



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Dipartimento federale dell'interno DFI  
Ufficio federale di meteorologia e climatologia MeteoSvizzera

# Estate 2013

## I francesi: "Il 2013 sarà un anno senza estate"

L'allarme lanciato da un noto meteorologo tv che, dopo una primavera tra le più fredde e piovose degli ultimi tempi, non prevede affatto miglioramenti. Dovremo passare le ferie con l'ombrello?



FOTO GETTY

### CORRELATI

- Meteo, sull'Italia torna l'instabilità
- Nel 1816 l'estate non arrivò mai
- Livorno, tromba marina a San Vincenzo
- Le previsioni meteo in diretta
- La situazione in Europa

**15:06** - Se state organizzando le vostre ferie for prepararvi a brutte sorprese. Il 2013 infatti potre come l'anno senza estate. La preoccupante pr meteorologo francese, che prevede tre mesi e della bella stagione. Basandosi sui mesi primav segnalati sono a dir poco scoraggianti: al Nord Ita pativa dal 1991.

"Siamo in un serio pericolo di un anno senza e: cui ci sono poche eccezioni, come nel 1975, nel quando ci sono state una primavera e un inver un'estate normale. Ma adesso abbiamo una bru partenza", spiega Laurent Cabrol che si fa chiar

"La temperatura dell'acqua del mare - aggiunge ed è un segno di raffreddamento dell'atmosfera nell'aria. E quando viene il caldo, l'umidità evap temporalmente. E quando ci sono i temporali non si p tranquilla giornata di sole".

A riprova dell'allarmante previsione ci sono i dat marzo e maggio è stato per molte zone in Emilia più piovoso degli ultimi 150/200 anni, cioè all cominciate le misurazioni meteorologiche. In cit e in altre zone del Nord-Est si sono registrate ne da record. Maggio da solo, invece, è stato al No dal 1991.

## La previsione meteo da brividi: "Il 2013 sarà un anno senza estate"

Le parole di un grande esperto francese: "Siamo in un serio pericolo di un anno senza estate". Ma non tutti sono d'accordo



La Nuova Venezia - 30 Maggio 2013

Empfehlen 3,5 20



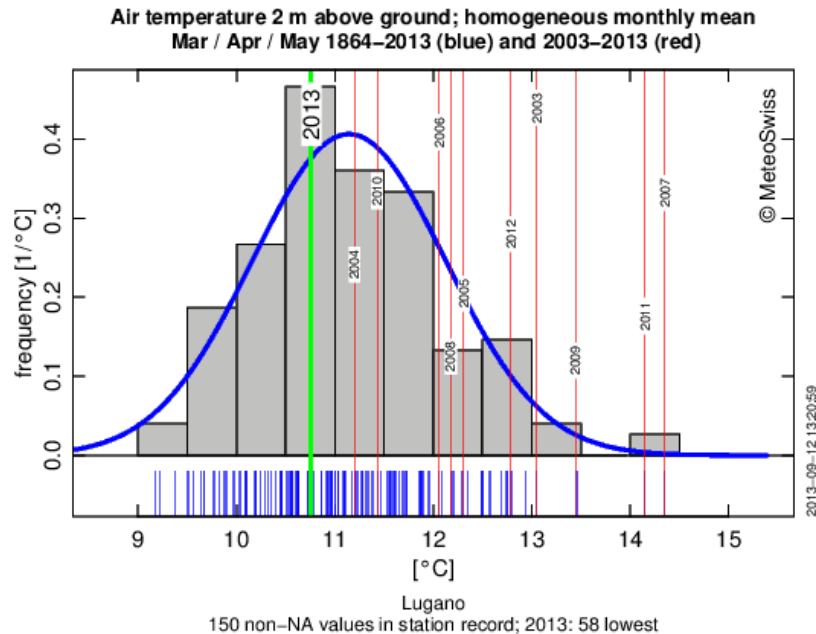
**Incredibile, ma vero.** Quello che alcuni temevano potrebbe trasformarsi in realtà. **Il 2013 potrebbe essere un anno senza estate.** E' dalla Francia che giunge una previsione preoccupante: il più affidabile meteorologo di France1, prima rete televisiva del paese, si è spinto a sostenere che potrebbe essere "un anno senza estate".

# Retrospettiva meteoclimatica

Matteo Buzzi, Mauro Guerini, Gianluca Ferri, Martino Buzzi

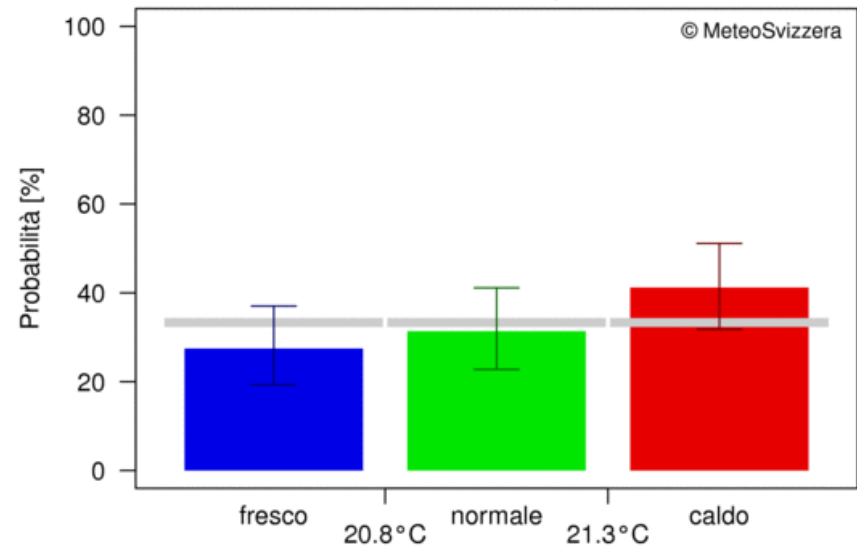


# Le premesse



## Temperatura media stagionale giugno – agosto 2013

Sud delle Alpi

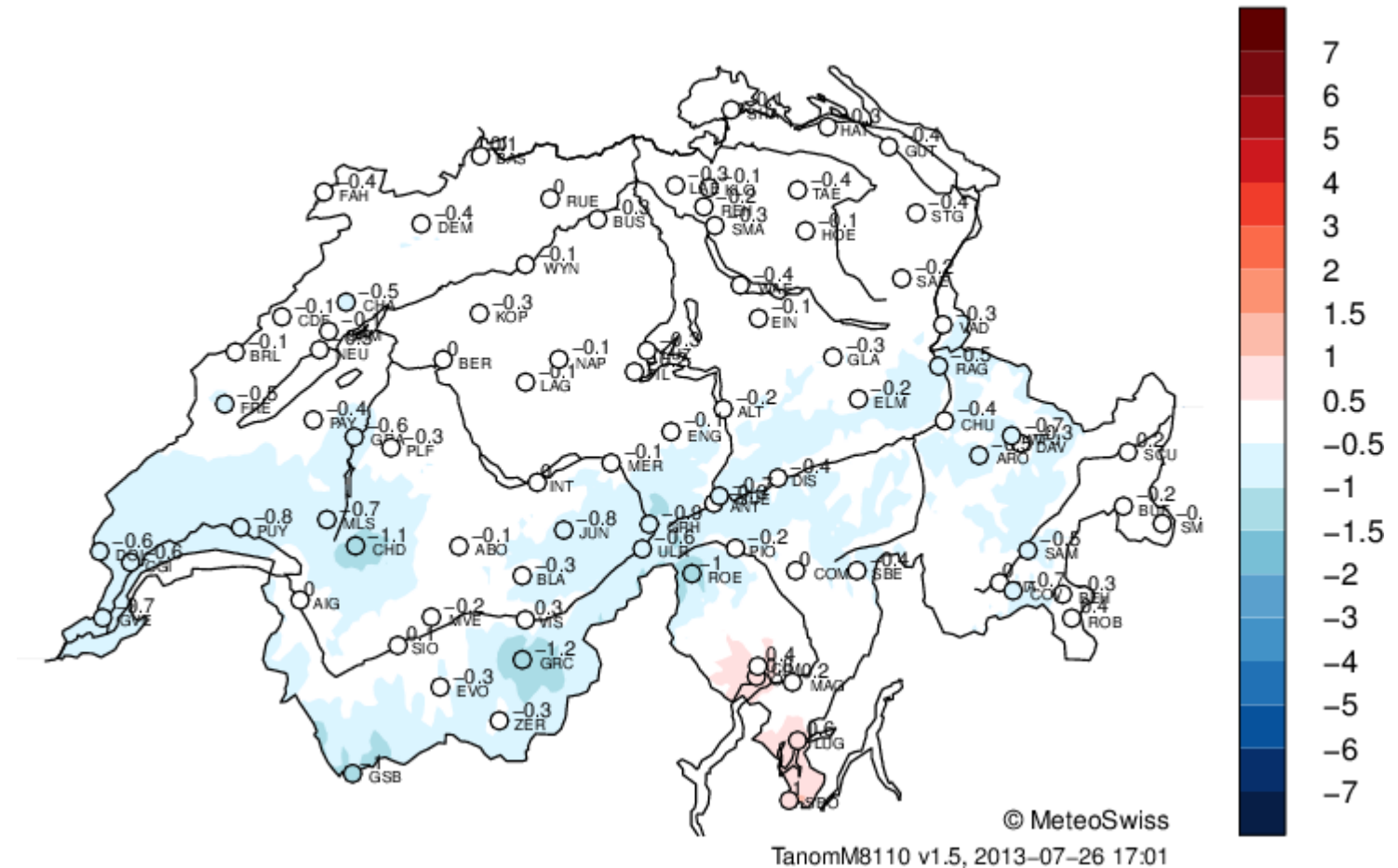


Previsione (in colore) e statistica 1981 – 2012 (in grigio)  
Elaborazione del maggio 2013



# Temperatura: giugno 2013

Monthly Temperature Anomaly (degC) Jun 2013 (Ref. 1981–2010)





# Temperatura: giugno 2013

Abweichung vom Temperaturmittel (°C)

Juni 2013

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	LUS	BUS	GUT	KLO	TAE	SMA	STG	CHU	VAD	ALT	ENG	ABO	CDF	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	-3.7	-3.8	-3.9	-4.6	-4.4	-5.8	-4.4	-4.5	-4.3	-4.8	-4.1	-3.6	-3.1	-3.2	-4.5	-3.9	-6.3	-6.4	-5.2	-4.6	-4.5	-3.3	-3.8	-3.9	-4.2	-4.0	-3.9	-2.9	-3.6	-2.9	-5.5	-4.7	-3.4	NA	-5.2	-4.6	-5.0	-5.2	-4.5	-4.0	0.1	-1.5	0.6	-2.0	0.2	1.5	0.6	-0.2	1
2	-2.6	-2.9	-2.7	-3.8	-2.4	-2.7	-3.2	-2.9	-2.7	-3.8	-2.6	-3.6	-2.5	-3.0	-3.6	-4.5	-5.1	-5.4	-3.8	-4.1	-4.3	-3.5	-4.1	-3.5	-4.8	-4.1	-4.5	-4.1	-4.3	-3.4	-4.5	-4.3	-2.4	NA	-4.5	-2.3	-1.6	-1.9	-2.5	-1.9	1.9	-2.0	0.1	-2.1	1.7	2.6	2.4	2.1	2
3	-6.2	-5.5	-5.5	-5.5	-2.8	-3.6	-3.7	-4.8	-4.9	-4.7	-5.5	-6.3	-5.7	-6.3	-6.1	-7.3	-5.3	-6.2	-4.3	-4.9	-4.7	-4.7	-5.8	-4.2	-6.0	-6.6	-5.8	-5.5	-5.7	-1.7	-5.0	-3.5	-2.2	NA	-4.4	-1.5	-2.7	-2.7	-3.3	-2.2	1.0	-2.6	-0.4	-1.5	0.6	1.4	0.1	0.1	3
4	-2.4	-2.8	-2.7	-2.9	-3.7	-4.5	-2.5	-3.1	-3.1	-3.5	-3.1	-3.0	-3.0	-3.3	-3.3	-4.1	-2.3	-3.2	-3.3	-4.0	-2.2	-1.7	-3.5	-2.9	-1.4	-4.5	-1.8	-1.6	-1.3	0.1	-1.0	-1.3	-1.0	NA	-1.2	-0.7	-2.6	-3.0	-2.1	-1.6	-0.6	0.1	0.4	0.1	-0.5	0.8	-0.5	0.1	4
5	0.9	1.4	1.1	1.4	-0.2	-0.4	0.5	0.9	0.3	0.7	0.3	-0.2	0.6	-0.5	0.4	-0.4	0.8	-0.5	-0.4	0.0	-0.5	0.6	1.4	1.7	1.0	1.5	1.6	1.0	0.0	0.3	1.0	1.0	0.2	NA	1.3	0.6	-0.2	0.4	0.4	-0.2	-0.2	-0.3	-0.4	0.0	0.2	0.8	-0.3	0.5	5
6	1.8	3.2	2.5	3.0	1.4	1.4	2.1	1.9	1.2	2.0	1.5	1.3	1.4	0.5	1.8	1.4	1.6	0.7	0.9	1.9	2.1	2.4	2.6	2.5	2.1	3.3	1.8	0.4	0.4	0.0	1.0	1.3	0.3	NA	2.3	1.2	1.7	1.9	1.7	1.4	0.5	1.0	0.1	1.2	1.0	1.0	-0.3	1.0	6
7	1.9	3.2	2.1	3.5	1.2	1.8	2.4	2.1	1.3	2.4	1.4	2.1	1.6	1.5	2.2	2.1	1.9	2.0	1.3	2.2	2.8	2.6	3.2	3.4	2.8	3.9	2.2	1.2	0.8	0.0	1.6	1.2	0.9	NA	2.2	1.3	2.3	2.8	2.1	1.9	-0.1	1.4	1.1	2.2	1.0	1.5	0.5	1.7	7
8	3.4	4.2	3.4	2.9	-0.1	0.4	1.8	2.1	2.7	3.6	3.1	3.2	3.3	2.9	3.3	3.4	3.2	3.5	2.8	3.7	3.3	2.5	3.4	2.1	2.3	4.1	3.6	2.7	2.1	1.0	2.3	2.1	0.1	NA	2.8	0.9	2.2	2.2	2.6	1.8	-0.4	-0.1	1.1	0.2	0.8	0.7	-0.2	1.2	8
9	1.2	0.4	0.6	-0.8	-2.6	-2.9	-1.0	0.1	0.8	1.6	0.9	1.6	1.2	1.4	0.8	0.8	0.1	1.6	1.6	0.7	-0.8	-1.1	-1.3	-3.0	-2.7	-0.7	-0.9	0.3	-0.7	-1.6	0.0	-0.9	-2.2	NA	-2.5	-1.9	-1.4	-1.5	-1.7	-2.1	-2.5	-2.6	-3.3	-3.9	-3.4	-3.7	-2.9	-2.1	9
10	-2.1	-2.3	-1.5	-2.5	-3.0	-4.0	-3.5	-2.4	-2.2	-2.2	-2.8	-1.8	-1.9	-1.8	-2.9	-2.9	-2.9	-3.2	-2.5	-3.1	-2.9	-1.9	-2.9	-3.2	-4.1	-3.3	-3.7	-3.2	-3.4	-2.8	-3.1	-3.4	-2.1	NA	-3.4	-2.2	-1.7	-2.2	-3.1	-2.6	-1.9	-2.1	-2.5	-2.4	-2.5	-3.0	-2.6	-1.7	10
11	-1.1	-0.8	0.3	0.0	-0.7	-1.0	-0.5	-0.4	-0.6	-1.7	-0.9	-1.7	-1.1	-2.0	-1.8	-2.3	-2.0	-2.8	-1.7	-1.8	-1.4	-0.3	-1.0	-1.2	-1.8	-1.5	-2.2	-2.3	-2.5	-2.4	-1.9	-1.6	0.3	NA	-1.4	-0.4	1.0	0.8	-0.6	-0.7	1.6	0.3	1.6	0.4	0.3	1.8	0.6	1.6	11
12	0.3	1.6	1.3	1.5	0.4	0.5	0.4	1.0	0.6	0.5	0.5	-0.8	0.4	-0.3	0.8	0.7	0.1	0.8	0.0	1.0	1.0	1.1	1.3	1.5	1.0	2.4	0.9	-0.3	-1.2	-0.5	0.1	0.4	-0.3	NA	0.7	0.1	1.7	1.3	1.0	0.6	2.4	0.6	2.5	1.2	0.7	2.6	1.7	1.8	12
13	3.2	3.8	2.6	2.2	2.2	1.8	1.6	3.4	3.2	3.7	3.0	2.9	3.4	3.4	3.6	4.1	4.0	4.7	3.0	4.7	4.4	3.1	3.2	3.6	3.7	4.7	4.6	3.8	4.2	4.6	4.5	4.4	2.1	NA	4.0	3.7	4.6	3.6	4.4	3.9	1.4	2.9	2.8	2.9	1.8	2.9	1.9	2.1	13
14	-1.8	-2.1	-2.0	-2.4	-0.5	-1.0	-1.0	-1.3	-1.5	-1.8	-2.0	-1.7	-1.5	-2.1	-2.3	-2.6	-0.2	-0.8	-0.5	-0.5	1.0	-0.5	-1.7	0.1	1.1	-1.7	2.6	2.6	2.6	3.2	2.4	3.4	3.3	NA	1.0	3.2	1.9	0.7	1.8	2.6	3.1	2.1	2.6	2.7	2.1	3.2	2.8	3.1	14
15	1.8	2.3	2.2	2.1	3.8	2.9	2.5	3.1	2.5	1.4	1.7	1.3	2.1	1.6	2.1	2.6	3.0	3.1	1.6	3.1	4.0	2.9	2.6	3.1	3.2	3.5	3.3	3.1	4.1	2.7	3.9	4.7	4.5	NA	3.9	3.5	4.2	3.1	3.8	4.1	3.1	2.3	2.8	2.9	2.7	3.0	3.6	4.1	15
16	4.1	4.7	4.7	3.9	4.5	4.4	4.7	5.4	4.7	4.2	4.0	3.4	4.7	3.9	4.2	4.0	4.2	4.4	4.0	4.5	5.2	5.1	5.0	6.1	5.9	5.7	6.0	5.3	5.3	5.3	5.3	5.9	3.8	NA	4.9	3.5	5.6	4.4	6.0	4.7	3.5	2.7	3.7	3.9	3.0	4.0	3.5	4.0	16
17	7.9	9.5	8.8	8.6	5.3	6.2	7.2	8.2	7.6	7.8	8.0	7.4	8.3	7.3	8.8	10.6	9.0	10.7	11.0	8.8	9.3	9.3	9.3	8.6	9.7	11.0	10.8	10.2	7.3	6.8	7.3	7.0	4.2	NA	6.6	4.8	8.0	8.2	8.3	6.5	4.3	3.7	5.1	4.5	2.6	5.1	4.9	5.3	17
18	9.6	10.1	9.2	8.8	6.6	7.3	9.0	9.3	9.4	9.1	9.6	9.1	8.9	9.4	9.6	9.9	7.3	8.4	9.8	10.8	10.3	9.7	10.1	9.8	9.9	11.0	10.7	9.5	8.9	6.3	8.2	7.6	4.4	NA	8.0	5.6	8.7	9.2	9.2	7.3	3.6	4.7	6.9	5.7	4.7	6.2	6.0	6.4	18
19	7.9	9.1	9.1	8.7	6.0	6.9	8.0	8.2	7.0	7.6	6.7	7.8	7.0	6.9	8.3	11.3	9.0	11.3	11.6	11.0	10.6	9.6	9.6	8.2	9.4	10.9	9.7	8.9	7.0	3.5	7.6	8.0	5.4	NA	7.0	2.8	7.3	6.6	7.5	6.7	5.2	3.7	5.4	3.3	2.9	3.9	4.7	5.6	19
20	3.0	2.0	2.1	1.1	0.7	0.6	2.3	2.6	2.6	3.4	2.4	4.4	3.0	3.5	3.2	6.2	5.3	8.2	5.6	5.7	3.7	1.9	2.3	0.1	2.6	3.5	5.4	6.1	5.0	1.4	5.7	6.7	3.4	NA	3.3	0.8	3.1	1.8	2.7	0.7	4.1	1.8	2.9	0.3	1.0	1.6	2.7	3.2	20
21	1.2	-0.1	0.2	-0.6	0.3	0.1	0.1	0.8	0.8	0.2	0.8	1.3	1.4	1.1	0.6	0.3	1.5	1.2	0.1	0.2	-0.7	-0.6	-1.3	-1.6	-1.2	-1.0	-0.7	0.2	1.9	0.5	1.7	4.0	2.0	NA	0.8	0.7	1.0	0.7	0.2	0.2	1.4	0.8	1.0	0.2	1.0	1.1	1.3	1.4	21
22	0.9	0.4	1.2	0.2	1.1	1.2	1.3	1.5	1.3	-0.1	0.5	0.4	1.0	0.7	0.0	-0.1	0.3	0.2	-0.4	-0.1	0.1	0.7	-0.7	-0.8	-0.7	-0.1	0.0	0.4	0.5	0.6	0.9	2.0	1.1	NA	0.1	0.4	0.2	1.0	-0.1	-0.8	-0.1	-0.2	0.6	-1.0	-0.9	0.9	2.1	1.5	22
23	-1.5	-3.0	-1.8	-3.0	-0.9	-1.6	-1.8	-1.8	-1.7	-2.8	-2.5	-2.2	-2.4	-2.7	-3.1	-3.4	-2.2	-2.7	-2.6	-2.6	-2.8	-2.9	-4.1	-4.5	-4.0	-3.5	-3.0	-2.2	-1.2	-0.8	-1.4	-0.2	-1.3	NA	-1.8	-0.5	-0.2	0.2	-0.9	-0.3	-0.7	-1.1	0.1	-1.3	-1.6	-1.1	-0.2	0.4	23
24	-4.9	-5.4	-3.8	-5.8	-5.3	-5.6	-4.7	-4.6	-4.0	-5.8	-4.9	-4.6	-4.2	-4.6	-5.0	-5.7	-5.1	-5.4	-5.8	-5.8	-6.5	-5.4	-6.6	-7.1	-7.6	-6.3	-6.9	-5.7	-6.5	-6.9	-5.7	-5.4	-5.4	NA	-5.1	-5.3	-3.6	-4.1	-5.6	-4.5	-1.8	-3.8	-2.6	-3.1	-0.8	0.1	0.9	1.4	24
25	-5.0	-5.2	-4.5	-5.7	-4.8	-4.5	-4.8	-4.7	-3.8	-5.4	-4.1	-5.6	-4.3	-4.8	-5.1	-6.8	-5.0	-5.9	-5.3	-6.1	-6.4	-5.7	-7.1	-6.9	-7.8	-6.8	-7.5	-5.7	-7.2	-7.5	-6.3	-4.8	-4.3	NA	-5.6	-4.9	-3.3	-3.6	-5.6	-4.4	-0.8	-4.8	-3.4	-3.5	-2.3	-0.4	0.8	1.3	25
26	-4.5	-4.9	-4.2	-4.8	-4.1	-3.5	-4.0	-4.1	-3.7	-4.2	-4.0	-4.5	-4.0	-4.7	-4.5	-6.1	-5.2	-6.1	-4.2	-4.6	-4.8	-4.6	-5.9	-5.2	-6.4	-5.9	-6.9	-7.2	-7.7	-7.0	-6.2	-5.2	-5.0	NA	-5.4	-4.5	-3.7	-3.0	-5.0	-4.0	-1.5	-4.6	-3.2	-3.9	-2.6	-0.7	-0.1	-1.2	26
27	-5.																																																

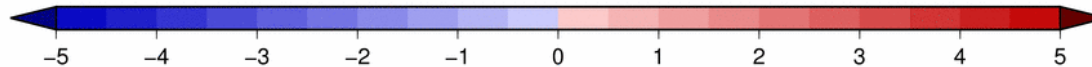
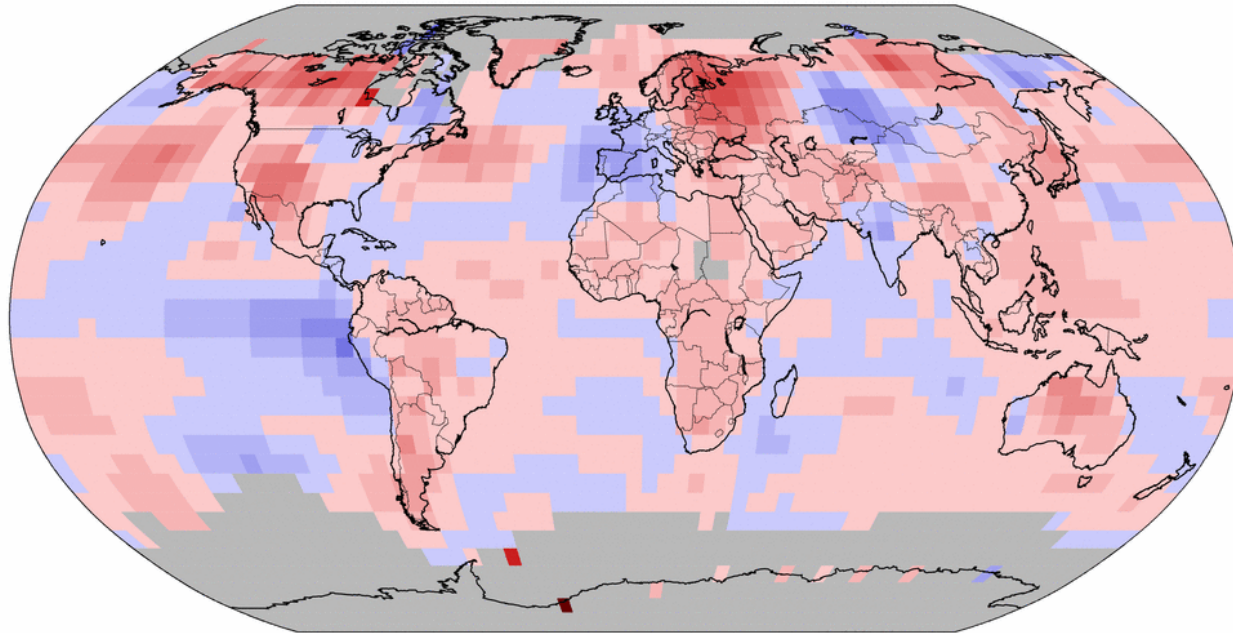




# Temperatura: anomalie globali giugno 2013

Land & Ocean Temperature Anomalies Jun 2013  
(with respect to a 1981–2010 base period)

Data Source: MLOST version 3.5.3



NOAA's National Climatic Data Center  
Fri Jul 12 08:06:13 EDT 2013

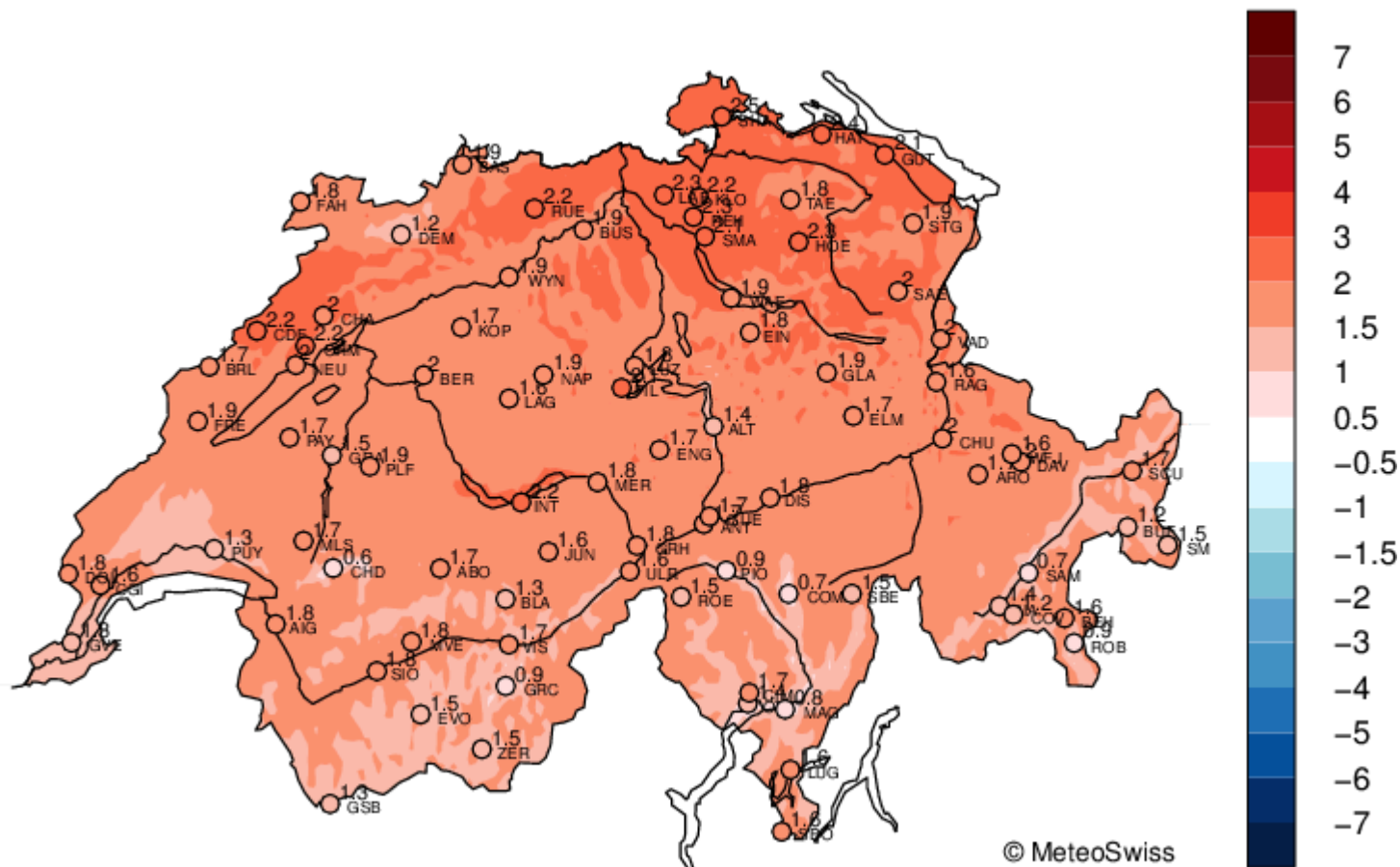
Degrees Celsius

Please Note: Gray areas represent missing data  
Map Projection: Robinson



# Temperatura: luglio 2013

Monthly Temperature Anomaly (degC) Jul 2013 (Ref. 1981–2010)



© MeteoSwiss

TanomM8110 v1.5, 2013-08-26 13:04



# Temperatura: luglio 2013

Abweichung vom Temperaturmittel (°C)

Juli 2013

Normperiode: 1981 – 2010

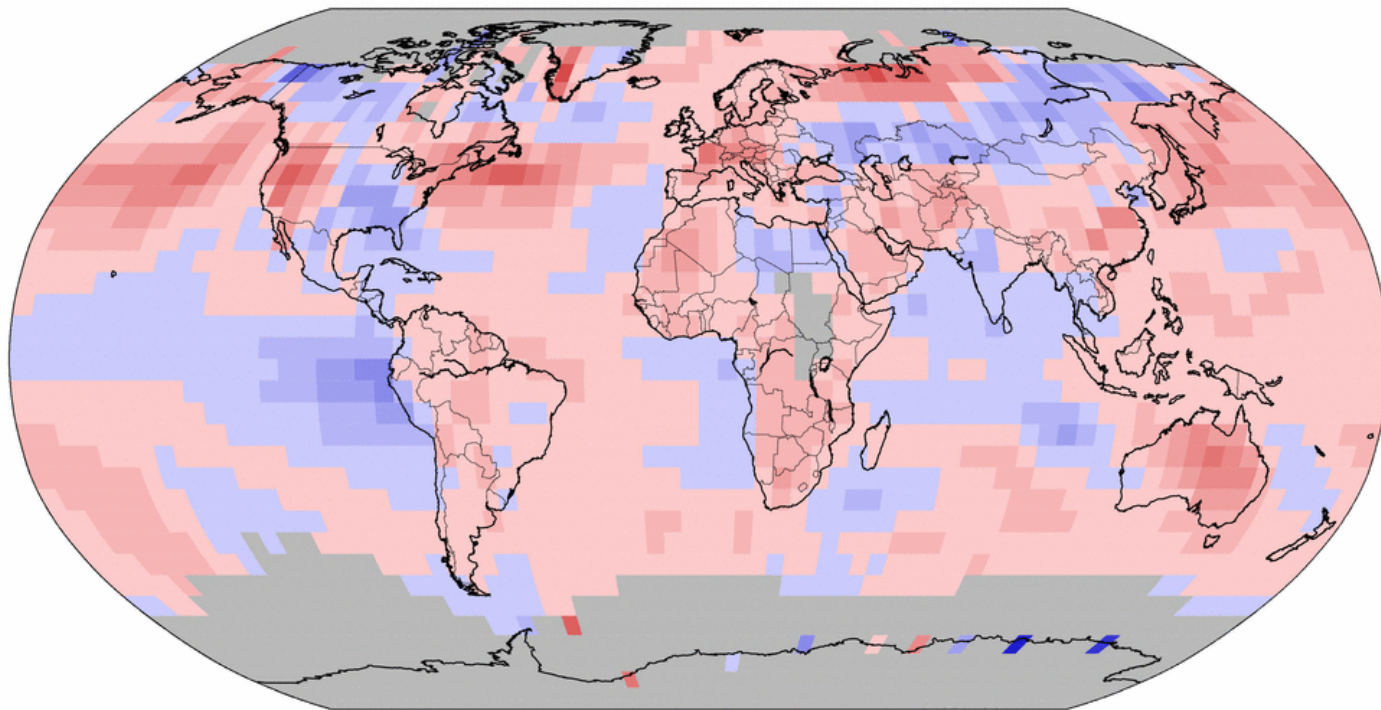
	N/NW-CH				Mittelland West				Mittelland Zentral/Ost								Täler Alpennordhang				Jura				Berglagen				Täler GR				Wallis				Alpensüdseite												
	SHA	RUE	BAS	FAH	GVE	PUY	NEU	BER	WYN	LUZ	BUS	GUT	KLO	TAE	SMA	STG	CHU	VAD	ALT	ENG	ABO	CDF	CHA	DOL	MLS	NAP	PIL	SAE	WFJ	JUN	DAV	SCU	SAM	AND	DIS	ULR	VIS	SIO	MVE	ZER	ROB	SBE	CIM	PIO	COM	OTL	LUG	SBO	
1	-0.7	-0.1	-0.4	-0.2	-1.0	-1.2	-1.1	-0.6	-0.7	-0.1	-0.7	-0.9	-0.4	-0.8	-0.2	-0.8	-0.5	-0.4	-1.2	-0.1	0.3	0.1	-0.2	0.5	0.4	1.0	0.8	0.1	0.2	0.5	0.4	0.2	-1.5	NA	0.8	0.0	0.0	-0.2	0.3	-0.4	-1.0	-1.0	0.0	-0.8	-1.3	0.5	-0.1	-0.4	1
2	1.5	1.7	0.3	0.9	2.3	1.5	-0.1	1.4	1.0	0.3	0.8	1.3	1.3	1.9	1.5	1.9	1.8	2.0	0.4	1.3	1.3	0.4	1.0	1.1	1.4	1.9	1.3	1.0	1.2	-0.1	2.0	2.0	0.5	NA	1.7	0.7	0.9	0.9	1.6	0.4	1.1	0.4	0.3	-0.5	0.4	1.2	0.8	0.7	2
3	-2.1	-1.4	-1.8	-2.3	-1.7	-2.6	-2.3	-1.5	-1.9	-2.2	-2.0	-1.7	-1.4	-1.6	-2.3	-1.4	-1.5	-1.8	-1.9	-1.2	-0.8	-1.2	-1.7	-2.1	-1.6	-1.7	-0.6	-0.3	-0.8	-0.6	-0.3	-0.9	-1.4	NA	-1.7	-1.9	-1.8	-2.1	-1.6	-1.7	-1.5	-2.6	-2.5	-3.9	-3.8	-2.9	-1.7	-2.1	3
4	-0.1	-1.8	-1.2	-2.7	-1.3	-1.6	-1.3	-0.8	-0.6	-1.5	-0.6	0.4	-0.2	0.2	-1.1	-1.0	0.3	-0.1	-0.9	-1.4	-1.2	-2.0	-2.8	-3.0	-2.3	-2.4	-1.5	-0.6	-0.4	1.0	0.5	0.8	1.0	NA	0.1	0.4	0.4	0.0	-0.8	0.1	0.2	1.4	1.8	0.4	-0.5	0.6	0.1	0.5	4
5	0.5	-0.2	-0.2	-0.8	-0.5	0.4	0.7	0.9	0.8	0.3	0.4	0.9	0.6	0.5	0.0	-0.7	1.3	1.1	0.2	0.5	1.0	0.2	-0.5	-0.2	-0.6	-1.1	-0.9	0.1	0.2	3.2	1.4	2.5	1.8	NA	1.3	2.1	1.7	1.4	0.9	1.6	2.1	2.5	3.2	2.0	1.7	3.3	2.3	2.7	5
6	2.8	2.2	1.4	1.5	0.6	1.4	2.8	1.8	2.0	1.8	2.2	2.6	2.2	1.7	1.9	1.1	2.7	1.9	1.1	1.6	2.3	2.7	1.8	1.6	2.4	0.9	1.5	1.0	1.1	3.2	2.3	3.0	1.3	NA	3.0	1.7	2.3	2.4	2.5	2.2	2.0	2.6	2.6	2.3	1.2	3.6	3.1	3.1	6
7	3.5	2.6	2.4	2.1	1.6	2.4	3.4	2.2	2.5	2.1	2.6	2.9	2.6	1.8	2.0	1.3	2.6	1.9	1.7	2.0	2.8	3.3	2.5	2.2	2.7	1.5	2.0	1.8	2.1	3.1	2.2	2.4	0.3	NA	2.9	2.3	3.3	3.3	3.2	3.1	0.8	2.0	1.7	1.9	2.0	2.9	2.5	1.8	7
8	4.1	3.1	2.5	2.2	1.5	2.0	3.6	2.8	3.0	2.6	3.3	3.6	3.1	2.9	2.9	1.5	1.7	2.0	1.8	2.0	2.7	4.1	2.7	2.2	2.7	1.3	2.7	2.7	1.7	2.1	1.8	2.0	0.4	NA	1.5	1.7	2.7	2.2	2.3	1.5	0.2	0.8	0.9	0.2	0.2	0.1	0.5	0.7	8
9	3.7	2.4	2.4	1.9	1.7	1.5	2.3	2.0	2.4	1.8	2.7	3.1	2.9	2.5	2.4	1.7	2.4	2.0	0.7	1.6	0.8	2.8	2.3	2.3	2.0	1.9	2.9	2.9	1.6	2.4	1.3	0.7	0.5	NA	1.4	1.7	1.3	0.9	1.5	1.6	0.4	1.4	1.5	0.4	0.0	0.8	1.7	2.0	9
10	3.7	2.8	3.1	3.1	1.8	2.2	3.0	2.6	2.8	1.7	2.9	3.2	3.3	2.7	2.6	2.5	2.8	1.9	1.1	1.2	1.4	3.9	2.4	2.3	1.2	2.3	1.3	1.1	0.8	1.9	2.4	2.0	1.9	NA	1.7	1.5	1.3	1.3	1.1	0.5	-0.4	2.8	1.3	1.2	1.4	0.1	0.0	0.7	10
11	1.3	0.1	-0.4	-0.7	1.7	2.3	2.4	1.5	1.3	1.1	1.7	0.8	1.1	0.4	0.8	-0.9	0.7	0.2	0.9	1.2	1.9	2.0	1.2	2.0	0.9	0.1	0.6	0.3	-0.1	1.2	1.2	1.6	1.0	NA	1.5	1.4	2.1	2.7	2.1	1.6	2.0	2.8	3.0	2.6	2.1	1.7	1.8	1.7	11
12	0.1	-0.3	-1.0	-0.8	0.8	0.4	1.1	-0.2	0.3	0.0	-0.3	-0.6	-0.9	-1.8	-0.4	-1.3	0.1	-0.9	0.1	0.1	0.9	0.8	0.6	1.2	1.6	0.0	1.4	1.4	0.7	1.1	0.6	0.2	-0.1	NA	1.3	1.2	2.1	2.3	1.9	1.9	0.3	0.7	1.0	1.1	0.9	1.5	1.5	1.7	12
13	1.2	0.6	0.1	0.2	0.7	1.0	0.6	0.0	0.4	0.8	0.5	0.3	0.5	-0.4	0.7	0.2	0.7	0.0	0.4	0.8	0.5	0.9	0.7	1.2	0.8	1.4	1.0	0.4	0.1	-0.1	0.9	0.4	-0.1	NA	1.2	1.5	0.6	1.8	0.7	1.3	0.6	1.1	1.1	1.4	-0.1	0.8	1.4	1.9	13
14	2.0	1.4	0.7	0.9	1.2	1.7	2.4	1.1	1.4	1.3	1.3	1.0	1.1	0.2	1.7	0.9	1.3	0.6	0.9	1.3	1.6	1.9	1.8	2.0	1.5	1.8	1.3	0.4	0.3	1.1	1.2	0.7	-0.1	NA	1.4	1.8	1.5	2.3	1.8	1.7	0.3	1.6	1.0	2.1	0.5	0.6	1.2	0.8	14
15	2.3	1.4	1.0	1.3	1.3	2.0	1.9	1.4	1.4	2.0	1.4	2.0	1.8	1.0	2.2	1.4	1.8	1.6	1.4	1.6	1.8	1.8	1.6	2.0	1.7	1.9	1.3	0.9	0.2	0.6	1.7	1.6	0.3	NA	2.0	1.9	1.7	2.8	1.9	2.0	1.9	3.1	2.5	2.7	2.3	2.2	1.9	1.6	15
16	2.6	2.6	1.7	2.2	1.8	2.1	3.2	2.3	1.8	2.2	1.7	1.8	1.5	0.8	2.3	1.6	2.6	1.9	1.6	2.0	2.0	2.9	3.0	3.0	3.2	2.8	4.1	4.3	3.2	3.9	2.9	2.8	0.7	NA	3.5	3.1	3.0	3.6	3.2	3.2	2.0	2.7	2.2	2.8	2.3	2.7	2.5	2.2	16
17	3.2	1.9	1.2	2.0	0.3	1.6	2.6	2.2	0.9	1.3	0.7	2.9	1.9	2.3	2.1	2.9	2.0	2.3	1.6	1.8	1.8	2.3	2.8	1.5	1.5	2.7	2.5	2.5	2.4	2.3	2.0	2.6	0.8	NA	1.5	2.1	1.1	1.2	1.1	1.0	0.7	0.9	0.0	-0.3	1.2	0.8	2.0	1.4	17
18	5.0	2.4	1.8	1.4	-0.1	-0.3	0.9	0.9	1.5	2.8	3.0	3.5	3.2	3.4	2.9	2.2	0.3	0.8	1.4	1.1	1.4	1.8	2.0	0.5	0.2	1.6	2.4	1.8	1.4	-0.2	0.8	0.6	0.6	NA	0.3	0.1	-1.4	-1.5	-0.9	-2.6	0.0	-0.8	-0.3	-1.4	-1.0	-1.2	0.5	0.0	18
19	3.8	2.9	2.0	2.0	-0.4	0.1	0.8	1.3	1.9	2.4	2.4	2.6	2.4	2.0	2.0	2.1	1.2	0.9	1.5	0.5	0.2	1.3	1.8	0.7	0.2	1.2	2.3	1.5	0.9	1.4	1.0	0.3	1.0	NA	1.4	0.1	-0.1	0.4	0.2	0.0	-0.6	-0.5	0.6	-0.2	-0.4	0.4	1.0	0.3	19
20	4.5	3.6	3.1	3.0	0.4	0.2	1.9	2.1	2.8	2.9	3.3	3.5	3.6	2.9	3.4	3.0	2.1	2.8	1.3	1.6	1.0	3.2	2.9	2.3	1.8	2.4	2.6	2.3	2.1	2.3	2.1	2.5	1.4	NA	1.7	1.0	1.4	1.1	1.4	1.4	1.0	0.5	2.0	0.2	-0.5	0.7	2.2	1.8	20
21	5.1	5.0	4.5	4.5	2.7	2.8	3.9	4.1	3.6	3.6	3.6	3.9	3.7	2.9	4.0	3.4	2.7	3.9	2.3	2.5	1.7	4.5	4.3	4.2	3.5	4.3	4.1	3.8	2.8	2.6	2.6	3.1	1.3	NA	2.7	2.7	2.2	3.2	2.9	2.2	1.0	1.4	2.5	1.7	1.2	2.3	2.8	2.4	21
22	4.6	6.4	5.8	5.6	4.1	3.8	4.4	5.1	3.9	4.9	4.6	4.3	4.6	4.4	5.1	4.8	4.0	4.4	3.7	4.3	3.3	4.8	5.3	4.6	4.2	5.7	4.2	4.1	3.7	1.9	3.5	1.5	0.0	NA	4.1	2.6	1.5	1.8	2.7	2.2	1.0	2.3	2.2	1.3	1.6	2.3	2.6	3.2	22
23	3.7	4.4	4.1	4.1	3.3	2.6	3.2	4.3	3.6	3.1	3.7	4.0	3.6	3.5	4.0	5.0	3.2	4.2	2.1	2.6	3.0	2.7	4.7	4.1	3.4	4.6	4.1	3.6	2.6	2.1	2.9	1.4	1.2	NA	2.3	2.4	2.0	1.8	2.8	1.9	0.4	1.5	2.6	0.4	0.2	1.1	1.3	2.6	23
24	1.1	2.0	3.0	2.4	2.6	1.5	2.2	3.0	2.9	1.4	2.0	0.4	2.1	1.1	2.0	1.7	0.9	1.3	0.0	1.1	2.2	2.6	2.1	2.4	1.9	2.6	2.0	1.9	1.9	0.9	1.5	1.6	0.3	NA	0.4	1.2	2.4	2.5	2.3	1.2	-0.2	0.5	2.9	-0.4	-0.4	0.9	1.7	2.2	24
25	3.7	4.2	4.2	4.5	3.9	3.6	4.3	4.2	4.1	3.3	3.9	2.7	4.1	3.4	4.2	3.9	4.0	3.8	3.1	3.9	4.2	3.9	4.1	4.3	3.7	4.7	3.5	3.0	2.8	2.1	3.7	3.1	1.7	NA	3.5	3.4	3.6	4.5	4.2	3.2	1.8	3.6	4.1	2.6	1.8	3.2	3.0	3.2	25
26	5.6	6.6	6.4	6.2	5.1	4.7	5.1	5.7	5.3	5.6	5.6	5.1	5.1	4.8	6.4	6.4	6.2	6.2	4.2	5.8	5.7	5.8	6.8	6.1	6.5	7.5	6.8	6.3	5.4	4.8	5.0	5.5	2.9	NA	5.1	3.7	4.8	5.6											



# Temperatura: anomalie globali luglio 2013

Land & Ocean Temperature Anomalies Jul 2013  
(with respect to a 1981–2010 base period)

Data Source: MLOST version 3.5.4



NOAA's National Climatic Data Center  
Wed Aug 14 08:06:31 EDT 2013

Degrees Celsius

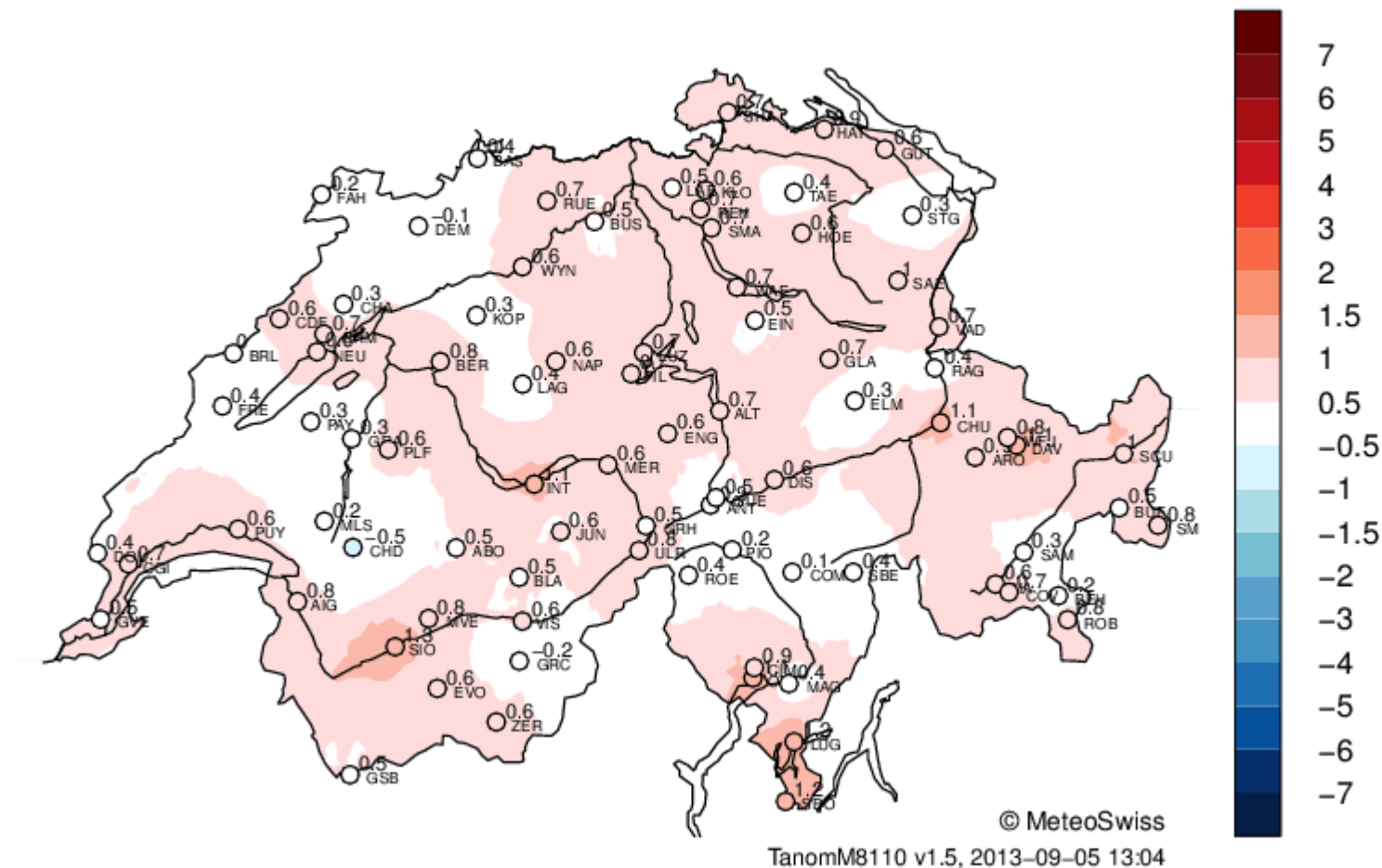
Please Note: Gray areas represent missing data  
Map Projection: Robinson





# Temperatura: agosto 2013

Monthly Temperature Anomaly (degC) Aug 2013 (Ref. 1981–2010)







# Temperatura: agosto 2013

Abweichung vom Temperaturmittel (°C)

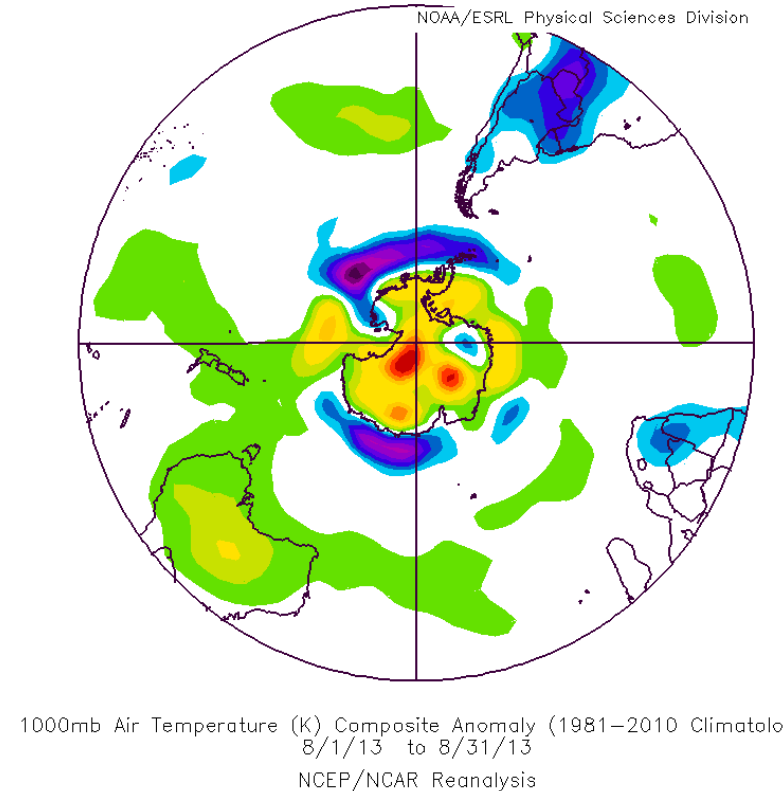
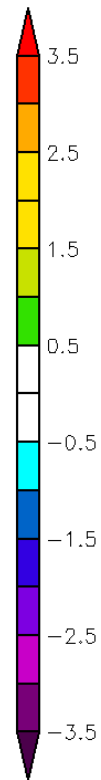
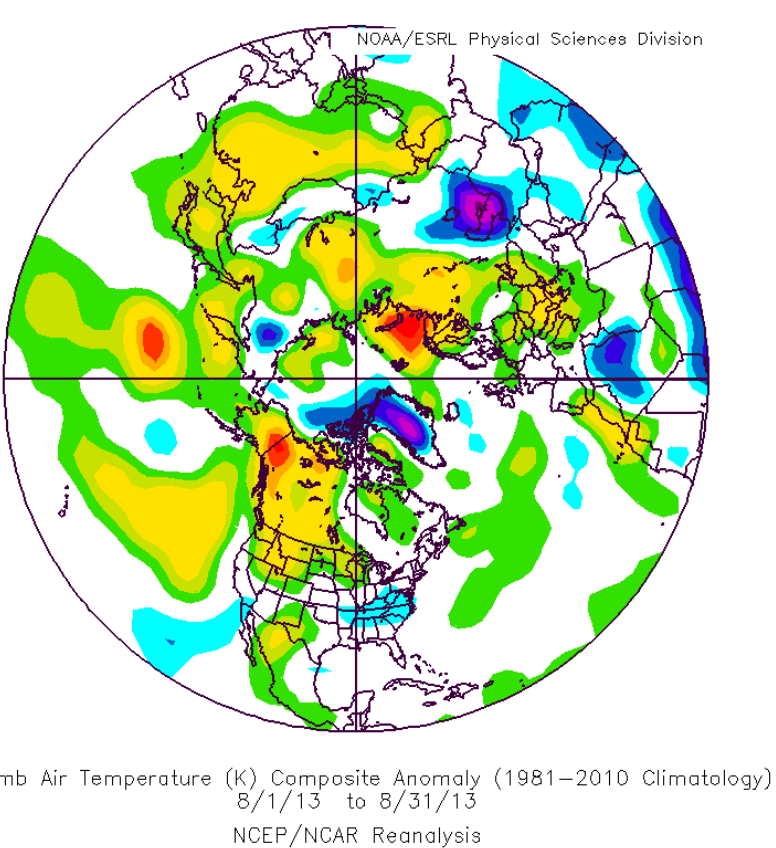
August 2013

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	CDL	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	3.5	5.2	4.7	4.6	3.2	2.8	3.2	3.7	3.0	3.5	3.2	2.6	3.5	2.7	4.2	4.3	4.5	4.8	1.7	4.1	4.7	4.8	5.6	5.1	5.5	6.2	6.7	7.3	6.0	5.8	4.6	3.9	1.1	NA	4.3	2.8	2.6	3.5	5.0	3.5	0.7	1.5	3.2	1.5	1.1	2.3	2.2	2.1
2	5.2	7.9	6.9	7.4	4.5	4.6	4.7	5.6	4.7	5.8	5.2	4.7	5.6	5.3	6.4	7.2	7.6	7.2	3.7	6.6	6.5	6.3	6.9	6.5	7.4	7.9	8.1	8.4	7.4	6.7	6.4	6.3	3.0	NA	6.9	3.7	4.1	5.2	6.7	4.7	2.4	2.4	5.1	2.9	2.5	3.3	3.0	2.9
3	5.0	5.1	4.9	4.6	4.8	4.7	5.4	5.6	5.2	4.2	4.8	4.9	4.9	5.1	5.1	5.4	4.5	5.4	4.3	4.3	5.1	4.9	4.7	4.6	5.5	5.3	6.2	7.1	7.8	5.7	5.6	4.8	3.8	NA	4.2	3.0	2.3	4.8	4.9	3.4	3.3	3.6	5.3	1.9	2.1	3.3	3.6	3.7
4	2.0	1.5	0.8	1.1	3.4	3.7	2.7	3.1	2.1	3.0	1.8	2.0	1.9	2.4	2.6	2.3	2.6	2.8	2.3	3.6	3.8	2.6	3.2	3.3	4.2	3.4	4.6	5.3	6.2	4.5	4.1	2.6	3.8	NA	3.3	2.8	2.7	3.9	3.7	2.7	3.6	4.2	6.2	2.5	2.2	3.8	3.8	4.0
5	4.5	5.3	4.8	4.7	4.9	4.3	4.2	5.1	4.1	5.2	4.3	4.1	4.9	4.7	5.3	4.8	5.5	5.1	4.0	5.1	4.9	5.4	5.6	5.5	5.5	6.4	6.5	7.0	7.2	4.0	6.8	6.3	4.0	NA	5.5	4.1	4.5	5.6	5.7	4.8	4.0	4.2	5.3	4.3	4.4	5.1	4.8	4.5
6	4.3	4.4	3.9	3.8	3.4	3.9	4.3	4.4	3.8	3.6	3.8	3.5	3.9	3.6	3.7	5.1	5.3	4.4	3.6	3.5	3.2	4.3	4.7	3.9	4.2	5.2	5.5	6.2	6.1	3.0	6.4	6.3	3.8	NA	3.3	1.3	3.8	3.7	4.6	3.0	4.0	3.6	4.9	1.2	3.7	4.5	4.6	4.6
7	1.2	-0.5	-0.7	-0.9	-1.0	-0.8	-1.0	0.0	0.1	1.4	0.2	1.9	1.2	1.9	1.0	1.1	4.5	2.0	2.7	1.7	0.5	0.4	-0.2	-1.4	-0.2	0.5	2.3	4.4	4.6	0.2	5.6	5.0	4.3	NA	2.6	0.7	0.4	-0.3	0.2	-0.2	3.4	2.7	2.4	0.7	1.7	1.6	3.2	3.5
8	-1.0	-1.4	-1.0	-1.9	-1.6	-1.5	-1.4	-1.0	-0.6	-1.1	-1.0	-0.6	-0.7	-1.0	-1.5	-1.2	-0.6	-0.4	-0.9	-0.5	-0.9	-0.5	-1.3	-1.9	-1.6	-1.6	-0.8	1.1	1.2	-0.8	2.3	2.5	0.7	NA	-2.1	-1.3	-1.2	-1.6	-1.7	-0.8	0.0	-0.6	-1.4	-2.9	-2.9	-3.1	-0.8	-0.1
9	-2.3	-2.0	-1.3	-1.6	-1.5	-1.5	-0.9	-1.0	-1.0	-3.1	-1.5	-2.7	-2.0	-2.6	-2.9	-3.2	-2.8	-2.9	-2.7	-2.9	-3.2	-1.6	-2.8	-2.8	-3.4	-3.1	-2.7	-2.0	-2.0	-2.4	-1.8	-1.7	-0.8	NA	-3.3	-1.5	-1.5	-1.0	-2.3	-2.8	-0.6	-1.0	0.1	-1.2	-1.0	-0.3	1.0	2.4
10	-0.9	-0.9	-0.5	-1.1	-0.9	-0.8	-0.7	-0.8	-0.9	-0.9	-0.7	-1.1	-1.1	-1.3	-0.7	-1.2	-1.0	-1.7	-1.7	-1.7	-2.0	-1.0	-1.7	-1.7	-2.1	-1.3	-2.4	-2.8	-3.2	-2.4	-1.8	-1.7	-2.8	NA	-1.9	-1.6	-1.1	-0.9	-1.7	-2.8	2.7	-1.0	0.6	-0.2	0.4	2.1	3.2	3.0
11	-0.2	-0.6	-0.8	-1.5	-0.7	-0.1	0.2	0.3	0.3	0.8	-0.1	0.5	0.3	0.7	0.5	-0.3	-0.1	0.2	0.4	0.5	-0.8	-1.5	-1.4	-0.9	-1.1	-0.9	-1.3	-1.3	-1.3	0.2	-0.5	0.0	-1.6	NA	-0.2	0.5	-0.4	0.4	-0.7	0.0	-0.8	0.0	0.6	0.1	-1.8	0.7	0.7	0.1
12	1.2	1.0	0.7	0.2	1.0	0.8	1.3	1.4	0.9	1.4	1.1	1.0	1.3	1.3	1.4	0.8	2.1	1.3	1.4	1.3	1.2	0.7	0.6	1.1	0.9	1.1	0.8	0.8	1.9	1.2	2.2	2.1	0.5	NA	2.1	2.5	0.9	1.8	1.7	1.5	0.6	0.9	1.1	0.1	-0.4	1.2	1.4	1.0
13	-0.2	-1.5	-1.1	-2.4	1.6	1.1	0.4	0.5	0.7	-0.3	0.4	0.2	0.1	0.0	-0.2	-1.1	0.2	0.0	0.2	-0.7	-0.5	-1.4	-2.8	-1.2	-1.1	-1.7	-1.8	-1.6	-1.0	-1.4	0.1	1.1	1.8	NA	0.2	1.4	2.0	2.5	1.3	2.0	2.2	1.7	2.4	1.8	1.2	2.8	2.7	2.6
14	-1.8	-2.7	-3.3	-3.7	-2.0	-1.4	-1.8	-1.7	-1.8	-0.9	-1.7	-0.9	-1.6	-1.9	-1.7	-2.8	-1.1	-1.3	-0.3	-1.6	-1.9	-3.3	-4.2	-3.2	-3.6	-3.9	-3.9	-3.7	-3.3	-2.1	-1.7	-0.1	0.7	NA	-1.3	-0.4	-0.9	-0.3	-2.0	-0.7	0.6	-0.1	-0.8	0.9	0.4	0.4	0.2	-1.3
15	-0.8	-1.3	-2.0	-1.6	-1.5	-1.2	-0.3	-1.4	-1.6	-0.8	-1.7	-0.9	-1.2	-2.3	-1.0	-1.9	-0.4	-1.4	-0.6	-1.0	-0.9	-0.9	-1.3	-0.6	-0.1	-1.5	-0.2	-0.5	-0.1	1.6	-0.3	0.3	-1.2	NA	0.2	0.3	-0.6	0.3	0.0	0.1	-0.2	-1.0	-1.7	-0.6	-1.2	0.3	0.0	-0.1
16	1.0	2.1	1.2	1.8	0.7	0.8	0.4	1.1	0.8	1.2	0.8	0.3	0.7	0.0	1.5	0.9	2.5	0.2	1.2	1.3	1.6	2.0	2.3	2.0	1.4	2.8	2.1	1.7	1.8	1.1	2.3	3.3	1.2	NA	2.2	2.0	0.8	2.0	1.9	1.7	1.5	0.3	-0.6	0.7	0.1	0.5	0.2	-0.4
17	3.6	4.3	3.3	3.3	1.5	2.4	2.3	3.1	3.1	3.7	3.2	3.0	3.5	3.1	4.1	3.8	3.3	3.4	3.1	3.2	2.7	2.2	2.7	2.1	1.6	3.2	1.6	1.9	1.6	1.3	2.3	2.9	2.1	NA	2.7	2.8	1.7	3.3	2.4	2.7	2.1	1.3	1.7	0.8	0.7	1.8	1.7	1.2
18	3.9	4.0	3.0	2.9	3.1	2.9	3.0	4.0	3.5	3.8	3.5	3.9	3.8	4.0	4.3	3.7	3.6	3.8	2.1	2.7	2.9	2.7	2.7	2.9	2.2	4.0	3.3	3.3	2.9	2.0	3.6	2.9	2.3	NA	3.0	2.3	2.6	4.0	3.1	2.5	2.2	1.3	2.7	1.5	1.1	2.7	2.4	2.4
19	0.2	0.7	0.1	-0.4	2.6	1.7	1.2	1.3	1.1	0.0	0.8	0.0	0.2	0.3	-0.1	-0.4	-0.7	-0.5	-0.4	-0.1	0.5	0.6	-0.5	-1.1	-1.2	-0.3	-0.6	-0.7	-0.7	-0.4	-0.4	-0.6	-0.2	NA	-0.5	0.7	1.1	1.7	0.9	0.3	0.5	-0.1	0.1	-0.5	-0.4	-0.3	0.9	1.4
20	-1.4	-1.7	-2.1	-2.3	0.1	-0.2	-0.3	-1.2	-1.3	-0.9	-1.4	-1.1	-1.4	-1.7	-1.5	-2.6	-1.2	-1.5	-1.3	-1.7	-1.3	-1.6	-2.5	-1.6	-3.2	-2.9	-3.4	-4.3	-4.4	-2.1	-2.7	-2.6	-2.0	NA	-2.1	-0.7	-0.2	0.2	-0.9	-1.9	2.2	-1.3	-0.2	-0.7	1.5	1.9	2.8	3.2
21	0.0	-1.0	-1.7	-1.4	-0.8	-1.1	0.0	-1.8	-1.2	-1.8	-1.4	-0.2	-1.2	-2.2	-1.5	-2.3	-1.2	-1.5	-1.8	-1.9	-1.1	0.3	-1.0	-0.1	1.3	-1.6	2.3	2.2	2.0	3.5	-1.5	-1.0	-2.6	NA	-1.4	-1.5	-1.3	0.1	-0.5	-0.3	-1.9	-1.1	-0.6	-1.8	-2.5	-0.2	0.1	-0.3
22	0.8	0.6	-0.6	0.5	-0.8	0.1	0.9	-0.3	-0.8	0.0	-0.6	-0.4	-0.1	-1.5	0.0	-1.0	0.4	-0.7	-0.5	-0.1	1.2	1.1	0.8	2.7	2.5	0.9	3.8	3.9	3.2	4.2	0.9	1.8	-0.3	NA	1.3	0.9	0.4	1.9	1.8	1.6	-0.2	-0.1	0.5	0.0	-0.4	1.0	0.9	0.1
23	0.9	2.5	1.8	2.5	1.8	2.0	1.9	1.6	0.7	2.0	1.4	-0.2	0.9	0.3	1.8	0.3	1.4	1.1	2.0	2.2	3.0	2.9	3.1	3.2	2.4	3.5	2.3	1.7	1.2	0.9	1.6	0.2	-0.2	NA	1.9	2.8	2.6	3.3	3.1	1.7	0.4	0.4	0.4	0.7	0.9	1.6	1.9	1.7
24	-1.0	-0.9	-0.9	-0.7	-1.2	-1.1	-1.2	-0.7	-1.2	-0.9	-1.2	-0.9	-0.7	-0.8	-0.7	-0.6	-0.1	0.7	0.2	-0.5	0.3	-0.3	-0.3	-0.8	-0.9	-0.1	0.0	0.4	0.1	-0.8	0.4	0.1	-0.7	NA	-0.8	-0.6	-1.2	-1.2	-0.9	-0.7	-1.1	-1.0	-0.6	-1.6	-1.6	-1.0	-1.2	0.1
25	-2.2	-3.0	-2.5	-3.9	-2.2	-3.0	-3.0	-2.6	-2.2	-2.8	-2.2	-2.3	-1.7	-1.9	-1.9	-3.2	-1.8	-2.2	-0.8	-3.2	-4.0	-3.3	-4.5	-4.7	-5.4	-4.4	-4.9	-4.1	-5.0	-3.9	-3.4	-2.5	-2.0	NA	-2.7	-1.5	-1.9	-2.3	-3.7	-2.8	-1.2	-1.7	-1.8	-0.9	-1.3	-1.2	-2.4	-2.2
26	-2.2	-2.2	-2.0	-3.5	-2.8	-2.6	-2.3	-1.8	-1.2	-1.7	-2.1	-1.0	-1.8	-1.9	-1.7	-2.6	-1.3	-1.6	-0.2	-2.2	-3.4	-3.0	-2.8	-3.7	-4.2	-3.2	-3.5	-3.1	-3.7	-2.4	-2.2	-2.8	-1.6	NA	-2.6	-1.2	-2.2	-1.8	-3.1	-2.5	-2.0	-2.6	-3.3	-2.7	-2.5	-2.7	-3.3	-1.8
27	-2.3	-2.4	-1.8	-2.7	-2.8	-2.1	-2.8	-2.7	-2.2	-2.2	-2.4	-1.9	-2.4	-2.4	-2.8	-3.0	-2.1	-2.4	-1.1	-2.7	-3.7																											

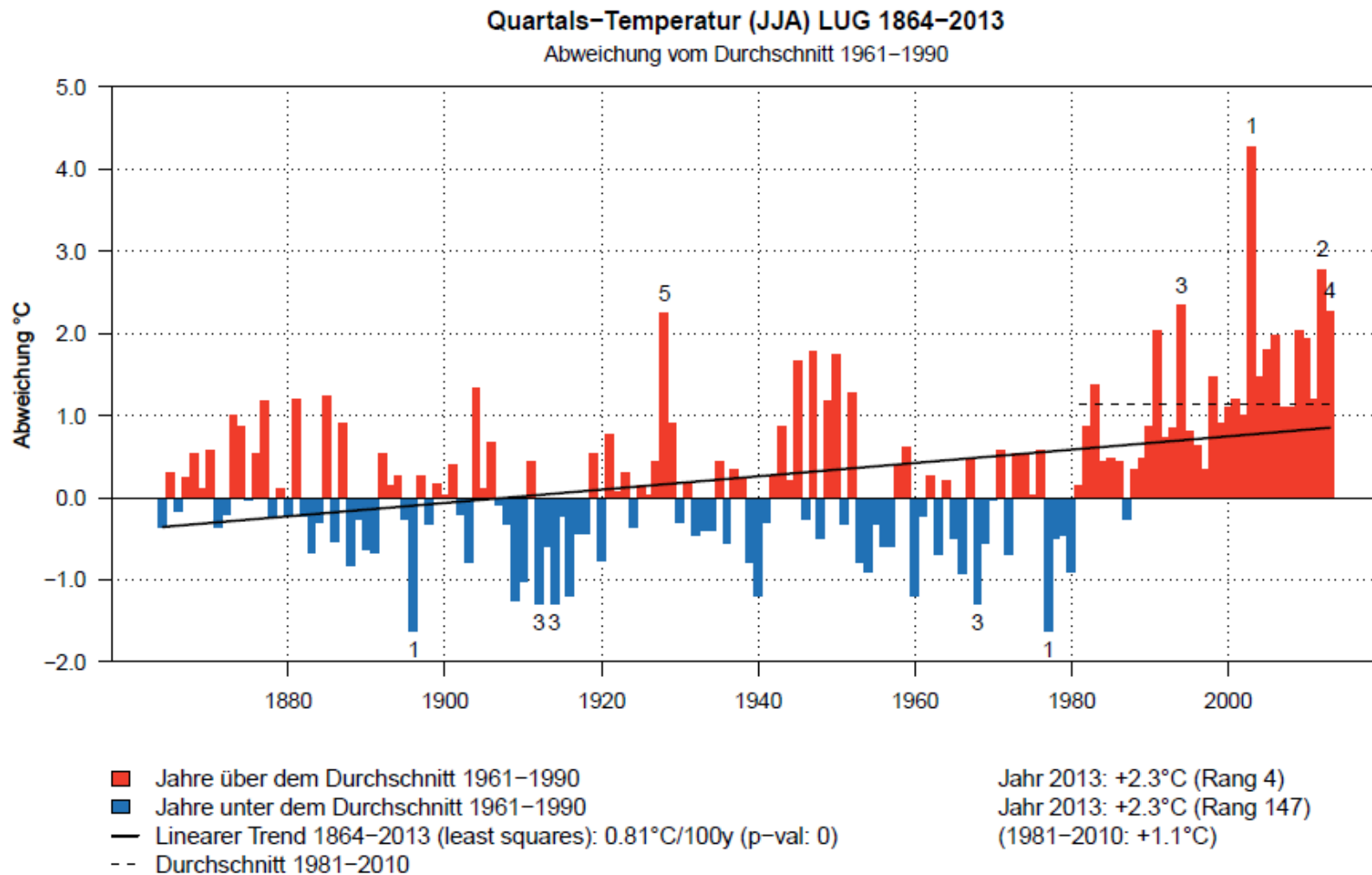


# Temperatura: anomalie globali agosto 2013



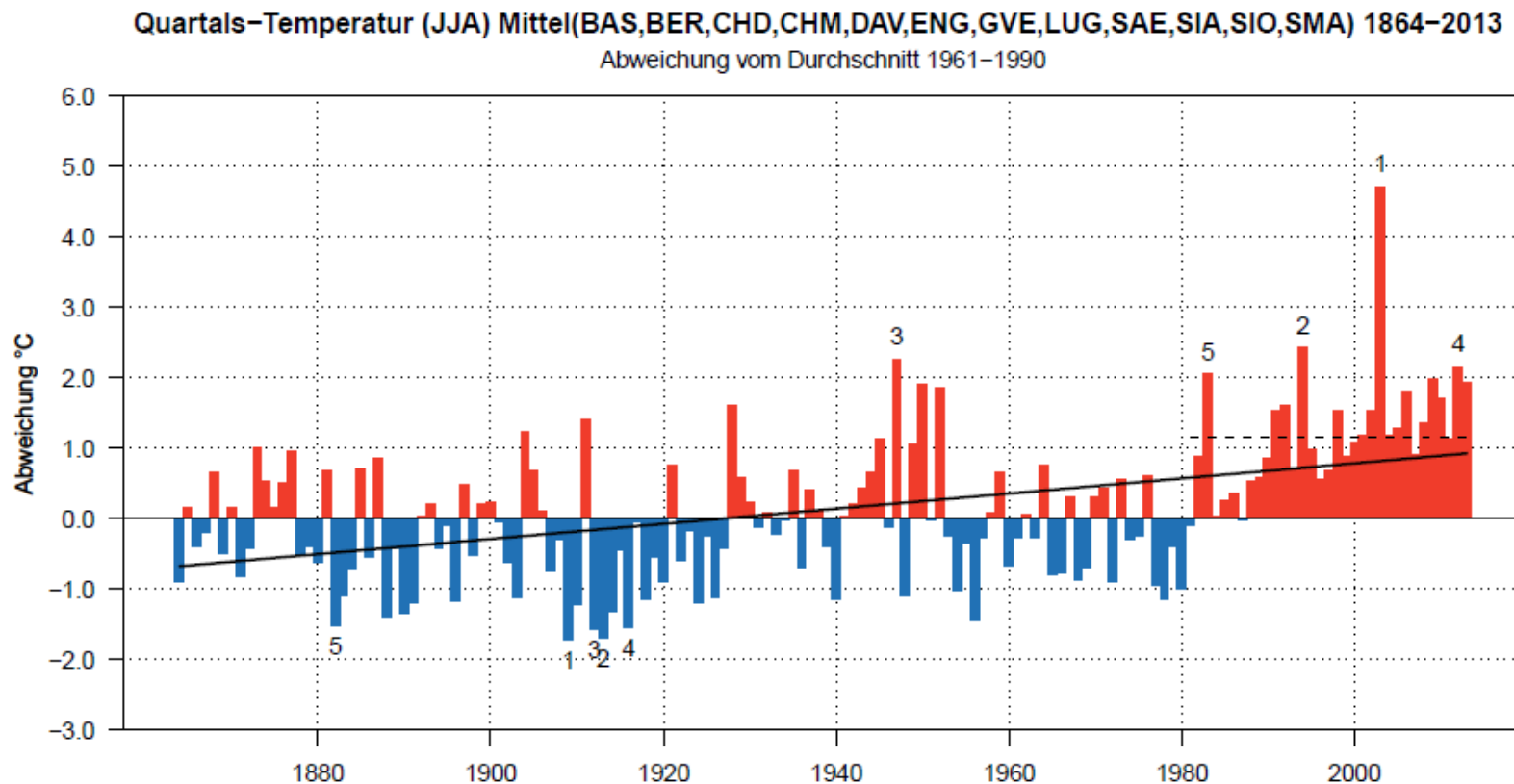


# L'estate in TI 2013 rispetto alle altre





# L'estate in CH 2013 rispetto alle altre



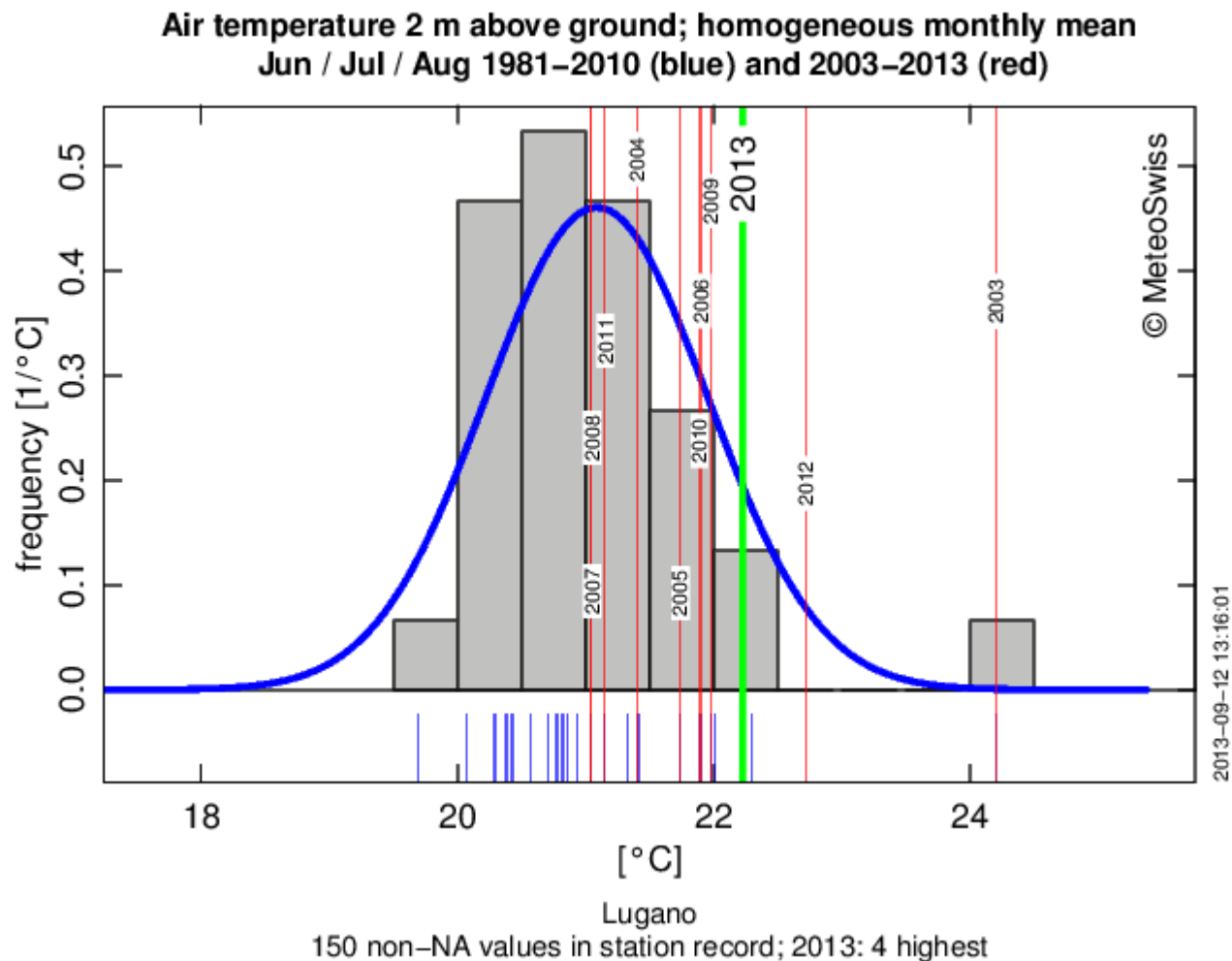
- Jahre über dem Durchschnitt 1961–1990
- Jahre unter dem Durchschnitt 1961–1990
- Linearer Trend 1864–2013 (least squares):  $1.07^{\circ}\text{C}/100\text{y}$  (p-val: 0)
- Durchschnitt 1981–2010

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Jahr 2013:  $+1.9^{\circ}\text{C}$  (Rang 7)  
Jahr 2013:  $+1.9^{\circ}\text{C}$  (Rang 144)  
(1981–2010:  $+0.8^{\circ}\text{C}$ )



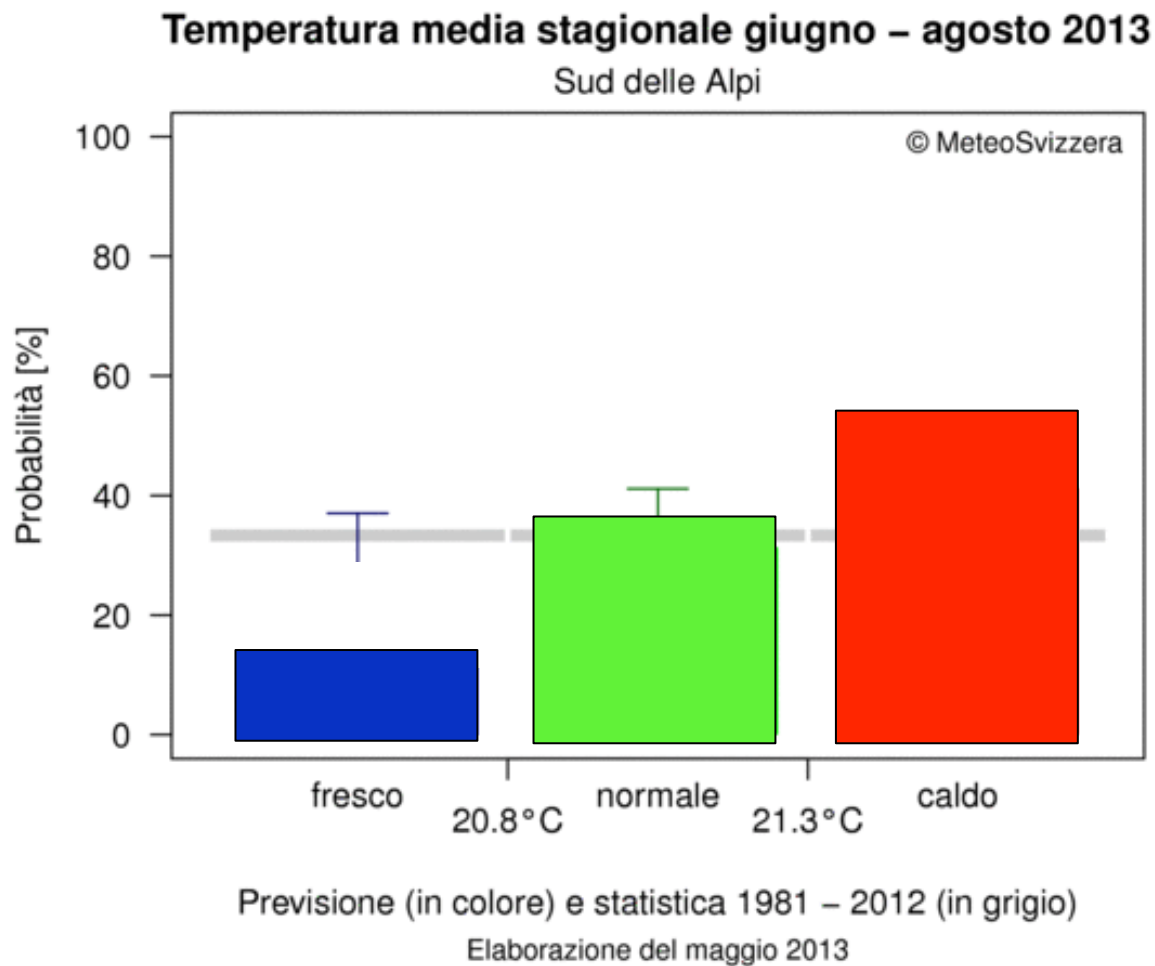
# L'estate in TI 2013 rispetto alle altre







# L'estate in TI 2013

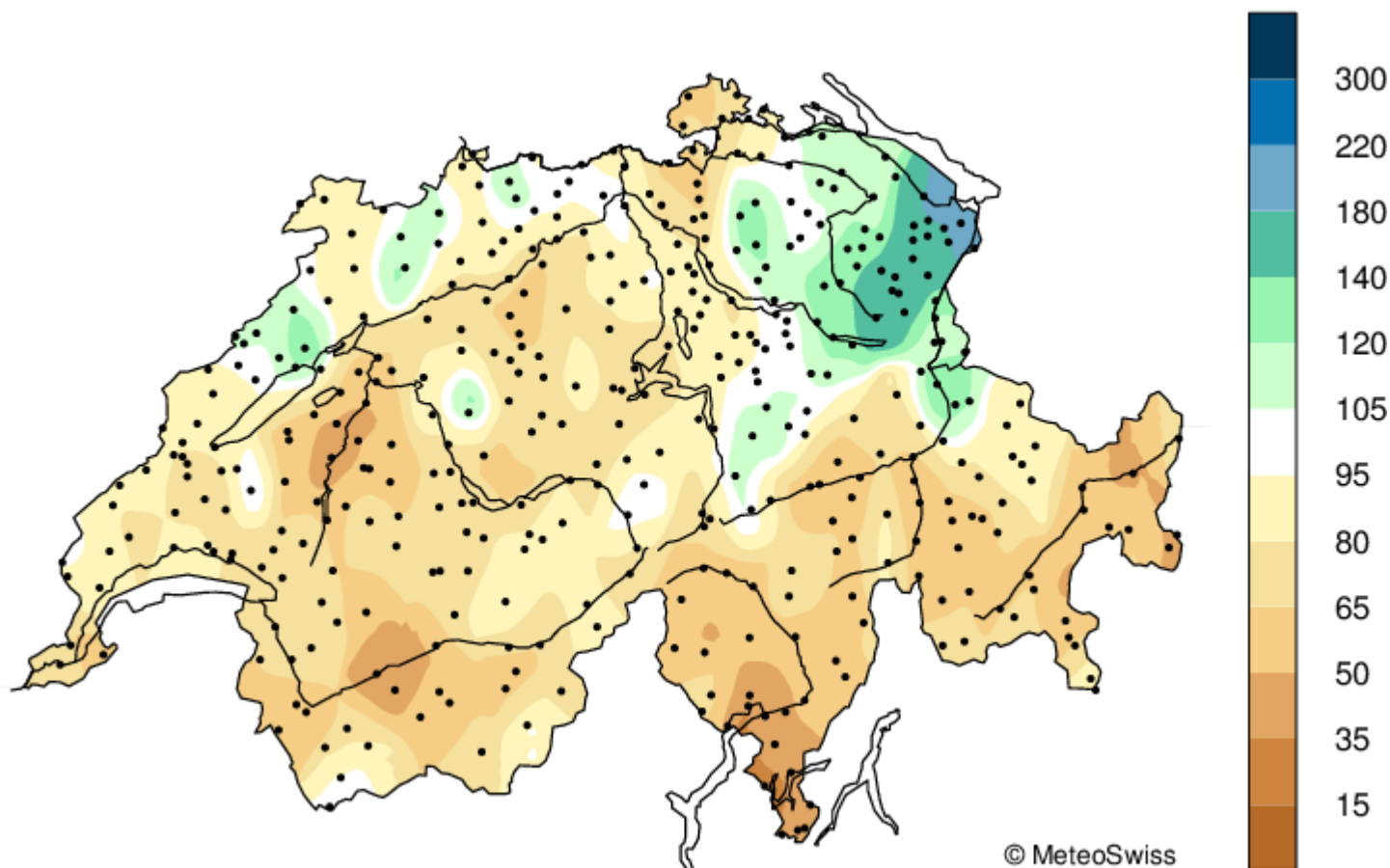


Osservato: 22.2 °C



# Precipitazioni: giugno 2013

Monthly Precipitation Anomaly (%) Jun 2013 (Ref. 1981–2010)



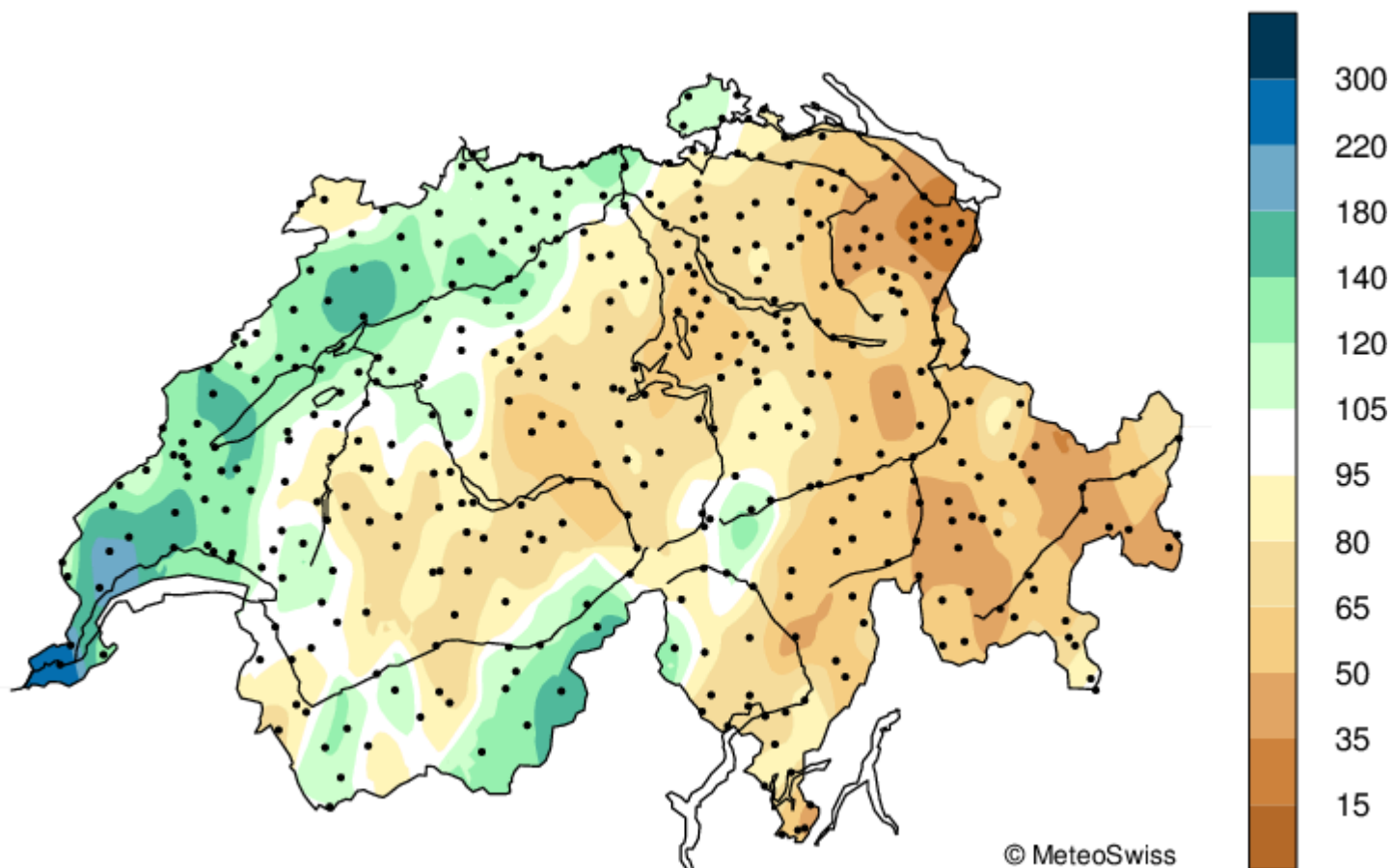
© MeteoSwiss

RanomM8110 v1.0, 2013-07-26 18:22



# Precipitazioni: luglio 2013

Monthly Precipitation Anomaly (%) Jul 2013 (Ref. 1981–2010)



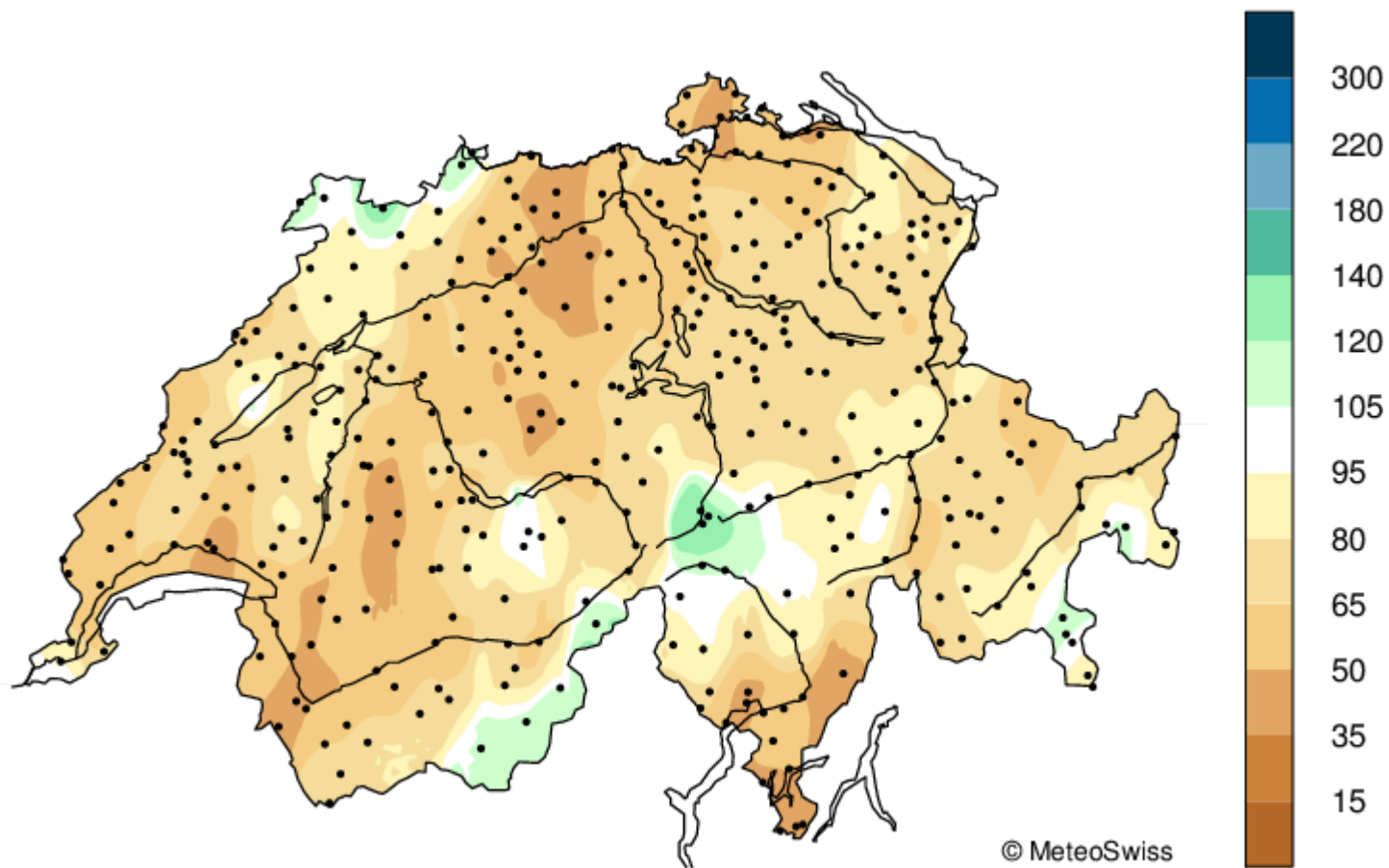
© MeteoSwiss

RanomM8110 v1.0, 2013-08-26 13:08



# Precipitazioni agosto 2013

Monthly Precipitation Anomaly (%) Aug 2013 (Ref. 1981–2010)

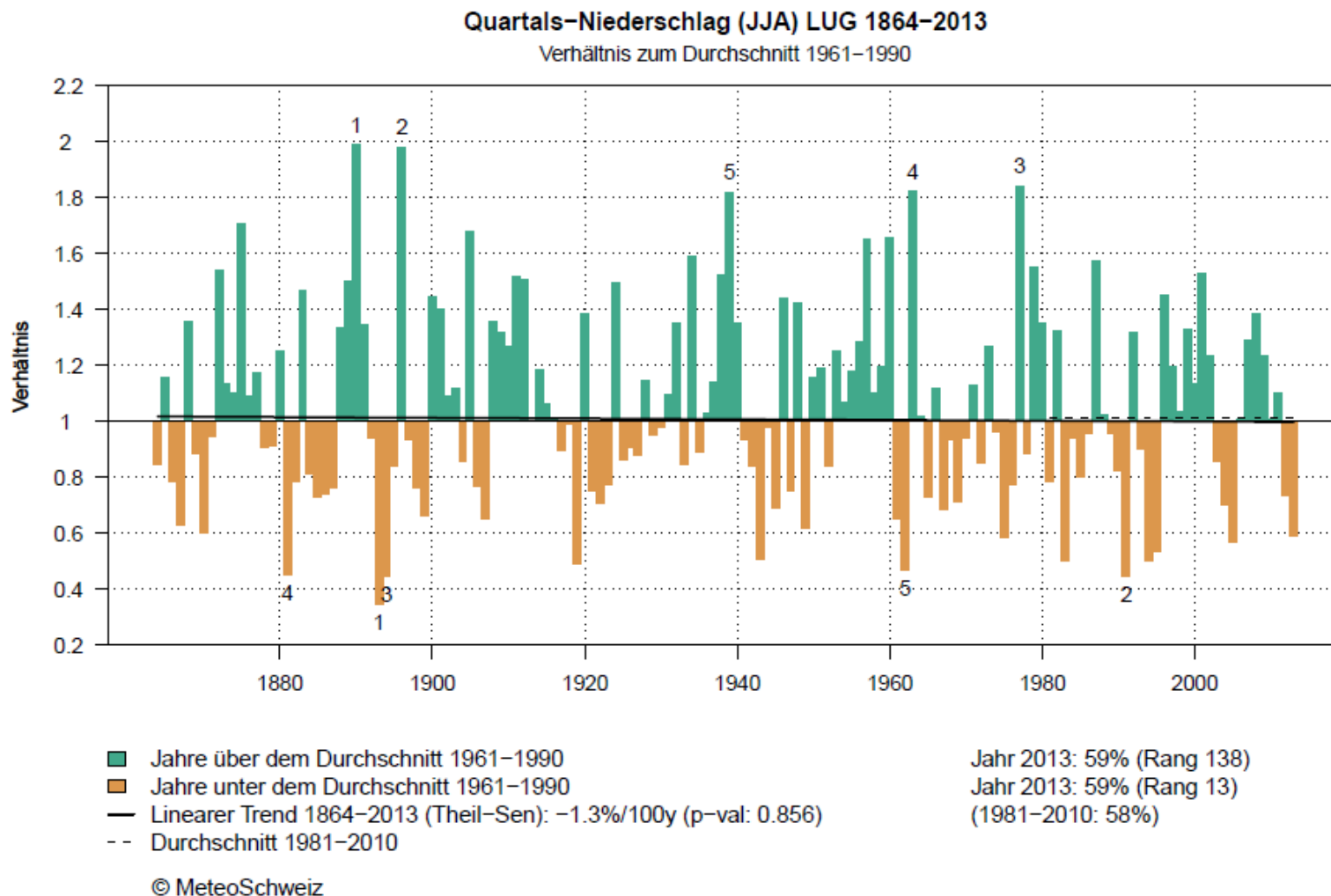


© MeteoSwiss

RanomM8110 v1.0, 2013-09-05 13:08



# L'estate 2013 rispetto alle altre

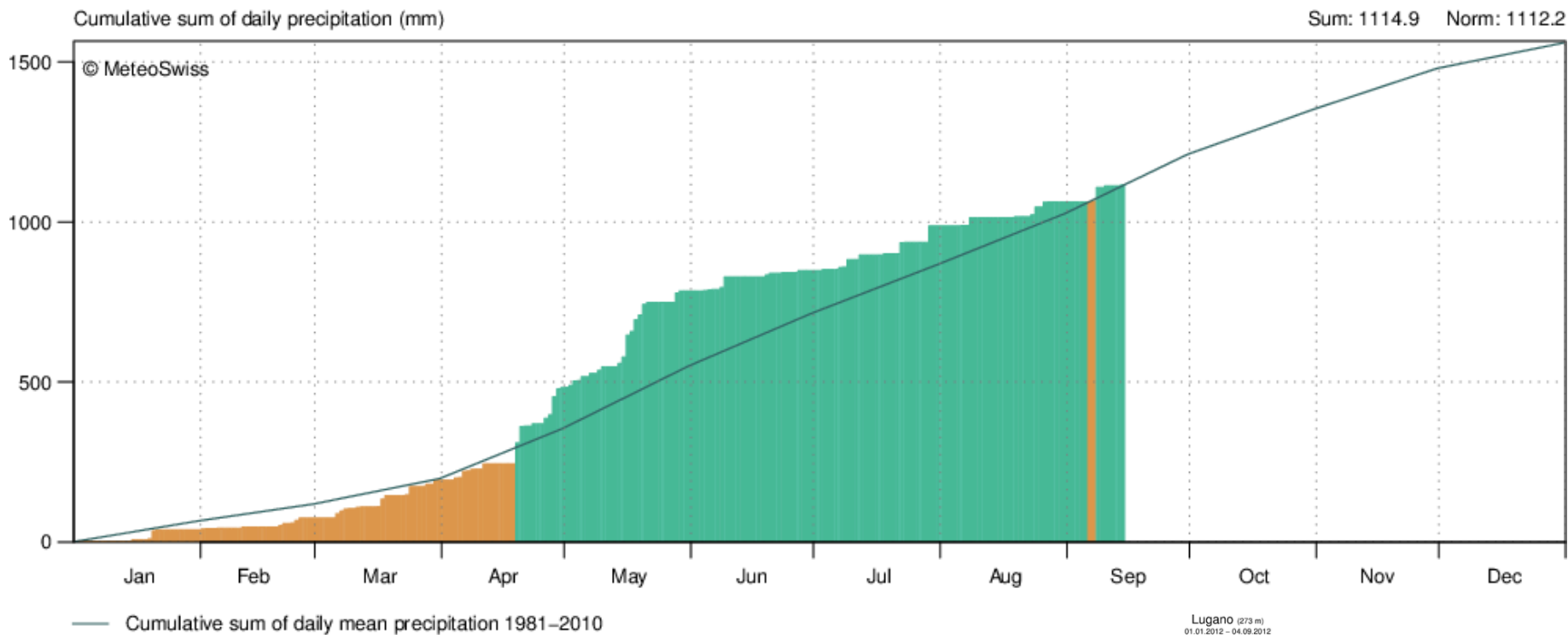




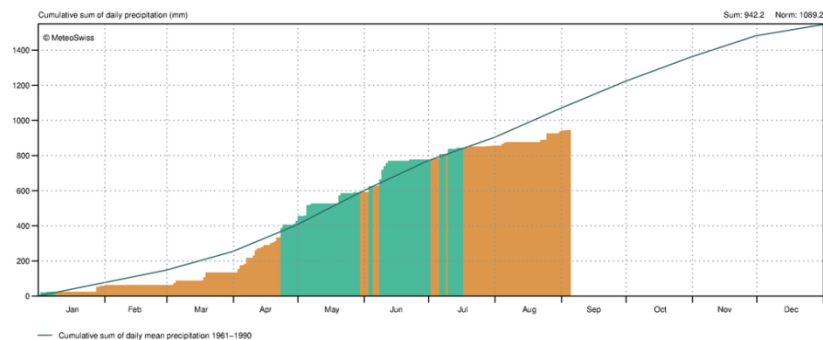


# Somma precipitazioni 2013

Lugano (273 m)  
01.01.2013 – 14.09.2013



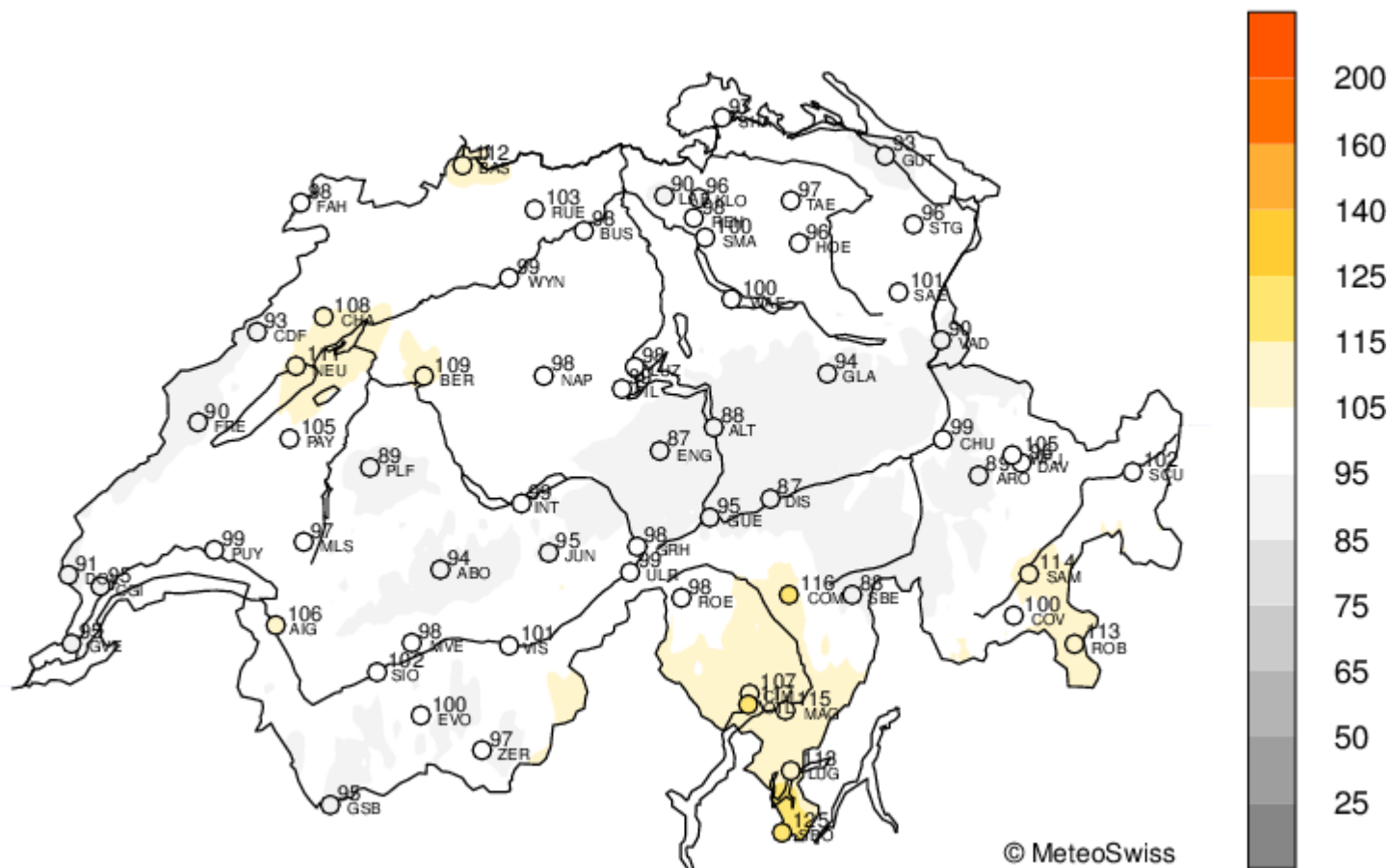
Status: 15.09.2013





# Soleggiamento: anomalia giugno 2013

Monthly Sunshine Duration Anomaly (%) Jun 2013 (Ref. 1981–2010)

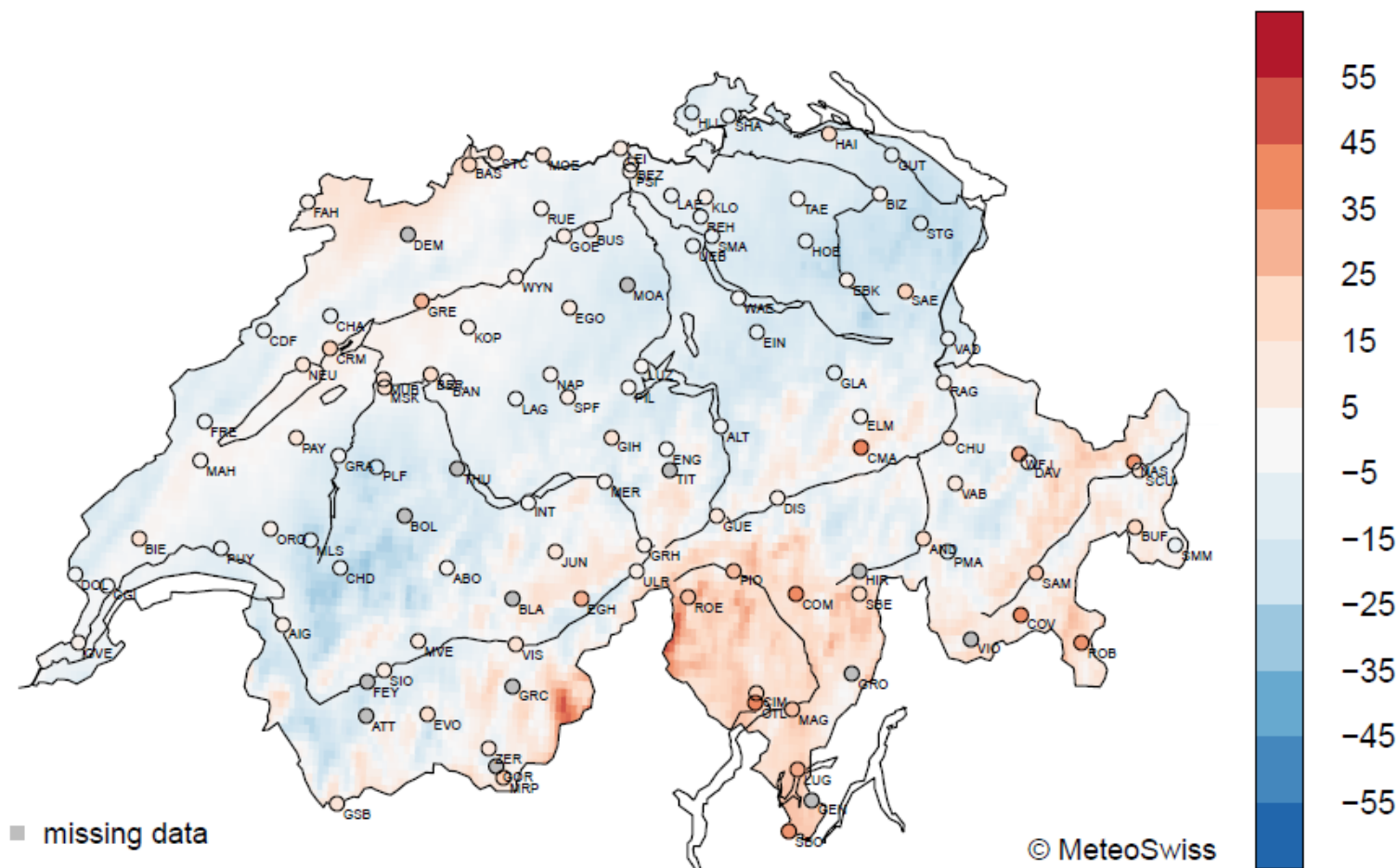


SanomM8110 v1.2, 2013-07-26 18:11



# Soleggiamento: anomalia giugno 2013

Global Radiation Anomaly (W/m<sup>2</sup>) 2013-06 (Ref.2004 - 2012)



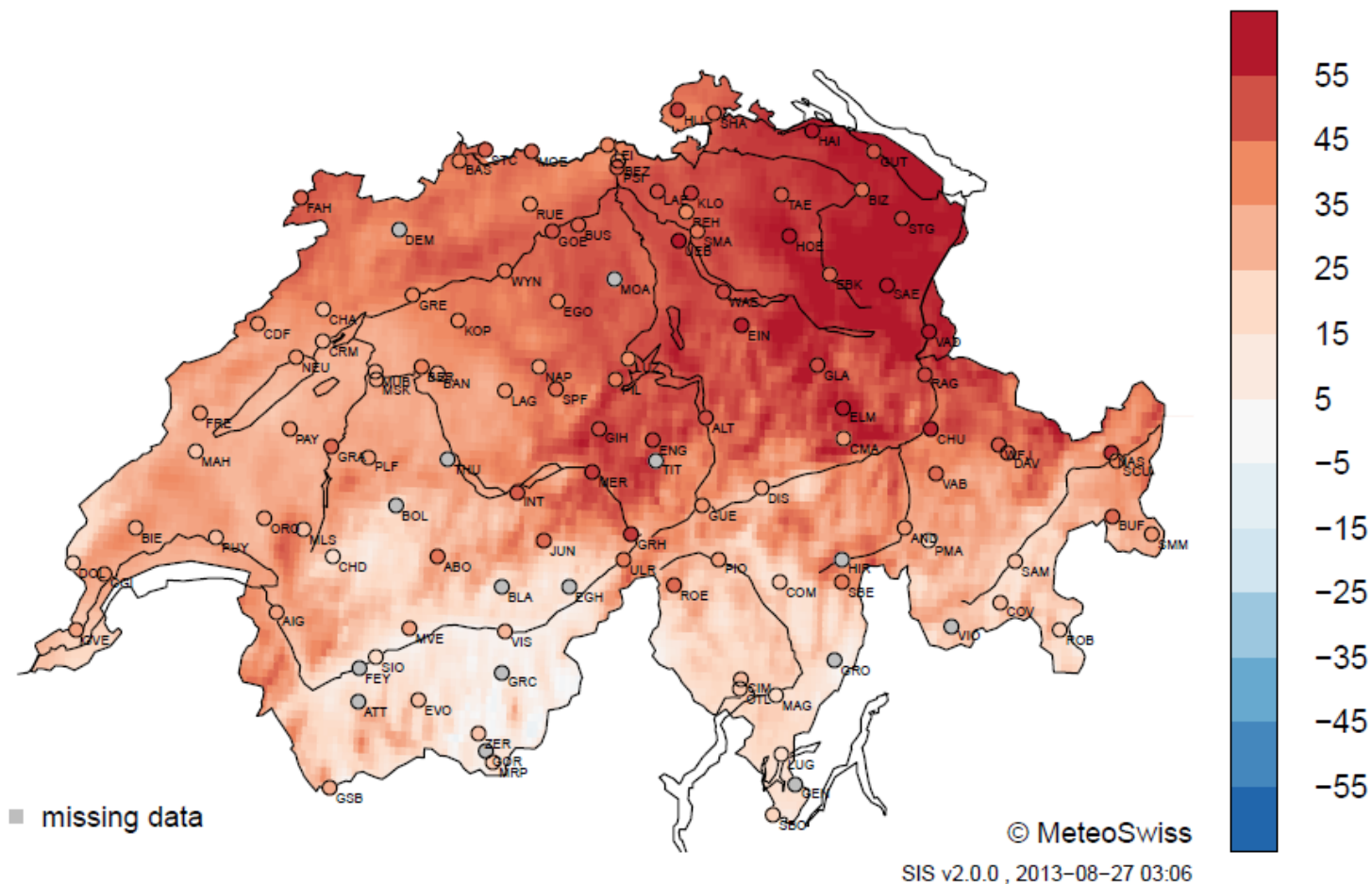


© MeteoSwiss  
SanomM8110 v1.2, 2013-08-26 13:05



# Soleggiamento: anomalia luglio 2013

Global Radiation Anomaly (W/m<sup>2</sup>) 2013-07 (Ref.2004 - 2012)

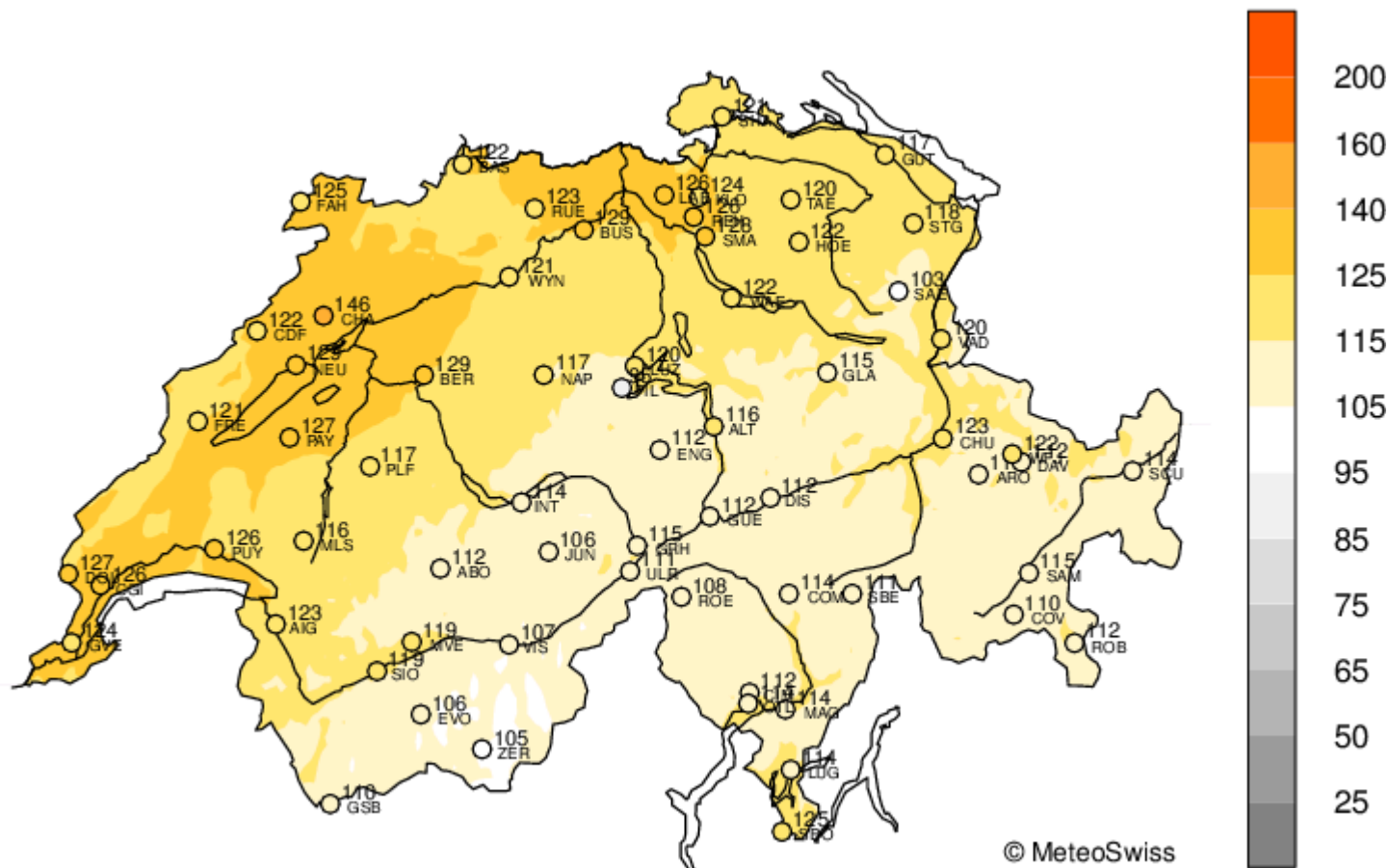






# Soleggiamento: anomalia agosto 2013

Monthly Sunshine Duration Anomaly (%) Aug 2013 (Ref. 1981–2010)



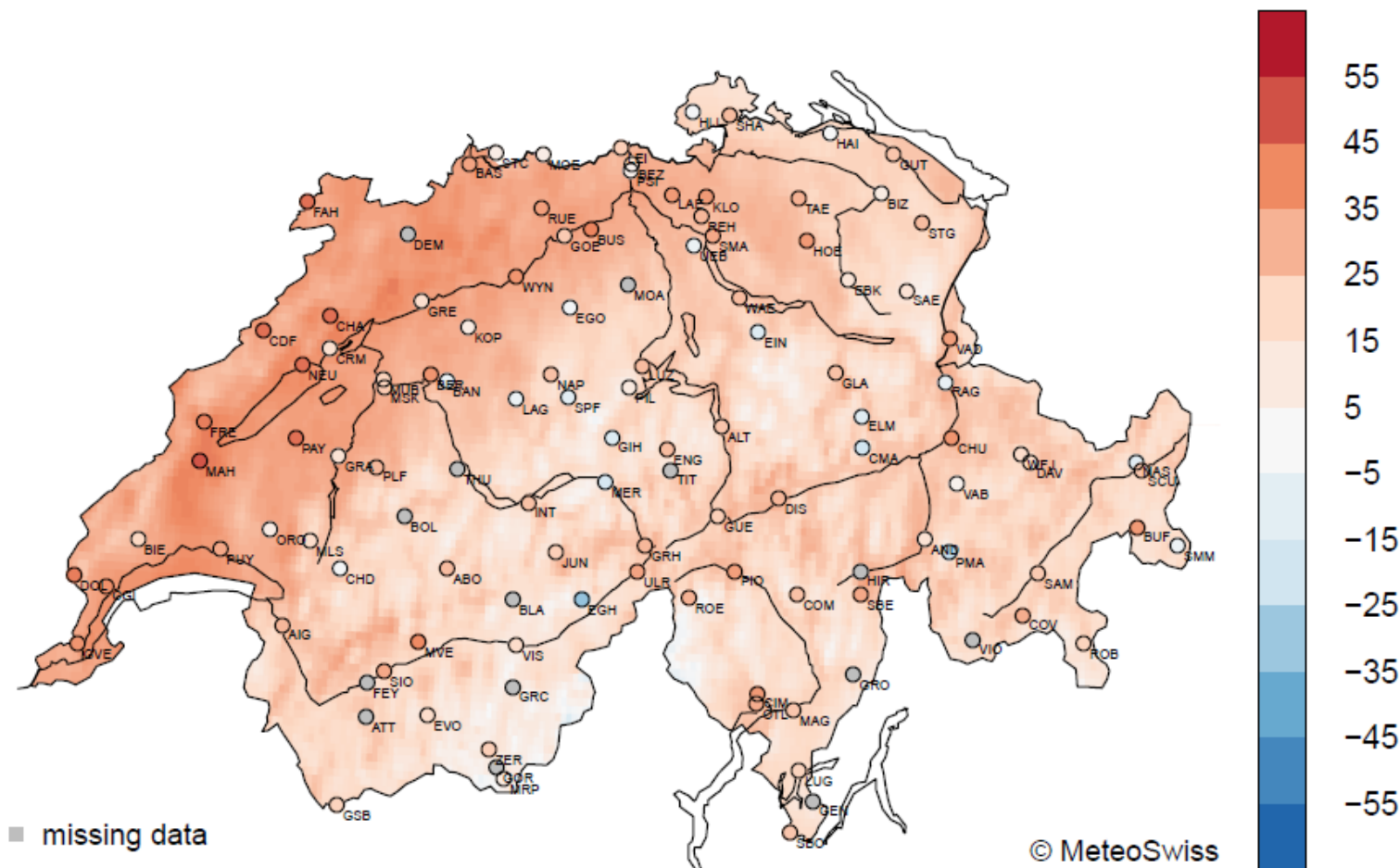
© MeteoSwiss

SanomM8110 v1.2, 2013-09-05 13:05



# Soleggiamento: anomalia agosto 2013

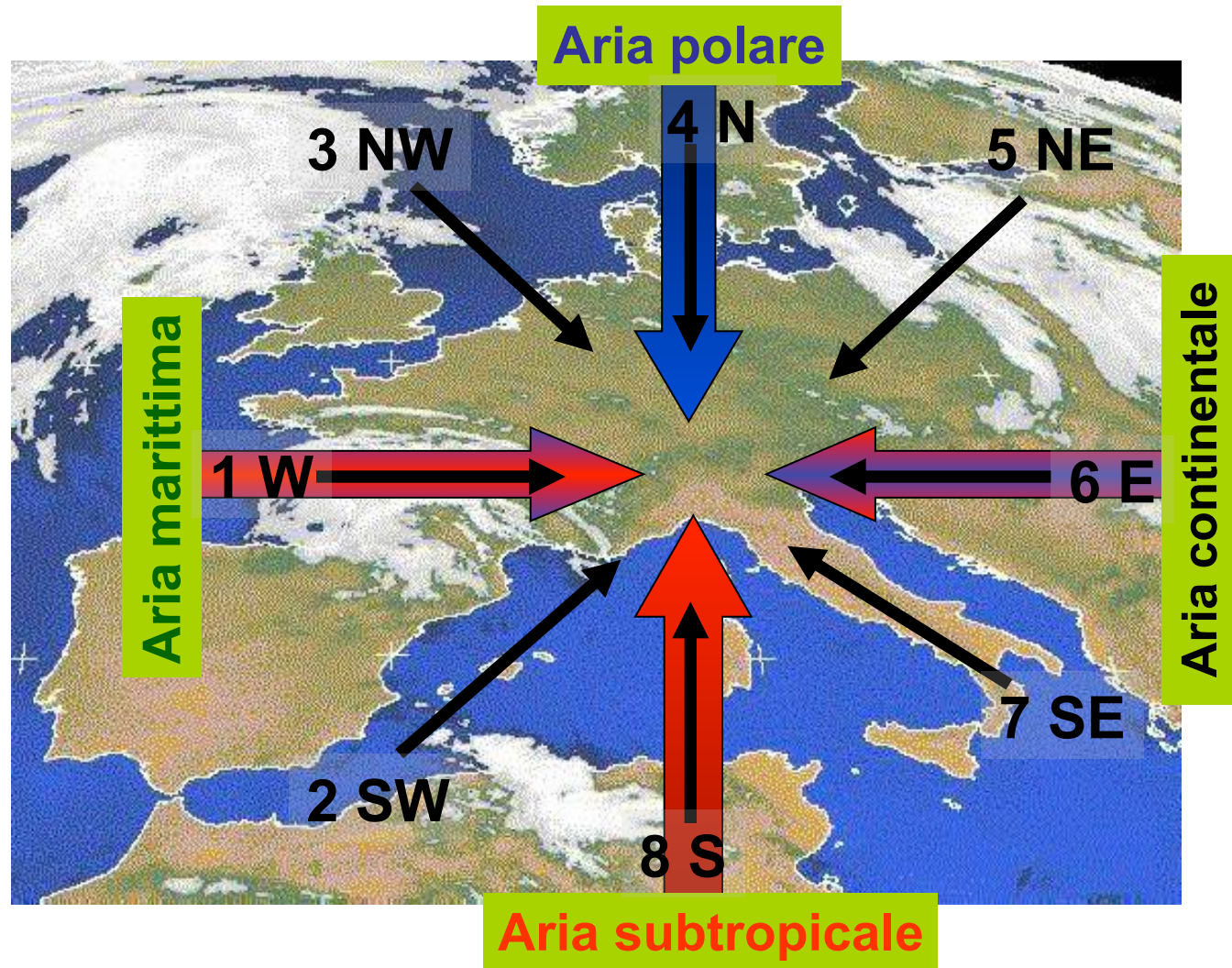
Global Radiation Anomaly (W/m<sup>2</sup>) 2013-08 (Ref.2004 - 2012)



SIS v2.0.0, 2013-09-02 11:01

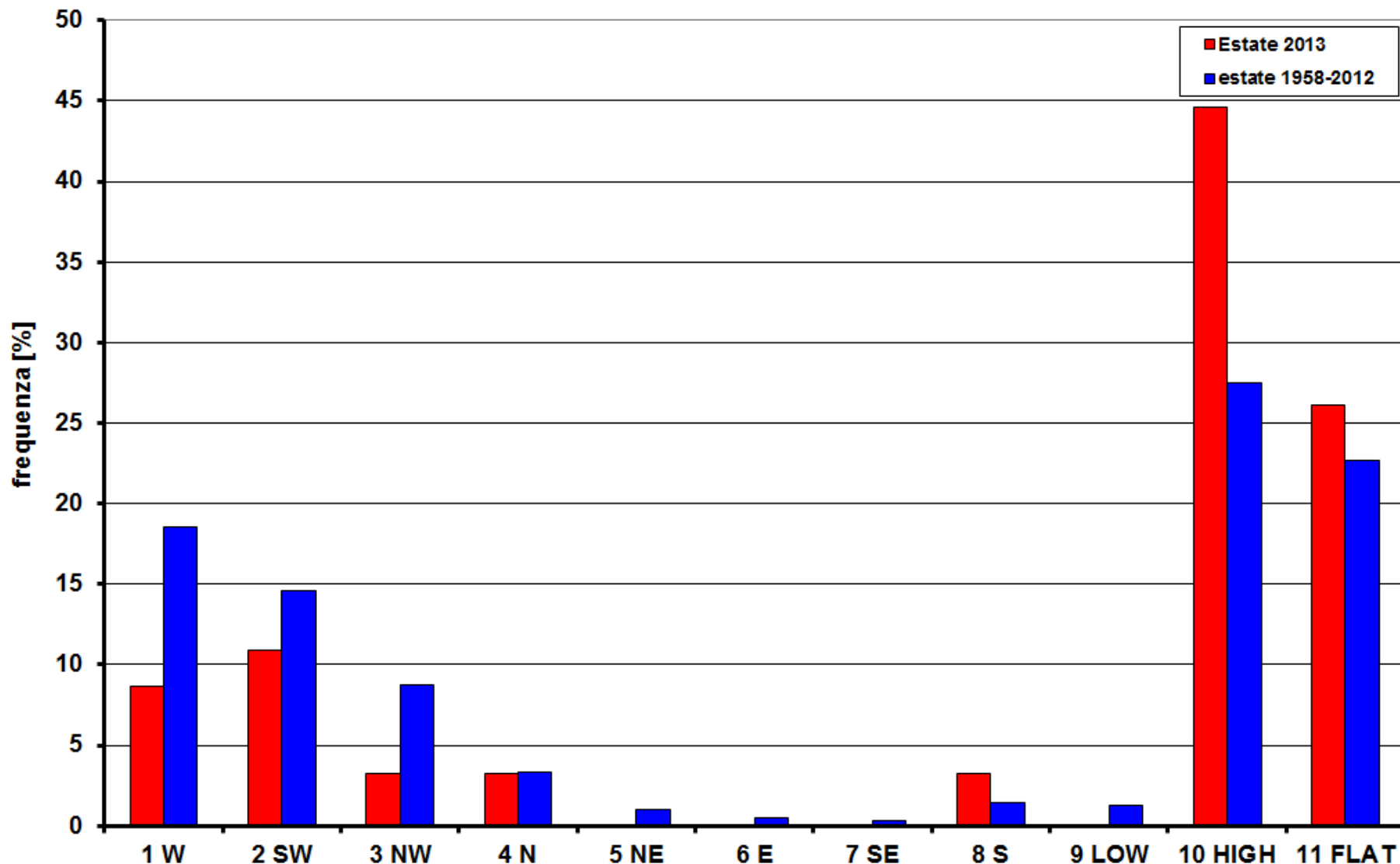


# Masse d'aria diverse, tempo diverso, situazioni diverse



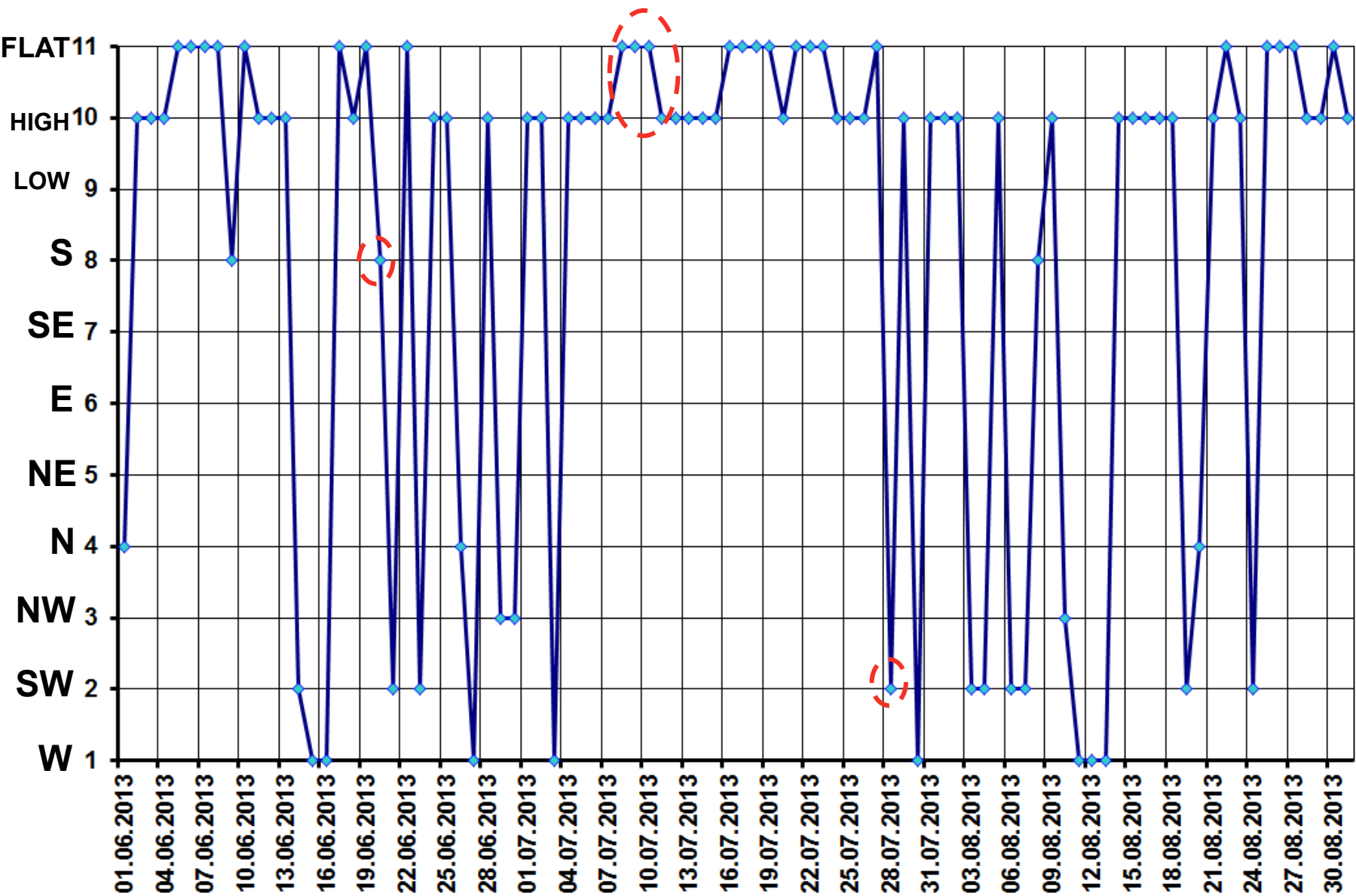


# La distribuzione delle situazioni





# Sequenza delle situazioni







## 20.6: grandinata a Ludiano

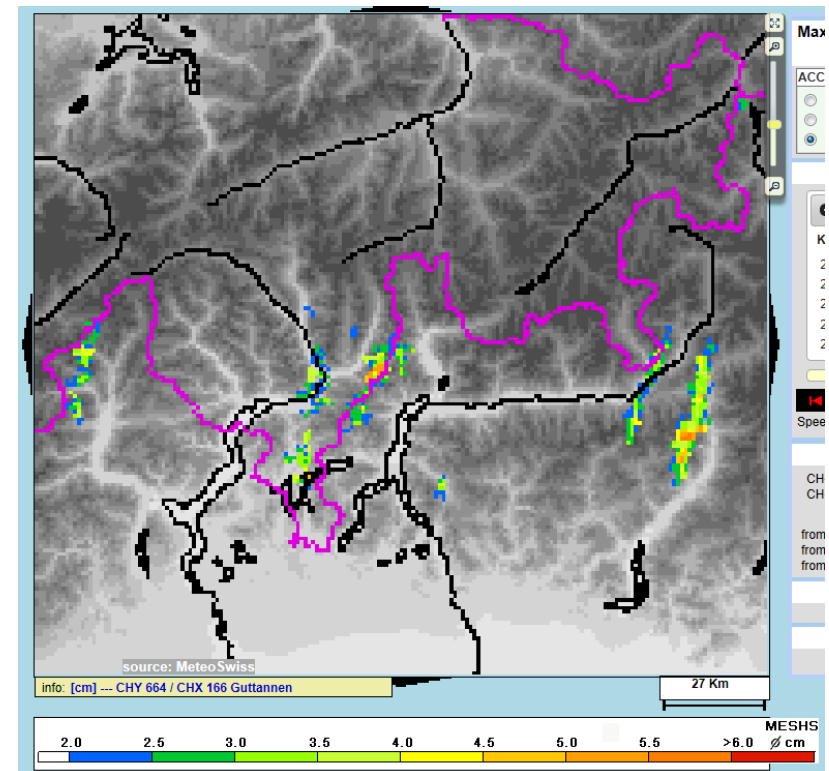
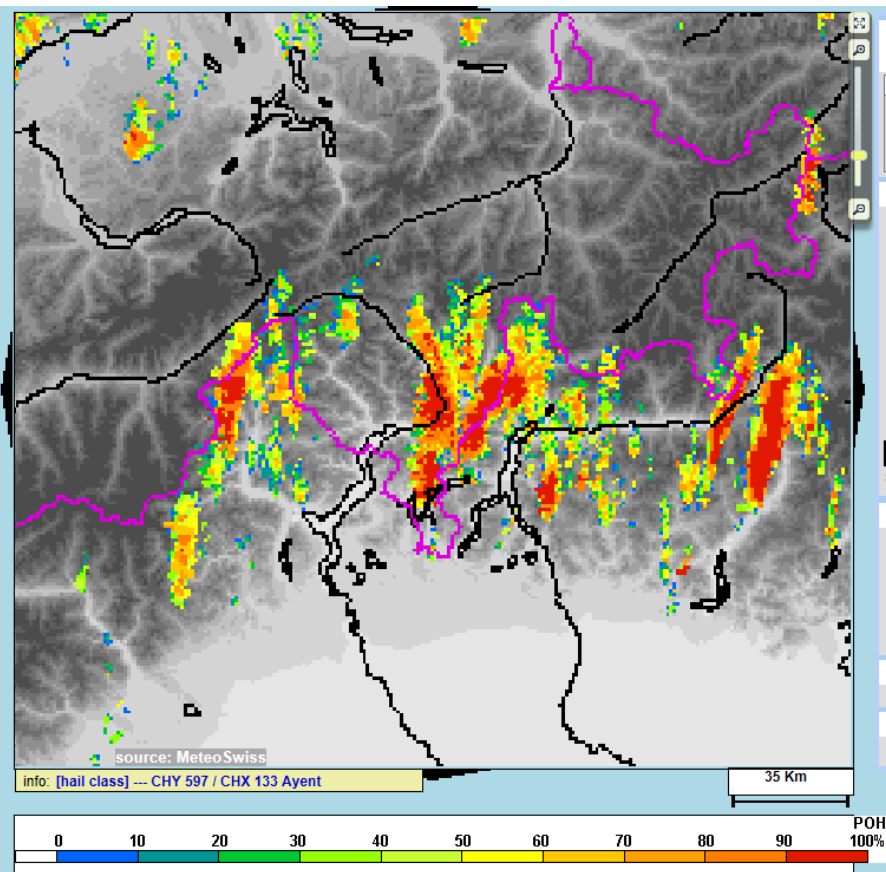
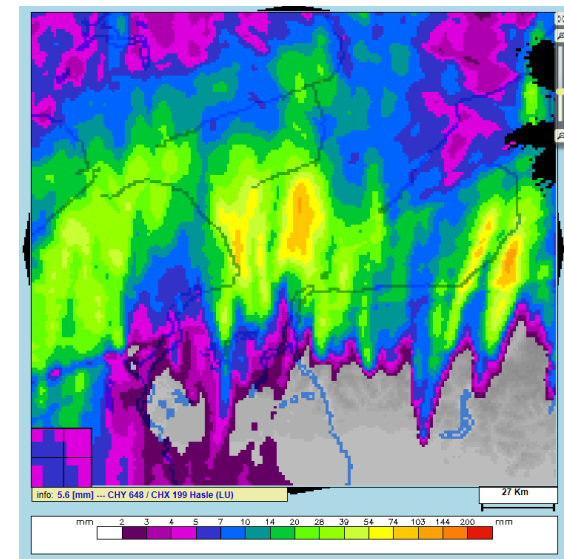


Martino





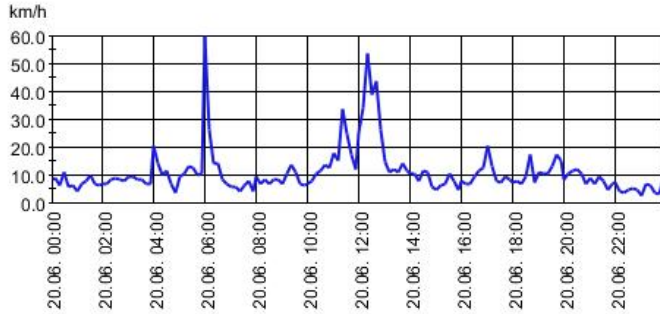
## 20.6: grandinata a Ludiano





# 20.6: grandinata a Ludiano

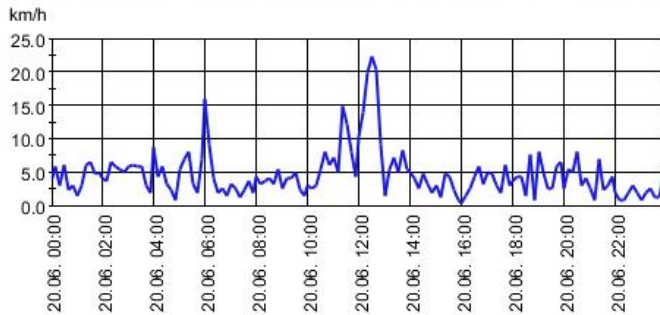
Böenspitze (Sekundenböe); Maximum [km/h] 20.06.2013 00:00 UTC - 20.06.2013 23:50 UTC



Quelle:  
MeteoSchweiz

— Acquarossa / Comprovasco

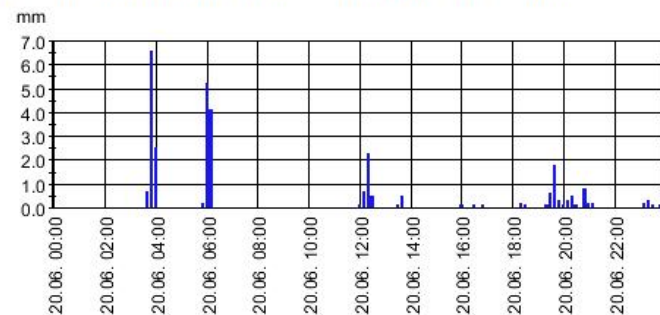
Windgeschwindigkeit; Zehnminutenmittel [km/h] 20.06.2013 00:00 UTC - 20.06.2013 23:50 UTC



Quelle:  
MeteoSchweiz

— Acquarossa / Comprovasco

Niederschlag; Zehnminutensumme [mm] 20.06.2013 00:00 UTC - 20.06.2013 23:50 UTC



Quelle:  
MeteoSchweiz

■ Acquarossa / Comprovasco

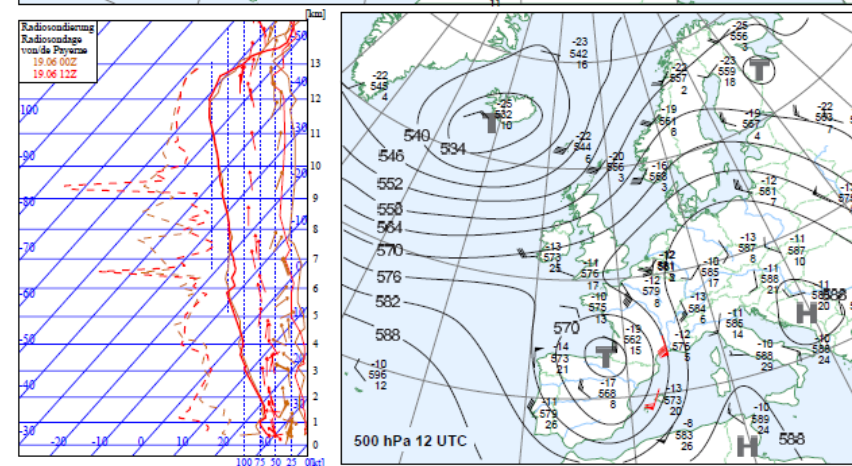
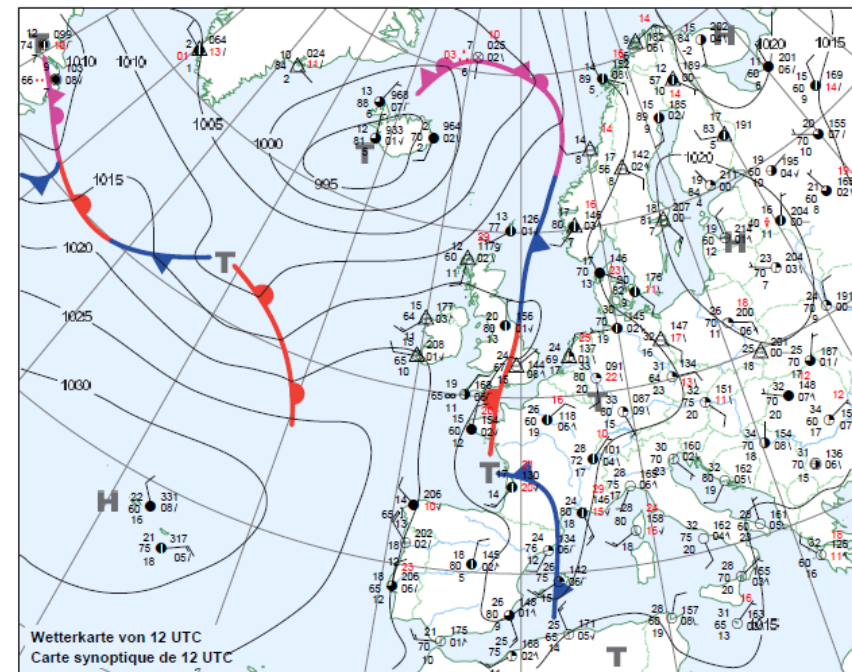
Wetterübersicht vom Mittwoch  
Résumé météorologique du Mercredi

19.6.2013



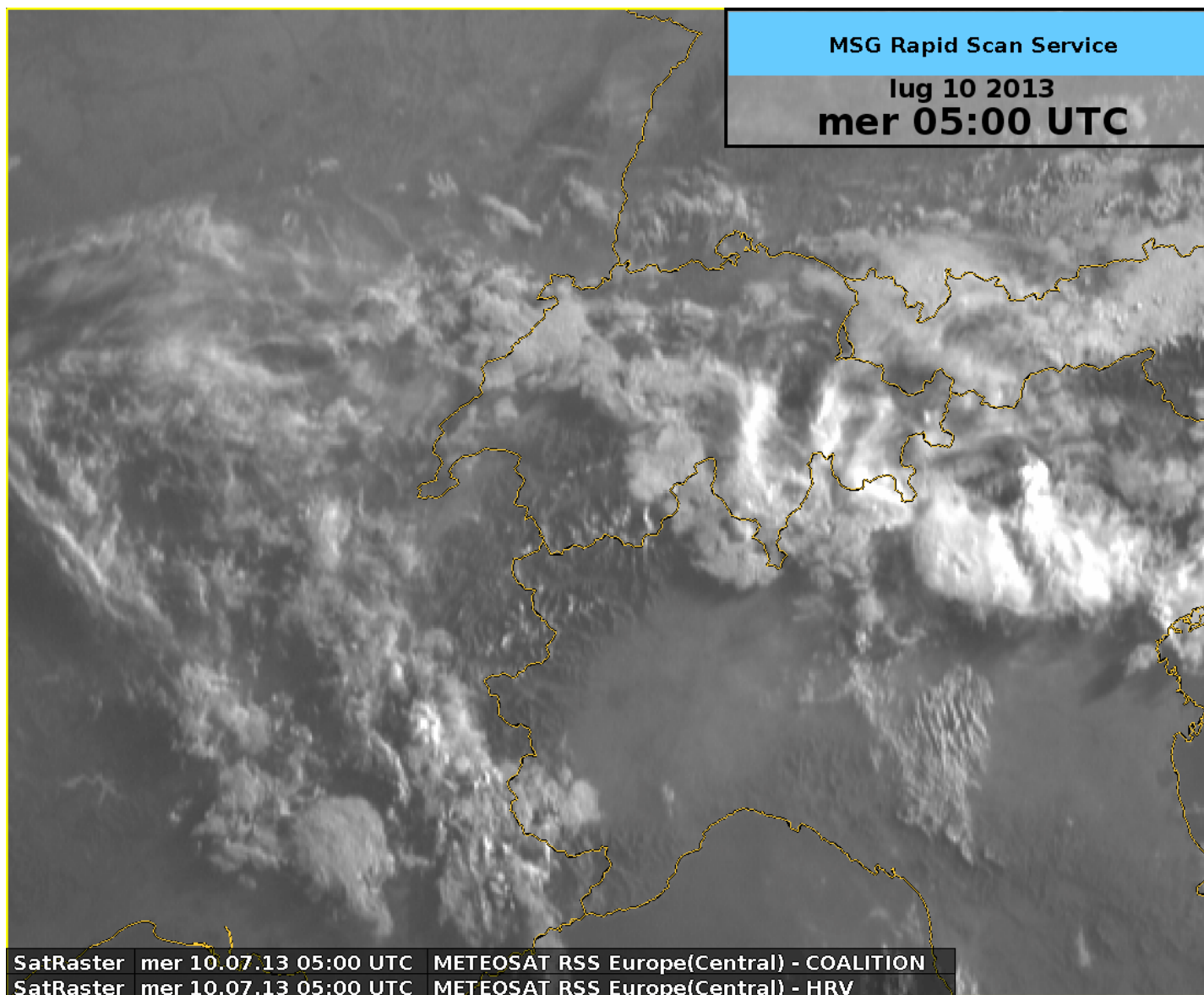
Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Eidgenössisches Departement des Innern EDI  
Département fédéral de l'intérieur DFI  
Bundesamt für Meteorologie und Klimatologie MeteoSchweiz  
Office fédéral de météorologie et de climatologie MeteoSwiss





# 7-10 luglio: pressione livellata, satellite







# 8-11 luglio: pressione livellata, CAPE

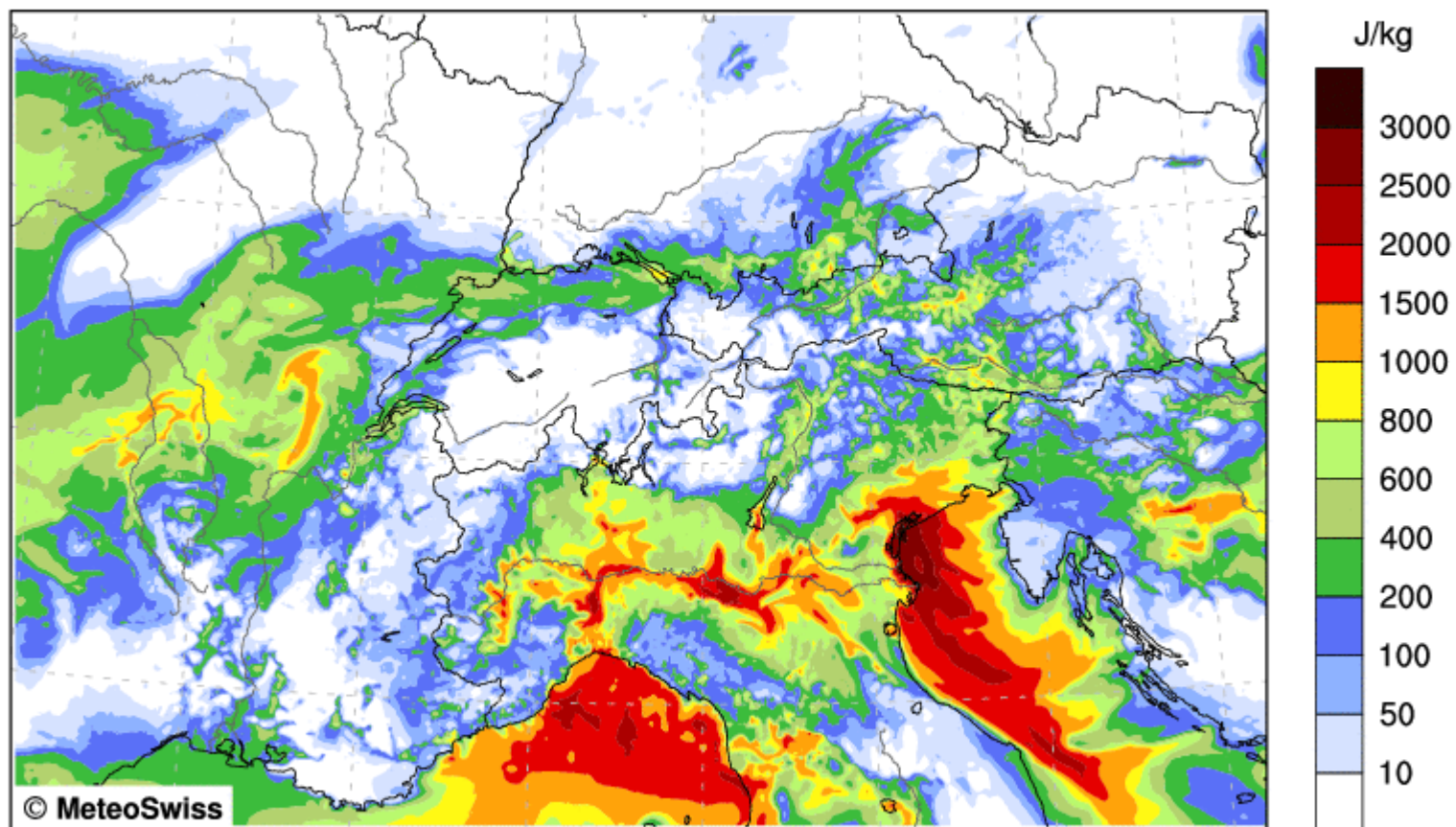
COSMO-2 ANALYSIS

Version: 935

Wed 10 Jul 2013 00UTC

Most Unstable Parcel Conv. Avail. Potential Energy

10.07.2013 00UTC +00h

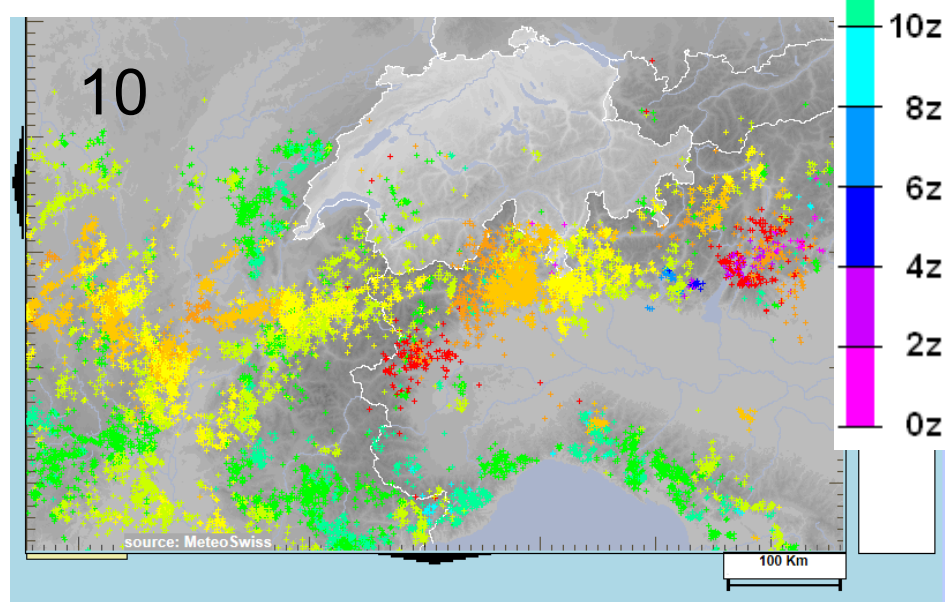
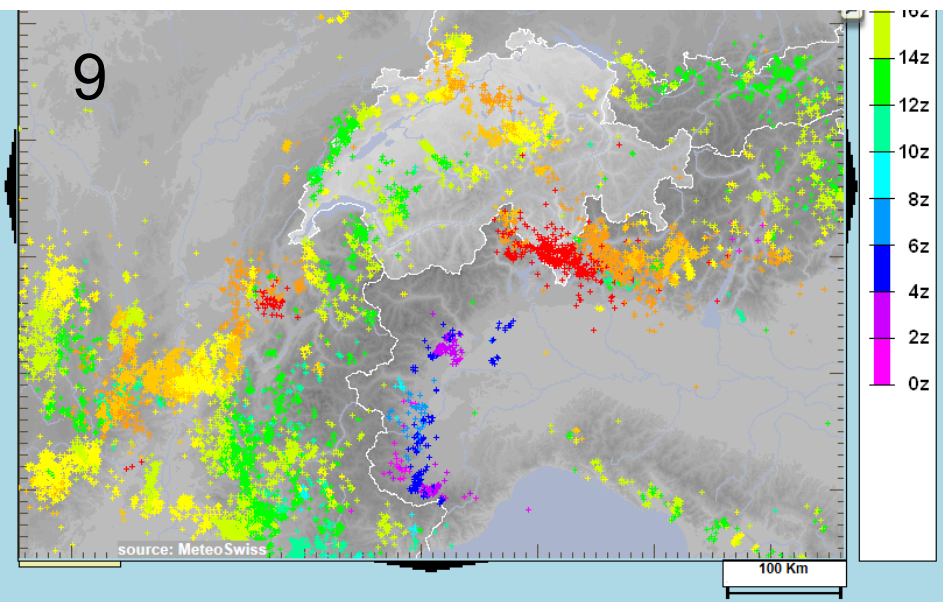
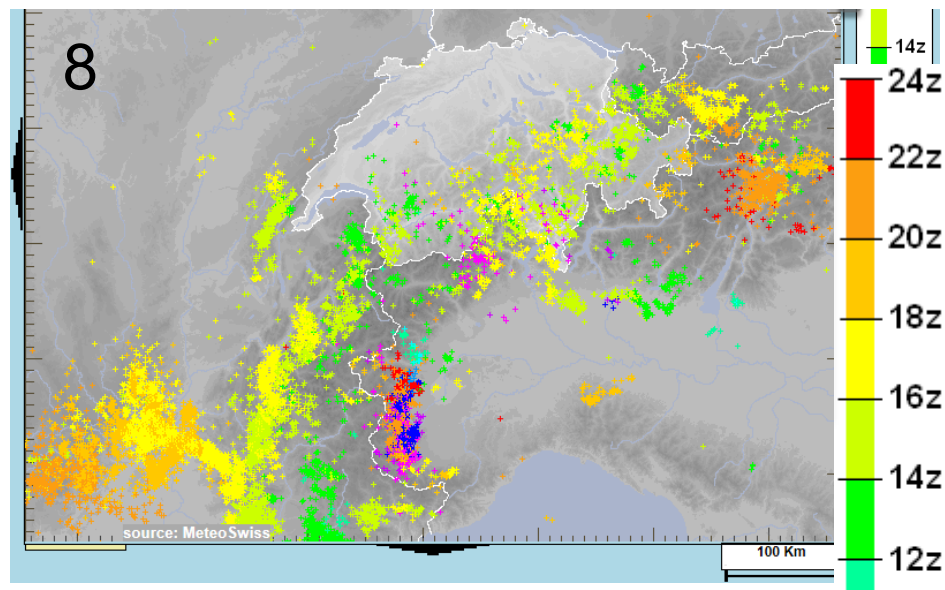
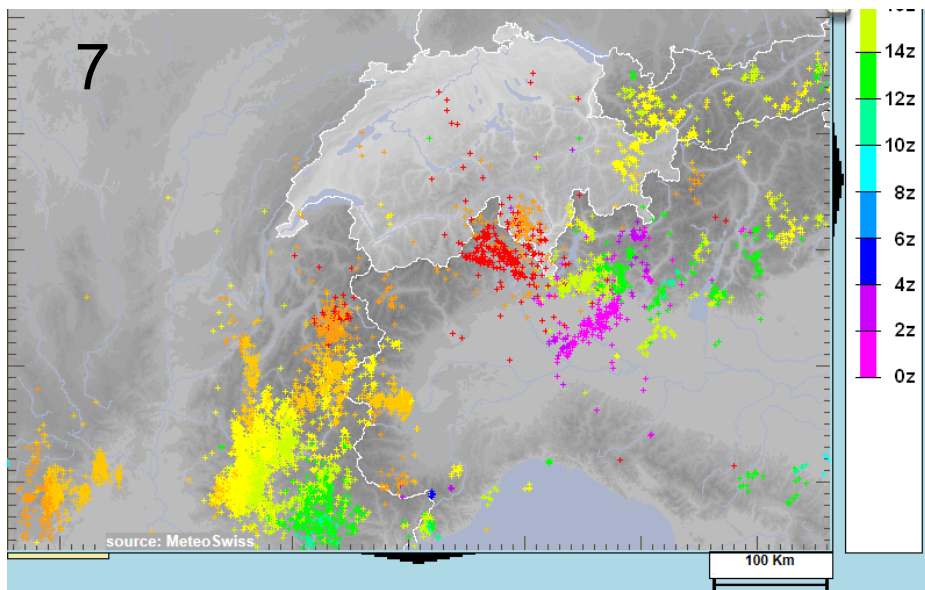


Cape of Most Unstable Parcel [J/kg]

Mean: 315.2 J/kg

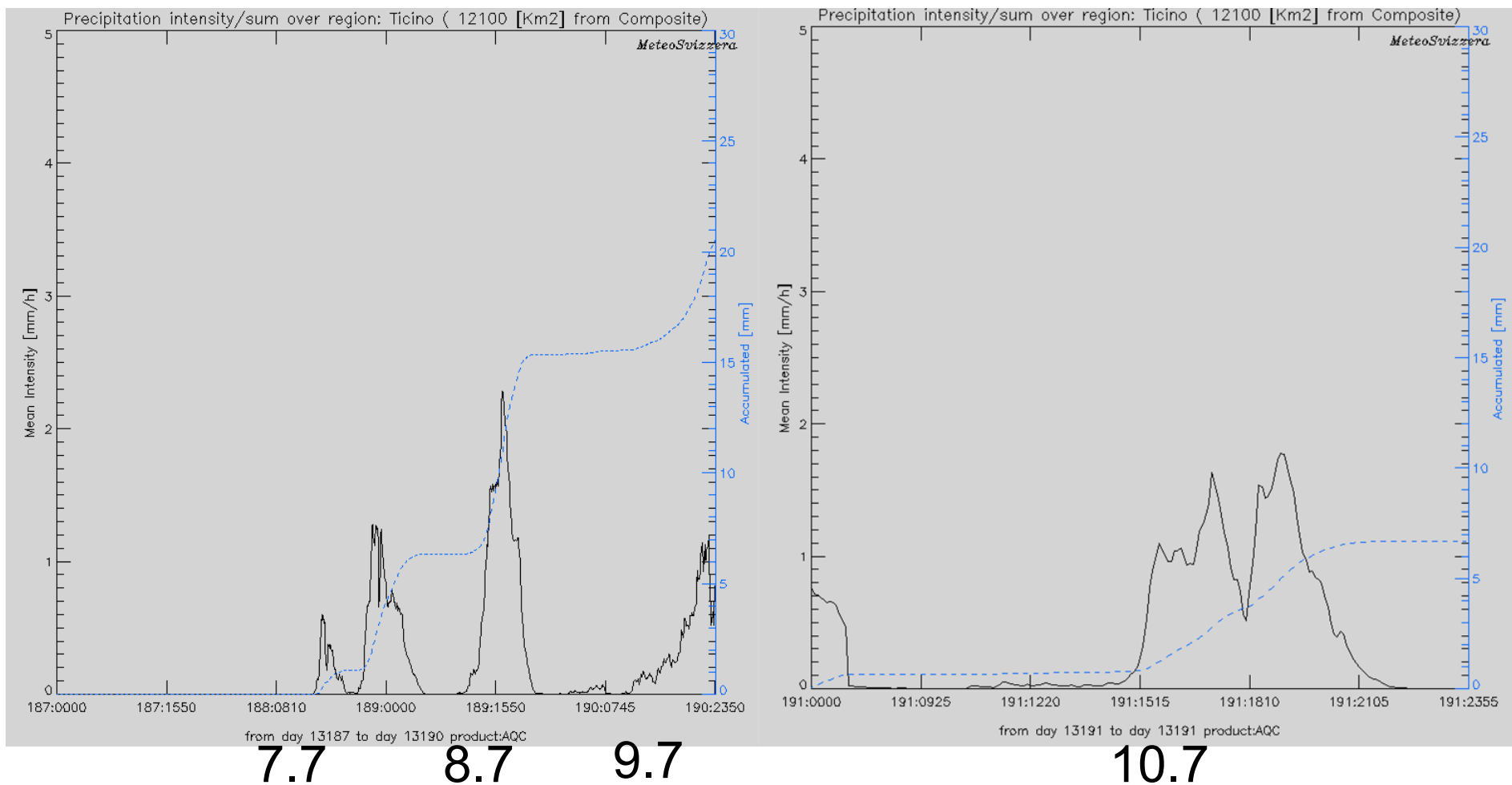


# 7-10 luglio: pressione livellata, fulmini





# 7-10 luglio: pressione livellata, precipitazioni







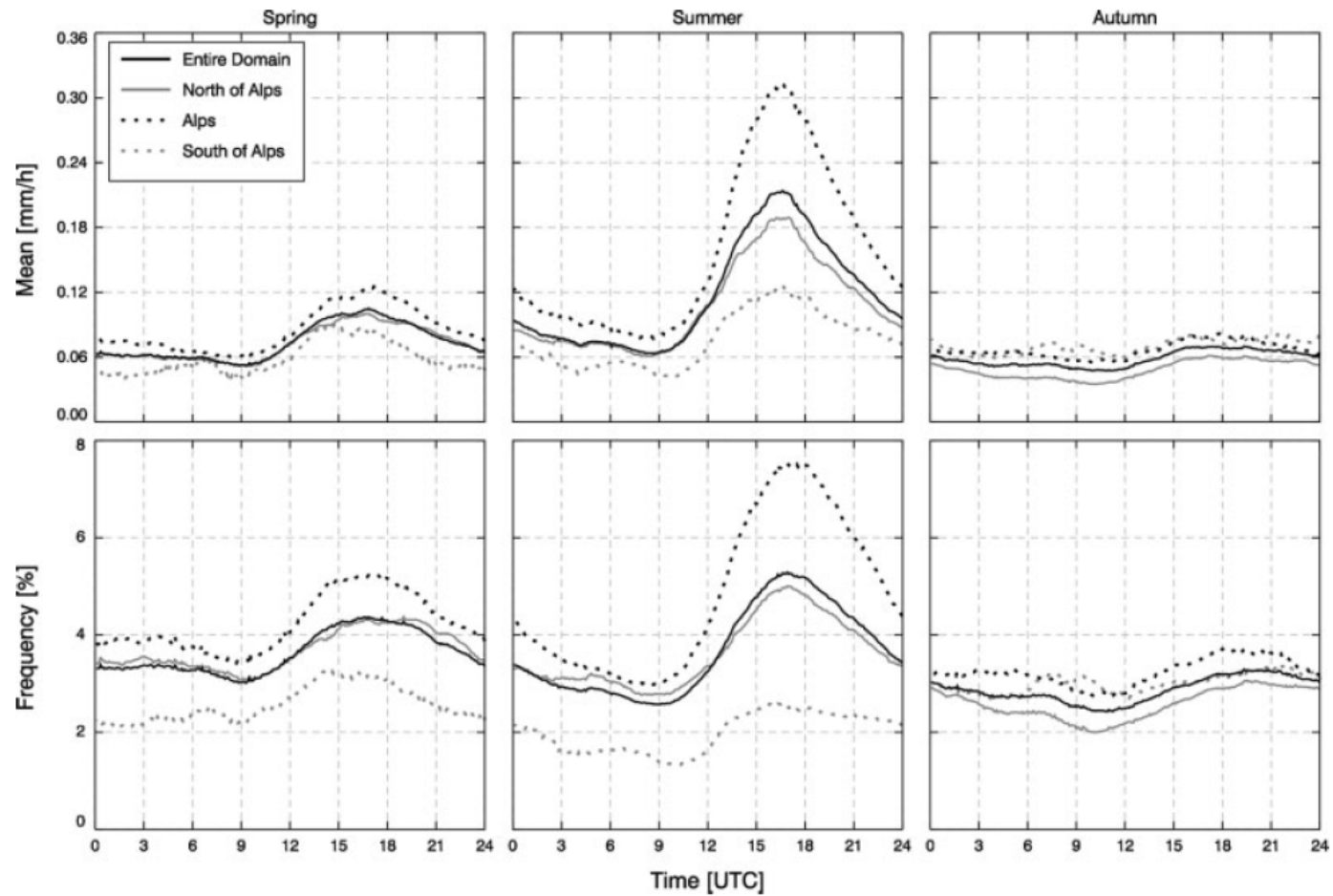
# Ciclo convettivo ingredienti

## Ciclo diurno della radiazione solare

- **Latente instabilità della massa d'aria** (misurabile in termini di energia potenziale convettiva "Convective Available Potential Energy" CAPE, ovvero quanto più è caldo dell'ambiente circostante un ipotetico pacchetto d'aria che viene fatto salire dalla superficie fino a ca. 10'000 m di altitudine)
- **Umidità** (misurabile in termini di integrale verticale dell'umidità "Vertical integrated liquid" VIL)
- **Un processo di innesco o di sollevamento** che permetta il rilascio dell'instabilità e di superare l'eventuale presenza di qualche inversione termica (forte riscaldamento al suolo, convergenze dei venti al suolo, effetto di sollevamento dell'orografia, vento in uscita da un'altra cellula temporalesca, un'instabilità in quota sottoforma di perturbazione/ saccatura termica o di posizione della corrente a getto)
- **Un taglio di vento**, ovvero la variazione del vento con l'altitudine ("wind shear"). Quest'ultimo contribuisce a dare una struttura al sistema temporalesco permettendogli di trasformarsi in supercella ed eventualmente nei casi più intensi di dare origine ad una tromba d'aria.



# Ciclo diurno medio delle precipitazioni





# 29.7 brusca fine della canicola

Wetterübersicht vom Sonntag

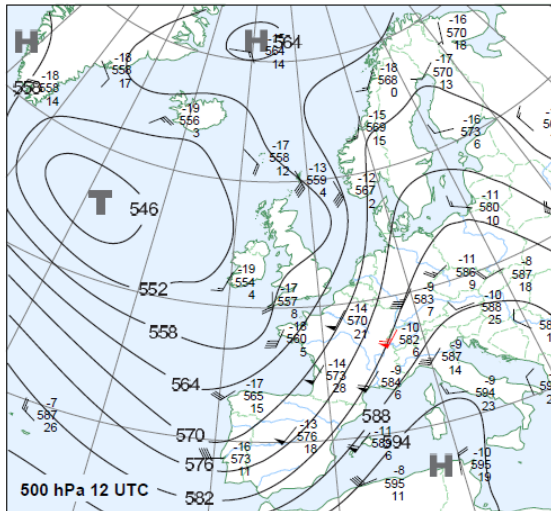
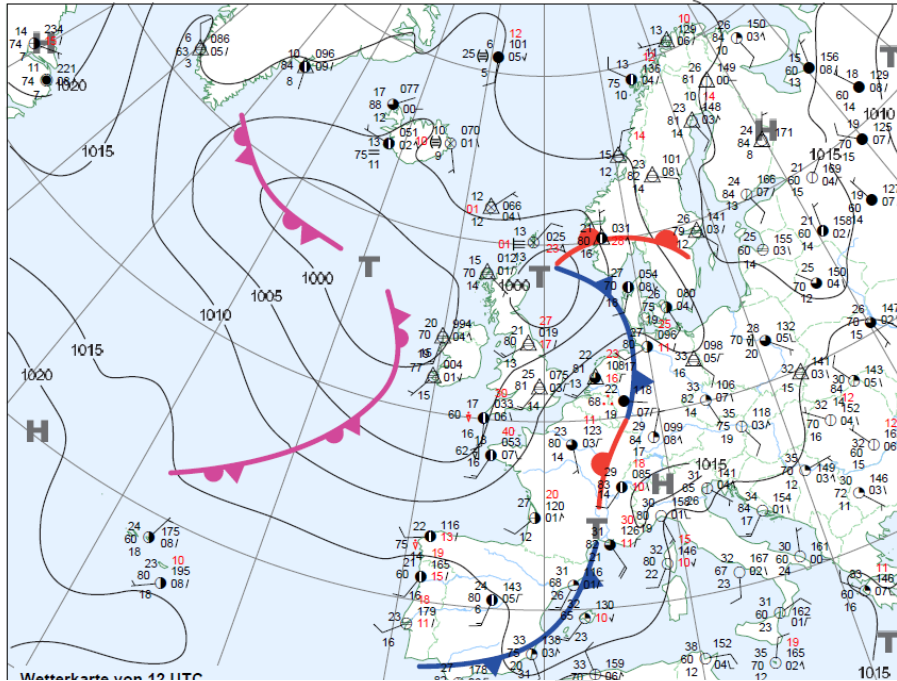
Résumé météorologique du Dimanche

28.7.2013



Schweizerische Eidgenossenschaft  
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Confederazione Svizzera  
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Eidgenössisches Departement des Innern EDI  
Département fédéral de l'Intérieur DFI  
Bundesamt für Meteorologie und Klimatologie MeteoSwiss  
Office fédéral de météorologie et de climatologie MétéoSuisse



Wetterübersicht vom Montag

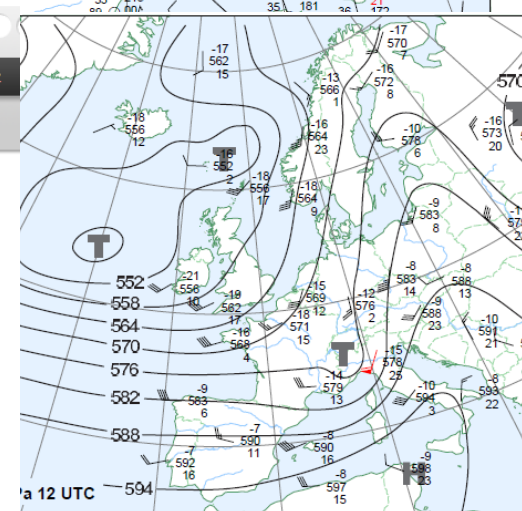
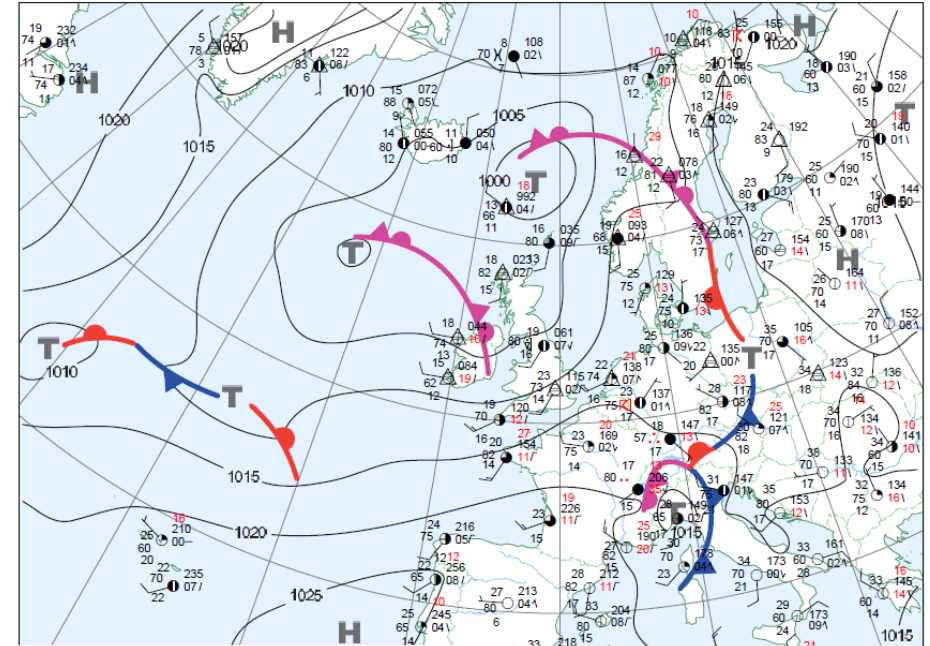
Résumé météorologique du Lundi

29.7.2013



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**tio**  
Il portale  
del Ticino

20  
anni

de fr it

Epaper

Trova Box

Pubblicità

search Chi/Cosa  
L'elenco telefonico elettronico

Ticino Svizzera Estero Finanza Sport Agenda People Buzz

CANTONE

29/07/2013 - 16:59

## Maltempo, 650 chiamate alla Polizia. Il video del Ticino sott'acqua

Allagata la strada cantonale a Figino, frana a Muzzano







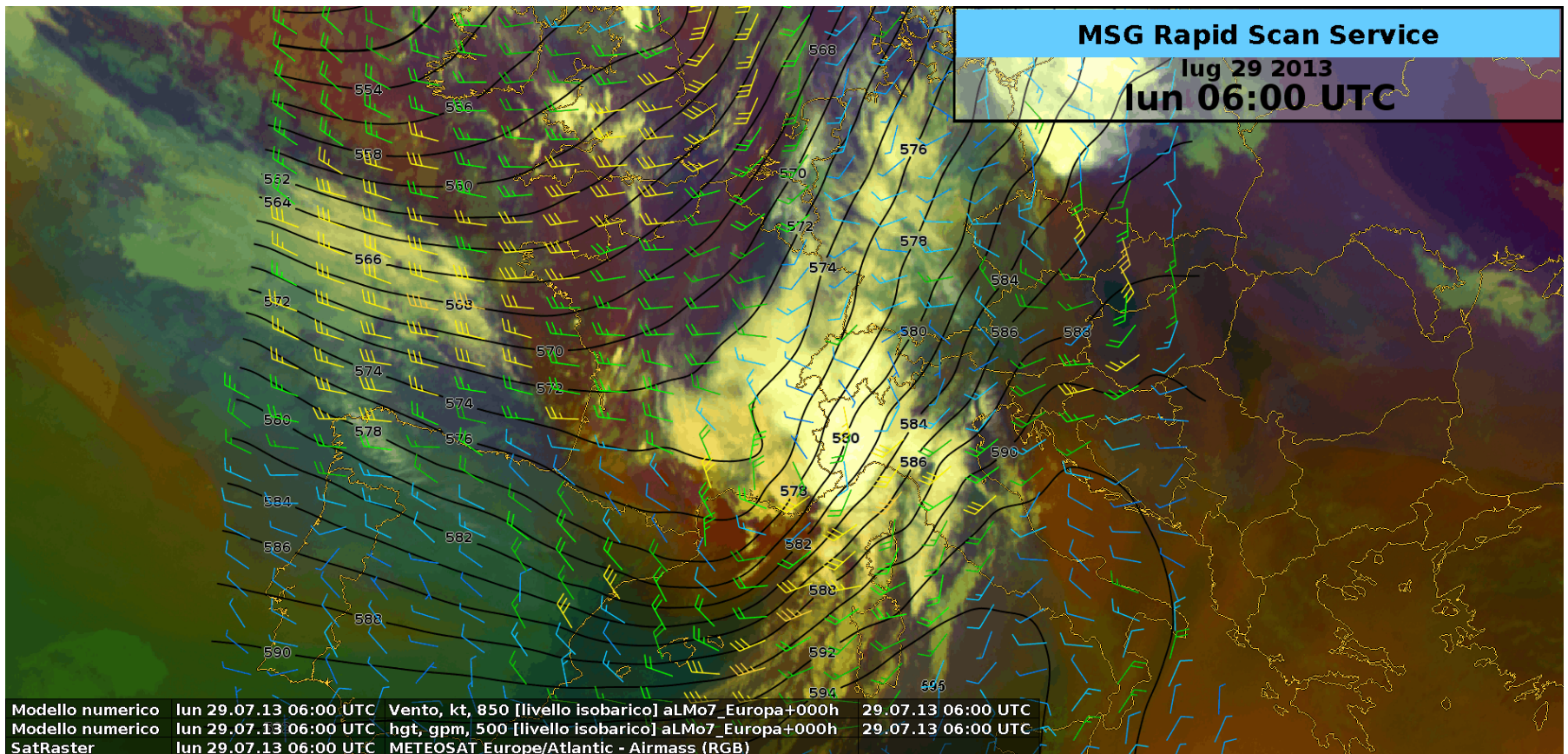
# 29.7 brusca fine della canicola







# 29.7: Z@500hPa



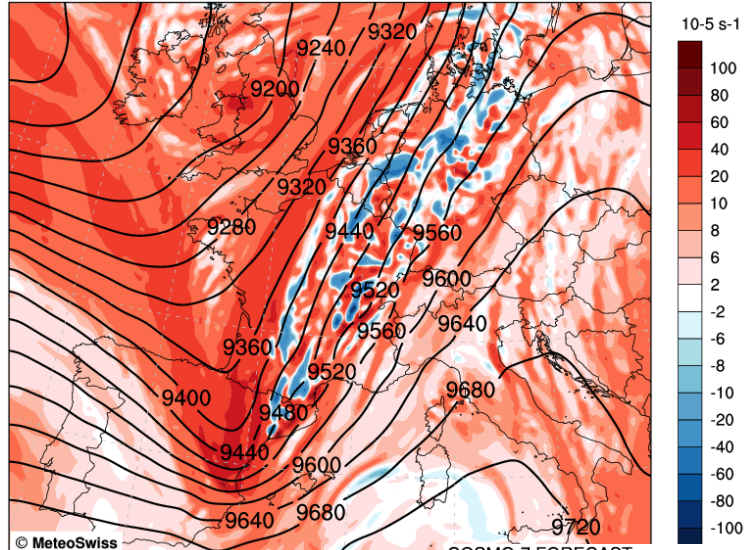


# 29.7: Z@300hPa e vorticità @300hPa

COSMO-7 FORECAST  
300hPa Absolute Vorticity and Geopotential

Version: 935

Mon 29 Jul 2013 00UTC  
28.07.2013 00UTC +24h



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COSMO-7 FORECAST  
300hPa Absolute Vorticity and Geopotential

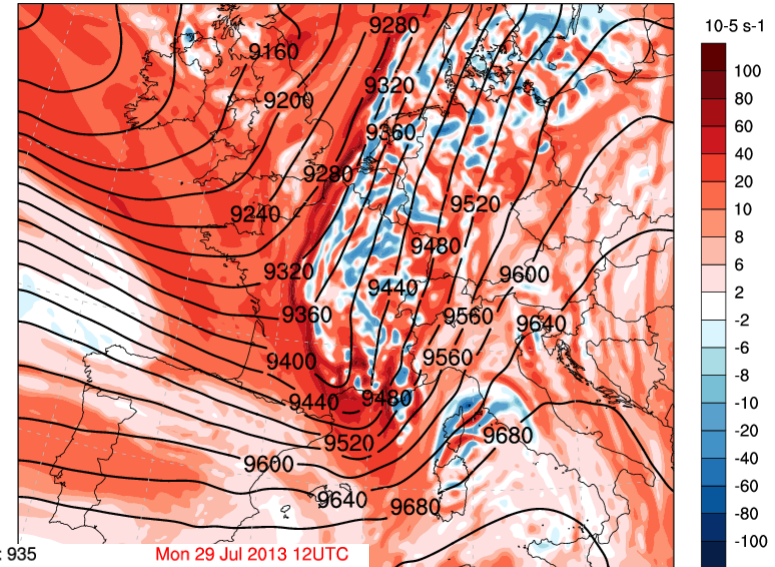
Version: 935

Mon 29 Jul 2013 12UTC  
28.07.2013 00UTC +36h

COSMO-7 FORECAST  
300hPa Absolute Vorticity and Geopotential

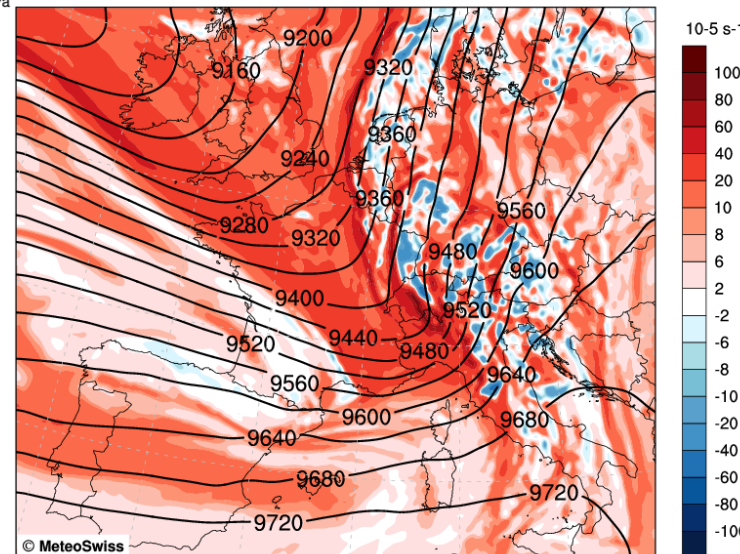
Version: 935

Mon 29 Jul 2013 06UTC  
28.07.2013 00UTC +30h



Mean: 9553.7 gpm  
Mean: 9.5 10^-5 s^-1

Geopotential [gpm], level = 300 hPa  
absolute vorticity on pressure surfaces [10^-5 s^-1], level = 300 hPa



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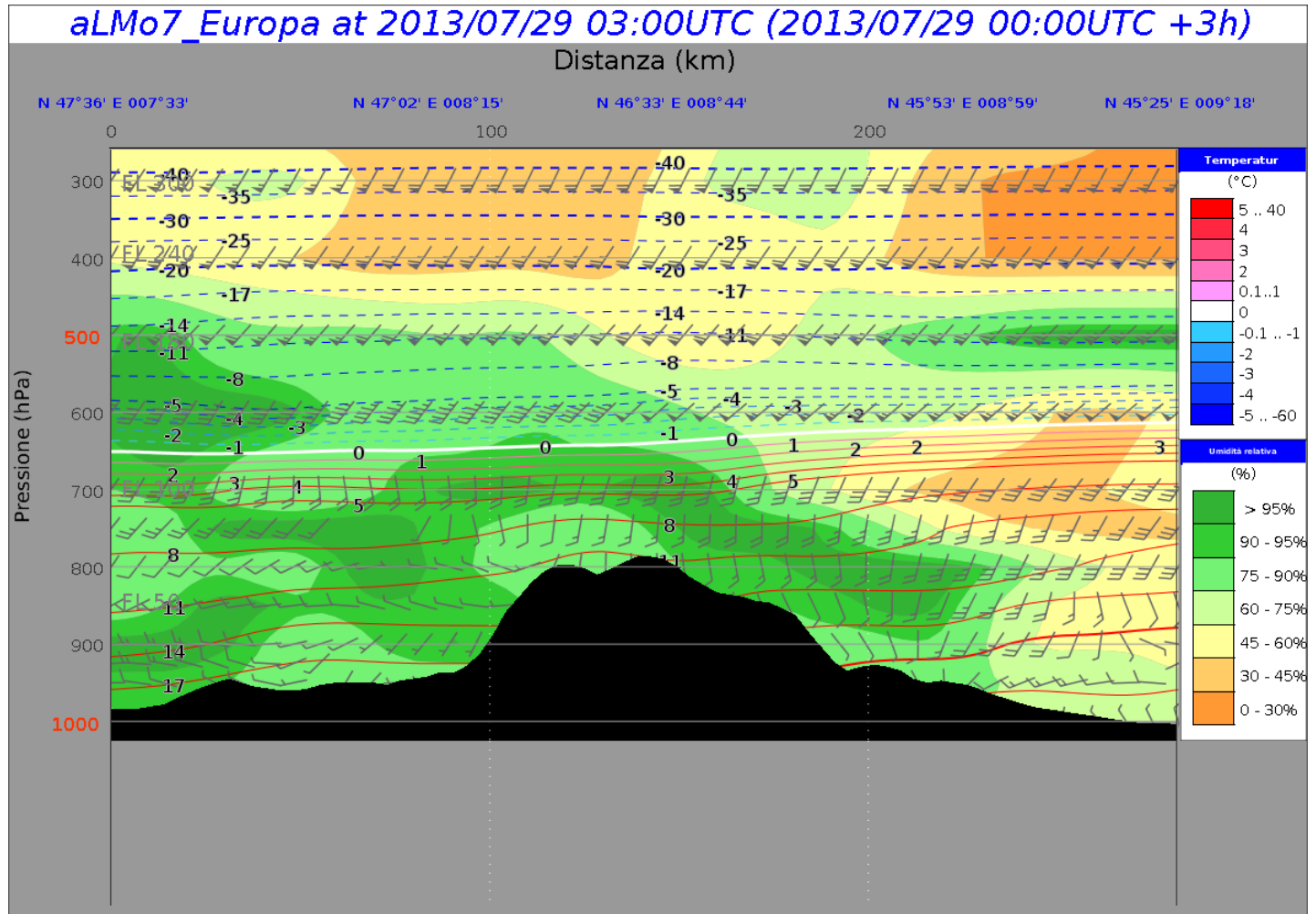
Geopotential [gpm], level = 300 hPa

Mean: 9555.6 gpm



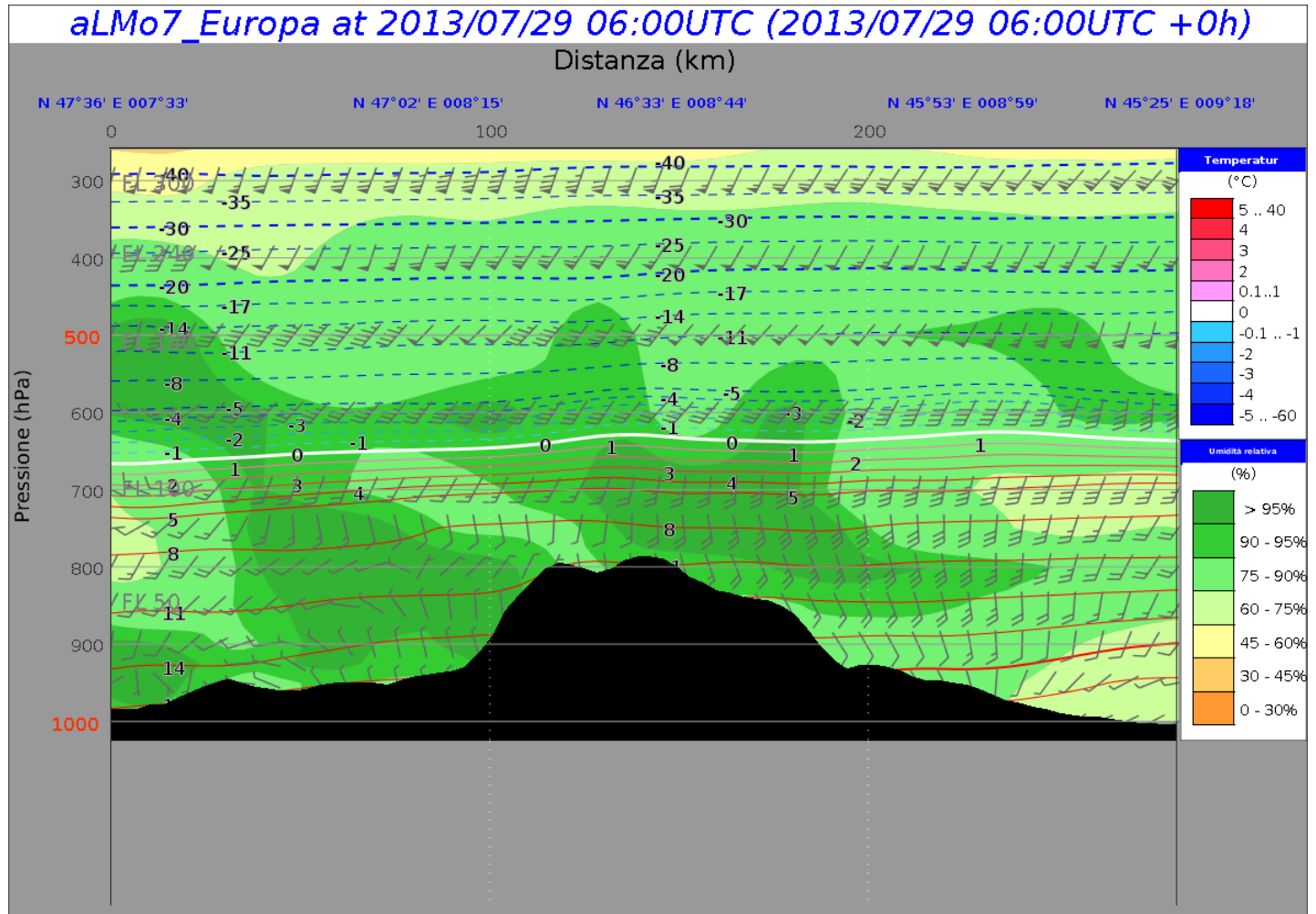


## 29.7: sezione nord-sud



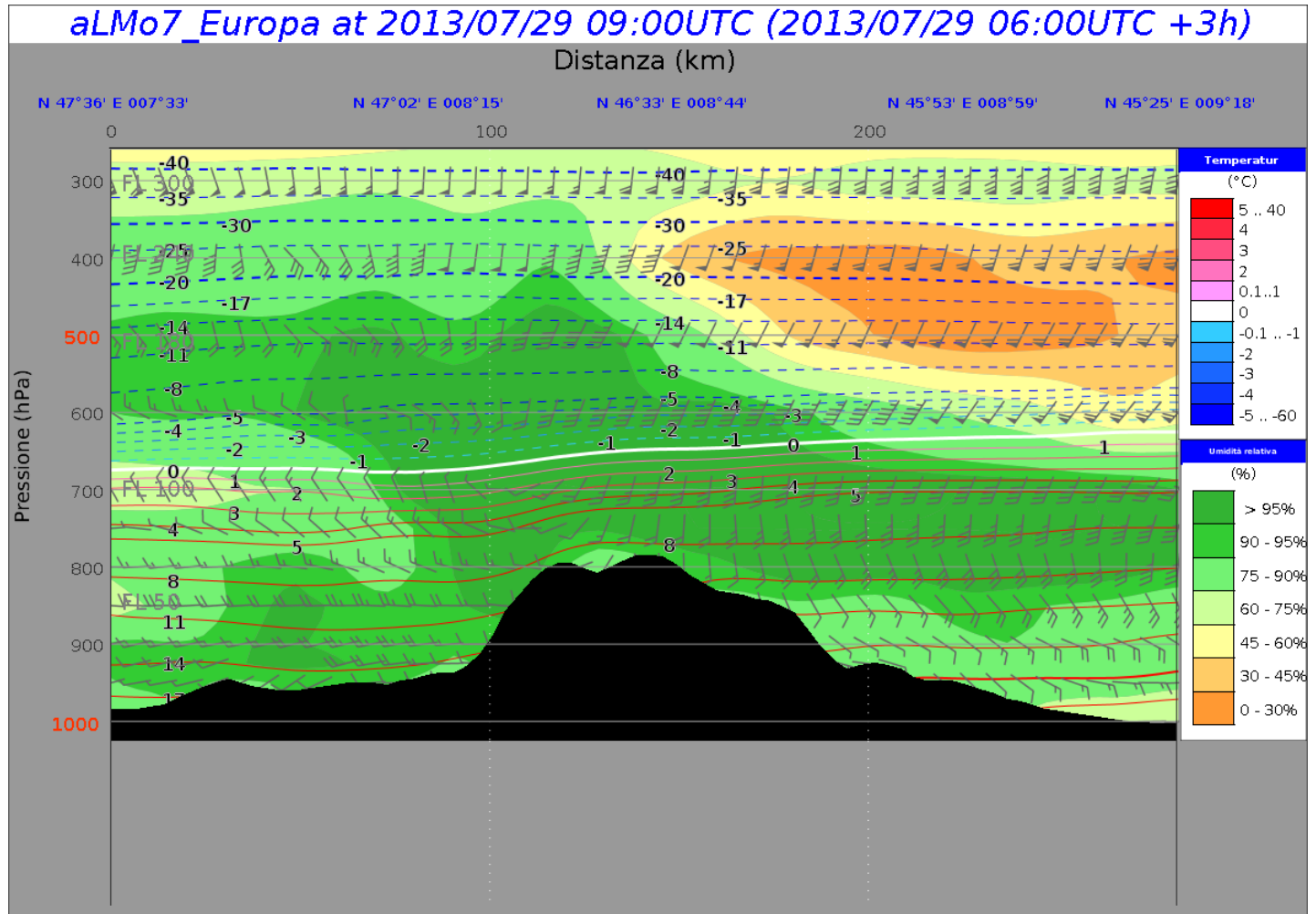


## 29.7: sezione nord-sud



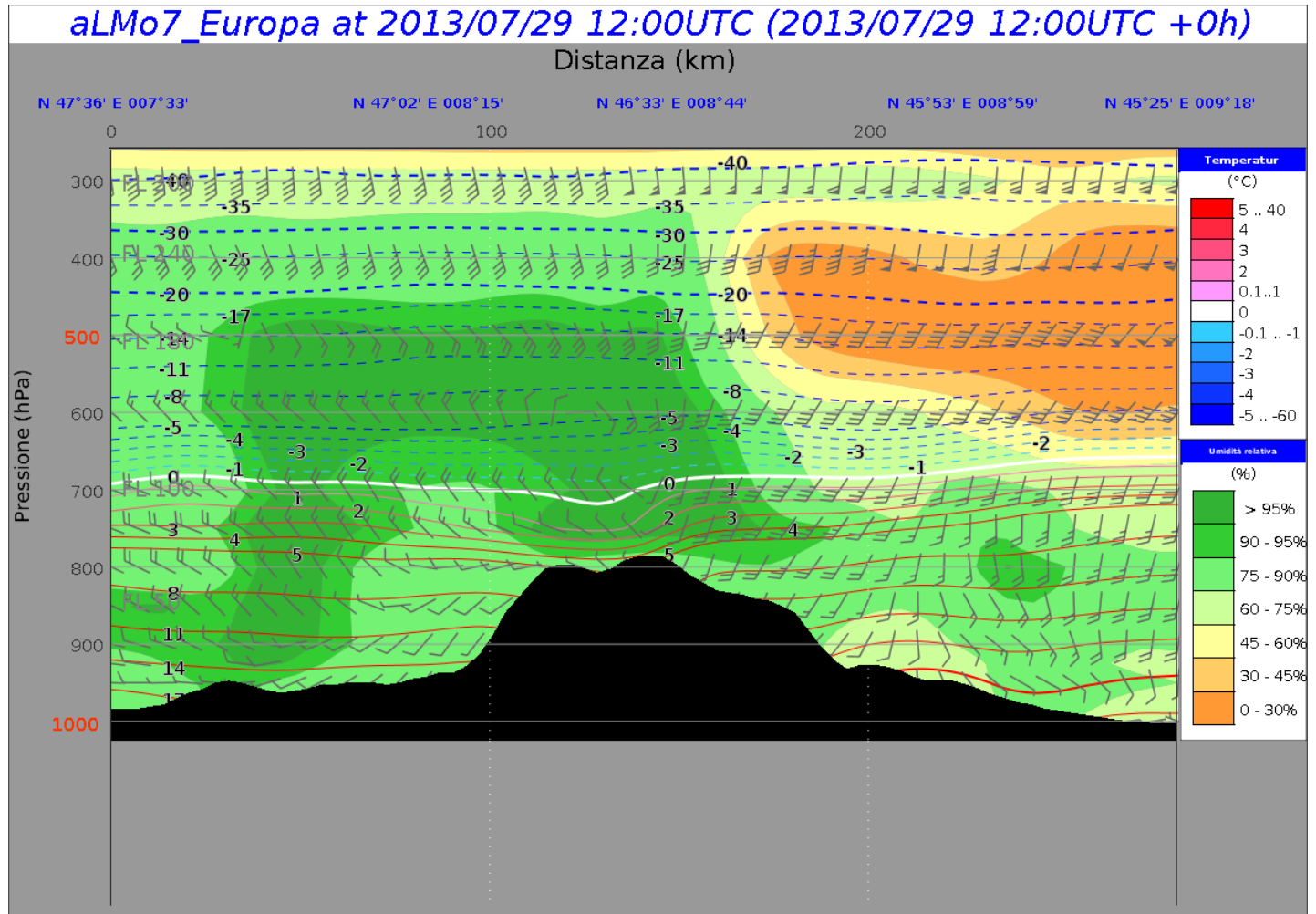


## 29.7: sezione nord-sud



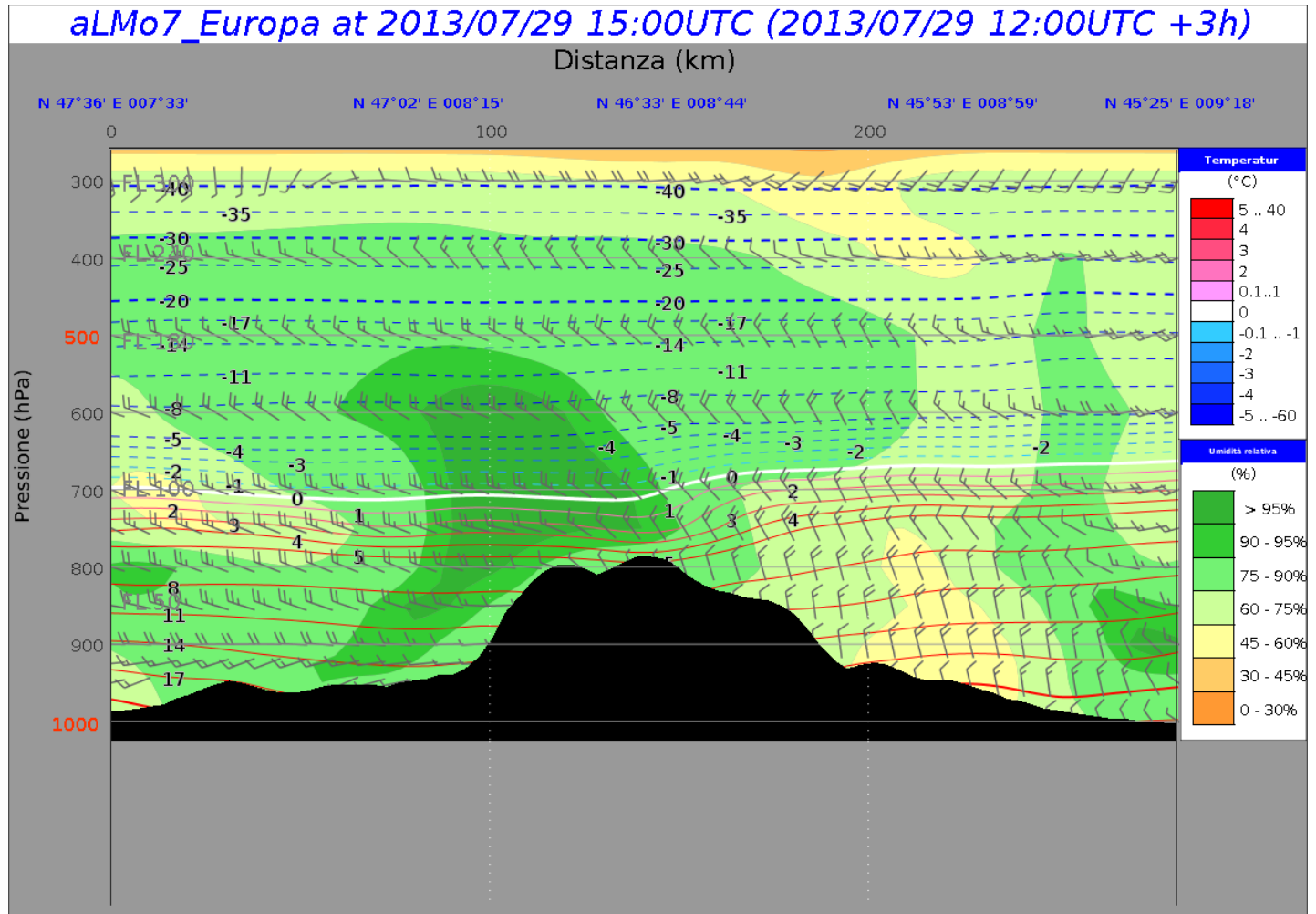


## 29.7: sezione nord-sud



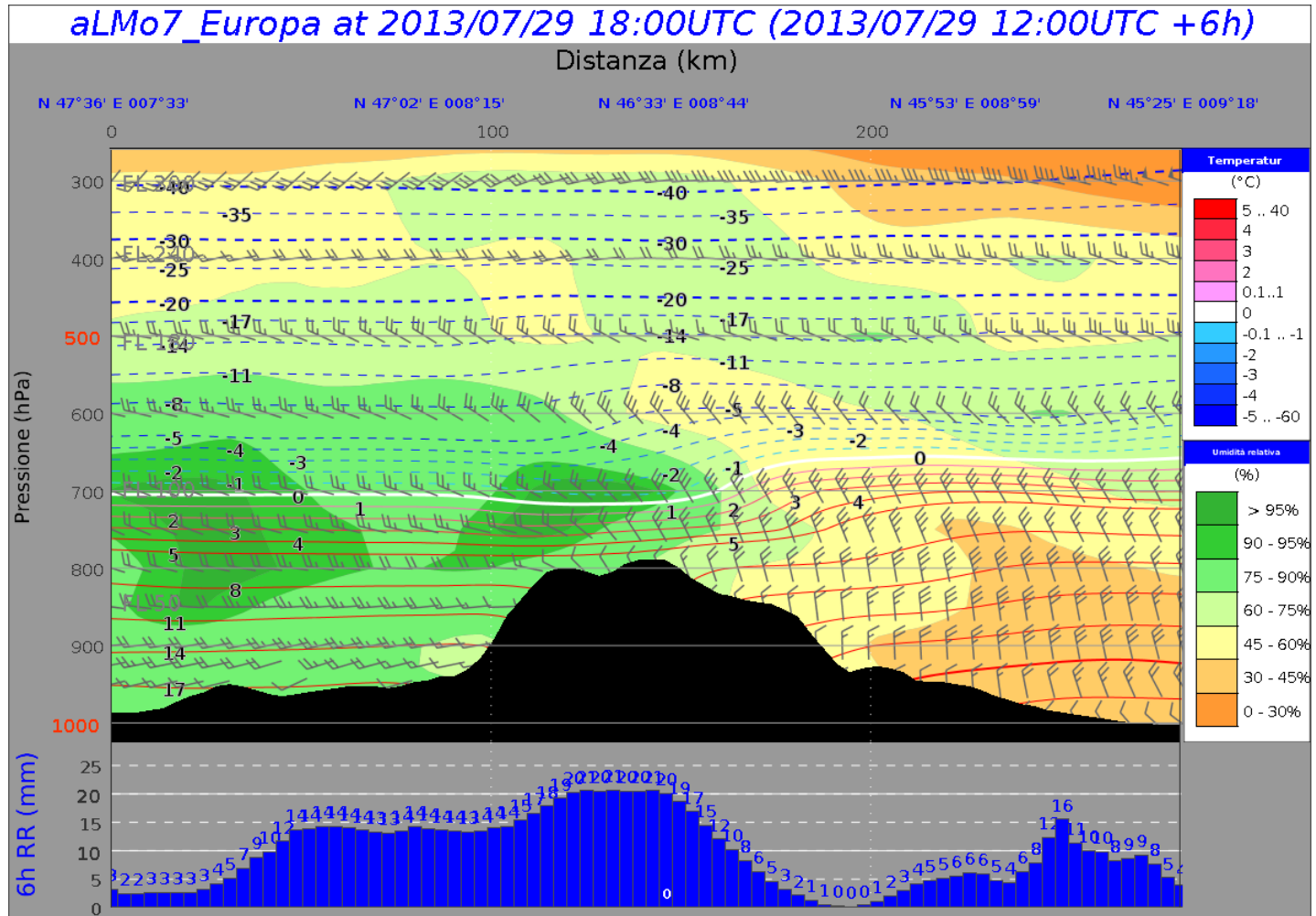


## 29.7: sezione nord-sud





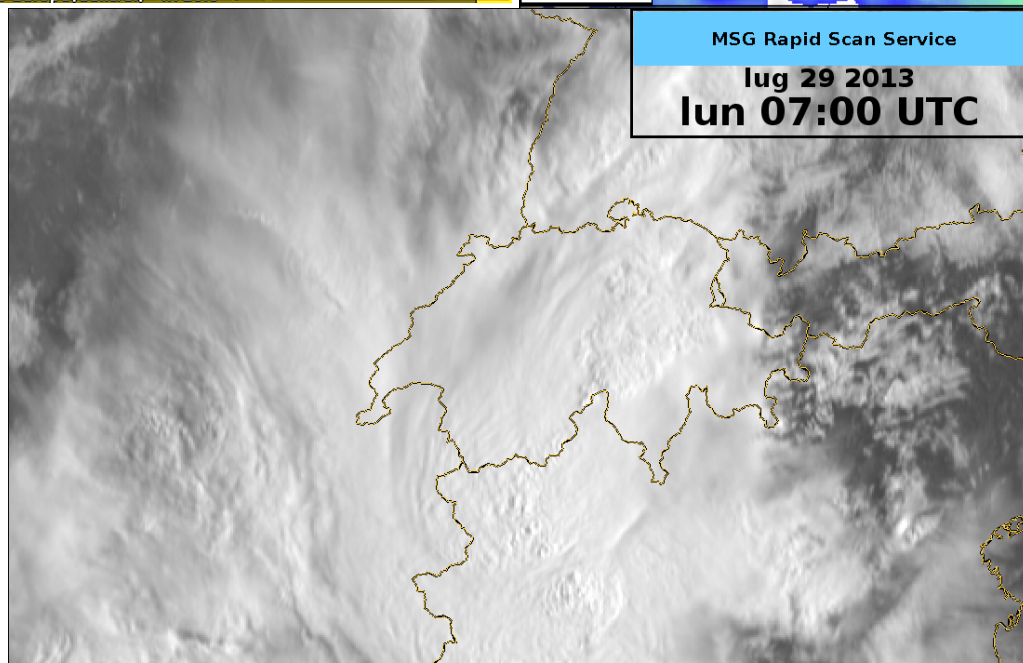
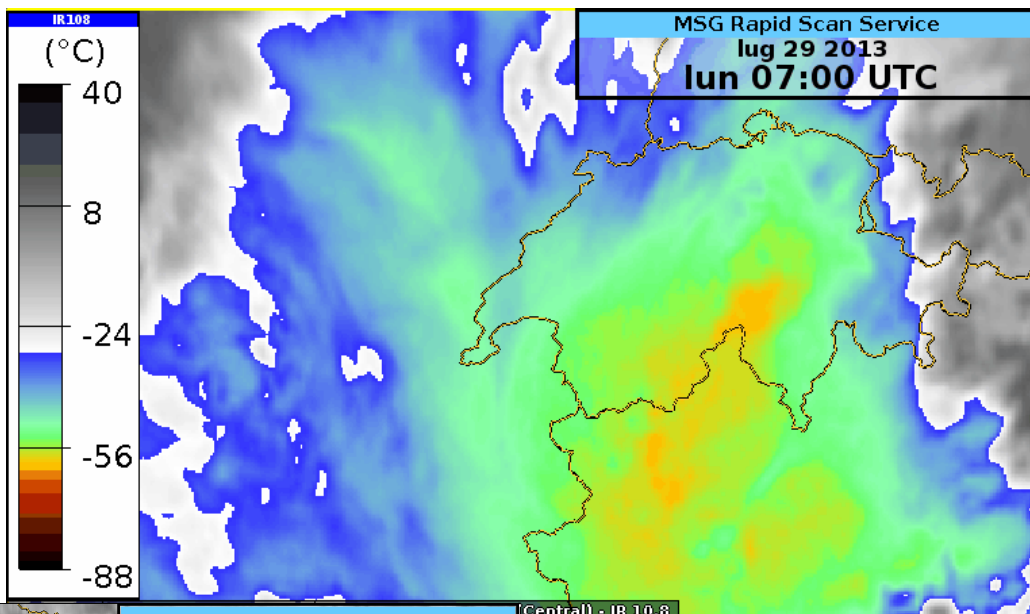
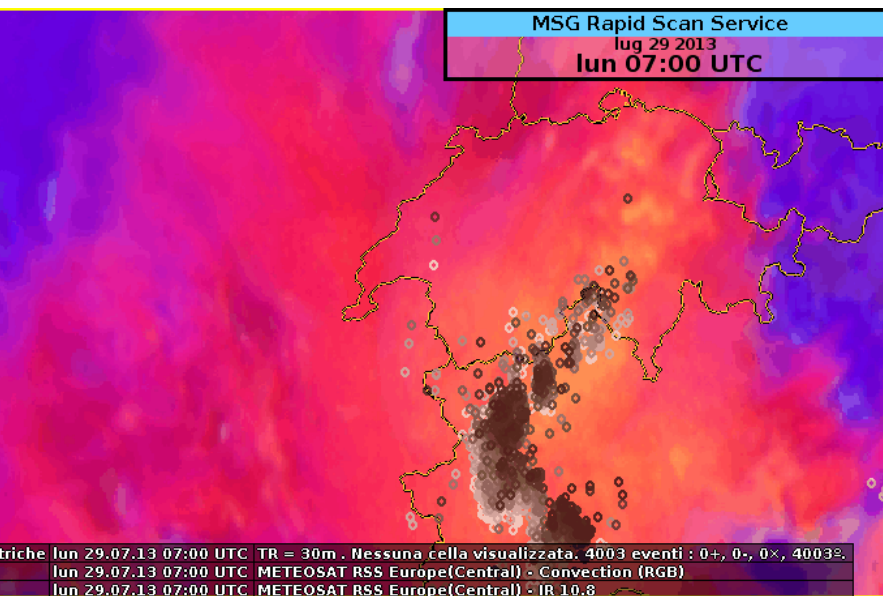
# 29.7: sezione nord-sud







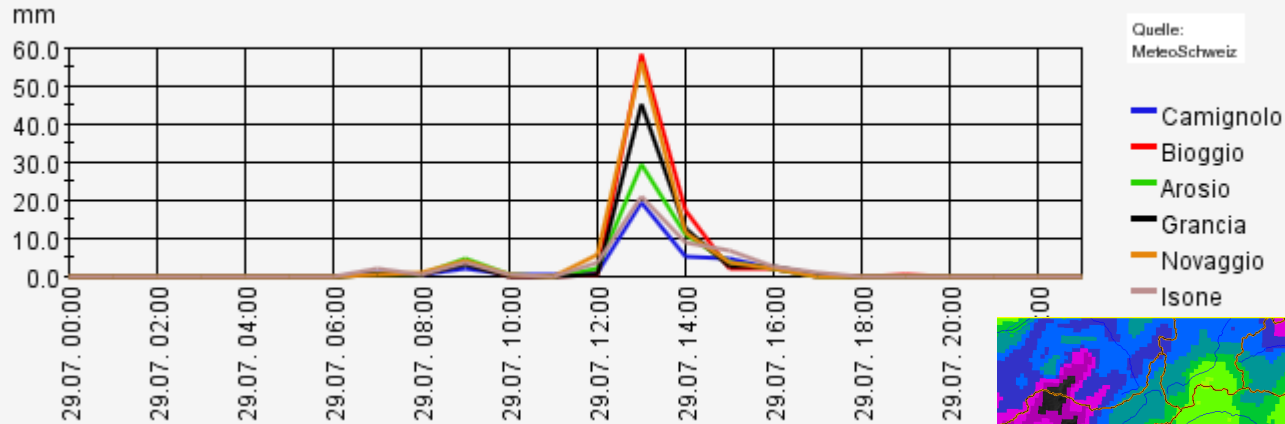
# 29.7: IR 10.8, RGB convection + fulmini, HRV



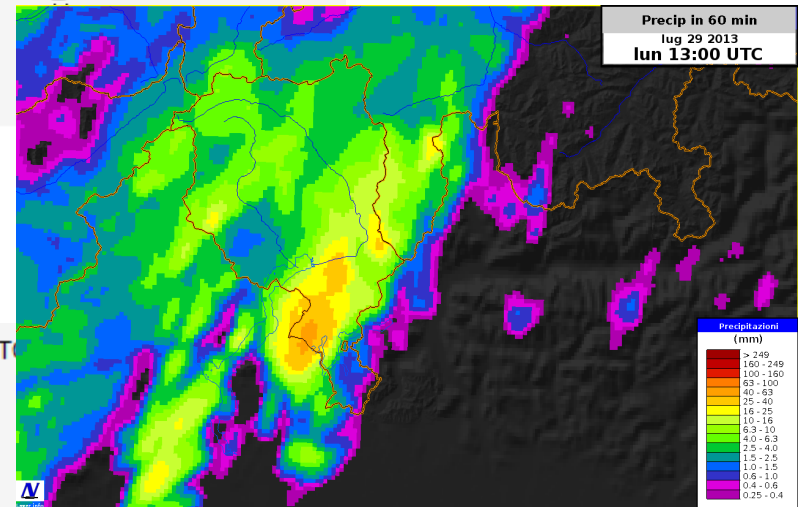
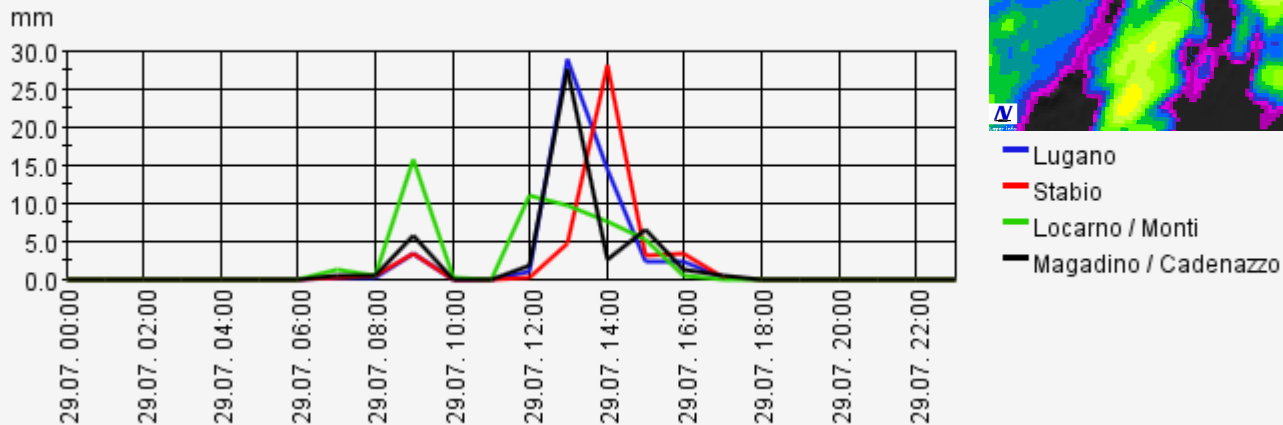


# 29.7: accumuli orari

Niederschlag; bürgerliche Stundensumme [mm] 29.07.2013 00:00 UTC - 29.07.2013 23:00 UTC



Niederschlag; bürgerliche Stundensumme [mm] 29.07.2013 00:00 UTC - 29.07.2013 23:00 UTC





**29.07.2013 02:10 UTC - 29.07.2013 14:00 UTC (massimo)**



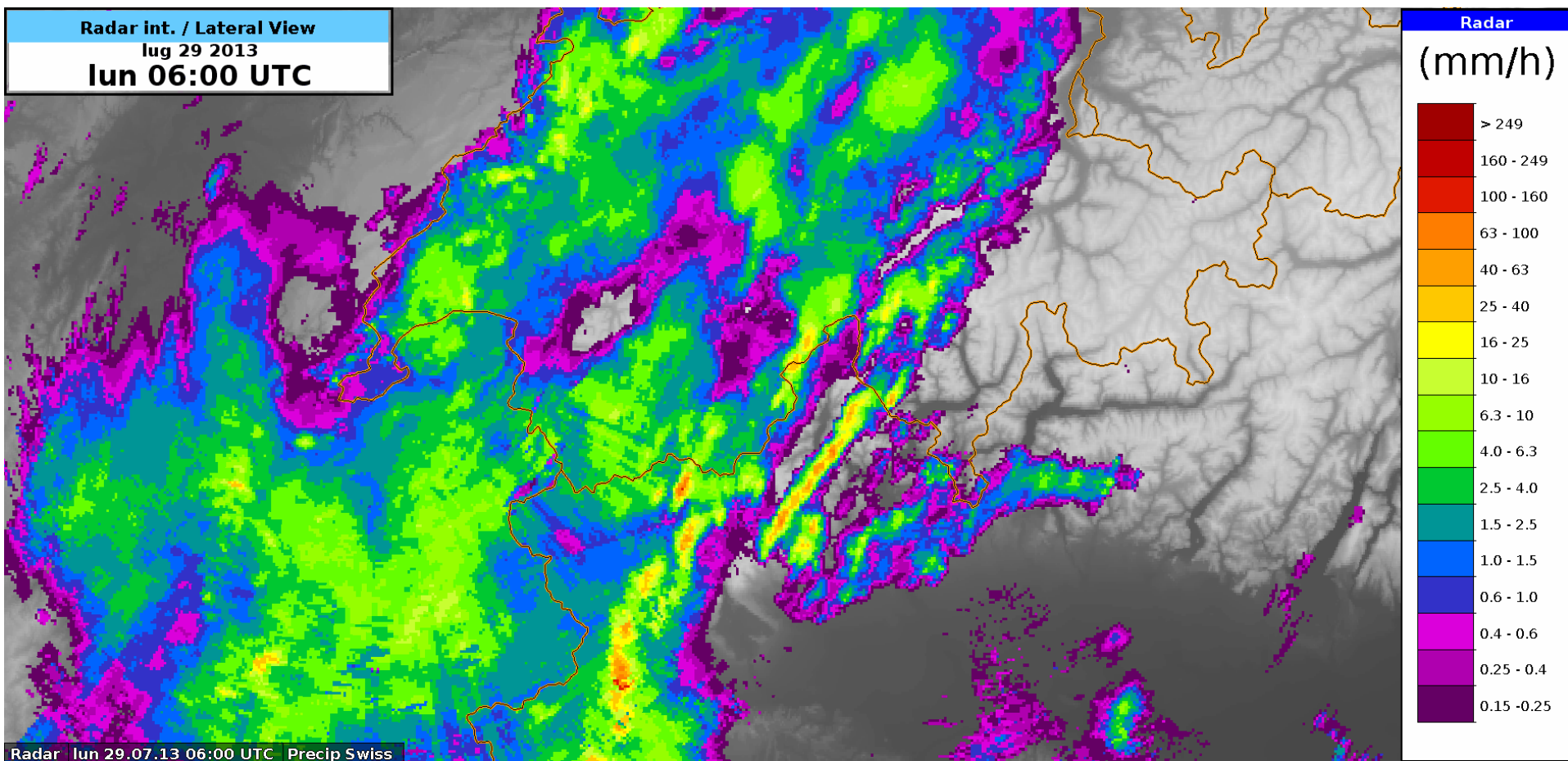


# 29.7: animazione radar

Radar int. / Lateral View

lug 29 2013

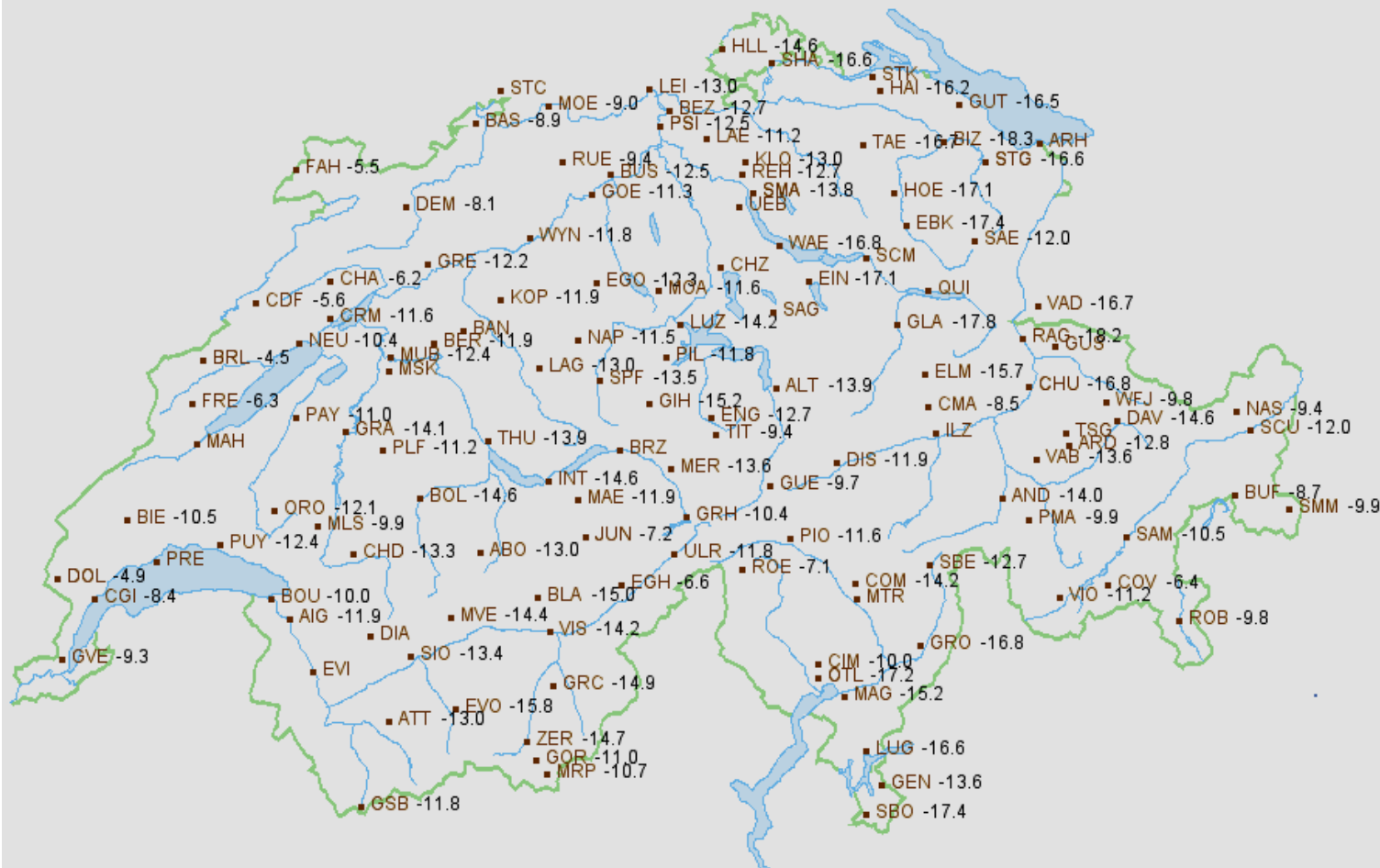
lun 06:00 UTC





# 29.7: calo termico

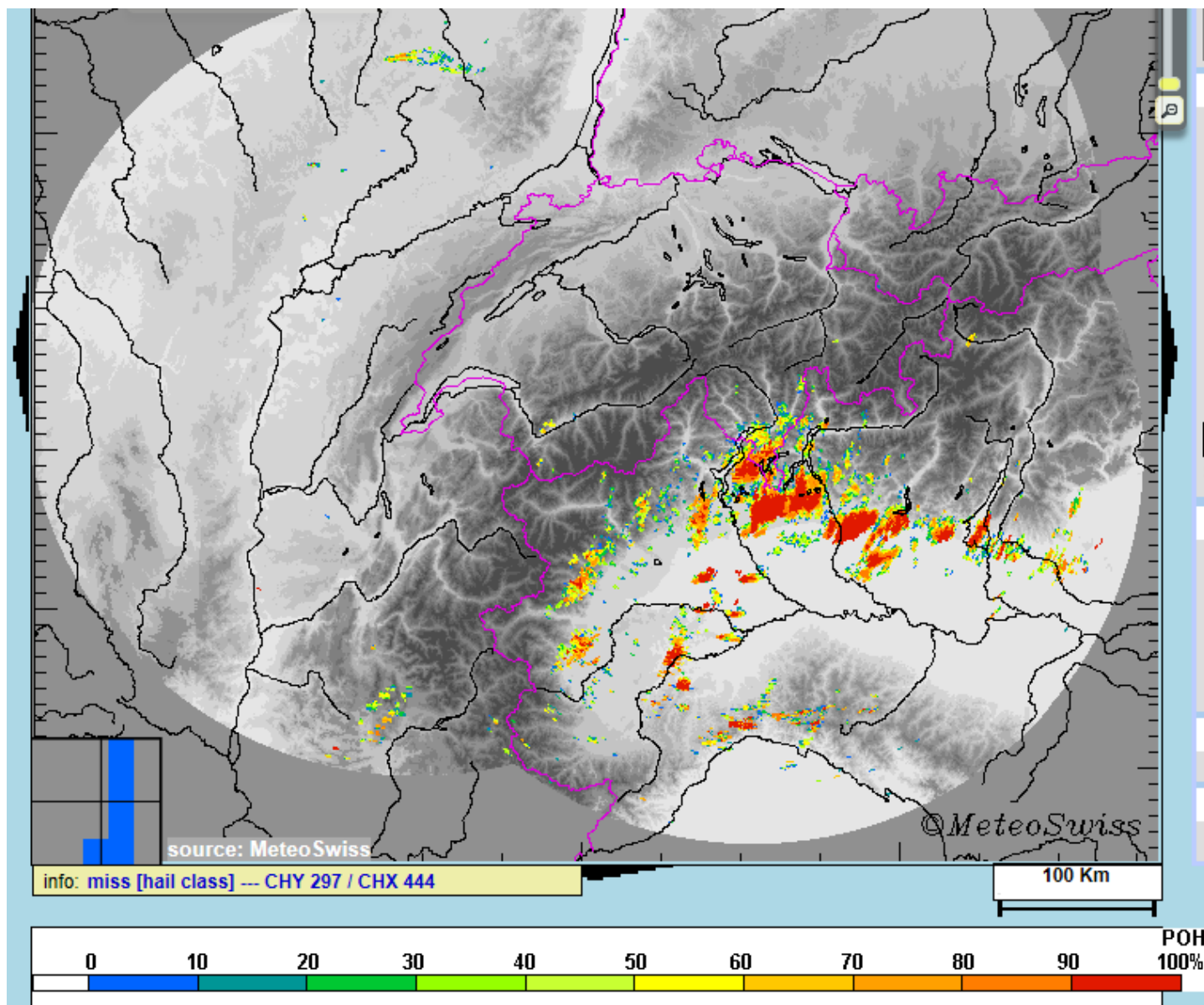
Temperatura dell'aria a 2 m; valore momentaneo [°C]  
28.07.2013 14:00 UTC - 29.07.2013 13:50 UTC (differenza)





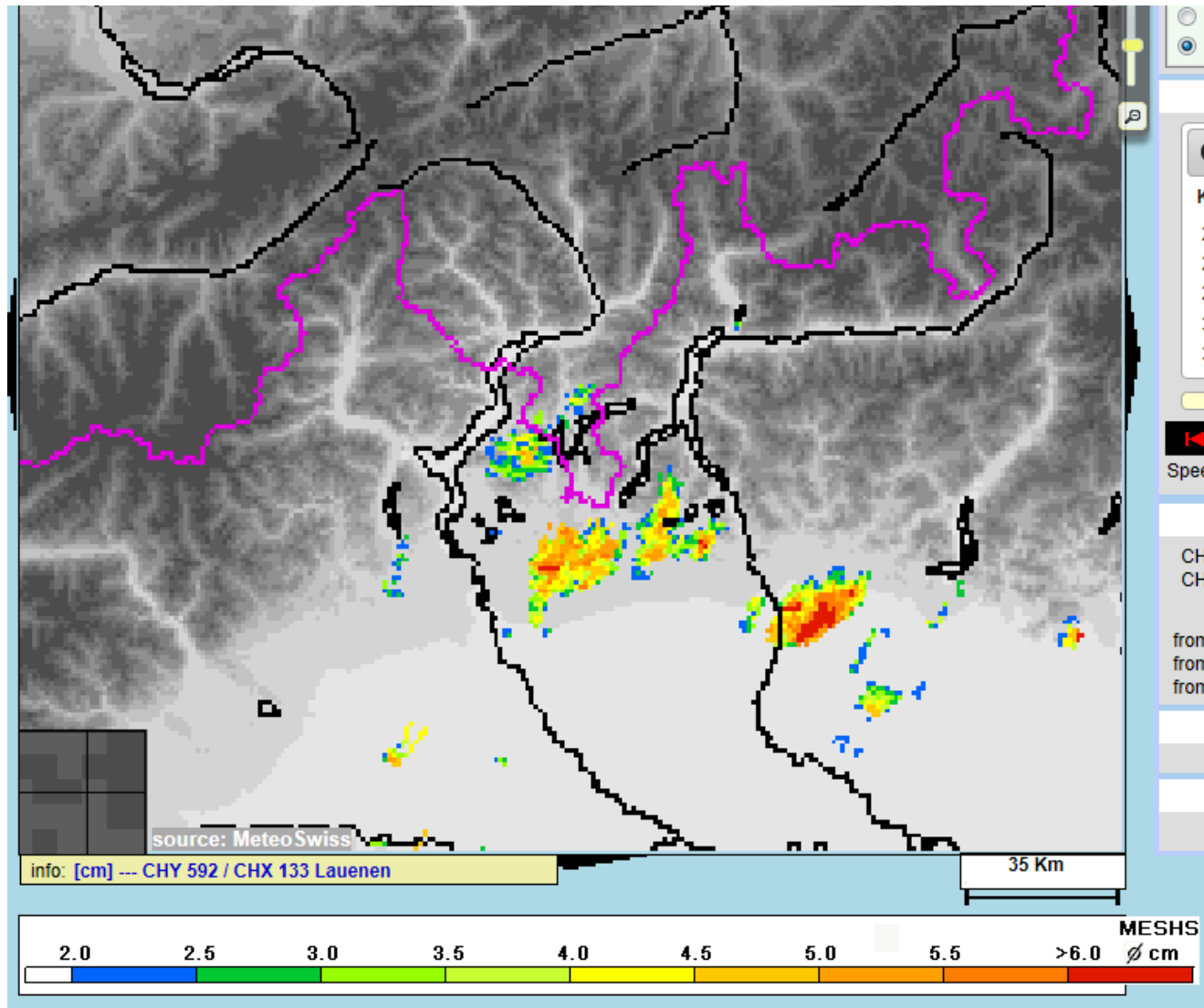


## 29.7: grandine



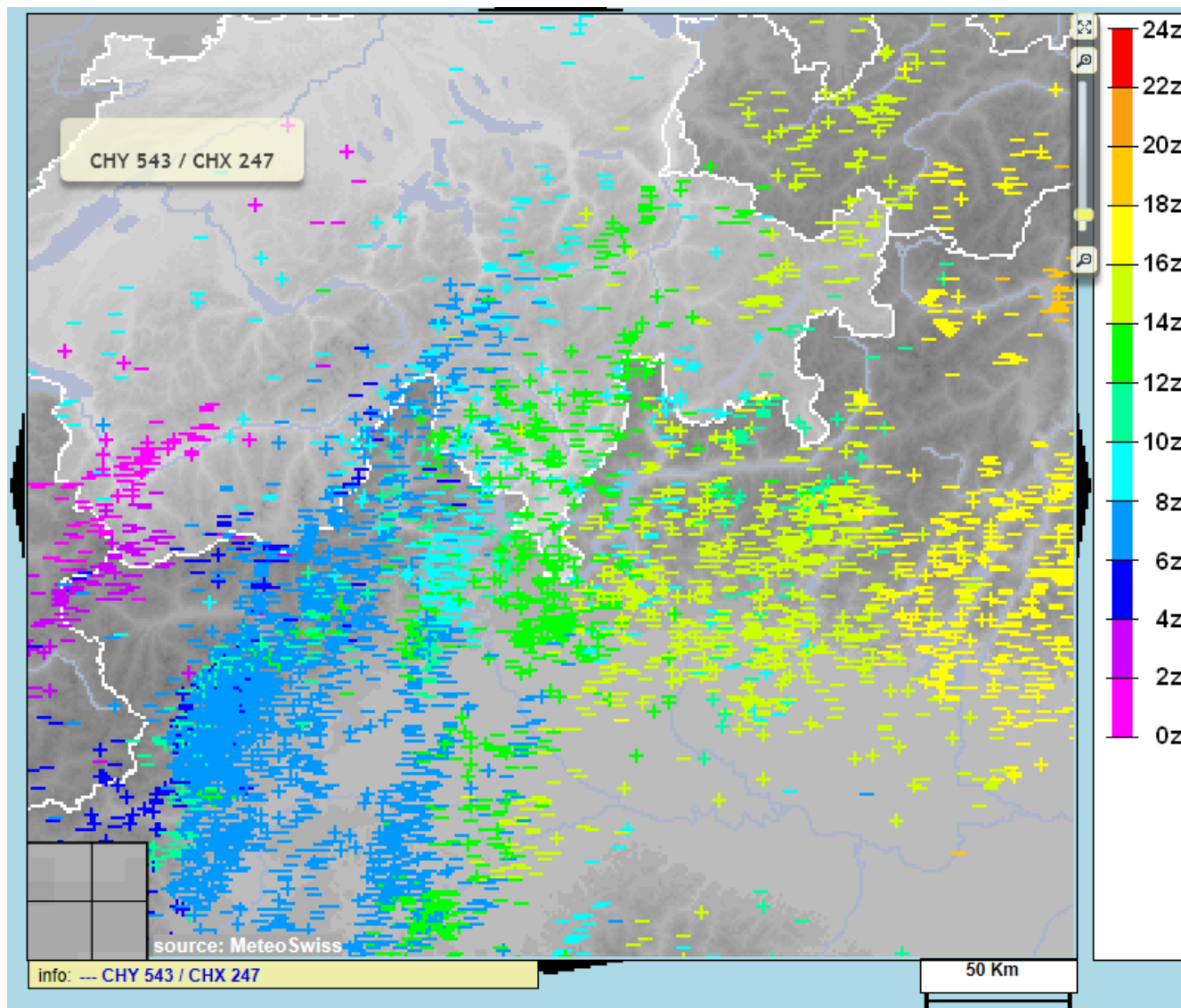


## 29.7: dimensione della grandine





## 29.7: fulminazioni





# Domande (Mauro)

le giornate di martedì 11 e mercoledì 12 giugno sono state delle bellissime giornate limpide. Fresche durante la notte e di primo mattino poi calde con una temperatura davvero gradevole. A partire da giovedì 12 giugno ho osservato un aumento della foschia.

Mi pare che questo aumento della foschia sia tipico degli anticicloni. E' dovuto alle brezze che soffiano dalla Pianura Padana?

Quale parametro utilizzate per valutare l'aumento della foschia? L'umidità relativa a 2 m? O a quote superiori?

Sulla Pianura Padana ristagna quasi sempre aria umida: a cosa è dovuto questo? Anche le pianure del nord delle Alpi e dell'Europa in genere sono caratterizzate da questa umidità o è tipica solo della Pianura Padana?

Nel secondo articolo indicate l'arrivo di una massa d'aria molto calda dal nordafrica.

Volevo chiederti innanzitutto quale parametro usate per stabilire la posizione delle masse d'aria. La temperatura a 850 hpa? Oppure la temperatura potenziale equivalente?

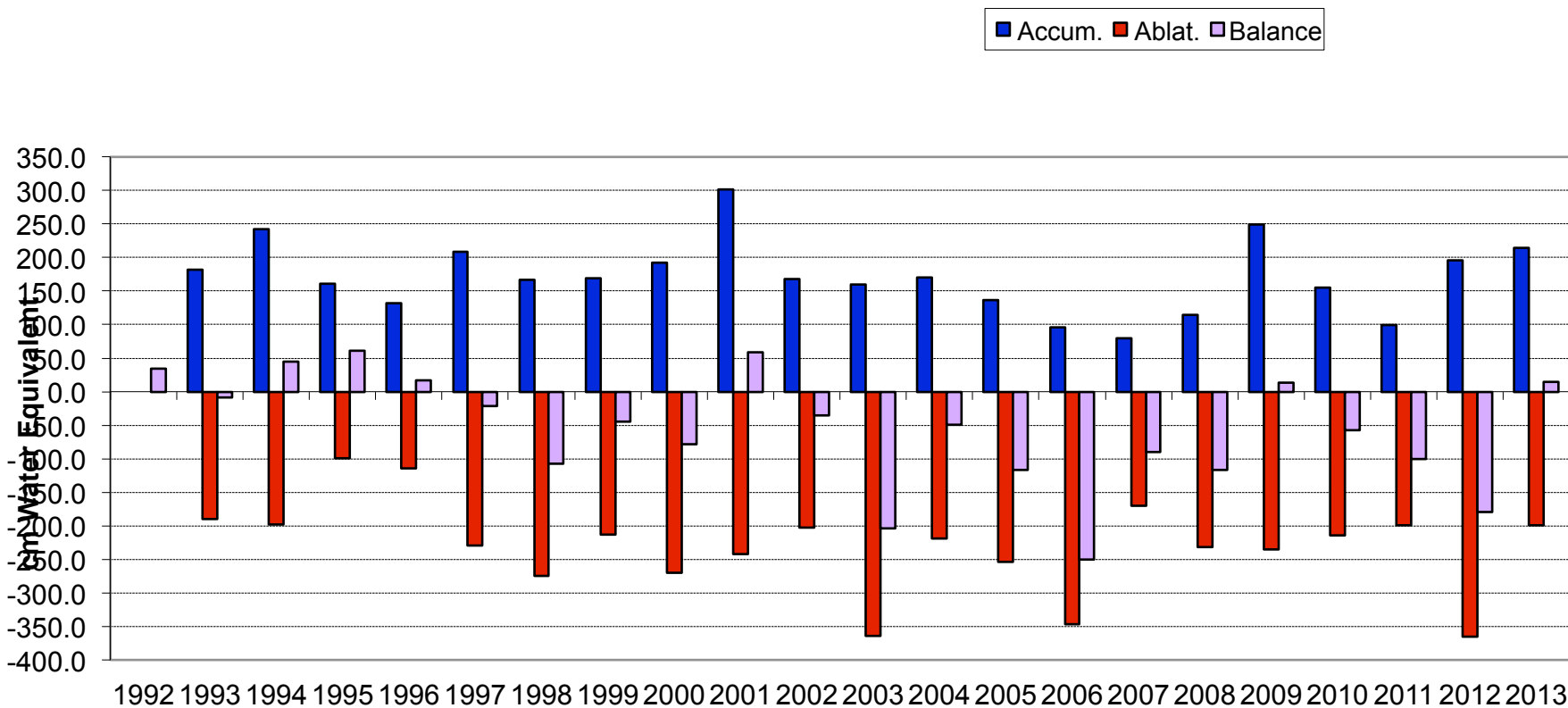
In Italia si sente spesso parlare (tra mille eccessi) di anticicloni nordafricani. Mi pare che voi non usiate questa espressione. E' l'equivalente del termine masse d'aria di origine subtropicale?

Infine ti volevo chiedere a cosa è dovuta l'afa dovuta all'umidificazione prevista nei prossimi giorni: è perchè la massa d'aria attraversa il mare o la Pianura Padana? Oppure perchè già la massa d'aria è già in parte umida?

Infine una domanda sull'umidità: talvolta parlando con la gente si sente dire che in Pianura d'estate è umido anche quando non fa molto caldo. E' sensata questa osservazione oppure fa parte un po' degli standard delle lamentele?



## Ghiacciaio Basodino - Mass balance



### Basodino 2012 - 2013

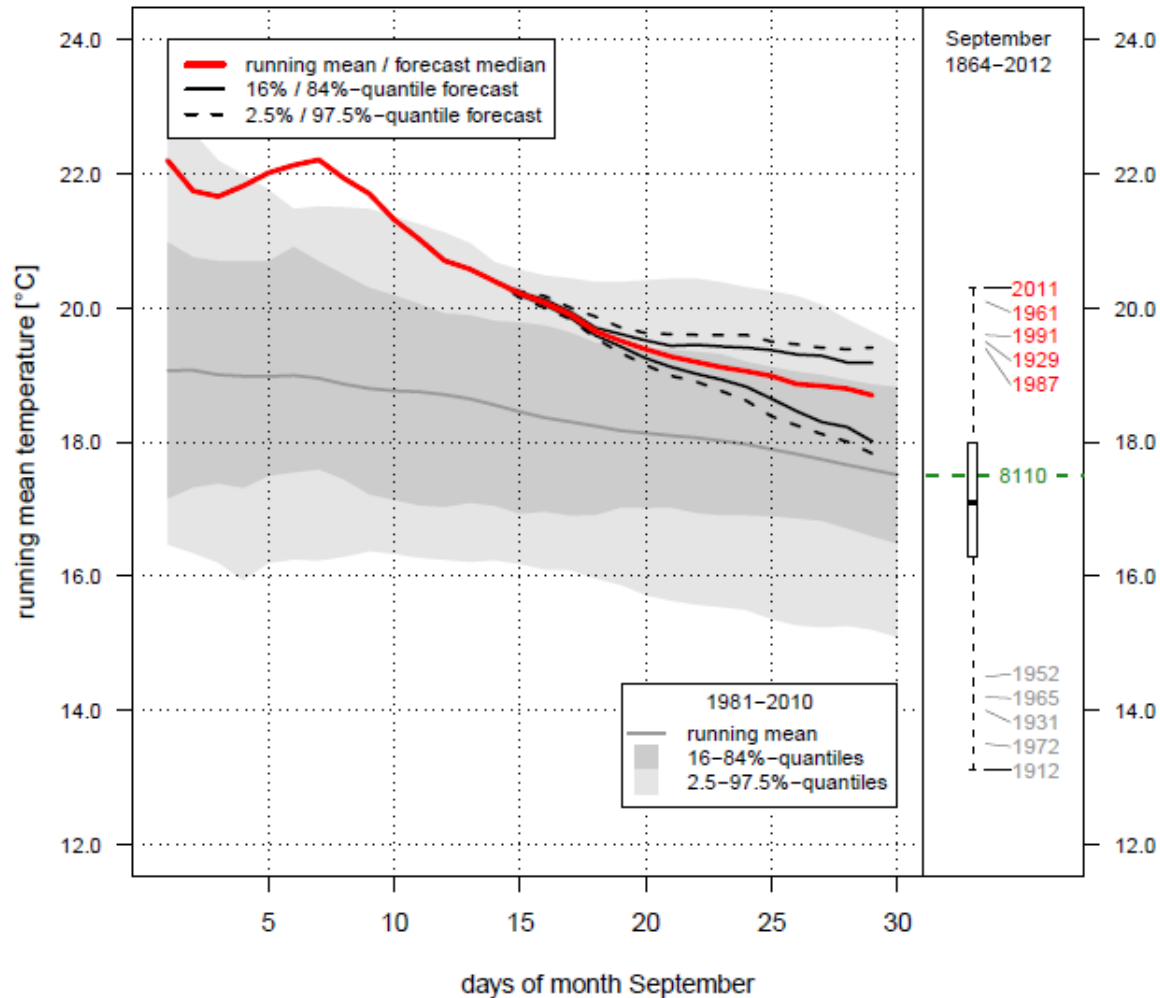
L'inverno è stato normale, ma molto nevoso in maggio e inizio giugno. Ciò ha fatto sì che l'estate, seppur calda, ma tardiva, non ha portato a delle perdite nette. Infatti l'accumulo totale è stato lievemente positivo, grazie appunto alla copertura bianca che ha riflesso gran parte della radiazione durante buona parte dell'estate. Gka 15.09.2013



# Settembre 2013

## Monthly Mean Temperature Outlook

Lugano: September 2013





# Autunno 2013

