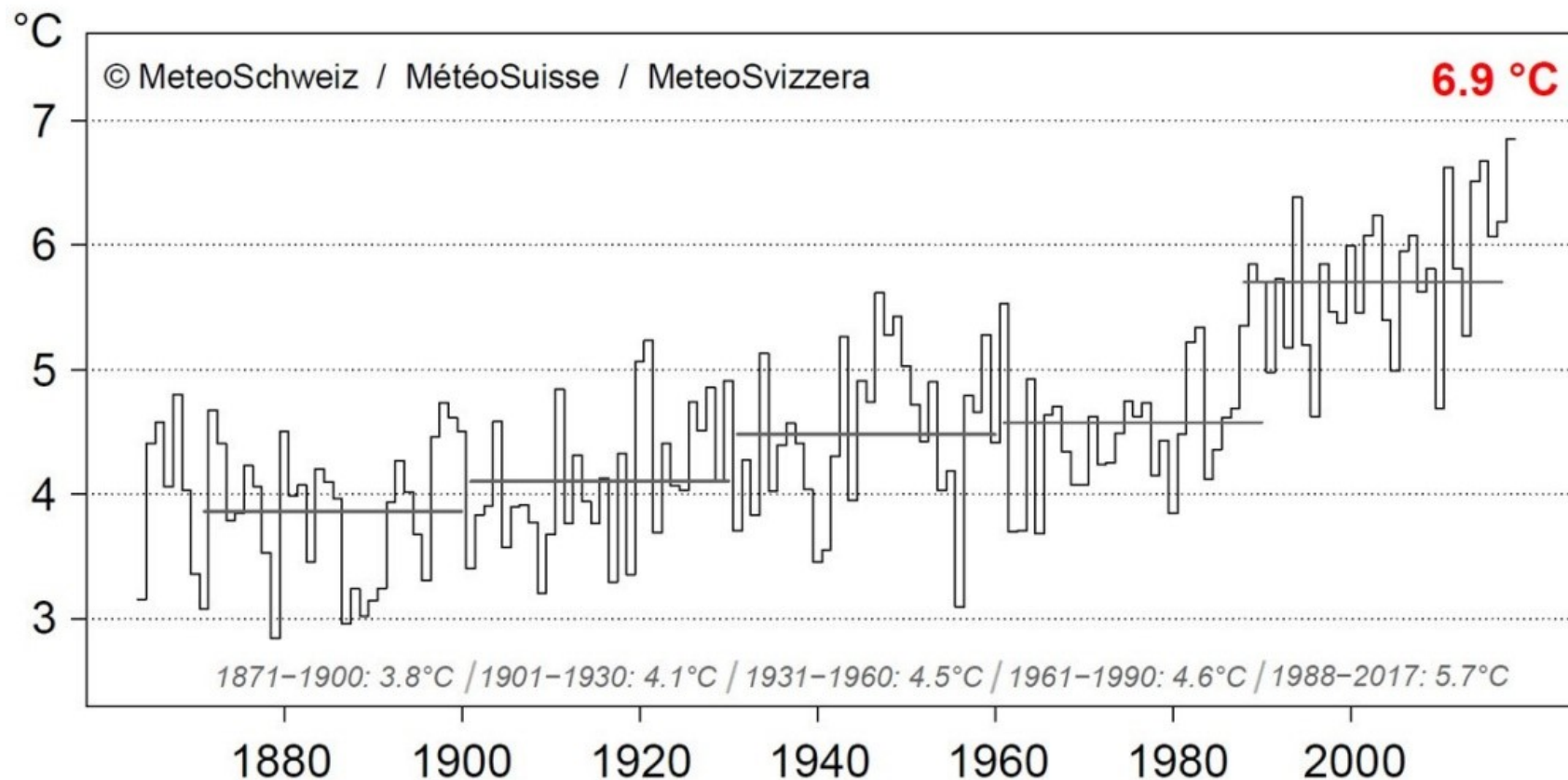




# Contenuto

- Anno 2018
- Caratteristiche principali autunno 2018 e prima parte dell'inverno 2018/19
- Stratospheric Warming e freddo polare: alcune spiegazioni

# 2018: l'anno più caldo dall'inizio delle misurazioni sistematiche.



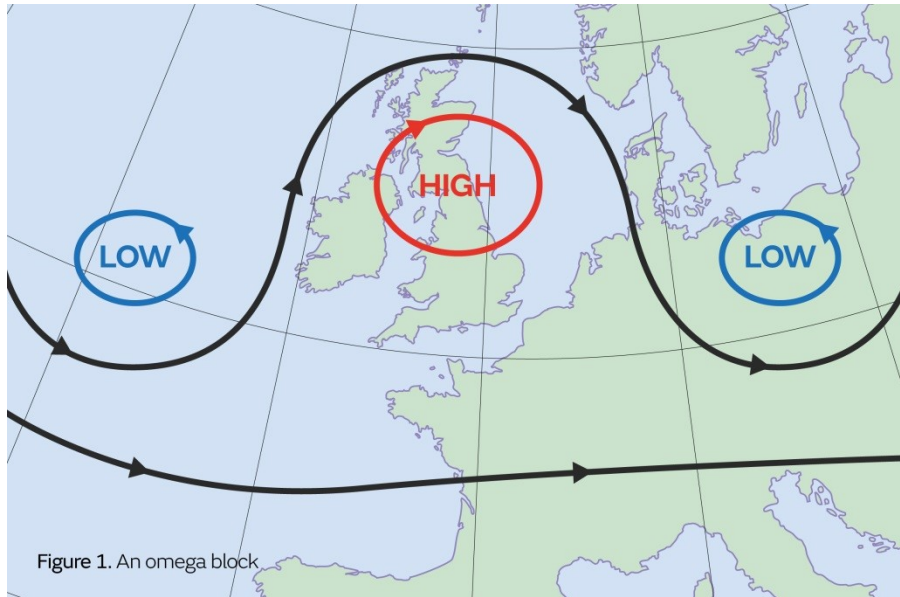
**Nord: 1.5 – 2.0 °C; Sud: 1.0 – 1.5; Media CH: 1.5°**



# 2018: l'anno dei blocchi atmosferici?

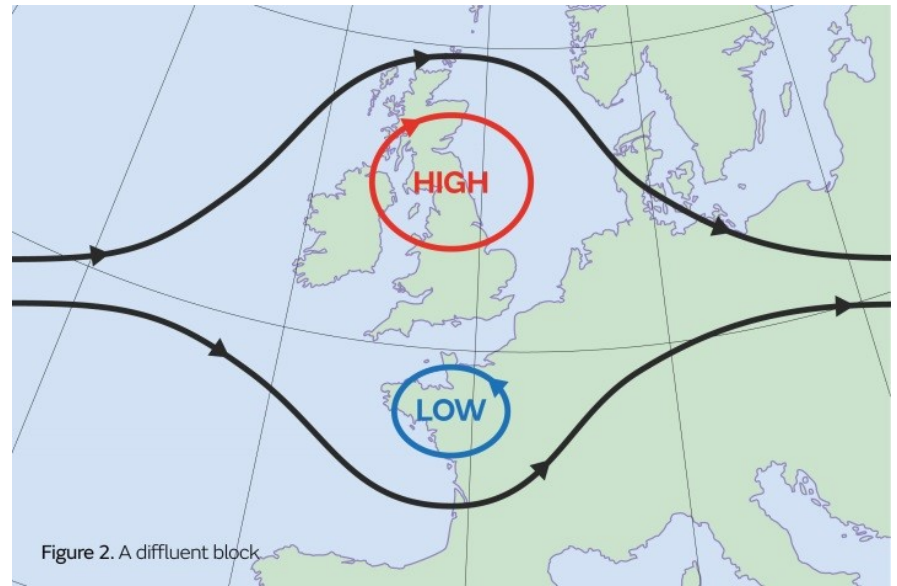


# 2018: una situazione spesso «bloccata»



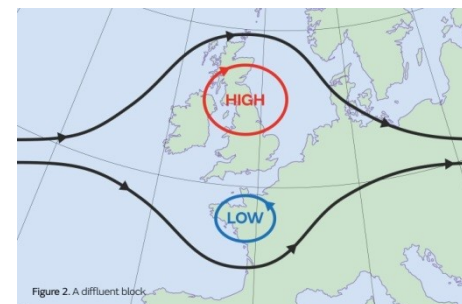
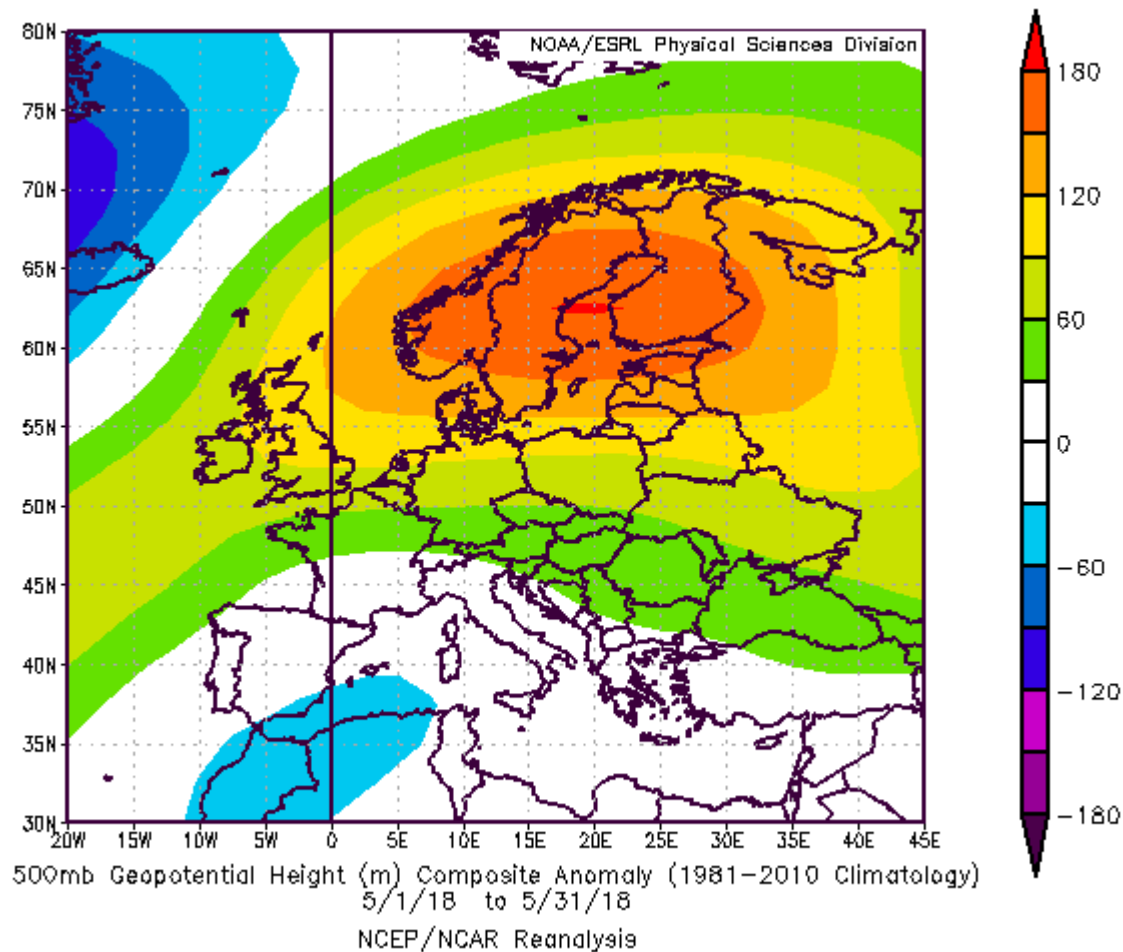
Blocco «omega»

Blocco «diffluente»





# Blocco diffluente durante la stagione «calda»

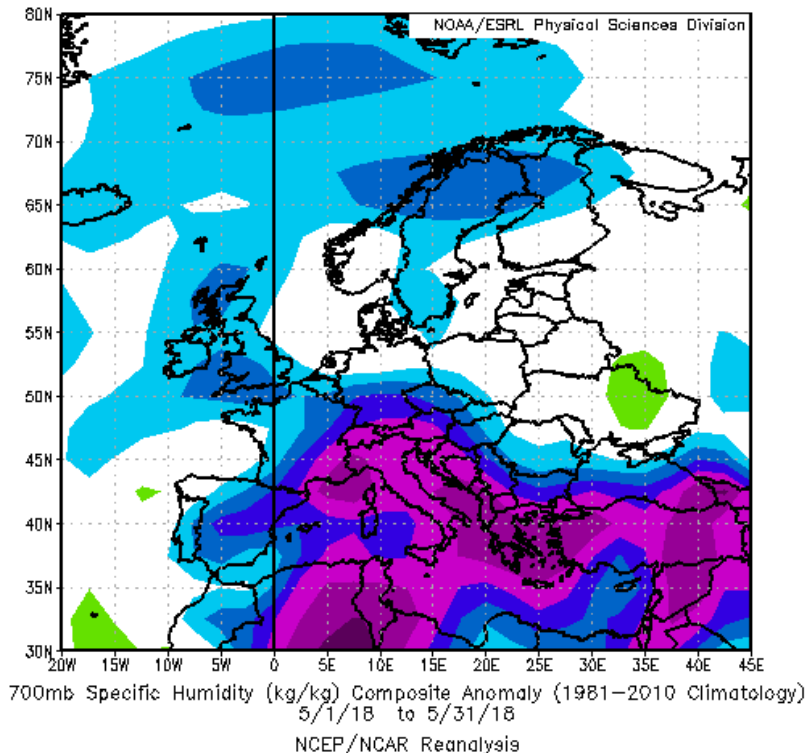




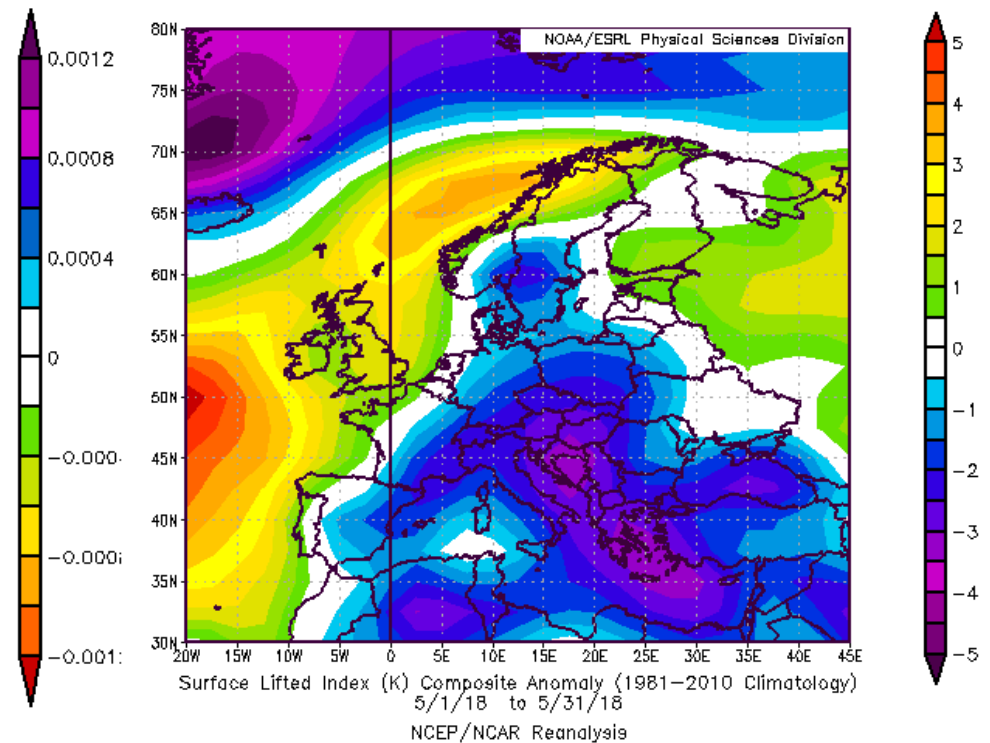


# Blocco diffluente durante la stagione «calda»

## 700 hPa Specific Humidity



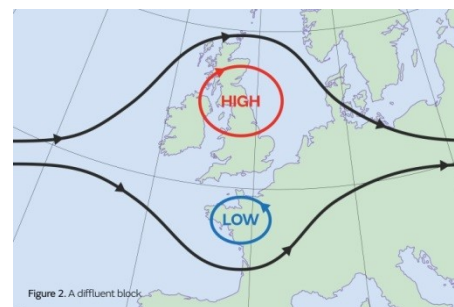
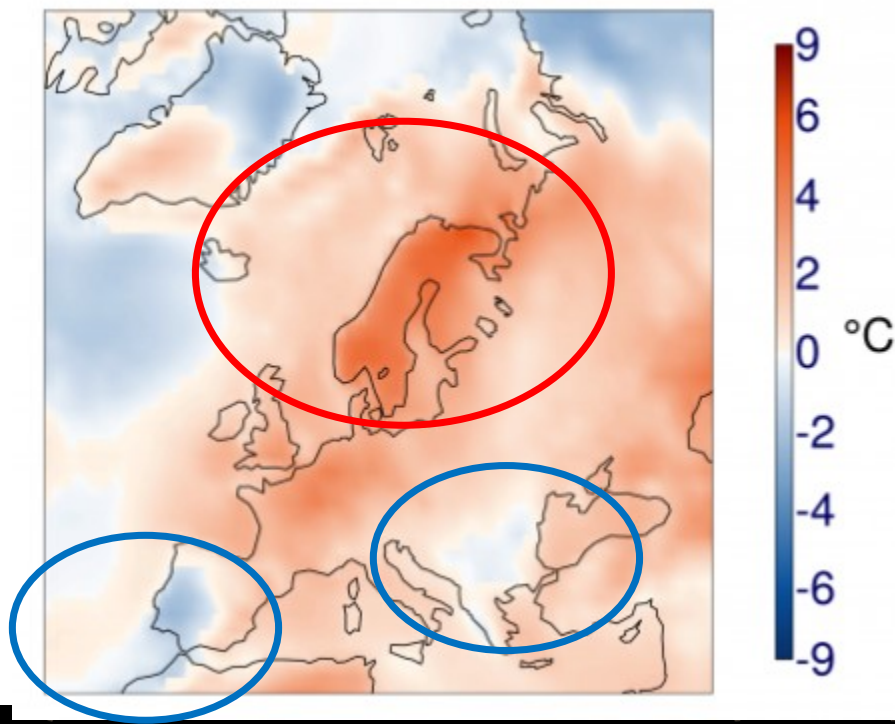
## Surface Lifted Index Anomaly





# Estate canicolare in Scandinavia

Surface air temperature anomaly for July 2018 relative to 1981-2010

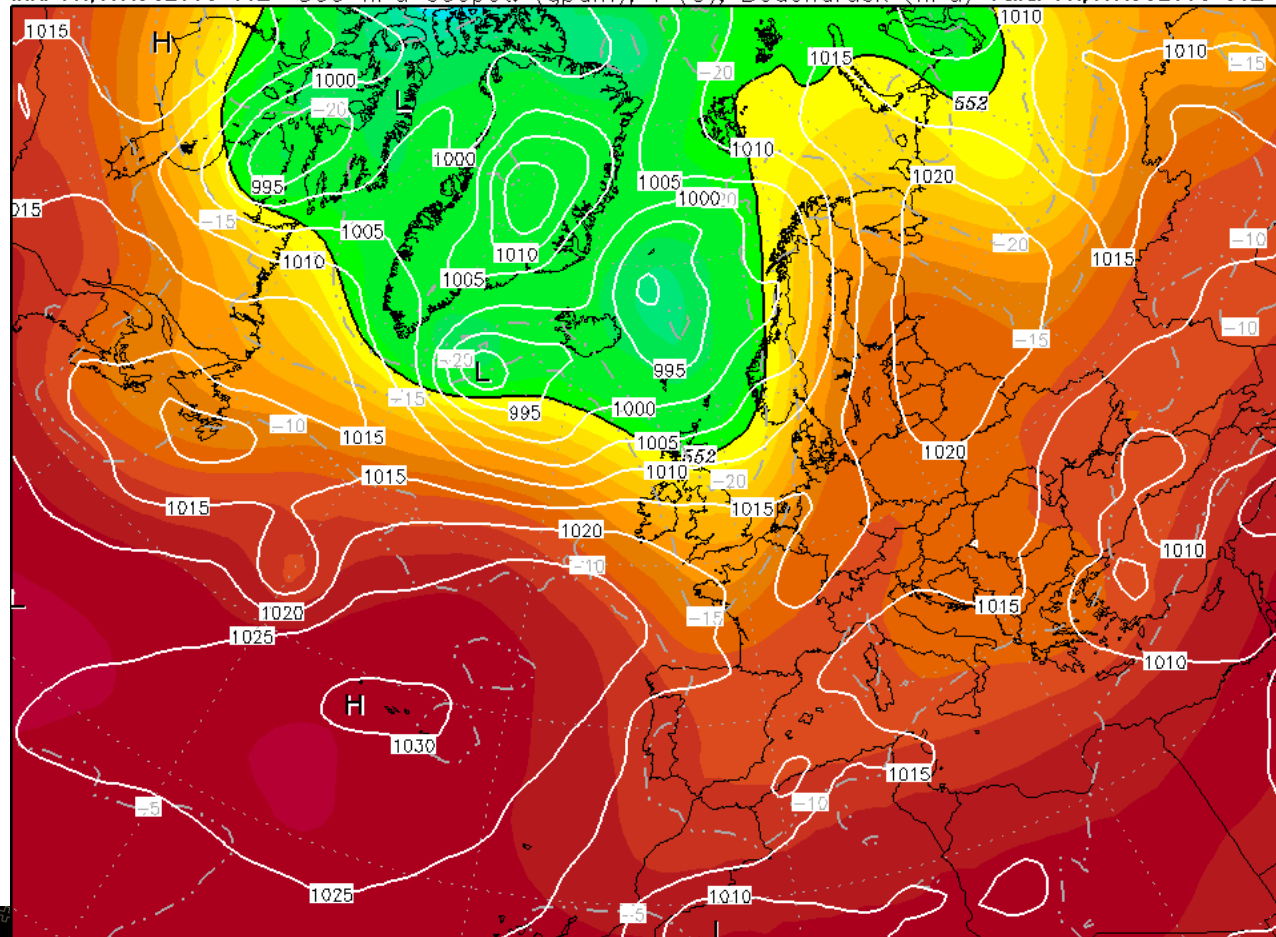






# Pochi sistemi frontali degni di nota

Init: Fri,17AUG2018 00Z 500 hPa Geopot. (gpm), T (C), Bodendruck (hPa) Valid: Fri,17AUG2018 00Z



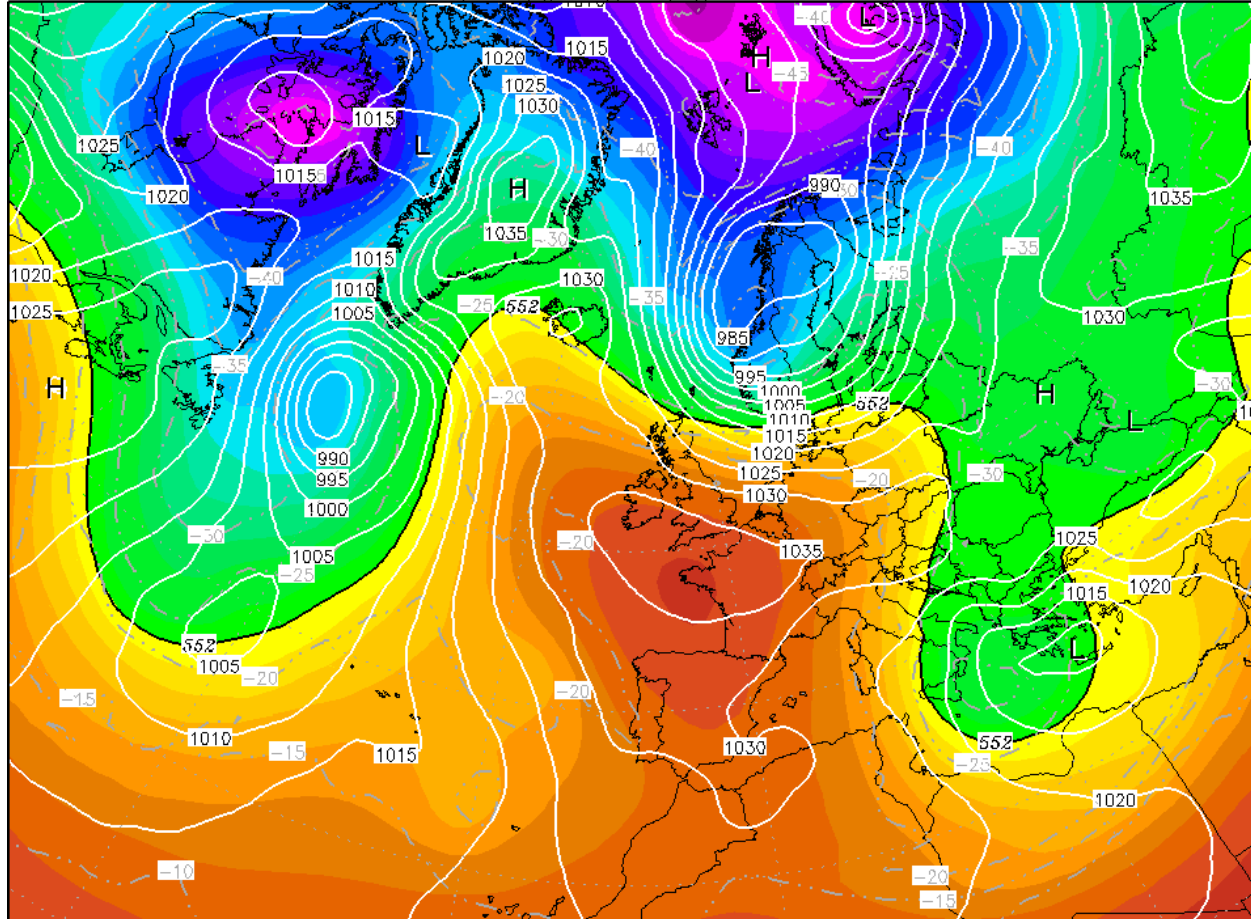
Data: GFS OPERATIONAL 0.250°  
(C) Wetterzentrale  
[www.wetterzentrale.de](http://www.wetterzentrale.de)

**MeteoSvizzera**



# ...finale a «omega»

Init: Tue,01JAN2019 00Z 500 hPa Geopot. (gpm), T (C), Bodendruck (hPa) Valid: Tue,01JAN2019 00Z



Data: GFS OPERATIONAL 0.250°  
(C) Wetterzentrale  
[www.wetterzentrale.de](http://www.wetterzentrale.de)

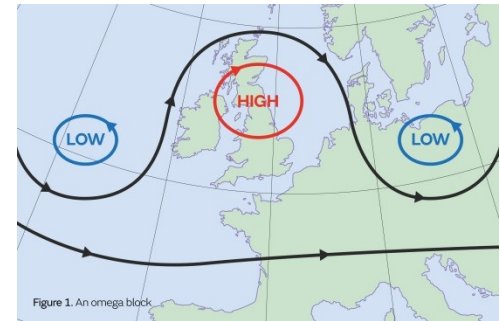
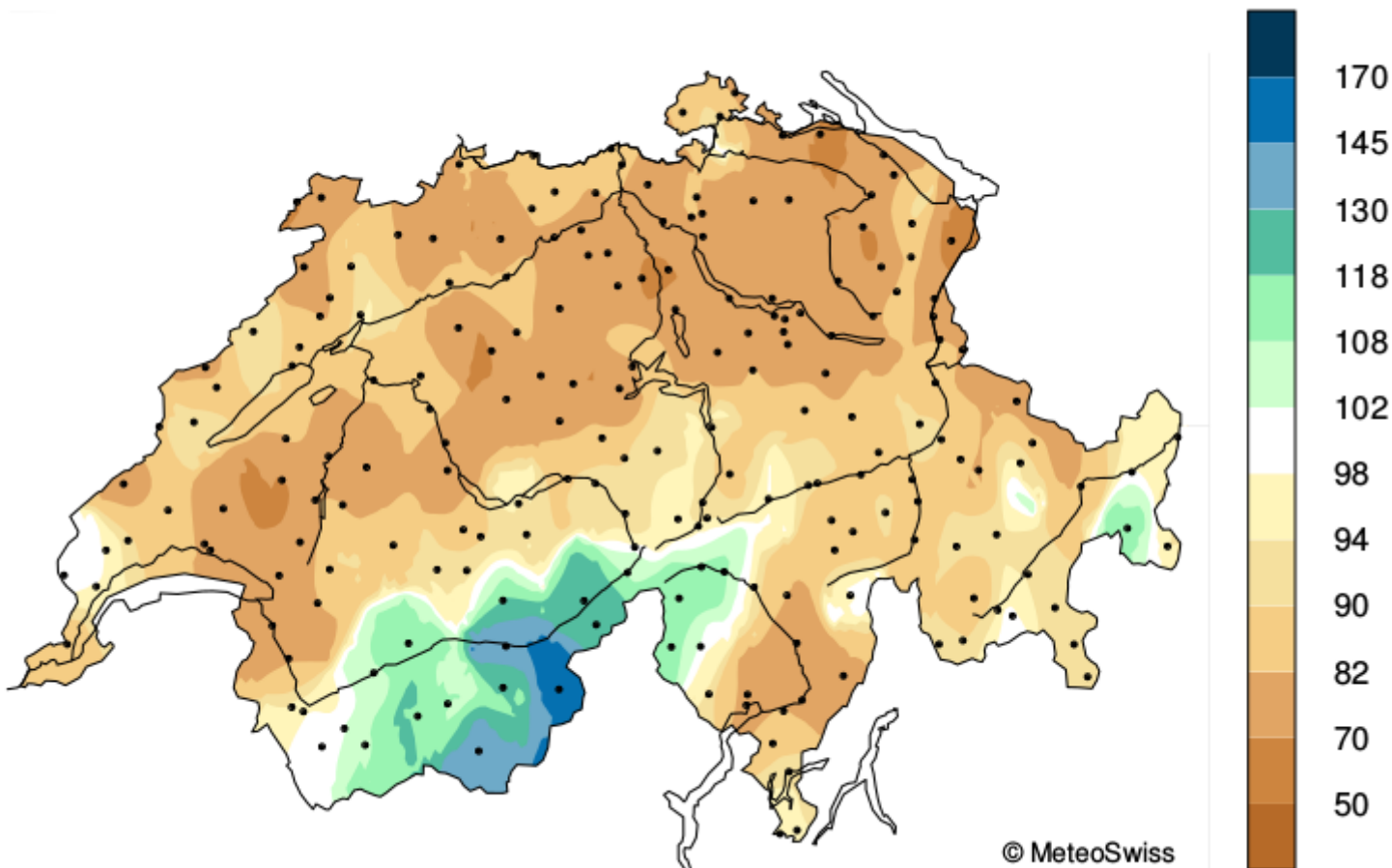


Figure 1. An omega block



# Anomalia Precipitazioni 2018

Yearly Precipitation Anomaly (%) 2018 (Ref. 1981–2010)

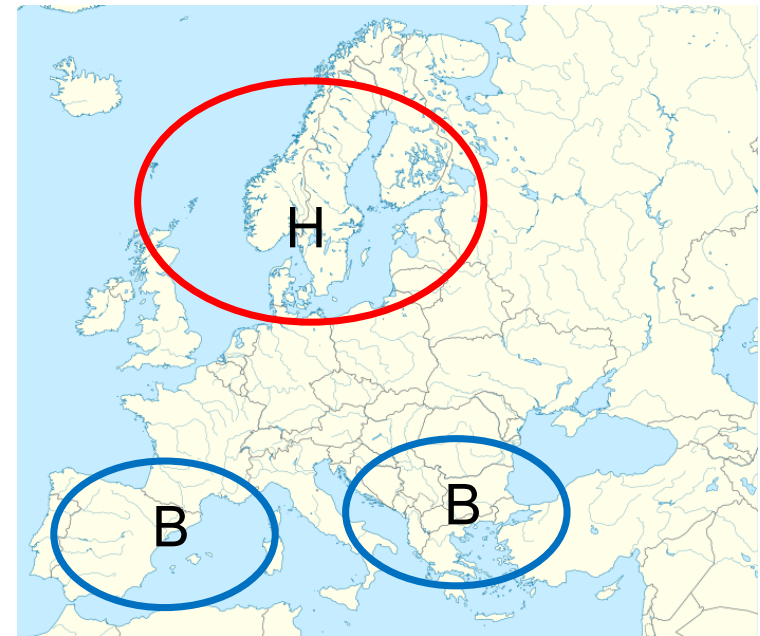
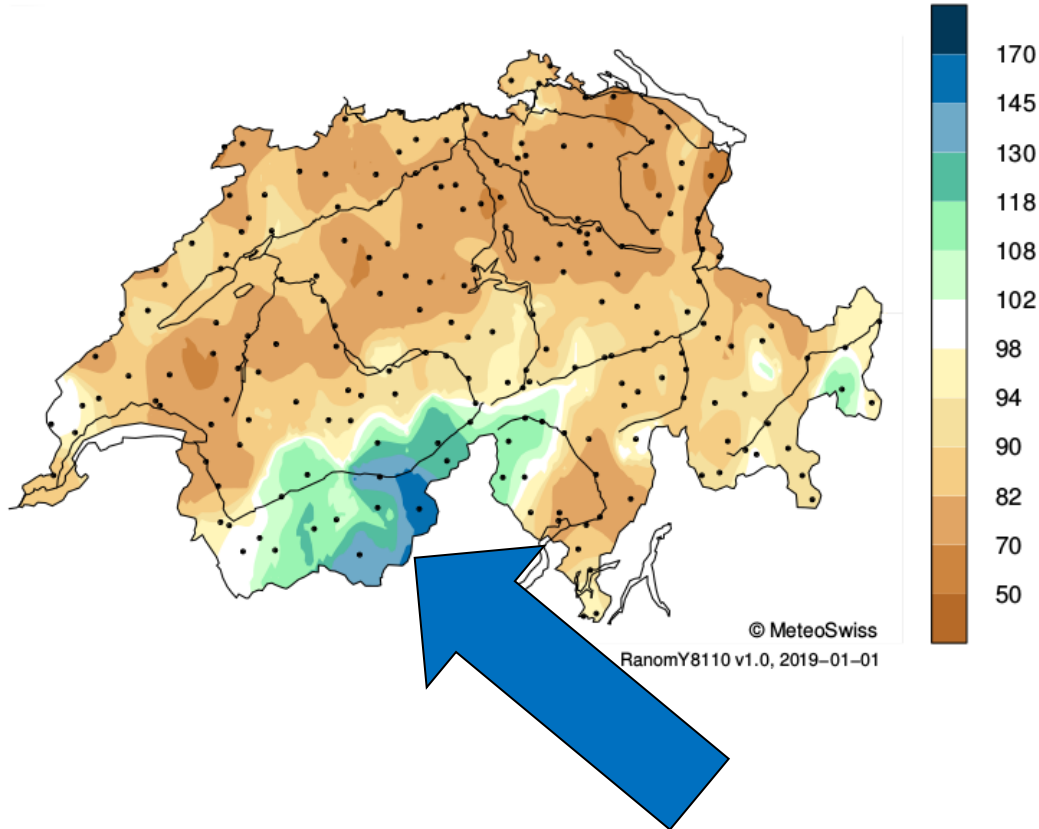


RanomY8110 v1.0, 2019-01-01



# Anomalia Precipitazioni 2018

Yearly Precipitation Anomaly (%) 2018 (Ref. 1981–2010)





# Autunno 2018

## Anomalia Temperature Set– Dic 2018



N/NW-CH	Mittelland West				Mittelland Zentral/Ost				Täler Alpennordhang				Jura		Berglagen				Täler GR				Wallis				Alpensüdseite																					
SHA RUE BAS FAH	GVE	PUY	NEU	BER	WYN	LUZ	BUS	GUT	KLO	TAE	SMA	STG	CHU	VAD	ALT	ENG	ABO	COF	CHA	DOL	MLS	NAP	PIL	SAE	WFJ	JUN	DAV	SCU	SAM	AND	DIS	ULR	VIS	SIO	MVE	ZER	ROB	SBE	CIM	PIO	COM	OTL	LUG	SBO				
-2.3	-3.4	-2.1	-2.5	-1.8	-2.9	-2.9	-3.1	-2.1	-3.8	-2.6	-2.7	-2.7	-2.7	-3.8	-4.3	-3.5	-3.9	-3.0	-3.9	-4.3	-3.0	-4.0	-4.2	-5.1	-4.9	-4.8	-4.4	-4.5	-3.0	-3.5	-3.6	-2.7	NaN	-4.3	-2.3	-2.8	-1.5	-3.7	-3.7	-1.9	-3.0	-1.7	-1.5	-0.3	-2.2	-2.4	-2.1	1
-2.4	-2.8	-2.0	-2.7	-0.8	-2.2	-2.6	-2.8	-1.2	-2.5	-1.8	-1.7	-2.2	-2.4	-2.9	-3.4	-1.9	-2.1	-2.0	-3.1	-3.4	-2.4	-3.2	-3.3	-3.3	-4.1	-3.0	-2.2	-2.5	-0.3	-2.1	-2.2	-2.3	NaN	-2.5	-1.1	-1.1	-0.6	-2.4	-1.8	-3.0	-1.5	-2.0	-0.8	-1.6	-2.1	-2.4	-1.7	2
-0.2	-1.1	-0.2	-0.9	-0.4	-0.5	-1.5	-1.4	0.1	-0.8	0.1	-0.3	-0.1	-0.3	-0.8	-1.6	0.1	-0.8	-0.7	-1.4	-1.4	-1.1	-2.0	-1.6	-2.0	-2.0	-1.9	-1.4	-2.2	-1.3	-0.9	-1.0	-0.9	NaN	-0.9	0.6	0.8	0.8	-1.0	-0.4	-1.9	-1.7	-1.2	-1.3	-1.2	-1.0	-1.5	-0.7	3
1.5	1.3	1.1	1.2	0.5	1.0	0.3	0.2	0.9	0.6	1.7	0.9	2.0	0.6	1.5	0.1	1.4	0.0	0.9	0.8	0.5	0.1	0.7	0.6	0.3	1.0	0.1	0.0	-0.6	1.1	0.9	0.6	0.4	NaN	1.0	2.1	1.6	1.6	0.1	0.5	-0.7	1.2	1.5	1.6	-0.1	0.5	0.0	0.0	4
2.8	3.4	2.8	3.4	2.0	2.3	1.8	1.9	2.2	2.0	2.4	2.1	2.3	1.5	2.8	2.0	3.2	1.7	1.7	1.7	2.3	1.9	3.5	2.8	2.9	3.6	2.9	2.7	2.3	2.4	3.0	2.0	1.7	NaN	2.7	1.9	2.5	3.1	2.4	2.6	1.2	1.4	2.2	1.1	1.2	2.0	1.6	1.4	5
3.1	2.4	1.6	1.8	0.5	0.7	0.4	1.6	2.3	1.7	2.4	3.4	2.7	3.1	2.9	3.0	3.1	3.2	2.1	2.2	1.7	0.5	1.7	0.6	0.7	2.6	1.6	2.6	1.8	2.0	2.7	2.3	3.0	NaN	2.9	1.9	1.3	1.8	1.3	1.5	1.8	1.0	1.3	1.0	1.2	1.6	2.1	1.9	6
3.0	1.3	2.0	1.1	2.0	1.8	1.9	2.6	3.0	1.6	2.7	3.2	2.4	2.7	1.8	1.2	1.4	0.9	1.4	1.1	0.9	0.6	-0.1	-0.2	-0.4	0.1	-0.5	-0.2	-0.5	-0.3	0.9	0.0	1.4	NaN	0.8	2.0	3.0	3.4	0.9	1.5	0.6	1.6	1.8	2.4	0.8	1.5	1.4	1.7	7
1.8	1.5	0.9	1.1	0.8	1.4	1.2	1.6	2.2	1.9	1.6	1.8	1.7	1.4	1.9	1.1	2.5	1.7	1.5	1.9	1.5	0.7	1.5	1.9	2.3	1.8	2.2	2.0	2.5	2.4	1.7	2.0	1.1	NaN	2.7	2.8	1.4	2.4	1.6	1.8	0.6	2.1	2.5	2.2	0.6	2.5	2.3	2.3	8
2.7	4.0	2.4	3.9	2.6	3.4	2.7	2.8	2.6	3.1	2.3	2.2	1.8	2.0	3.5	3.2	3.6	3.5	2.1	2.8	3.8	2.2	4.9	4.7	4.4	5.0	4.1	3.6	3.9	3.3	3.4	3.4	1.6	NaN	3.8	2.9	2.9	4.2	4.1	3.9	1.3	1.9	3.1	2.6	1.7	3.3	2.7	2.6	9
3.9	6.1	4.3	5.8	4.2	5.0	4.2	4.1	3.5	4.1	3.5	3.3	3.1	3.0	4.6	4.5	4.2	4.4	3.7	4.6	4.4	3.3	6.0	5.6	4.5	5.8	3.8	3.2	3.0	2.7	3.7	3.1	2.3	NaN	4.1	4.3	4.3	5.5	4.5	4.5	2.1	4.1	4.5	3.8	2.6	4.2	3.6	3.6	10
5.1	7.2	5.2	6.8	4.1	5.0	4.5	4.7	4.1	4.3	4.4	4.2	4.3	4.2	5.5	5.7	5.4	5.5	3.7	4.6	5.2	4.2	7.2	7.3	6.9	7.6	6.3	5.9	6.9	7.5	4.7	4.2	2.0	NaN	5.5	3.8	4.2	5.2	5.5	4.8	1.8	4.7	5.9	4.4	3.5	4.9	4.3	4.4	11
6.6	8.0	6.8	8.2	7.1	6.7	5.4	6.2	5.8	5.9	6.1	5.0	6.0	5.8	6.7	7.1	6.4	6.4	5.0	6.3	6.5	6.5	7.6	7.6	7.2	8.1	7.2	7.0	7.3	5.5	6.0	5.6	3.1	NaN	6.6	5.9	5.8	6.9	7.0	5.7	3.1	4.6	5.4	4.8	4.2	5.4	4.8	4.8	12
4.1	4.3	4.3	5.2	5.9	4.7	3.1	5.1	4.6	4.5	4.8	4.5	4.7	5.0	4.4	3.8	5.8	5.0	5.0	4.5	4.1	4.6	4.5	4.5	3.8	4.4	3.8	3.4	3.9	2.9	5.1	4.3	3.3	NaN	4.8	4.9	5.1	6.2	4.1	4.1	2.8	4.8	4.4	5.2	4.3	4.3	3.7	4.4	13
3.6	2.8	2.9	2.6	4.7	3.9	3.4	3.9	4.6	3.3	4.2	3.9	4.0	4.1	3.6	2.4	3.9	3.0	3.6	3.0	2.2	2.4	2.0	1.8	1.7	1.9	1.9	1.9	2.3	2.6	3.2	3.4	3.7	NaN	3.2	4.4	3.6	4.7	2.3	3.4	3.2	4.1	4.6	4.1	2.7	3.6	3.6	3.9	14
3.0	1.7	1.8	1.6	3.1	3.6	3.1	3.2	3.6	3.1	3.1	3.2	2.8	2.8	2.9	2.0	3.9	3.4	3.6	3.2	2.8	0.8	1.2	2.4	2.3	1.2	1.8	1.8	2.9	4.1	3.5	4.5	3.9	NaN	3.5	4.2	3.7	4.2	2.8	3.9	2.9	3.9	4.1	5.0	3.0	4.4	4.0	3.9	15
2.3	3.1	2.4	3.6	2.7	2.9	2.0	2.4	1.9	2.2	2.2	2.3	1.6	1.9	2.3	2.4	3.8	2.4	2.0	3.0	3.6	2.6	4.3	4.3	4.1	4.5	4.8	4.9	4.7	3.7	4.8	5.0	3.5	NaN	3.7	2.8	1.8	3.5	3.3	3.1	2.9	2.4	2.5	2.2	1.9	1.8	3.2	3.9	16
3.8	6.4	5.6	7.0	4.8	4.9	4.0	4.8	4.1	4.7	4.2	3.9	3.7	4.2	5.2	5.1	4.8	5.0	3.9	4.6	4.8	4.1	5.9	6.3	5.0	6.3	5.4	5.3	4.9	4.3	4.7	5.3	4.0	NaN	5.2	4.3	5.2	6.5	5.5	4.9	3.8	3.0	3.4	3.2	2.7	3.4	3.5	3.8	17
4.8	7.1	5.8	8.1	6.4	6.3	5.3	5.8	5.7	4.3	4.8	4.5	4.2	4.5	5.3	5.6	5.4	5.6	4.1	4.9	5.4	5.9	6.8	6.3	6.0	6.7	5.2	5.0	4.1	3.7	3.8	2.2	3.5	NaN	6.0	3.8	5.5	7.3	6.1	5.0	2.7	3.1	3.4	3.0	3.0	3.8	3.3	4.1	18
5.2	7.4	6.1	8.3	5.9	6.2	5.3	6.2	5.5	5.2	5.4	4.9	4.8	4.7	6.1	5.9	5.0	5.1	4.5	4.6	5.4	5.7	7.0	6.4	5.5	6.9	5.6	4.6	4.0	2.9	3.8	3.0	3.1	NaN	4.7	4.4	4.3	6.2	5.1	4.6	2.8	5.4	5.6	4.1	3.3	4.6	4.1	4.3	19
6.0	8.0	6.9	8.2	5.6	6.3	5.9	6.5	5.7	5.6	6.1	5.2	5.3	5.4	6.4	6.6	5.5	6.2	4.7	5.1	5.9	5.8	7.1	7.5	6.3	7.5	6.5	6.0	6.3	5.0	4.8	4.0	2.6	NaN	6.0	4.4	4.2	6.4	5.9	5.4	3.1	5.5	5.7	4.3	3.8	5.0	4.5	4.5	20
3.8	5.0	4.0	4.5	5.5	5.3	4.2	4.8	4.5	4.2	4.1	4.7	4.0	4.7	4.7	5.8	6.2	6.4	4.6	5.5	6.2	3.1	3.3	3.6	4.1	5.3	4.9	4.7	5.8	4.5	5.8	6.1	4.3	NaN	6.7	4.9	5.4	6.0	5.1	5.5	4.1	4.3	4.5	5.2	5.0	5.4	4.6	4.7	21
0.5	0.1	1.1	0.8	1.9	1.4	1.9	2.2	2.0	0.9	1.6	0.5	0.9	0.9	1.0	-0.5	1.1	0.4	1.0	0.1	1.7	1.1	-0.3	0.6	1.4	-0.6	0.1	-0.5	2.9	3.7	0.5	2.4	5.5	NaN	0.0	3.5	2.6	3.3	1.9	3.0	4.9	3.6	5.0	6.0	6.0	6.4	5.2	5.3	22
4.6	5.7	4.9	5.2	7.7	6.2	6.3	7.5	7.4	5.7	6.5	5.5	6.4	6.6	6.2	5.7	4.7	5.1	5.1	6.4	8.2	4.5	3.4	3.0	3.8	4.7	4.3	4.1	5.8	5.2	5.8	5.2	8.6	NaN	4.8	6.1	6.1	7.0	6.6	6.1	7.0	6.3	5.6	6.4	6.6	6.5	6.1	6.0	23
-2.9	-3.7	-2.5	-3.2	-1.1	-2.2	-1.9	-2.6	-1.9	-2.7	-2.3	-2.6	-2.7	-3.3	-3.3	-4.3	-2.6	-3.4	-2.0	-3.3	-3.6	-4.0	-5.6	-5.1	-5.8	-5.5	-6.6	-6.8	-5.9	-1.5	-3.7	-2.8	-1.6	NaN	-3.5	-1.5	-0.1	0.7	-1.7	-0.3	2.8	-1.6	0.8	0.1	2.2	4.5	4.0	5.2	24
-3.1	-3.9	-3.1	-3.3	-1.0	-2.3	-1.9	-3.2	-2.2	-2.8	-2.5	-2.5	-3.5	-3.7	-3.5	-4.6	-3.8	-4.7	-3.5	-4.0	-3.1	-2.6	-4.6	-3.6	0.9	-5.5	-2.2	-2.0	-1.9	1.9	-4.4	-4.9	-4.2	NaN	-4.2	-2.3	-2.7	-1.2	-1.8	-0.8	-3.7	-3.1	-3.3	-2.8	-2.8	-0.4	-0.5	-0.9	25
-2.3	-0.9	-1.0	-0.6	-1.1	-1.2	-1.8	-1.6	-2.0	-1.9	-1.8	-3.2	-2.9	-2.9	-2.1	-2.4	-0.8																																



	N/NW-CH				Mittelland West				Mittelland Zentral/Ost								Täler Alpennordhang				Jura				Berglagen				Täler GR				Wallis				Alpensüdseite												
	SHA	RUE	BAS	FAH	GVE	PUY	NEU	BER	WYN	LUZ	BUS	GUT	KLO	TAE	SMA	STG	CHU	VAD	ALT	ENG	ABO	COF	CHA	DOL	MLS	NAP	PIL	SAE	WFJ	JUN	DAV	SCU	SAM	AND	DIS	ULR	VIS	SIO	MVE	ZER	ROB	SBE	CIM	PIO	COM	OTL	LUG	SBO	
1	-2.2	-4.0	-3.0	-4.0	-2.6	-3.6	-3.0	-2.3	-2.3	-2.7	-2.1	-2.0	-2.1	-1.9	-2.7	-3.6	-3.0	-2.9	-2.8	-4.2	-4.8	-4.3	-6.3	-6.7	-7.0	-5.5	-6.3	-6.1	-6.1	-6.7	-4.4	-2.6	-2.9	NaN	-4.6	-2.5	-2.1	-1.8	-4.5	-3.6	-0.4	-3.2	-3.4	-1.6	0.2	-0.2	-0.2	-0.2	1
2	-2.9	-4.0	-2.5	-3.7	-2.6	-2.5	-2.6	-2.7	-2.4	-2.2	-2.3	-2.3	-2.6	-2.6	-2.9	-3.7	-2.8	-3.0	-2.6	-3.5	-4.3	-4.4	-5.9	-4.6	-4.9	-5.4	-5.1	-6.6	-5.8	-2.5	-4.4	-2.5	-2.3	NaN	-4.2	-2.3	-3.0	-2.8	-5.2	-4.7	-0.6	-2.1	-1.0	0.4	1.5	0.5	-0.2	-0.8	2
3	-0.2	-1.1	-1.0	-1.2	0.4	0.5	0.6	0.4	0.4	0.5	0.0	0.0	0.1	0.4	-0.1	-0.6	-0.8	-1.0	0.0	-0.1	0.0	-0.7	-0.9	-0.4	-1.3	-1.0	-1.7	-2.2	-2.1	1.2	-0.6	-1.0	-0.7	NaN	-1.3	0.3	-2.4	0.1	-1.8	-1.8	2.0	1.4	3.8	3.1	2.9	0.9	-0.2	-1.5	3
4	0.5	0.3	-0.9	0.9	1.4	0.7	1.9	0.3	0.4	0.2	0.4	0.5	0.1	0.3	0.6	-0.3	0.6	0.2	-1.0	0.3	0.9	1.1	1.5	2.1	3.4	0.3	3.9	4.0	4.0	4.4	1.2	0.2	-0.8	NaN	1.6	1.1	0.0	1.8	1.8	2.1	-0.1	-0.1	1.7	0.7	1.0	2.0	1.0	-0.1	4
5	1.2	3.2	2.7	4.4	0.9	1.4	1.3	2.2	1.2	1.3	1.0	0.1	0.8	0.8	2.0	2.1	3.2	1.8	0.4	2.6	3.4	3.1	5.0	4.7	4.3	4.7	4.9	5.1	4.7	3.0	2.8	2.9	0.4	NaN	3.7	2.0	3.5	2.7	4.3	3.4	0.2	0.4	2.1	0.8	1.1	2.0	1.1	0.3	5
6	2.5	5.9	4.3	6.3	3.2	2.8	2.6	2.9	2.5	3.2	2.9	2.1	2.4	2.9	4.0	4.5	5.9	4.5	3.7	3.7	3.3	4.2	3.9	3.2	2.9	4.4	3.5	3.1	2.2	1.0	3.4	3.2	1.7	NaN	3.4	1.7	4.0	3.2	3.3	2.6	1.3	0.1	0.3	0.2	0.9	0.9	1.2	1.2	6
7	4.2	3.8	3.8	3.5	2.2	1.5	3.4	2.7	3.3	3.5	3.3	4.3	3.9	3.7	4.2	3.7	4.2	4.1	3.7	2.9	1.9	2.3	1.8	0.1	0.3	2.1	1.1	1.1	1.8	0.1	2.7	2.3	1.7	NaN	3.4	1.3	0.3	1.6	0.5	2.1	1.5	1.9	2.3	1.3	1.8	2.1	1.4	0.8	7
8	3.7	1.7	0.6	1.4	2.7	1.8	3.0	2.4	1.5	1.9	2.2	3.3	2.5	1.9	2.1	1.7	3.5	2.2	1.9	1.6	2.0	3.1	3.4	2.7	4.2	1.8	4.8	4.3	3.5	1.8	3.3	3.1	2.4	NaN	3.9	3.0	1.0	2.6	3.5	4.0	2.7	2.4	3.2	2.5	3.7	4.1	3.5	2.8	8
9	3.9	2.8	1.5	3.0	2.3	2.6	3.2	3.6	2.6	3.2	2.4	3.9	3.6	3.4	3.2	2.5	2.9	2.0	1.9	1.8	3.4	3.1	5.7	5.5	5.0	4.4	5.3	4.8	4.2	2.6	3.6	3.6	2.0	NaN	4.4	2.1	2.7	3.1	4.6	3.6	3.2	2.7	2.9	2.7	3.8	4.2	3.5	2.9	9
10	4.3	3.7	3.9	3.7	1.9	2.3	1.9	2.3	3.0	3.5	3.7	4.3	3.8	3.1	4.1	5.4	6.4	6.2	6.3	6.8	6.7	3.5	6.4	5.9	5.1	6.8	4.6	3.5	2.7	0.3	3.9	4.4	2.1	NaN	5.1	2.7	5.5	5.6	4.2	4.3	2.5	2.5	1.2	2.6	3.2	2.5	2.9	3.4	10
11	2.2	3.7	2.5	4.7	4.2	4.0	2.9	2.5	1.3	2.0	1.3	3.5	1.4	1.6	2.7	6.9	6.6	10.1	9.4	6.2	4.7	3.4	5.3	4.5	4.3	5.3	4.1	3.3	1.5	0.7	4.1	3.8	2.4	NaN	4.2	2.3	5.9	6.1	4.0	2.5	2.0	1.6	0.0	1.9	1.5	0.6	0.9	1.8	11
12	4.1	6.8	6.2	8.2	4.1	4.7	4.2	4.1	3.2	3.7	3.6	4.1	3.2	3.7	4.9	6.4	6.5	6.9	3.5	4.4	4.4	5.6	5.7	5.1	4.9	6.3	5.4	4.5	4.4	3.7	4.5	4.8	2.9	NaN	5.3	3.1	3.7	4.6	4.4	3.5	2.7	2.8	3.3	2.3	3.0	3.0	3.1	4.0	12
13	3.9	6.0	5.7	7.3	3.6	4.2	3.9	3.9	2.7	3.2	2.9	3.9	2.7	3.2	4.4	5.1	6.6	6.1	3.7	4.2	4.6	3.9	7.0	6.2	5.2	6.2	6.2	5.2	4.7	4.1	4.7	4.7	2.2	NaN	6.0	2.9	4.8	3.8	5.9	4.3	3.0	3.1	4.1	3.2	3.4	3.8	3.1	2.6	13
14	3.3	5.9	5.5	7.0	3.3	4.1	3.9	3.3	2.2	2.7	2.2	4.0	2.5	2.3	5.0	8.6	6.6	10.6	10.0	7.5	6.7	4.6	5.7	4.5	4.7	6.4	4.9	3.6	2.3	-0.9	3.0	3.8	1.5	NaN	4.5	2.0	7.1	5.4	4.5	2.5	3.1	2.2	1.8	2.8	3.2	3.0	2.5	1.7	14
15	3.5	5.8	3.6	5.4	3.1	4.5	3.5	2.4	1.9	3.0	2.3	3.0	2.1	2.2	5.2	7.9	6.6	9.2	9.2	7.1	5.5	3.0	5.4	5.1	3.9	5.9	3.5	2.1	0.9	-1.0	3.4	4.6	3.6	NaN	4.7	1.6	5.5	4.1	3.5	1.8	2.5	1.7	0.6	1.4	2.0	2.2	2.7	2.4	15
16	2.9	5.2	3.3	5.4	4.0	4.9	3.6	2.5	1.8	2.2	1.9	2.2	1.5	1.4	4.0	5.1	4.1	5.4	3.9	3.4	3.6	3.2	5.5	5.4	4.0	5.0	3.5	2.6	1.5	3.6	1.9	2.2	1.5	NaN	3.7	1.8	4.6	3.8	3.9	2.1	2.1	1.7	1.6	2.1	2.4	3.0	2.7	2.4	16
17	3.4	4.8	2.5	4.8	1.9	3.1	3.3	1.7	1.1	2.2	1.5	2.6	1.3	1.5	3.2	3.5	3.3	3.9	0.6	2.7	3.1	2.2	4.6	4.6	3.9	4.1	4.2	3.6	3.5	4.7	2.3	2.5	1.1	NaN	3.6	1.6	2.3	3.3	3.8	2.9	1.5	1.6	3.0	2.4	2.5	3.1	3.0	3.2	17
18	4.5	4.6	1.7	4.1	2.8	3.6	4.7	2.7	2.4	2.2	2.3	4.0	2.7	2.1	3.3	2.4	2.0	0.9	0.6	2.2	3.2	4.3	3.9	3.5	5.0	2.5	3.4	3.0	3.6	5.4	2.6	2.6	1.2	NaN	3.5	2.6	2.1	3.1	4.1	3.9	2.2	2.4	4.3	2.3	3.5	3.9	3.4	3.0	18
19	3.3	2.4	1.0	2.3	1.8	2.7	3.3	1.4	0.8	1.0	0.9	1.9	0.8	0.7	1.3	0.5	1.7	0.6	0.7	1.1	3.6	3.5	3.8	4.9	5.3	3.5	5.2	5.0	4.1	4.7	2.9	2.8	1.2	NaN	3.1	2.0	1.6	2.9	3.7	3.6	2.7	3.4	4.8	2.7	3.7	4.5	3.8	3.1	19
20	2.1	2.3	0.0	2.0	1.1	1.8	3.5	2.1	2.5	1.7	2.1	2.0	2.2	2.0	2.3	1.3	0.5	0.6	1.6	0.6	2.6	2.1	3.9	5.0	4.5	2.4	4.4	3.3	2.5	4.0	1.9	2.3	1.0	NaN	2.2	1.9	1.0	2.2	2.7	3.5	2.5	5.4	5.3	2.8	3.4	4.8	4.2	2.6	20
21	0.9	0.6	-0.4	0.8	1.2	1.2	2.0	0.2	-0.6	0.4	-0.4	1.2	-0.3	-0.4	0.0	-0.5	-0.7	-1.3	-0.4	-0.4	1.6	1.9	4.1	3.7	4.6	0.9	3.3	1.3	0.3	2.8	0.1	-0.1	-0.6	NaN	0.0	0.3	-0.5	1.2	1.7	2.4	3.8	4.8	5.4	4.4	5.0	2.6	2.5	1.7	21
22	0.1	-0.7	-1.8	-0.6	1.9	0.0	0.9	-0.8	-0.9	-1.5	-1.7	-1.1	-1.5	-3.0	-1.6	-2.6	-2.2	-2.8	-1.8	-2.5	-0.7	-0.7	0.6	2.0	1.8	-1.1	0.4	0.0	0.1	4.0	-1.9	-1.1	-1.2	NaN	-1.6	-1.0	-2.3	-0.4	-0.7	0.7	-0.3	2.8	0.4	0.8	0.6	1.3	0.7	-0.7	22
23	1.0	0.1	0.5	0.8	1.1	1.0	1.8	0.4	-0.2	0.4	0.4	1.0	0.1	0.5	0.3	0.5	0.3	0.0	-0.3	0.6	1.1	0.2	1.5	2.8	2.5	1.6	1.9	0.1	-0.2	2.0	0.8	2.2	1.4	NaN	0.0	1.0	-1.0	0.5	1.6	0.7	4.4	5.2	5.9	6.8	3.8	1.1	0.3	-1.1	23
24	3.2	2.1	2.7	0.4	2.7	4.0	3.7	3.8	3.7	3.5	3.1	3.7	3.4	3.8	2.9	2.3	1.8	1.4	3.5	2.3	2.9	0.6	2.2	3.9	3.2	2.2	2.4	1.0	1.2	3.1	2.7	3.2	6.7	NaN	1.1	5.0	4.6	4.3	5.9	4.5	11.9	7.8	8.6	9.0	12.6	11.1	8.0	9.0	24
25	3.0	2.0	1.6	0.0	2.1	2.2	2.7	2.1	3.0	2.9	2.7	2.8	2.1	2.7	2.8	2.8	3.9	3.1	1.5	2.2	3.8	1.2	5.2	6.5	5.7	4.3	4.8	3.0	3.7	4.2	3.4	3.7																	

## Abweichung vom Temperaturmittel (°C)

November 2018

Normperiode: 1981 – 2010

	N/NW-CH				Mittelland West				Mittelland Zentral/Ost							Täler Alpennordhang					Jura				Berglagen					Täler GR					Wallis					Alpensüdseite									
	SHA	RUE	BAS	FAH	GVE	PUY	NEU	BER	WYN	LUZ	BUS	GUT	KLO	TAE	SMA	STG	CHU	VAD	ALT	ENG	ABO	COF	CHA	DOL	MLS	NAP	PIL	SAE	WFJ	JUN	DAV	SCU	SAM	AND	DIS	ULR	VIS	GIO	MVE	ZER	ROB	SBE	CIM	FIO	COM	OTL	LUG	SBO	
1	0.9	1.8	0.5	1.1	0.6	0.9	1.3	0.9	0.4	0.6	0.3	1.5	0.4	0.8	1.1	4.2	2.6	3.9	4.7	3.3	2.3	0.8	0.7	-0.5	-0.4	1.1	0.8	1.2	0.4	-1.3	2.6	0.7	1.1	NaN	-0.3	-0.2	3.2	3.7	0.8	0.1	0.9	-1.2	-1.8	-2.3	-1.5	-2.2	-1.1	0.3	1
2	2.0	1.2	0.1	0.3	1.6	1.8	1.4	2.0	2.1	2.6	2.2	2.2	2.0	1.7	2.2	1.9	1.4	1.8	2.0	1.7	0.4	-0.3	-0.9	-1.0	-2.2	0.0	-2.0	-0.3	0.2	-0.2	1.3	0.1	1.0	NaN	0.7	1.6	2.5	2.5	0.5	1.1	1.9	0.9	0.4	0.9	1.1	0.4	1.1	2.3	2
3	4.4	1.0	0.8	0.1	3.2	2.8	3.2	3.2	3.9	3.0	4.1	4.0	4.1	3.5	3.0	1.6	2.5	2.1	1.7	1.4	1.5	0.3	1.7	1.9	3.1	0.1	3.1	3.9	3.7	2.6	2.7	3.3	1.8	NaN	2.3	3.5	2.1	2.3	3.0	2.5	3.8	1.4	3.2	2.7	2.1	1.5	1.8	3.0	3
4	3.5	2.0	1.2	0.7	2.4	1.8	1.8	2.6	3.5	2.7	3.1	2.7	3.2	3.1	2.0	1.5	4.2	1.3	2.5	4.8	6.3	2.5	8.0	6.6	6.2	7.6	6.1	6.1	4.8	3.0	5.4	4.0	1.8	NaN	6.4	5.1	5.8	3.4	5.9	4.8	5.0	2.5	4.8	4.6	4.3	3.6	3.3	4.5	4
5	2.3	2.9	1.5	3.3	1.2	1.3	1.7	2.7	2.1	2.0	2.0	2.0	2.7	1.8	2.8	7.4	7.5	10.7	9.6	10.4	8.3	5.0	7.8	7.1	6.5	7.7	6.4	5.2	3.4	2.4	5.6	5.7	3.5	NaN	5.6	5.0	8.6	6.9	6.1	4.7	4.3	2.6	1.9	3.4	3.6	2.7	3.1	4.5	5
6	2.3	4.2	1.3	3.5	1.0	2.4	2.6	3.9	2.4	3.7	1.6	4.3	2.0	2.6	4.1	9.6	8.3	11.2	11.0	9.9	8.0	3.4	5.7	3.8	4.4	6.8	5.2	4.9	3.6	2.4	6.3	6.8	4.1	NaN	5.1	4.9	6.1	7.2	4.4	3.9	4.5	2.7	2.2	3.5	4.0	3.2	3.7	6.1	6
7	3.0	4.0	3.4	4.7	1.2	2.3	2.8	3.4	2.3	3.7	1.6	2.8	2.6	3.3	3.5	3.8	6.0	2.8	4.4	4.5	2.9	3.3	2.5	1.1	2.0	2.6	3.6	4.1	3.5	1.6	6.6	6.5	4.9	NaN	5.3	4.0	7.0	4.8	4.3	4.5	4.4	2.9	1.6	3.0	2.9	2.0	3.7	5.0	7
8	5.0	3.2	3.3	2.8	2.6	2.3	3.0	3.6	3.8	4.2	3.9	5.0	4.6	5.3	4.1	3.8	4.5	3.1	4.5	3.4	2.3	2.0	1.0	0.8	0.8	1.5	1.7	2.8	3.1	1.0	4.8	5.6	4.7	NaN	4.6	5.4	4.9	4.7	3.4	3.8	4.8	3.1	1.5	4.0	4.2	3.0	3.9	4.9	8
9	4.8	3.0	3.4	4.0	2.2	2.2	0.7	1.3	2.6	2.7	2.8	4.2	3.4	3.4	3.2	2.8	6.5	1.8	2.3	3.2	3.7	4.5	4.3	3.9	3.5	5.1	4.4	3.9	3.4	1.3	4.9	5.3	4.8	NaN	6.0	6.4	6.4	3.9	5.3	4.1	4.4	3.1	1.4	4.2	4.0	3.1	4.0	5.0	9
10	3.4	3.2	3.9	5.7	2.3	2.3	1.0	2.1	2.3	3.1	2.3	2.7	3.5	3.2	3.1	2.7	8.1	3.2	3.8	4.1	4.0	5.6	4.1	3.9	4.2	5.5	5.7	4.9	3.8	1.9	5.5	4.8	5.3	NaN	6.1	6.9	9.0	4.4	6.0	6.8	4.1	3.4	1.7	4.0	4.1	3.0	3.7	4.4	10
11	4.3	6.4	5.3	6.6	4.8	4.8	3.8	5.0	4.5	5.6	4.1	4.5	4.8	4.8	5.5	5.6	9.1	5.7	6.9	4.7	5.0	6.4	4.5	4.9	4.7	5.2	5.7	4.9	4.3	3.7	6.5	5.8	6.0	NaN	7.2	7.0	8.7	6.2	6.1	5.3	4.5	3.8	1.8	4.6	4.3	3.0	3.5	4.7	11
12	2.9	7.2	5.7	8.9	3.0	3.6	3.0	4.3	3.6	4.1	4.2	4.4	4.0	3.0	5.2	8.3	9.6	13.1	13.1	6.2	6.6	9.1	7.1	7.1	8.0	8.7	8.2	7.8	5.1	7.2	6.2	5.8	6.5	NaN	8.6	6.7	10.9	6.7	7.5	4.7	5.7	5.1	3.2	5.5	5.0	4.1	4.7	5.8	12
13	3.1	4.6	4.6	4.4	4.8	5.0	3.8	4.5	4.2	4.2	3.8	3.5	3.9	3.9	4.2	5.9	6.1	6.0	5.3	4.9	4.6	4.0	3.6	4.9	4.1	4.4	4.0	4.4	4.9	5.4	5.3	6.0	5.0	NaN	6.6	6.2	6.1	5.9	5.2	4.9	4.7	5.3	4.4	5.7	5.4	5.2	5.0	5.1	13
14	1.5	2.7	2.9	1.5	5.5	5.2	4.1	5.2	4.6	4.2	3.2	1.8	2.8	2.6	2.0	0.9	3.8	2.1	2.8	2.4	4.3	2.8	6.4	6.8	5.9	7.0	6.3	6.4	6.6	7.5	3.4	4.0	2.1	NaN	5.0	3.0	1.1	4.1	4.5	3.8	2.3	3.3	5.4	1.8	3.0	3.7	3.4	5.0	14
15	1.7	2.1	2.6	1.7	4.4	3.7	2.6	3.4	3.9	3.0	2.8	1.8	2.3	2.2	1.6	-0.4	-0.8	1.0	0.7	1.4	3.5	2.4	5.7	5.7	4.5	5.6	5.6	8.7	8.7	7.5	3.3	2.2	1.0	NaN	3.3	1.1	-1.9	1.3	3.0	3.8	0.8	1.5	4.0	-1.1	1.7	3.0	3.6	4.9	15
16	0.2	-0.7	0.2	-0.7	2.1	1.0	0.0	1.0	1.6	1.6	1.0	0.3	0.9	0.6	-0.2	-1.4	-1.6	-0.7	0.8	-0.8	1.5	0.7	4.5	5.1	5.3	2.5	6.2	6.1	6.0	7.0	2.5	0.9	2.2	NaN	1.9	1.3	-2.6	0.4	2.3	3.0	0.2	0.6	-1.0	0.1	1.9	1.8	2.7	3.3	16
17	0.1	-1.7	-1.5	-2.7	0.4	-0.5	-0.6	-0.8	-0.6	0.2	-0.1	0.4	0.0	-0.5	-1.2	-2.5	-2.2	-1.8	-0.4	-1.8	-3.0	-2.2	-2.2	-0.8	0.6	-3.9	1.4	-0.2	-1.3	-2.3	-0.1	0.0	1.4	NaN	0.3	-0.2	1.0	0.2	0.1	-0.4	0.3	-2.9	-3.7	-1.0	-0.7	0.3	0.6	-0.1	17
18	-2.9	-4.4	-3.6	-4.1	-0.5	-2.0	-2.6	-2.7	-3.0	-2.2	-3.5	-2.6	-3.5	-3.4	-4.0	-4.5	-3.6	-4.2	-1.6	-3.5	-4.2	-3.5	-1.6	-0.5	-1.2	-5.7	-0.4	-1.6	-2.3	-1.6	-1.7	-1.7	-1.9	NaN	-1.4	-1.3	-2.6	-2.1	-1.5	-1.6	-1.8	-3.2	-4.8	-2.9	-2.5	-1.6	-1.2	-2.1	18
19	-2.3	-4.4	-5.2	-5.8	-2.7	-3.7	-3.5	-3.1	-2.1	-2.5	-2.4	-2.4	-2.3	-2.6	-3.5	-4.3	-3.2	-3.8	-2.6	-4.1	-5.2	-4.7	-6.7	-6.5	-6.4	-6.4	-6.4	-6.1	-5.5	-7.0	-3.3	-2.0	-1.5	NaN	-4.3	-1.1	-0.7	-1.7	-4.6	-2.7	-2.8	-4.6	-6.9	-3.4	-3.8	-4.1	-4.2	-3.7	19
20	-2.9	-4.4	-3.6	-4.6	-2.7	-3.2	-3.7	-3.3	-2.5	-2.5	-3.3	-3.2	-3.1	-3.0	-3.9	-4.9	-1.0	-4.9	-2.9	-4.9	-2.7	-2.7	-2.6	-3.1	-2.1	-1.7	-0.6	-1.3	-1.7	-4.0	-1.1	-1.8	-2.0	NaN	-1.5	-0.1	1.9	-0.8	-1.4	-1.7	-2.7	-4.1	-4.2	-3.6	-3.6	-3.5	-2.8	-2.0	20
21	-3.6	-4.0	-3.5	-2.8	-0.8	-1.0	-3.0	-1.9	-1.9	-2.0	-3.4	-2.8	-2.7	-2.6	-3.8	-4.6	-1.1	-3.3	-1.2	-1.4	0.4	1.0	0.9	0.5	0.3	0.7	2.1	3.3	1.7	0.4	1.8	-0.3	-2.1	NaN	1.1	1.6	0.1	-0.4	0.4	1.0	-1.2	-2.0	-0.3	-2.9	-1.2	-1.3	-1.5	-1.4	21
22	-2.8	-2.2	-2.3	-1.2	0.7	0.4	-0.9	-0.3	-2.3	-0.3	-1.9	-1.0	-2.7	-1.4	-2.2	-1.3	0.5	-1.1	-0.8	1.3	1.4	1.6	2.3	2.0	0.9	2.6	1.8	1.3	1.0	-0.8	2.4	2.5	1.9	NaN	2.2	2.1	-1.2	0.7	1.1	2.0	1.2	0.1	-1.0	-1.0	1.1	0.7	1.6	2.5	22
23	-2.5	-1.9	-1.8	0.1	1.3	0.8	-1.7	-1.6	-1.4	-0.7	-1.8	-0.9	-1.7	-1.3	-2.1	-2.3	3.1	-2.4	0.1	1.7	2.1	2.9	1.9	1.2	1.3	3.4	2.7	2.3	1.3	0.0	2.8	1.7	0.1	NaN	2.9	2.8	4.0	0.8	1.7	0.9	1.0	-0.3	-1.5	-0.1	0.7	0.7	0.9	1.9	23
24	1.1	2.8	1.8	3.2	1.7	2.2	2.3	2.1	1.8	1.4	1.5	1.3	2.2	2.2	2.2	2.0	2.2	0.3	0.9	1.6	1.2	1.6	0.2	0.3	0.0	0.9	0.6	1.0	2.2	0.6	3.6	3.7	4.5	NaN	2.3	3.4	2.5	2.7	1.0	2.2	1.9	0.9	-0.1	-0.3	-1.6	-0.5	0.7	2.2	24
25	-0.1	-0.4	-0.2	1.2	1.2	0.7	-1.3	-1.6	-0.6	-0.3	-0.8	-0.2	-0.5	-0.9	-1.4	-1.3	1.2	-0.5	-0.9	-0.8	0.5	1.3	0.5	-0.2	-0.4	1.1	0.6	1.4	0.9	0.0	1.0	1.5	-0.5	NaN	1.2	1.8	-0.4	0.8	0.6	1.0	-0.2	-1.2	-0.2	-1.0	0.2	1.1	1.4	3.0	

N/NW-CH Mittelland West Mittelland Zentral/Ost Täler Alpennordhang Jura Berglagen Täler GR Wallis Alpend Südseite

	SHA	RUE	BAS	FAH	GVE	PUY	NEU	BER	WYN	LUZ	BUS	GUT	KLO	TAE	SMA	STG	CHU	VAD	ALT	ENG	ABO	COF	CHA	DOL	MLB	NAP	PIL	SAE	WFL	JUN	DAV	SCU	SAM	AND	DIS	ULR	VIS	GIO	MVE	ZER	ROB	BBE	CIM	PIO	COM	OTL	LUG	BBB	
1	3.3	3.6	3.4	3.4	2.2	2.9	3.0	3.2	3.7	2.8	2.9	3.6	3.7	3.7	3.4	2.7	3.2	2.6	2.2	2.3	1.3	3.1	0.5	0.6	-0.4	0.5	0.2	0.2	0.4	0.8	1.9	3.3	2.4	NaN	2.0	3.8	3.3	4.2	0.6	0.9	-0.7	1.7	1.7	-0.9	-2.1	-0.6	-0.1	-0.6	1
2	5.8	7.4	5.5	7.1	4.6	3.3	5.0	5.1	6.0	4.0	5.8	4.5	5.9	6.4	4.5	6.0	4.5	6.6	4.0	5.6	6.6	6.6	3.8	3.1	3.7	4.1	4.3	4.7	4.8	6.5	3.5	2.7	4.0	NaN	3.2	3.6	2.5	3.3	1.9	3.0	1.1	0.3	0.4	-0.2	0.1	-0.1	-0.2	-1.0	2
3	8.9	8.6	9.7	8.2	8.6	6.1	7.2	9.0	8.6	7.9	8.7	9.5	9.5	9.4	8.5	8.5	5.6	7.0	6.7	7.5	6.9	7.9	5.5	4.9	4.1	5.4	3.9	4.6	4.9	4.4	5.9	5.6	7.4	NaN	5.0	5.8	5.6	5.9	4.8	5.0	3.5	4.1	4.2	3.9	2.5	2.1	1.9	1.2	3
4	5.9	5.3	6.1	5.2	6.2	5.5	6.0	7.1	6.7	6.0	6.5	6.1	6.3	6.3	5.7	4.5	4.5	4.9	4.4	4.8	3.4	4.9	2.4	2.6	1.4	2.7	0.9	1.4	1.3	1.1	3.7	4.7	5.8	NaN	3.0	5.3	7.7	6.0	2.9	3.7	5.4	4.8	4.0	5.0	5.4	6.3	4.7	3.8	4
5	4.1	4.4	4.7	4.4	2.4	3.0	4.0	5.4	5.5	5.3	4.8	4.0	4.6	4.3	4.2	3.5	4.6	5.6	3.8	5.6	5.7	5.3	6.6	7.8	7.0	5.5	5.3	3.4	4.6	5.4	3.7	4.2	3.9	NaN	2.9	5.6	5.1	4.3	4.8	5.0	3.4	3.3	3.7	2.5	3.8	4.6	3.6	2.3	5
6	6.2	6.7	6.0	7.4	5.3	4.9	5.9	6.8	7.1	5.8	7.0	6.3	7.3	7.5	6.6	6.9	5.5	6.3	4.9	6.3	5.4	6.9	4.3	3.9	2.7	4.2	3.0	3.3	3.5	3.8	5.6	4.7	5.3	NaN	4.6	6.8	5.9	5.6	3.7	4.4	2.6	4.2	2.7	2.2	2.0	3.1	3.3	3.5	6
7	7.4	6.4	7.5	6.0	5.6	5.6	6.3	6.8	7.4	5.8	7.2	7.7	7.8	8.3	7.3	7.2	5.8	6.6	4.7	5.8	5.9	5.5	3.5	2.9	4.0	3.6	4.6	4.7	6.0	6.2	5.4	5.0	6.5	NaN	6.1	5.8	5.8	5.8	4.5	5.2	3.4	3.5	3.9	1.9	2.3	2.5	2.9	2.9	7
8	3.8	3.8	5.1	3.3	3.5	3.3	3.0	4.8	4.4	6.0	4.1	4.7	4.8	4.6	4.1	3.2	3.5	4.5	4.4	4.4	1.8	2.2	-0.5	-1.1	-2.1	-0.3	-2.2	-1.4	-2.3	-2.1	1.7	2.7	3.5	NaN	0.2	4.3	5.0	4.7	-0.5	1.6	4.5	2.1	0.4	3.1	5.5	5.3	5.6	5.9	8
9	4.7	4.1	5.0	3.9	5.3	4.2	3.8	5.3	5.6	6.0	4.7	5.0	5.3	5.0	4.2	3.4	1.6	5.0	4.8	4.8	2.4	2.9	0.5	0.3	-0.4	0.5	NA	0.6	-0.1	0.2	2.1	3.2	5.9	NaN	0.0	5.6	5.9	6.1	0.9	2.9	1.5	0.8	-0.1	1.3	1.6	2.5	3.4	3.1	9
10	2.5	1.8	3.0	1.4	2.7	1.8	2.0	3.0	3.5	3.0	3.1	2.4	2.7	2.6	1.9	0.9	1.6	3.6	3.4	1.4	-0.8	0.9	-1.8	-1.5	-2.7	-1.6	-3.6	-3.2	-3.6	-4.5	0.1	1.3	2.8	NaN	-1.0	4.0	4.7	4.8	-0.9	0.7	1.9	-0.3	-2.6	0.9	1.6	2.6	3.8	6.4	10
11	-0.8	-1.0	-0.4	-1.3	-0.3	0.4	0.3	0.3	-0.6	1.0	-0.3	-0.3	-0.9	-0.4	-0.6	-1.2	-0.9	0.0	0.4	-2.7	-4.7	-3.5	-4.6	-3.4	-4.6	-3.7	-6.2	-7.1	-7.2	-6.7	-3.4	-2.6	-2.7	NaN	-3.3	-1.9	2.7	1.6	-3.1	-3.2	0.2	-3.0	-3.0	-1.5	0.3	1.6	2.5	2.8	11
12	-2.3	-3.1	-4.0	-3.7	-3.4	-2.4	-1.9	-2.9	-2.4	-2.6	-2.8	-1.4	-3.1	-3.1	-2.7	-3.6	-5.3	-3.6	-4.3	-7.6	-8.3	-5.6	-6.3	-3.4	-5.8	-5.2	-5.0	-5.9	-5.6	-5.5	-8.9	-9.1	-12.9	NaN	-7.7	-12.5	-3.3	-2.2	-7.0	-6.6	-5.3	-5.5	-4.0	-6.8	-3.8	-1.9	-1.6	-2.9	12
13	-1.1	-2.8	-2.9	-3.3	-2.1	-3.3	-2.3	-2.8	-0.9	-3.0	-1.3	-1.4	-1.9	-1.8	-2.8	-5.1	-4.3	-5.1	-4.2	-6.9	-6.4	-3.9	-6.9	-3.5	-4.6	-5.5	-5.1	-6.1	-7.5	-6.5	-7.7	-9.1	-11.9	NaN	-5.8	-10.8	-2.7	-2.4	-5.6	-7.6	-5.2	-7.1	-6.4	-3.8	-2.7	-2.1	-0.9	-1.6	13
14	-3.0	-4.4	-2.6	-4.1	-1.0	-1.9	-2.7	-2.2	-2.0	-2.6	-2.6	-2.7	-2.5	-2.9	-3.5	-5.3	-3.5	-4.4	-1.9	-3.6	-5.4	-3.1	-5.1	-4.6	-5.7	-4.5	-5.4	-5.6	-6.2	-4.8	-6.6	-8.7	-10.1	NaN	-5.3	-10.2	-2.7	-1.7	-5.4	-6.3	-5.6	-5.0	-5.2	-4.9	-4.0	-2.7	-2.5	-3.5	14
15	-3.7	-4.3	-2.9	-4.3	-1.6	-2.5	-3.4	-2.6	-2.1	-2.5	-2.7	-3.8	-3.4	-4.0	-4.0	-5.5	-4.5	-3.5	-3.5	-7.3	-5.8	-4.2	-4.9	-2.7	-2.9	-5.1	-3.6	-4.4	-5.1	-2.6	-7.6	-8.5	-10.8	NaN	-6.9	-10.6	-3.3	-1.0	-5.2	-5.4	-4.6	-2.9	-2.3	-4.5	-4.0	-3.5	-3.1	-4.5	15
16	-1.9	-0.9	-1.0	0.6	0.6	0.1	-0.3	-0.2	-0.4	-0.5	-0.9	-1.2	-0.8	-0.7	-1.1	-0.5	-1.8	-0.7	-1.4	1.6	2.2	1.4	0.3	0.8	0.5	0.4	0.0	0.0	0.3	1.3	-0.1	-2.2	-0.5	NaN	-1.7	1.3	0.4	0.1	-0.6	1.6	-1.2	-2.2	-3.0	-2.8	-2.1	-1.6	-1.4	-1.6	16
17	0.0	1.0	1.2	1.6	2.0	2.0	1.4	1.4	1.1	1.1	1.0	0.9	0.7	1.0	0.6	0.6	-1.0	-0.7	0.4	1.7	-0.5	0.5	-1.1	-1.3	-2.3	-0.5	-2.5	-2.2	-2.1	-3.3	0.6	-1.7	-1.9	NaN	-0.3	3.0	1.9	1.4	-0.8	-0.4	1.8	2.0	0.3	-1.3	-0.2	-1.1	-1.1	-1.5	17
18	-1.6	-0.8	-1.1	0.1	-0.5	0.2	-0.5	-1.4	-1.2	-1.4	-0.9	-0.4	-2.7	-3.0	-2.1	-1.3	0.0	2.3	-1.9	-0.8	-1.3	0.7	1.1	1.6	3.4	2.2	3.3	1.9	2.2	3.6	-2.3	-3.0	-6.3	NaN	-0.7	-3.9	-1.3	-0.5	-0.5	-1.2	-1.1	-1.3	-0.3	-4.6	-0.8	-0.2	-1.4	-2.6	18
19	-0.5	1.1	0.2	4.2	0.9	1.2	0.5	0.6	0.3	1.3	0.2	0.0	-0.2	-0.4	0.4	3.4	1.4	0.6	1.3	2.9	2.0	3.4	1.5	0.8	0.8	1.6	1.3	1.4	2.5	1.8	1.8	-0.5	1.9	NaN	2.9	4.1	2.0	1.2	1.0	2.1	-0.5	-1.4	-2.0	-1.5	-1.7	-1.9	-1.6	-1.2	19
20	3.2	4.1	4.0	3.8	2.5	2.7	3.6	3.0	3.9	2.2	4.2	4.1	4.8	4.5	3.9	3.6	1.0	2.9	1.4	1.8	2.4	2.8	-0.2	-0.4	-1.4	0.1	-1.4	-1.4	-1.0	-2.7	0.3	1.0	-1.6	NaN	0.0	-0.1	-0.4	0.3	-0.6	-1.3	-2.2	-2.8	-1.7	-4.7	-2.5	-1.4	-0.8	-1.0	20
21	6.0	7.1	7.6	7.0	4.7	3.4	5.4	5.2	6.2	3.2	6.0	5.6	6.7	5.9	5.3	6.6	2.4	5.0	2.3	5.3	6.2	5.9	2.5	2.2	2.1	3.1	2.7	3.4	3.2	4.9	1.5	0.5	1.1	NaN	1.4	1.3	0.5	1.1	1.3	1.6	-1.4	-1.1	-0.4	-1.2	-1.1	-0.8	-0.4	-1.5	21
22	8.9	8.4	9.6	7.9	8.0	6.7	8.4	9.9	8.9	9.8	8.9	9.2	9.2	9.2	8.6	8.2	3.8	8.0	5.7	7.7	6.9	7.6	4.1	4.2	3.2	5.0	2.7	3.9	3.9	3.1	5.4	4.7	9.0	NaN	5.4	7.6	4.8	5.1	5.1	5.4	3.6	6.1	6.1	3.2	3.7	1.8	0.6	-0.8	22
23	8.0	7.5	8.6	7.7	6.9	6.3	7.4	9.0	7.7	7.4	7.5	8.1	8.2	8.4	7.7	7.1	3.9	5.5	5.1	7.0	6.8	7.4	4.3	4.1	3.5	4.7	3.4	3.7	3.9	5.1	4.6	4.6	6.9	NaN	3.1	7.2	5.3	5.5	4.6	4.7	5.2	6.6	7.3	6.6	5.8	3.1	1.1	0.0	23
24	5.4	4.6	4.8	4.0	6.1	4.9	4.7	5.4	5.7	6.5	5.8	4.9	5.4	4.6	4.7	3.4	3.0	3.7	4.2	4.5	2.4	4.1	1.4	2.1	1.0	1.7	0.3	-0.3	0.0	1.3	2.3	4.0	4.9	NaN	1.3	5.3	7.3	6.7	3.1	3.3	5.6	3.0	3.4	4.6	5.3	5.3	5.6	6.2	24
25	-1.0	-1.7	-0.6	-1.5	1.2	-0.1	0.0	-0.1	-0.1	0.5	-0.4	-0.3	-0.2	-0.3	-1.0	-1.5	-0.5	0.3	-2.0	-1.2	-1.6	-0.4	2.7	1.7	2.2	2.3	1.0	-0.6	-1.8	0.7	-4.2	-1.8	-5.9	NaN	-3.3	-2.6	0.6	2.1	-1.5	-1.2	2.6	1.5	3.8	3.1	2.8	3.6	2.4	0.3	25
26	-1.4	-2.9	-3.1	-4.0	-0.5	-1.5	-2.2	-1.4	-1.1	-0.6	-1.3	-1.8	-0.9	-1.7	-1.7	-3.4	-0.3	-0.1	-2.3	1.1	2.8	-0.2	6.7	6.3	6.5	6.1	5.5	4.7	3.6	4.7	-1.6	-1.7	-4.1	NaN	-0.8	-3.1	-1.8	-0.4	1.5	1.7	1.1	6.3	5.6	-0.7	0.4	0.4	-0.3	-1.5	26
27	-2.8	-2.7	-2.7	-1.1	-0.9	-1.0	-2.0	-1.9	-1.5	-1.1	-1.7	-1.9	-1.5	-2.4	-1.9	-2.0	1.2	-3.4	-1.8	4.3	5.6	1.9	9.9	9.4	7.3	9.1	7.8	7.4	6.8	7.4	0.1	-0.2	-2.6	NaN	2.3	-2.2	-1.5	0.0	3.8	3.4	1.8	5.4	6.5	0.2	1.2	0.9	-0.5	-1.5	27
28	-0.8	-0.2	-0.7	-0.4	-0.5	0.3	-0.8	-1.0	-0.6	0.2	-0.7	-0.4	0.6	-0.1	-0.1	-0.4	0.5	-1.1	0.2	2.4	4.1	0.7	5.9	6.3	5.2	4.9	5.8	5.4	5.2	5.4	2.9	2.7	1.3	NaN	2.8	-0.4	0.6	0.7	2.8	4.9	5.1	7.6	8.9	5.3	3.7	2.4	0.9	-0.2	28
29	-1.1	-2.0	-1.2	-1.9	0.3	-0.7	-1.3	-0.5	-0.3	0.3	-0.4	0.0	0.1	0.1	-0.6	-2.4	-1.4	-0.8	0.2	-0.9	2.9	-0.7	4.0	5.0	4.0	4.0	3.8	2.6	2.4	3.0	1.1	1.4	0.1	NaN	0.5	-2.5	-0.8	0.5	1.3	2.7	6.0	6.6	8.1	7.4	6.7	3.7	0.7	0.3	29
30	1.9	0.4	1.4	0.5	0.6	1.3	1.2	1.7	1.7	1.8	1.3	2.2	1.8	2.4	1.5	1.7	0.8	1.8	1.3	2.1	2.5	1.8	2.0	3.3	2.1	1.9	-0.1	-1.																					



# Autunno 2018

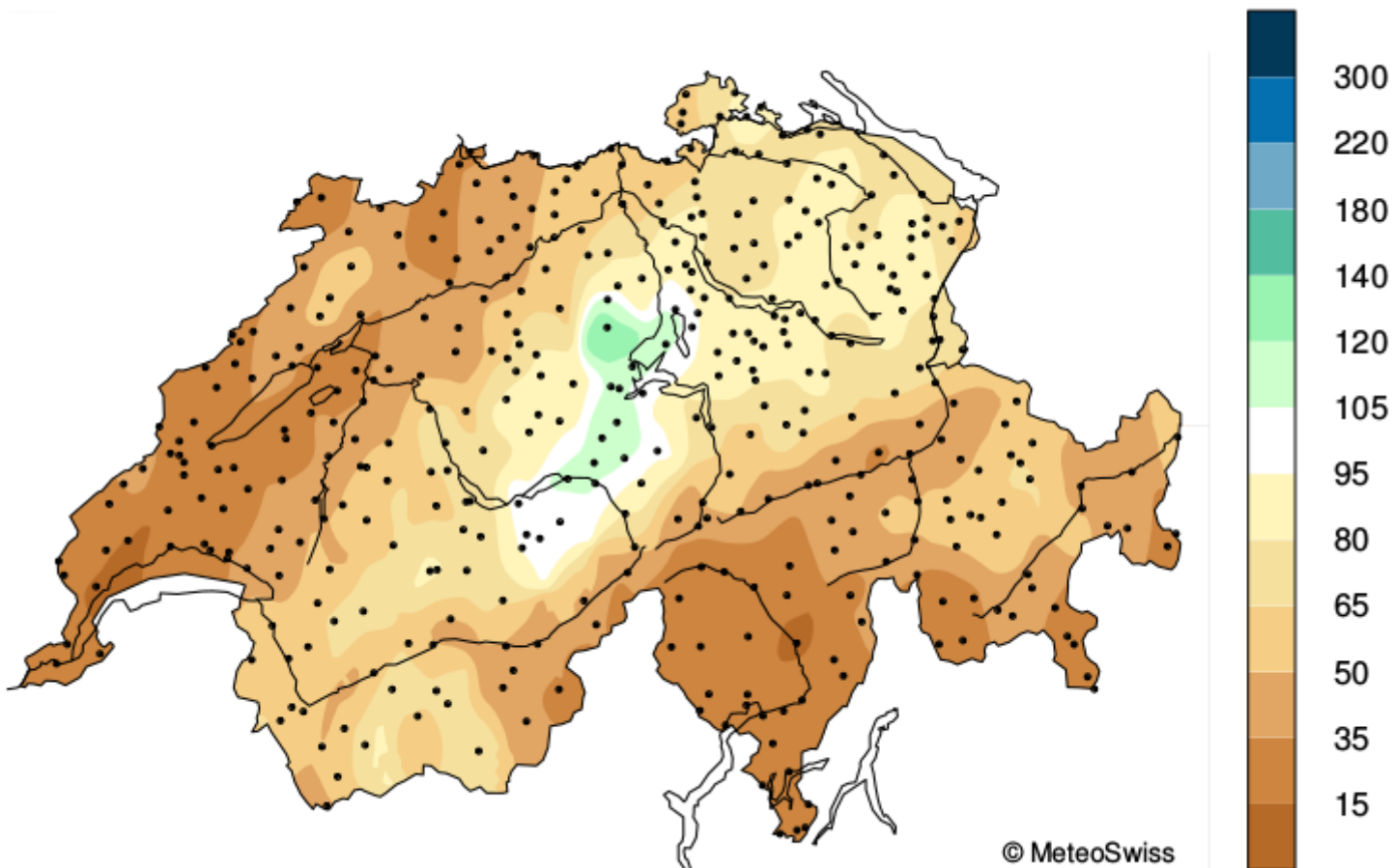
## Anomalie Precipitazioni Set- Dic 2018





# Settembre 2018

Monthly Precipitation Anomaly (%) Sep 2018 (Ref. 1981–2010)



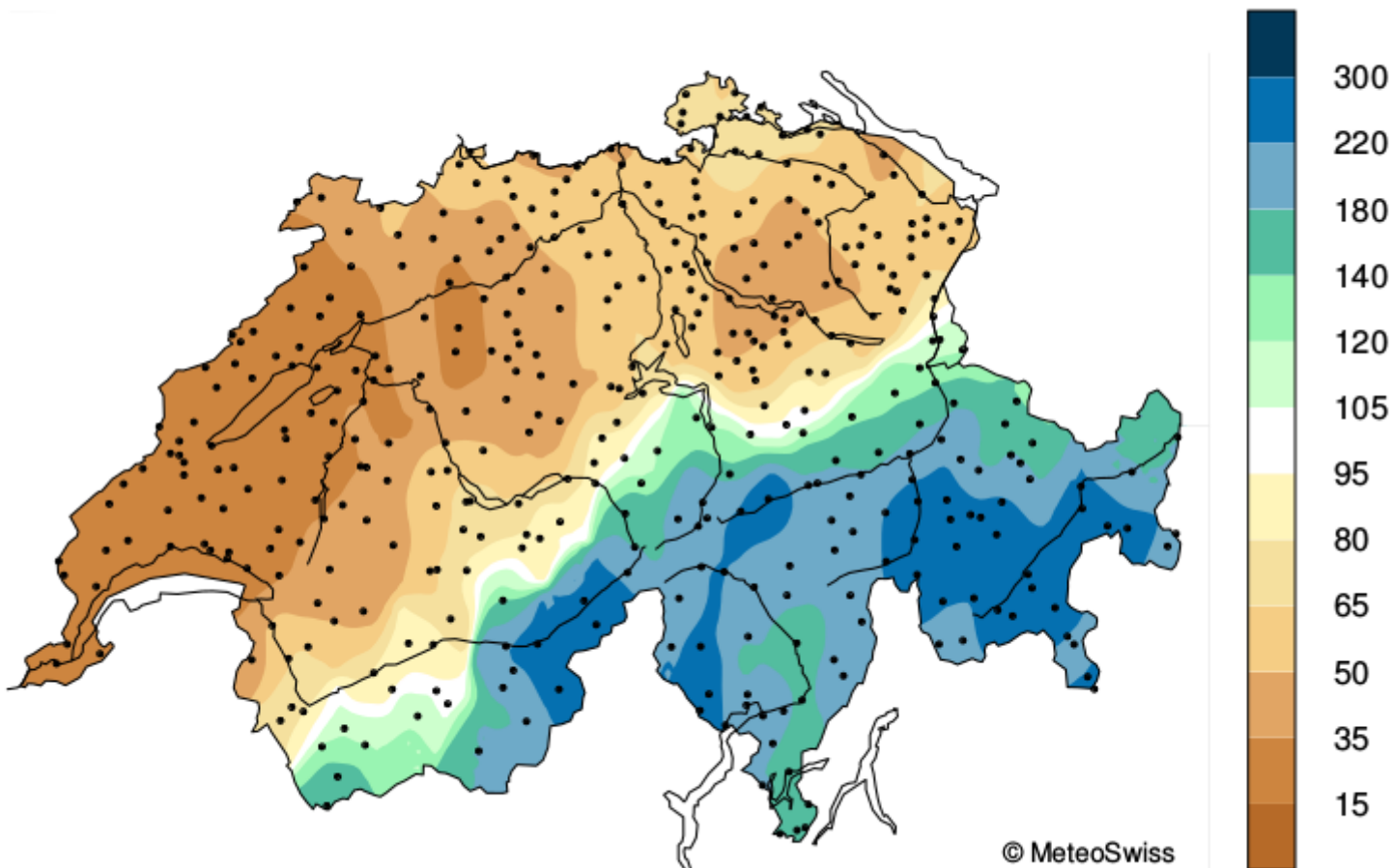
© MeteoSwiss

RanomM8110 v1.0, 2019-01-01 17:47



# Ottobre 2018

Monthly Precipitation Anomaly (%) Oct 2018 (Ref. 1981–2010)



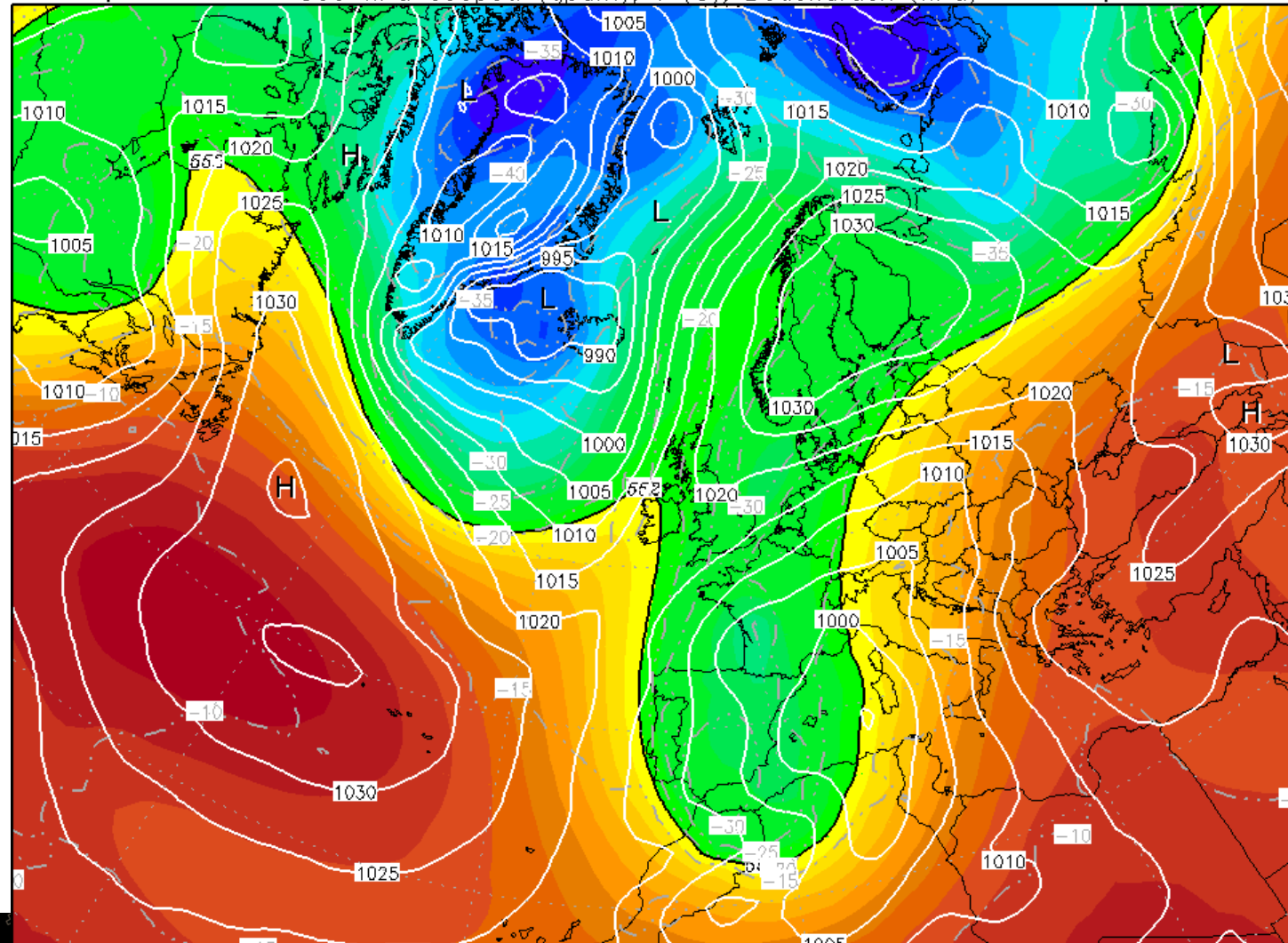
RanomM8110 v1.0, 2019-01-01 17:47





# Ottobre 2018

Init: Mon,29OCT2018 00Z 500 hPa Geopot. (gpm), T (C), Bodendruck (hPa) Valid: Mon,29OCT2018 00Z



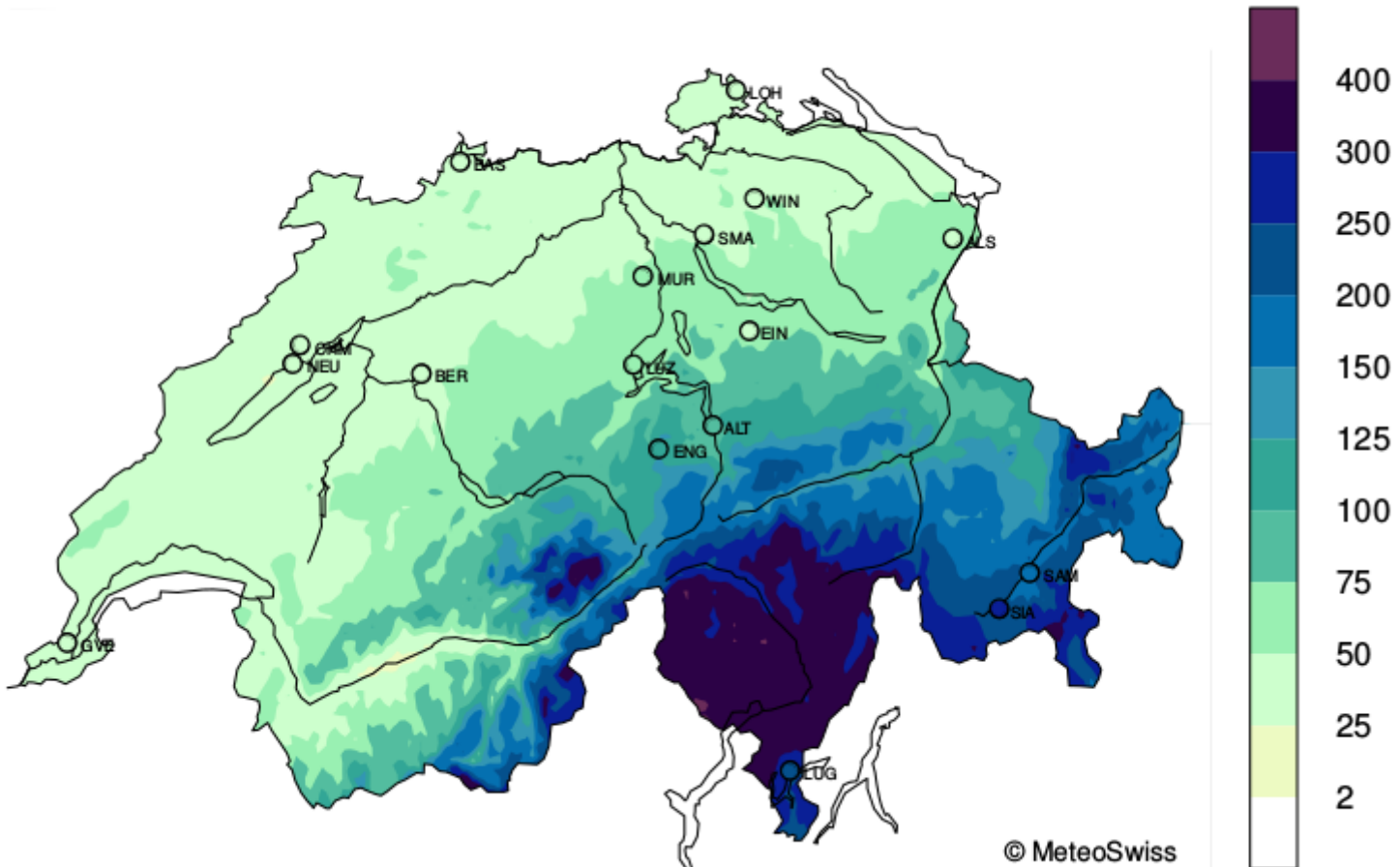
Data: GFS OPERATIONAL 0.250°  
(C) Wetterzentrale  
[www.wetterzentrale.de](http://www.wetterzentrale.de)

**MeteoSvizzera**



# Ottobre 2018

Monthly Precipitation (mm) Oct 2018 (Reconstr.)

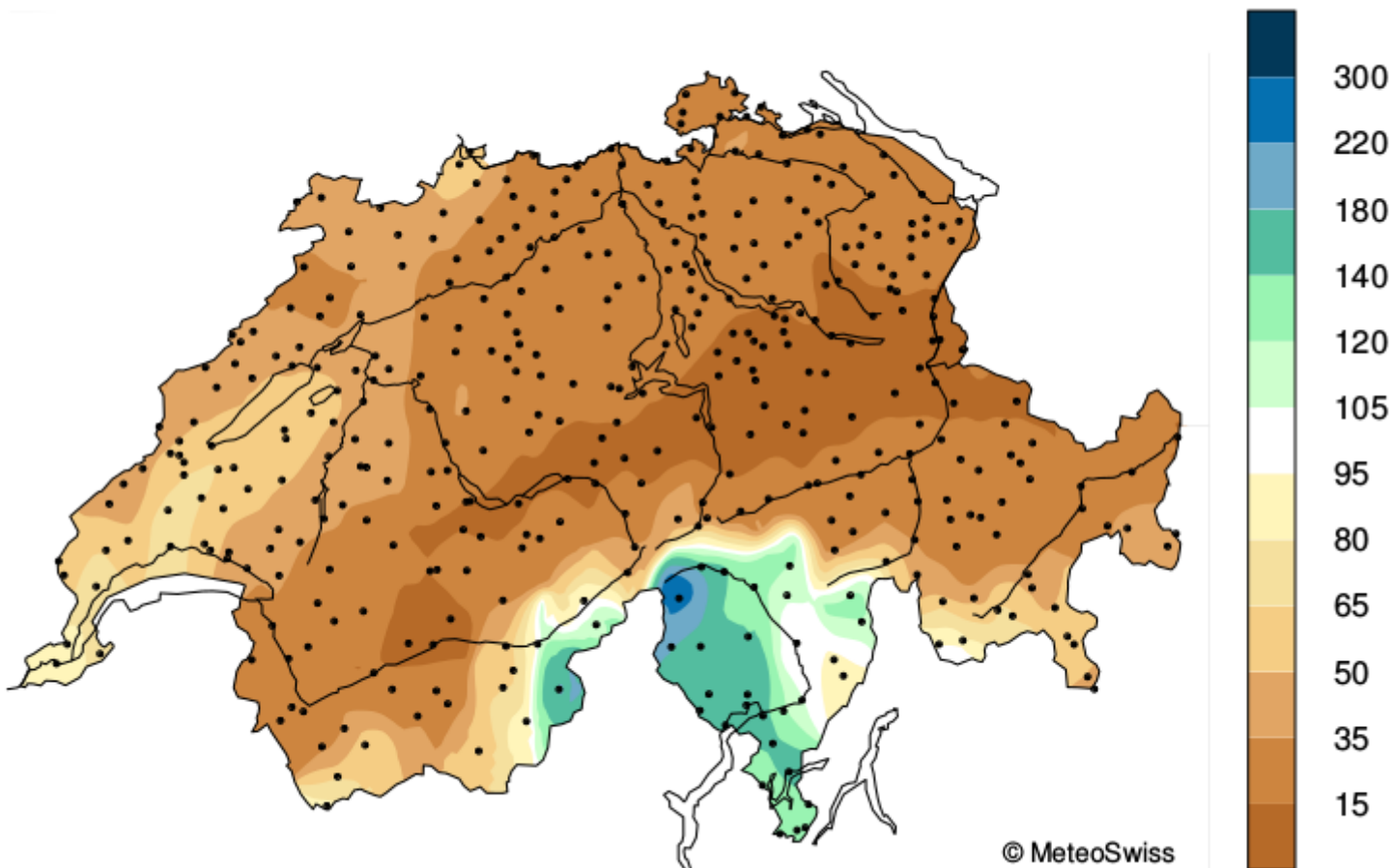


RrecabsM1864 v1.0, 2019-01-01 18:32



# Novembre 2018

Monthly Precipitation Anomaly (%) Nov 2018 (Ref. 1981–2010)

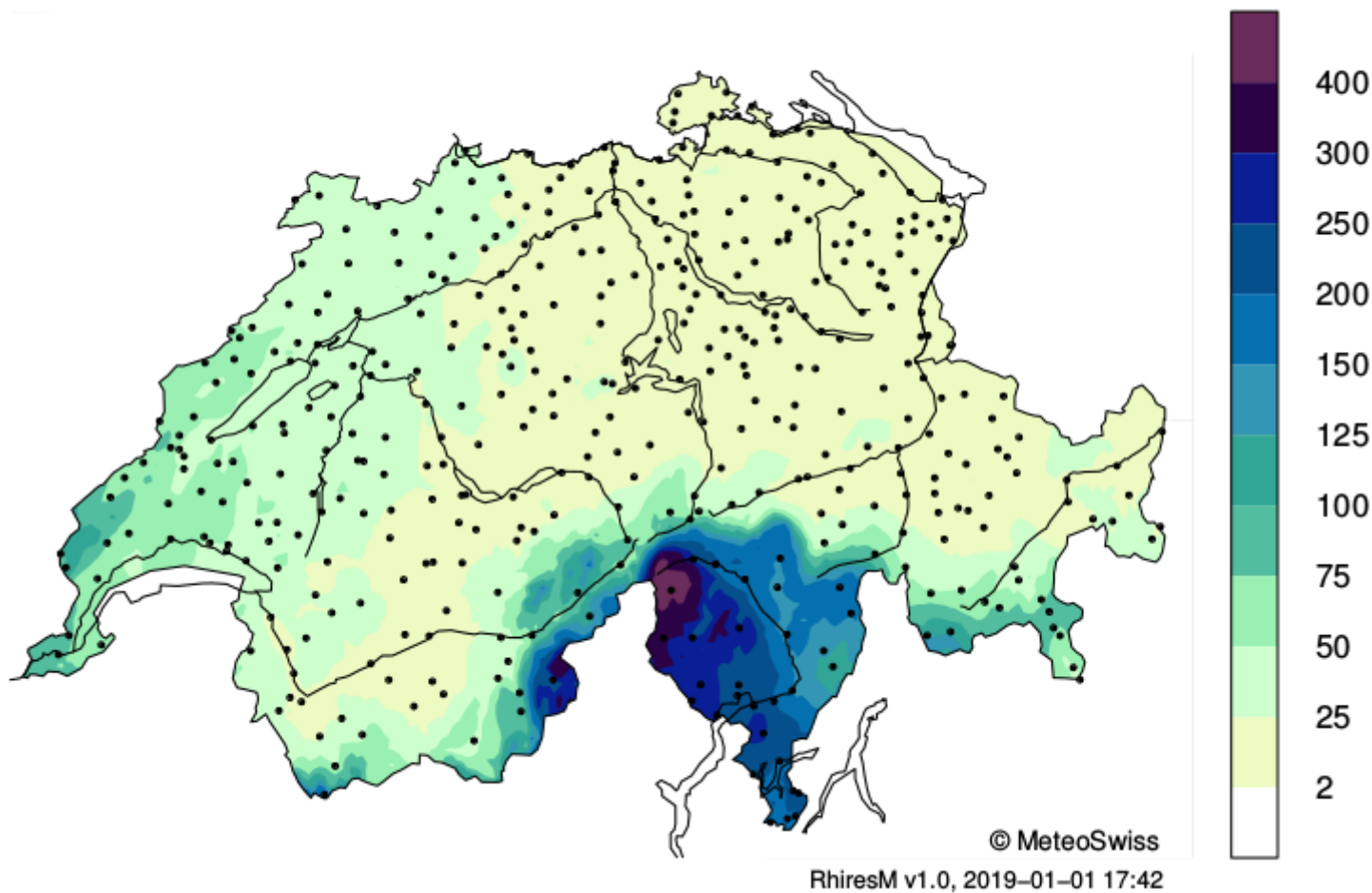


RanomM8110 v1.0, 2019-01-01 17:47



# Novembre 2018

Monthly Precipitation (mm) Nov 2018





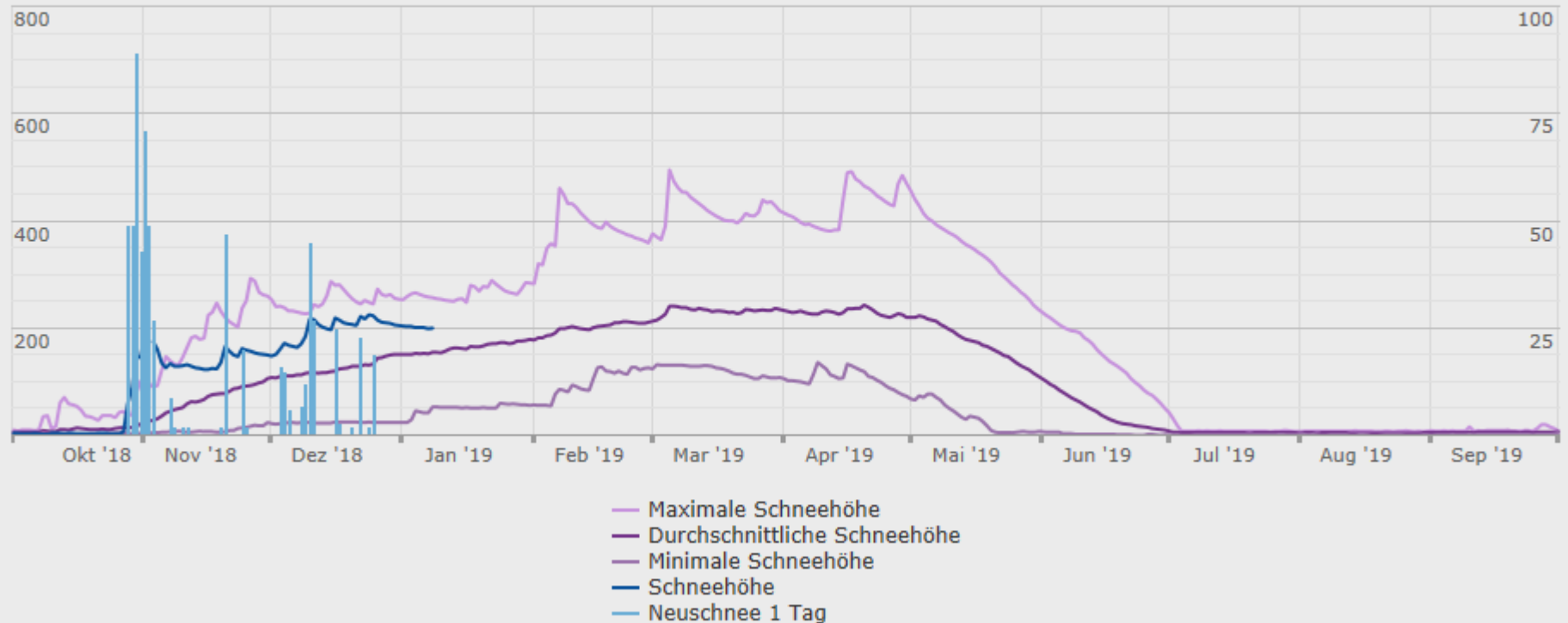
# Neve a Bedretto Cassinello

Cassinello 2101 m

Schnee ○ 3 Tage ○ 7 Tage ● 1 Jahr

Schneehöhe [cm]

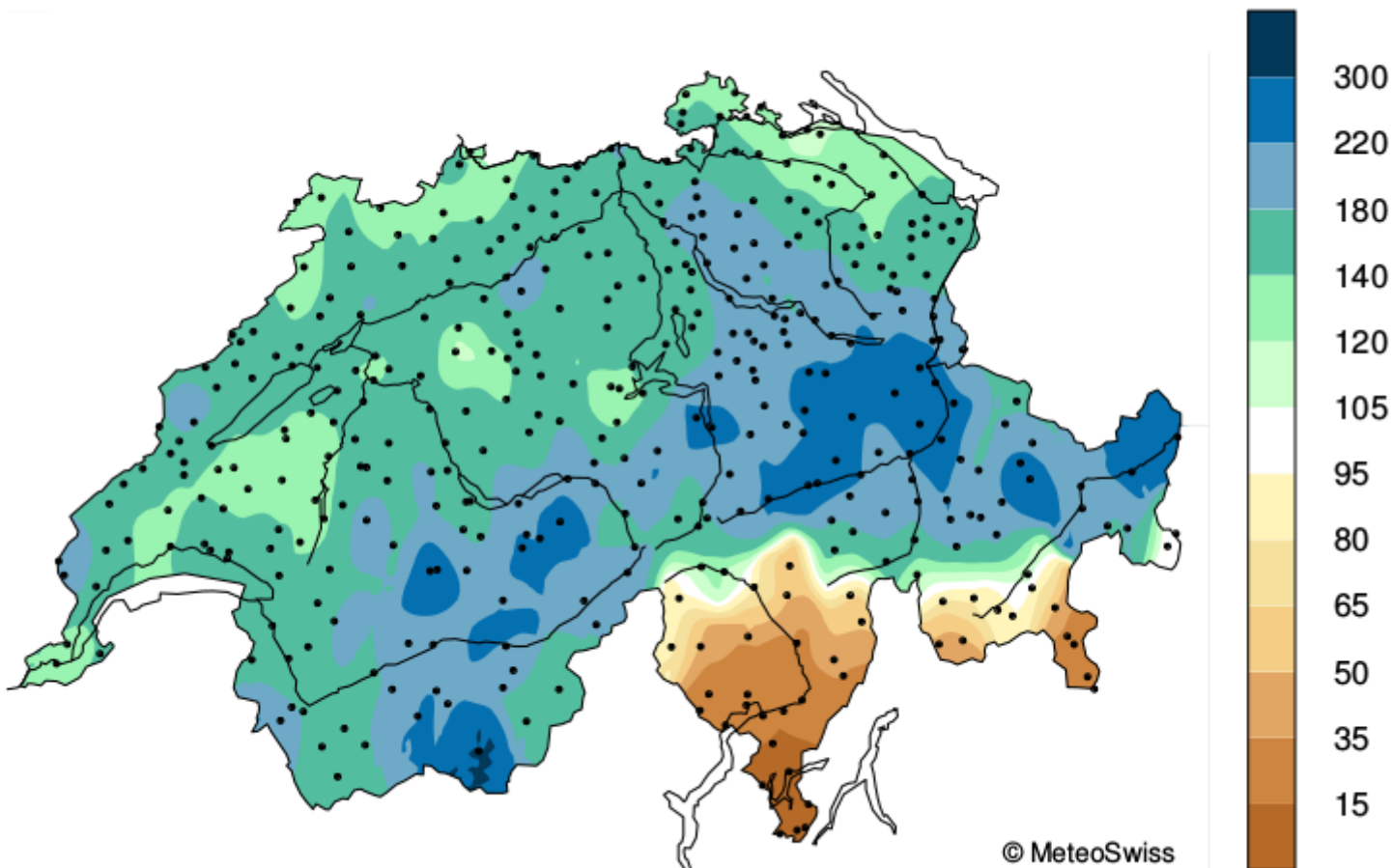
Neuschnee 1 Tag [cm]





# Dicembre 2018

Monthly Precipitation Anomaly (%) Dec 2018 (Ref. 1981–2010)



RanomM8110 v1.0, 2019-01-06 12:07





# Uno sguardo a gennaio 2019...



# Gennaio (2017 vs 2018 vs 2019)





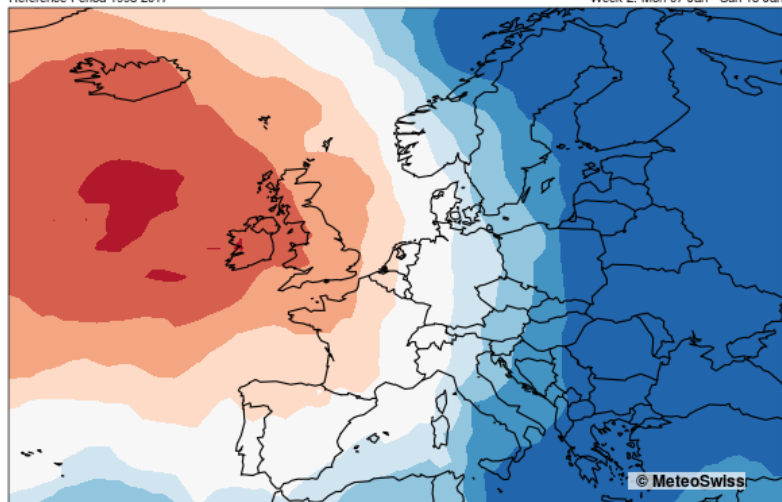
# Anomalie geopotenziale previste al 31.12 per giorno +8/+14

Z 500 (upper tercile)

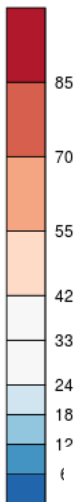
Reference Period 1998-2017

started on 31-12-2018

Week 2: Mon 07 Jan - Sun 13 Jan



[%]

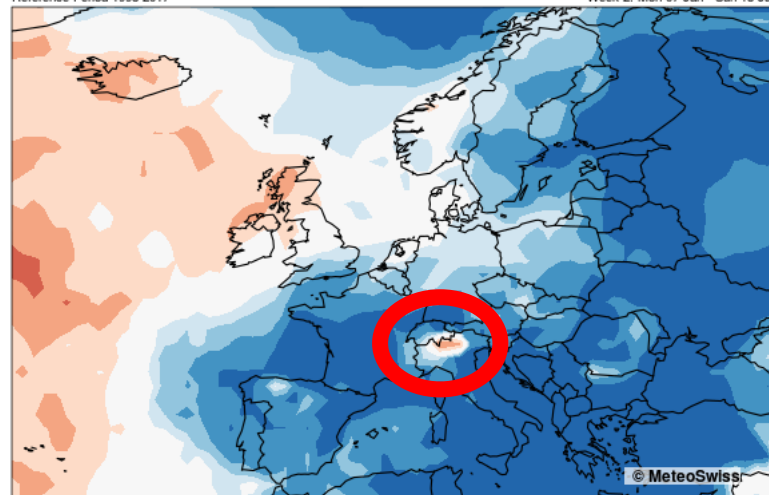


Temperature 2m (upper tercile)

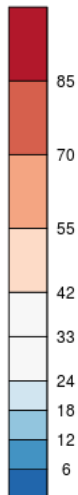
Reference Period 1998-2017

started on 31-12-2018

Week 2: Mon 07 Jan - Sun 13 Jan



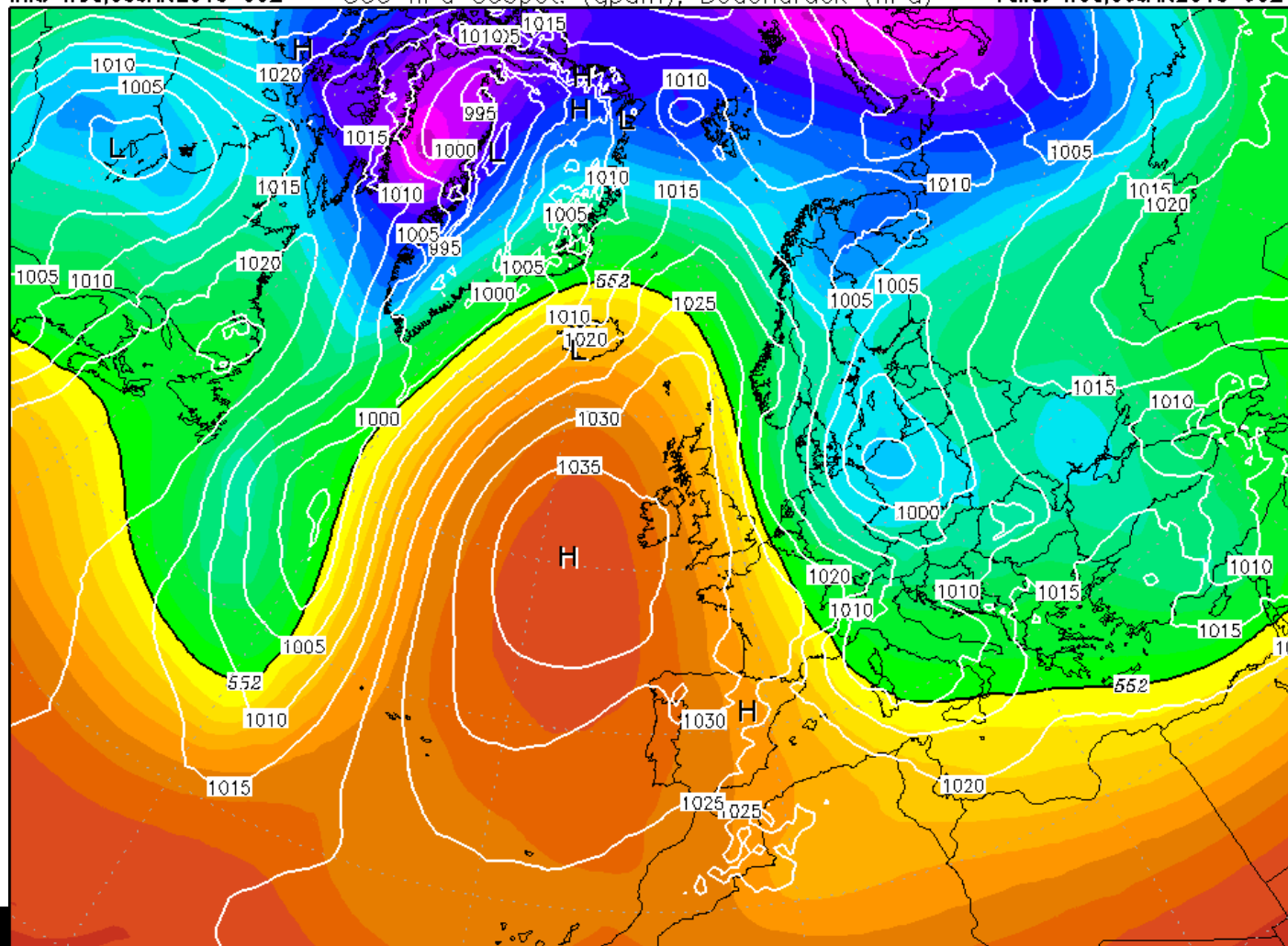
[%]





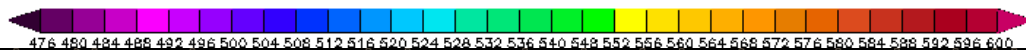
# Blocco «omega» persistente

Init: Wed,09JAN2019 00Z 500 hPa Geopot. (gpm), Bodendruck (hPa) Valid: Wed,09JAN2019 00Z



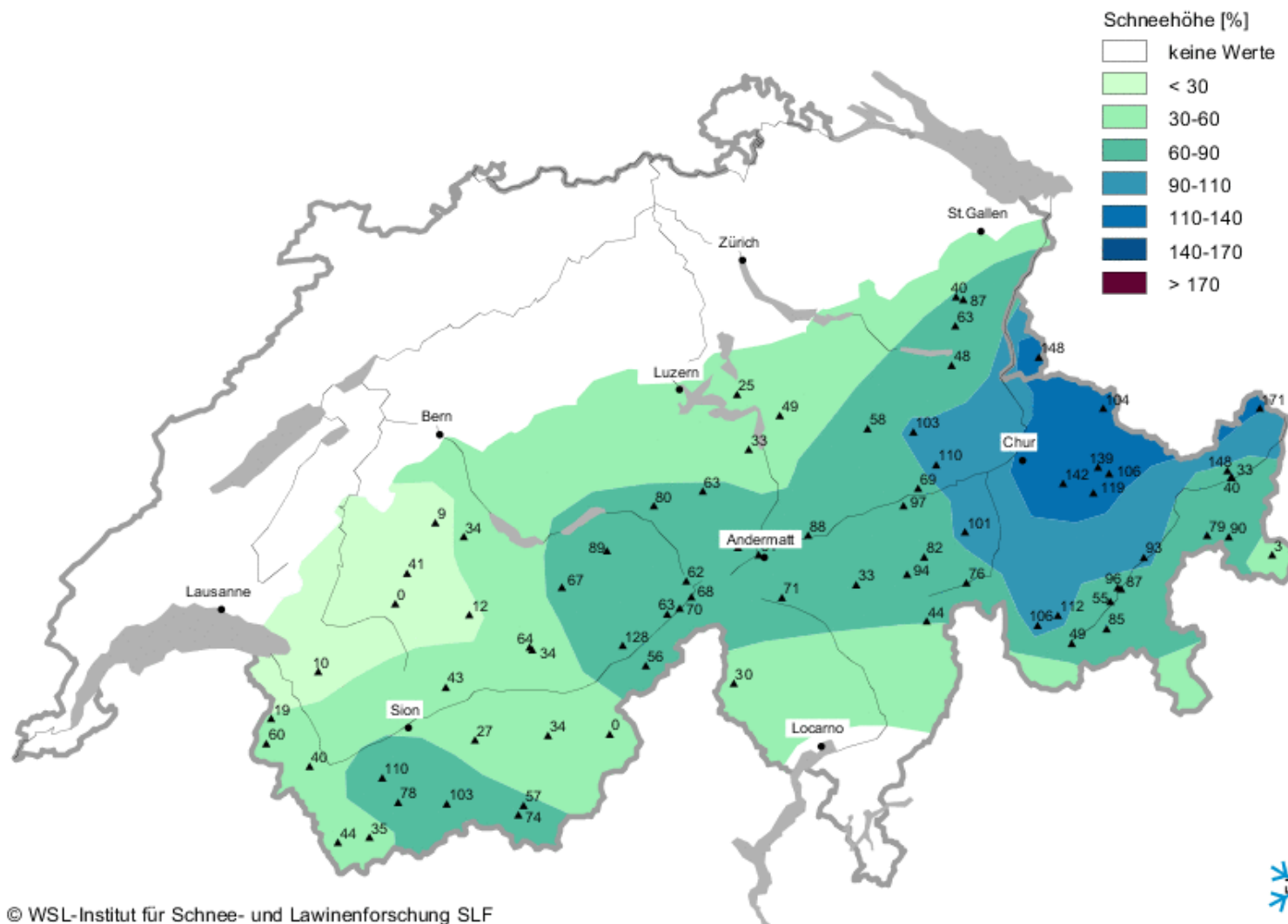
Data: ECMWF 0.500°  
(C) Wetterzentrale  
[www.wetterzentrale.de](http://www.wetterzentrale.de)

**MeteoSvizzera**





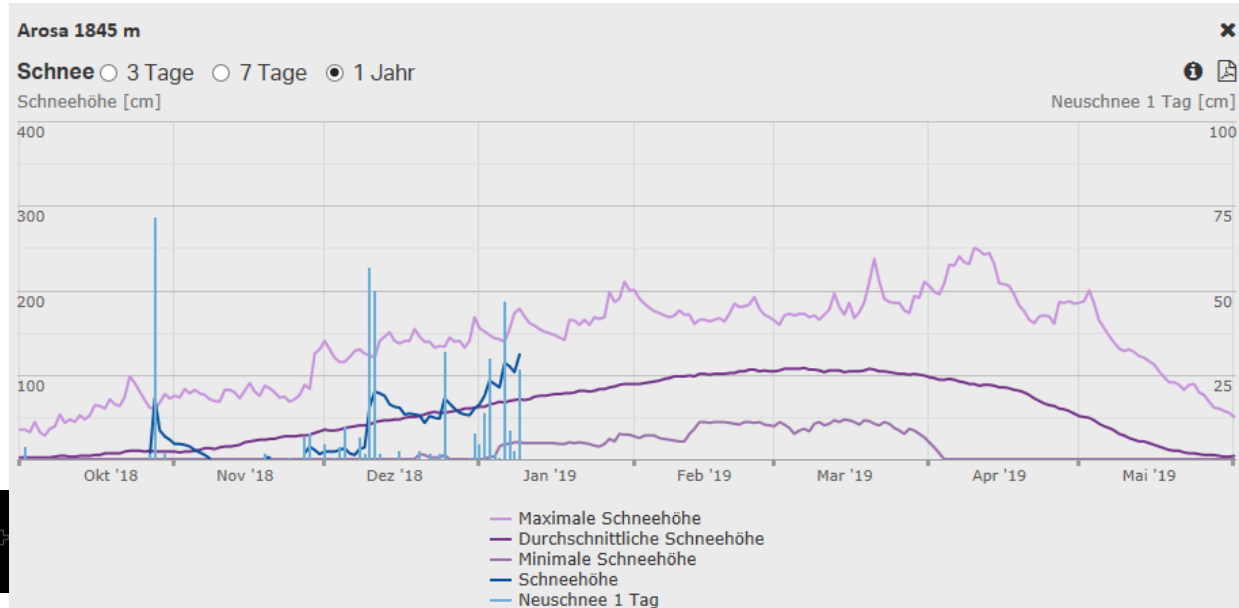
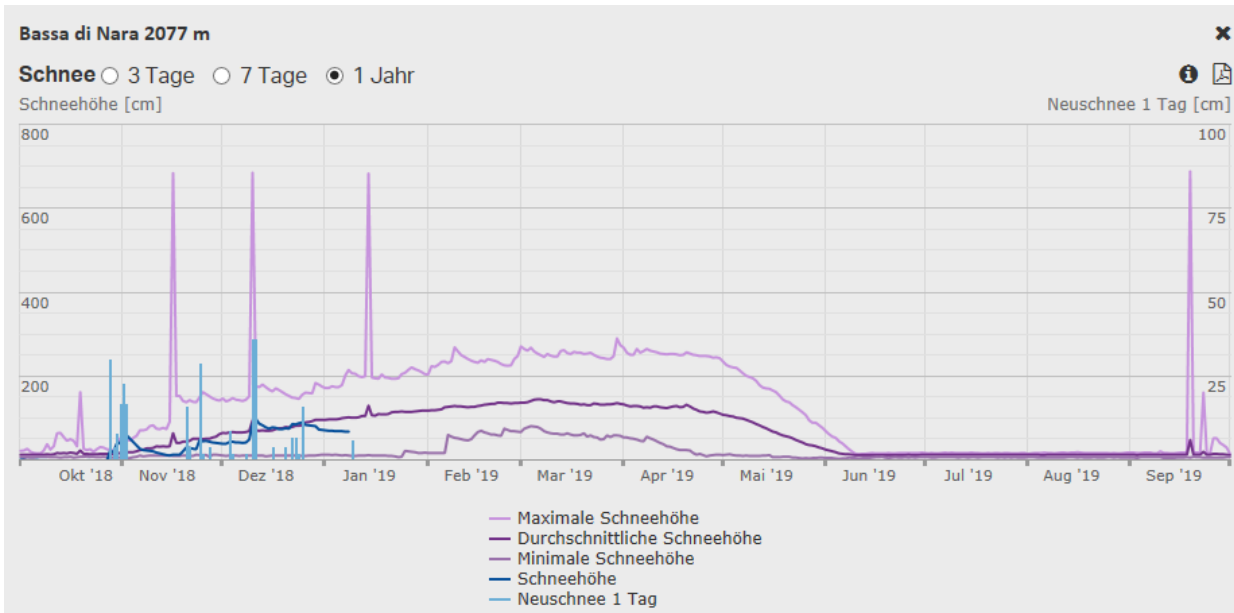
# Spessore della coltre nevosa: anomalia



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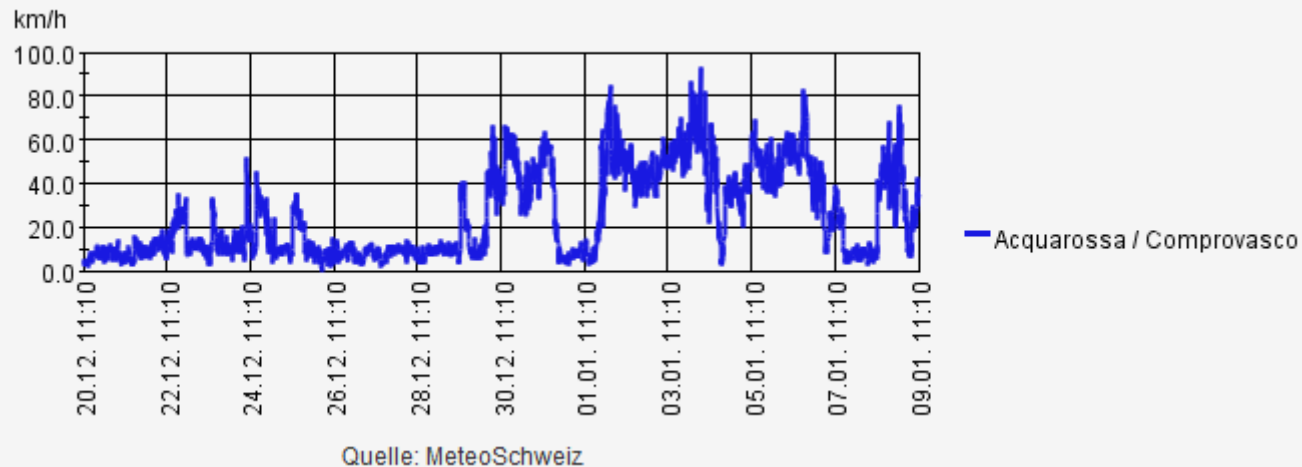




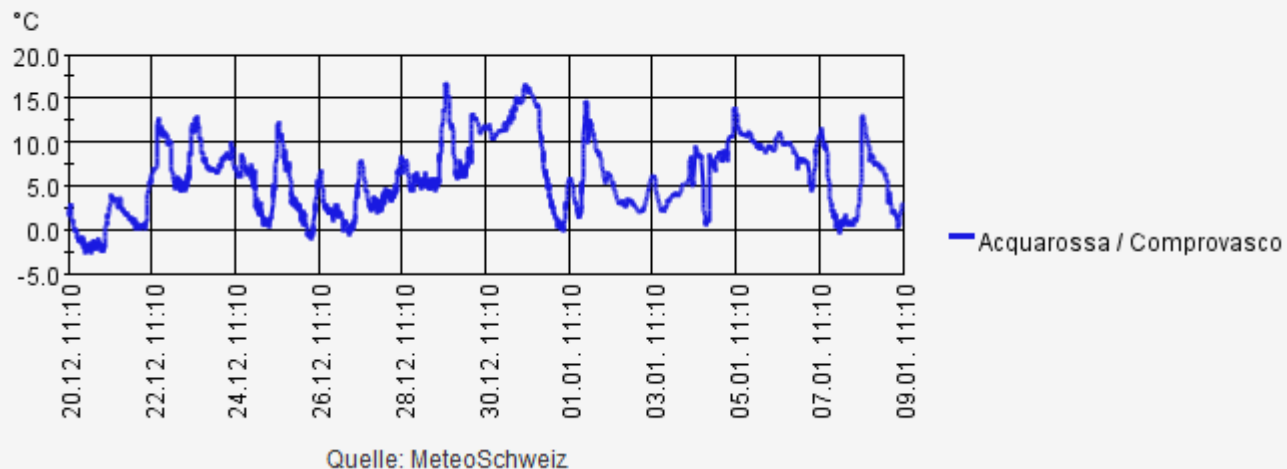


# Favonio persistente

Böenspitze (Sekundenböe); Maximum [km/h] 20.12.2018 11:10 UTC - 09.01.2019 11:10 UTC



Lufttemperatur 2 m über Boden; Momentanwert [°C] 20.12.2018 11:10 UTC - 09.01.2019 11:10 UTC

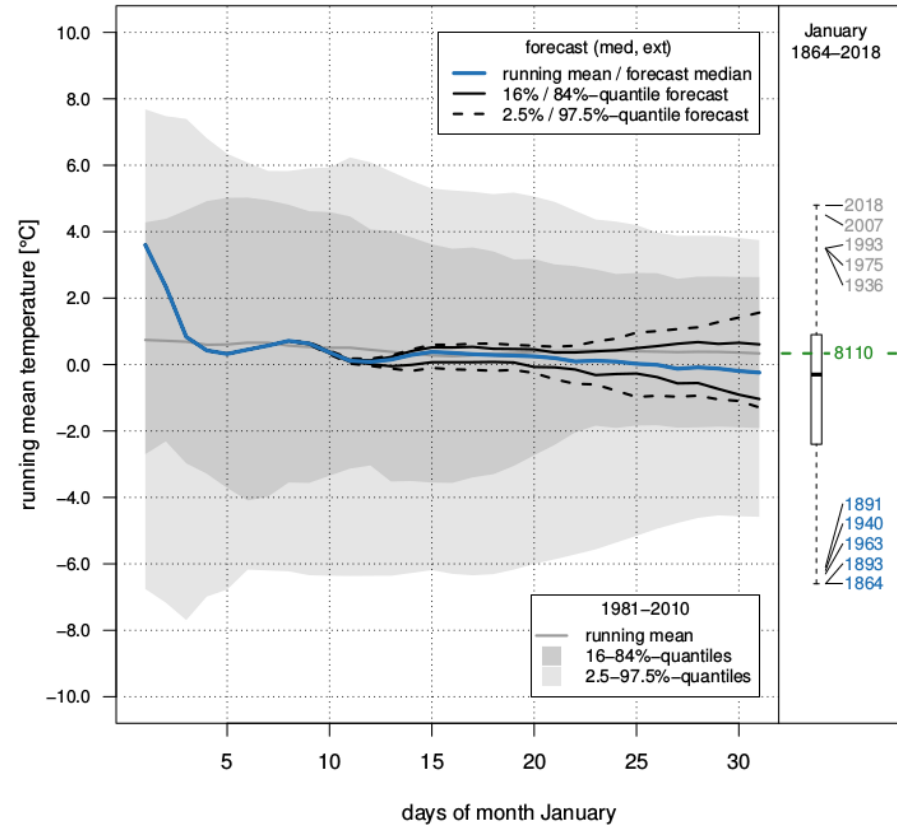




# Favonio persistente

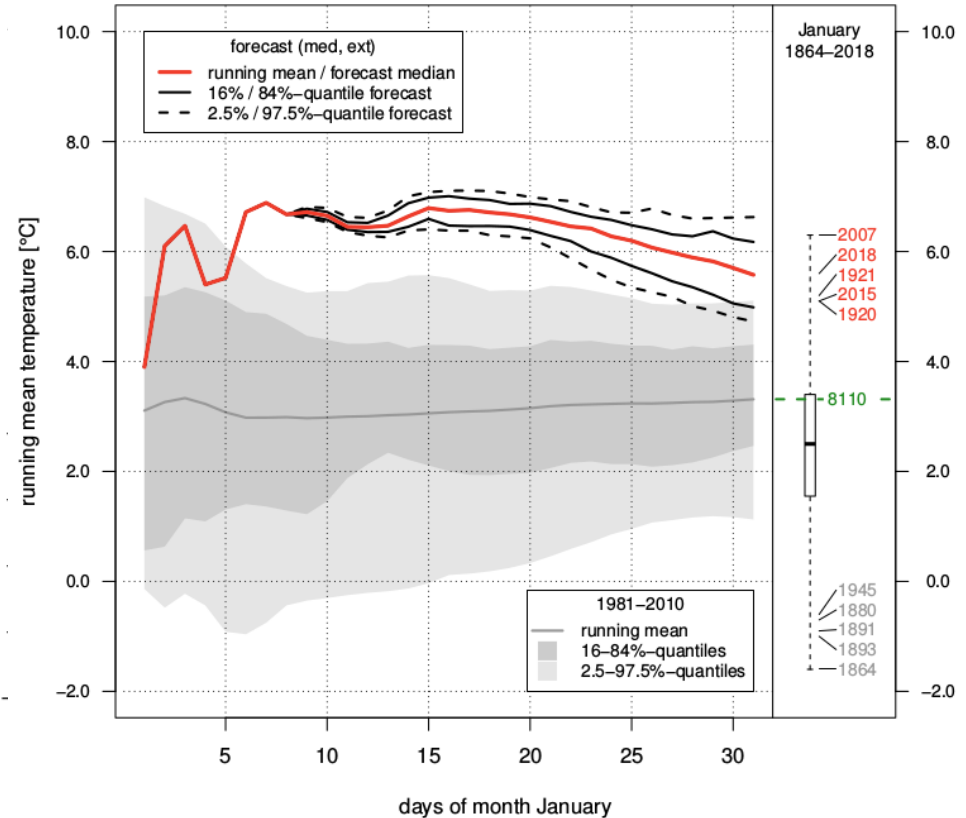
## Monthly Mean Temperature Outlook

Zürich / Fluntern: January 2019



## Monthly Mean Temperature Outlook

Lugano: January 2019

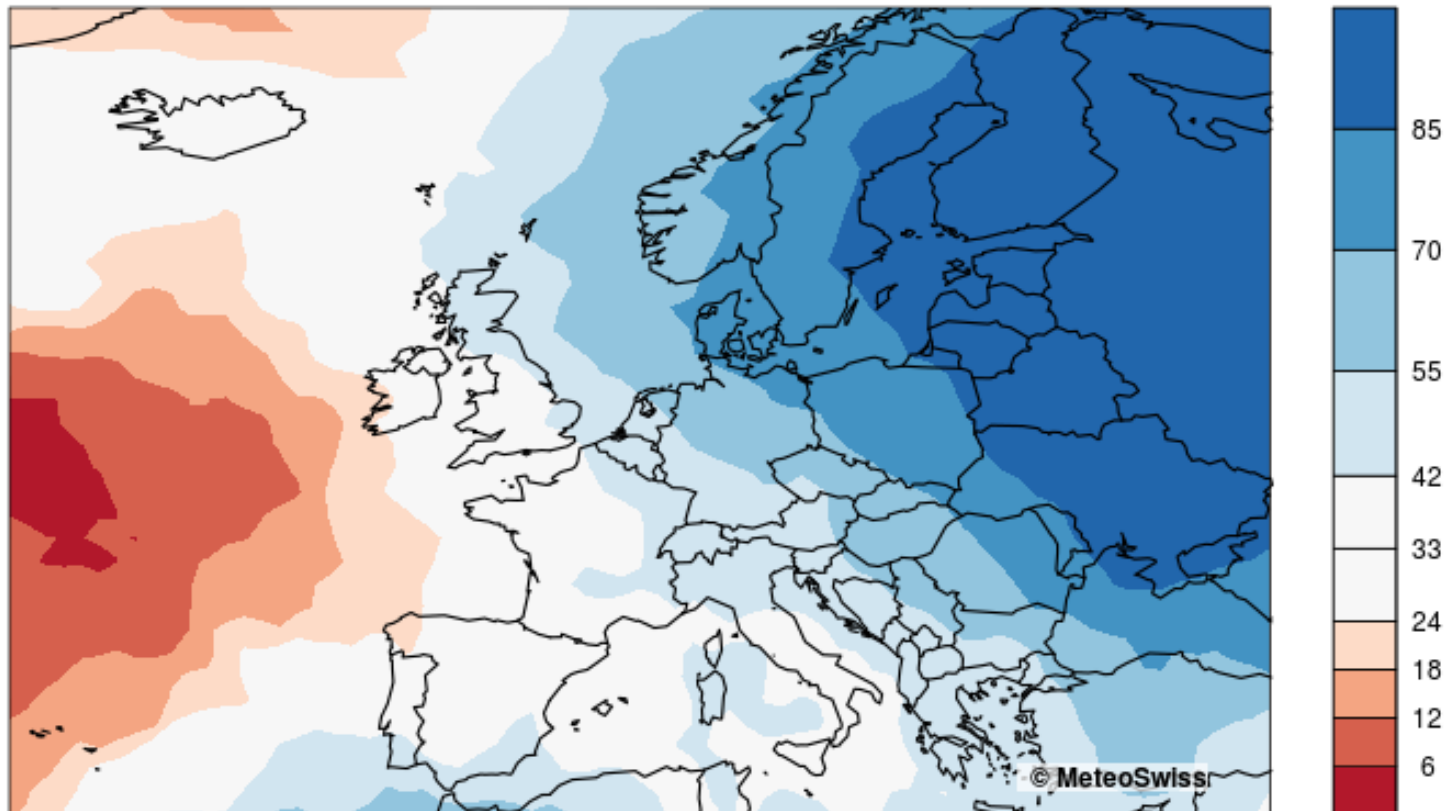




# Previsione giorno +8 / +14

Z 500 (lower tercile)  
Reference Period 1999-2018

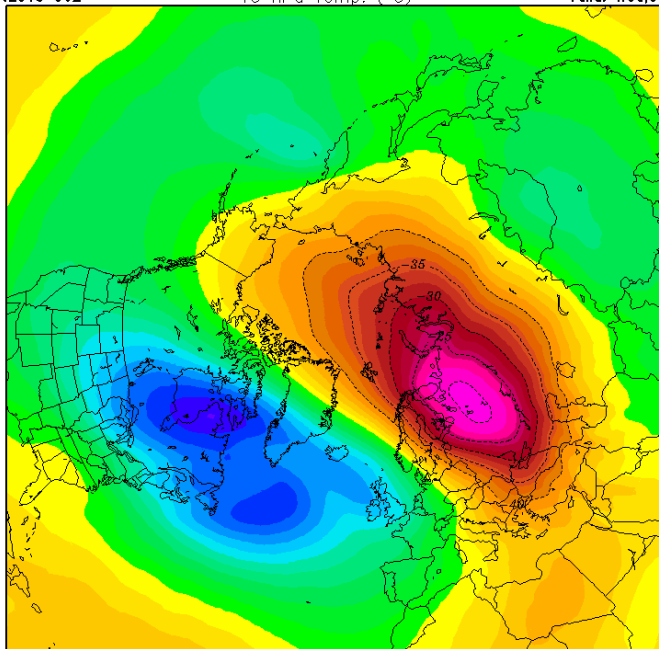
started on 07-01-2019  
Week 2: Mon 14 Jan - Sun 20 Jan





# Stratospheric Warming...e i media sono subito in allerta per freddo artico su tutta l'Europa!

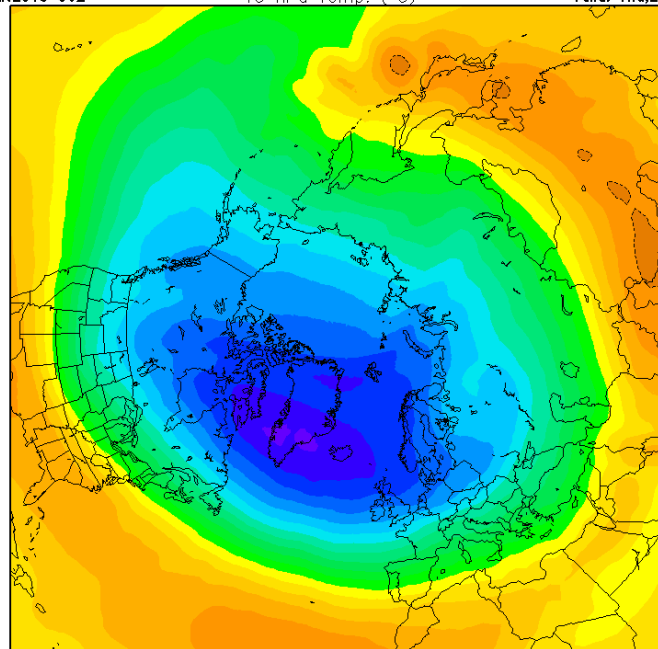
Init: Wed,09JAN2019 06Z 10 hPa Temp. (°C) Valid: Wed,09JAN2019 12Z



Data: GFS OPERATIONAL 1.000°  
(C) Wetterzentrale  
www.wetterzentrale.de



Init: Wed,09JAN2019 06Z 10 hPa Temp. (°C) Valid: Thu,24JAN2019 18Z



Data: GFS OPERATIONAL 1.000°  
(C) Wetterzentrale  
www.wetterzentrale.de



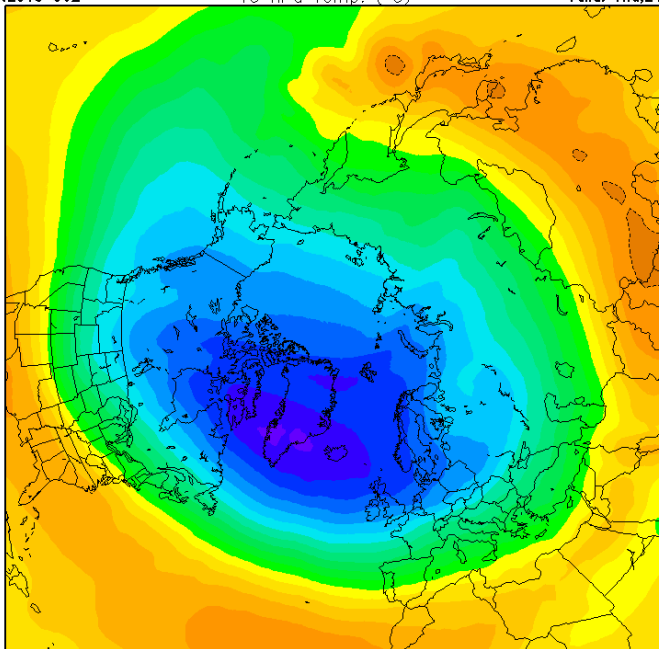


## Vortice polare stratosferico «normale»

Init: Wed,09JAN2019 06Z

10 hPa Temp. (°C)

Valid: Thu,24JAN2019 18Z



Data: GFS OPERATIONAL 1.000°  
(C) Wetterzentrale  
www.wetterzentrale.de

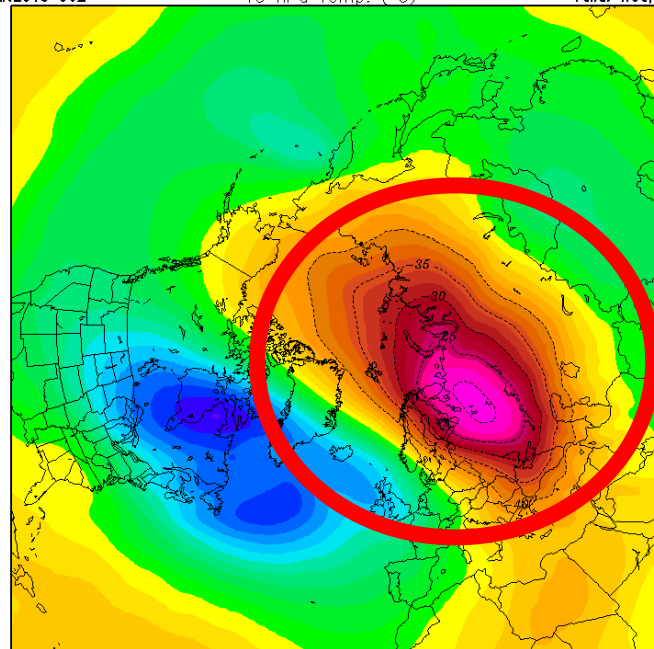


## Vortice polare stratosferico «disturbato»

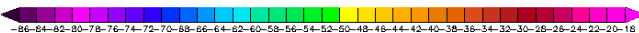
Init: Wed,09JAN2019 06Z

10 hPa Temp. (°C)

Valid: Wed,09JAN2019 12Z



Data: GFS OPERATIONAL 1.000°  
(C) Wetterzentrale  
www.wetterzentrale.de







# Stratospheric Warming

- Il riscaldamento può essere lieve, moderato o intenso (fino a 60 °C di anomalia);
- rilevabile tramite radiosondaggi atmosferici;
- si presenta in massima parte d'inverno e sembra coinvolgere in misura molto maggiore l'emisfero settentrionale piuttosto che quello meridionale;
- Le cause dello strat-warming sono ancora poco chiare nella comunità scientifica sebbene siano state avanzate ipotesi che coinvolgono l'attività solare da una parte e l'influenza delle onde planetarie dall'altra.



# Stratospheric Warming

- la configurazione è stata all'origine delle più intense ondate di gelo che hanno investito il continente europeo (Italia compresa) nel 1929, 1963, 1985, 2018.
- Tale configurazione atmosferica è del tutto temporanea e reversibile ed il vortice polare può ricomporsi dopo 15/20 giorni sulle latitudini di sua competenza;
- Il meccanismo esatto di influenza dello strat-warming sulla bassa troposfera non è noto ed è tuttora oggetto di studi.



# Influsso sulla circolazione nella troposfera

- Vortice polare stratosferico «spostato»
- Vortice polare troposferico «spezzettato»

