

METEOCLIMATIC REPORT AND ACTIVITIES ANNEXED TO THE RURITAGE PROJECT

FEBRUARY 2021

FEBRUARY showed VERY SPRING thermal features throughout the month, if we exclude a short and intense cold wave in its central phase ; the weather was often sunny and there was a marked deficit of rainfall, concentrated in just 4 days and overall very poor.

The NAO signal remained negative in the first decade of the month and then gradually became more and more positive. (fig.1)

Contrary to what was recorded in the first two months of the winter season, temperatures remained significantly above - by almost two degrees - the thirty-year seasonal averages - while they almost coincided with those of the last fifteen years; already in the first week of the month - climatologically the third coldest of the meteorological year - the maximum values of 20 ° C were spent. The days of frost were rare and concentrated in the short cold phase of mid-month, with an ice day (with $t_{max} < 0^{\circ} C$) at the highest altitudes of the municipal area recorded on day 13

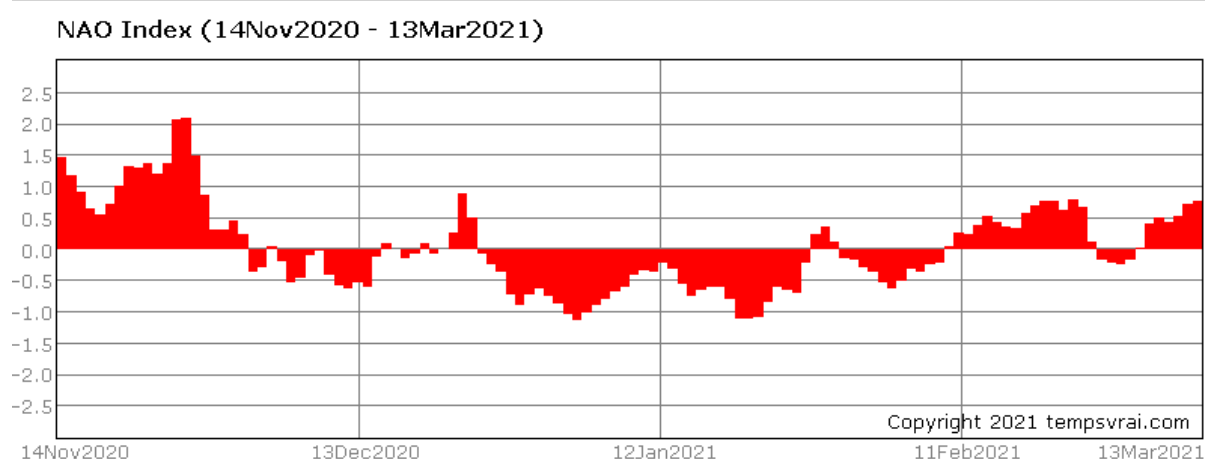


Figure 1 – standardized monthly NAO signal

With regard to the meteoric situation, the monthly cumulative has just exceeded 25 mm between solid and liquid precipitations, compared to only 3 rainy days and 2 snowy days - one

of which with accumulation over the cm. The frequent presence of the Azores anticyclone, a harbinger of westerly or libeccio currents, has determined the thermo-pluviometric conditions just highlighted; the only disturbed phase, concentrated between 11 and 14 (fig. 3), is derived from an advection of intermediate arctic air (figs. 3 and 4).

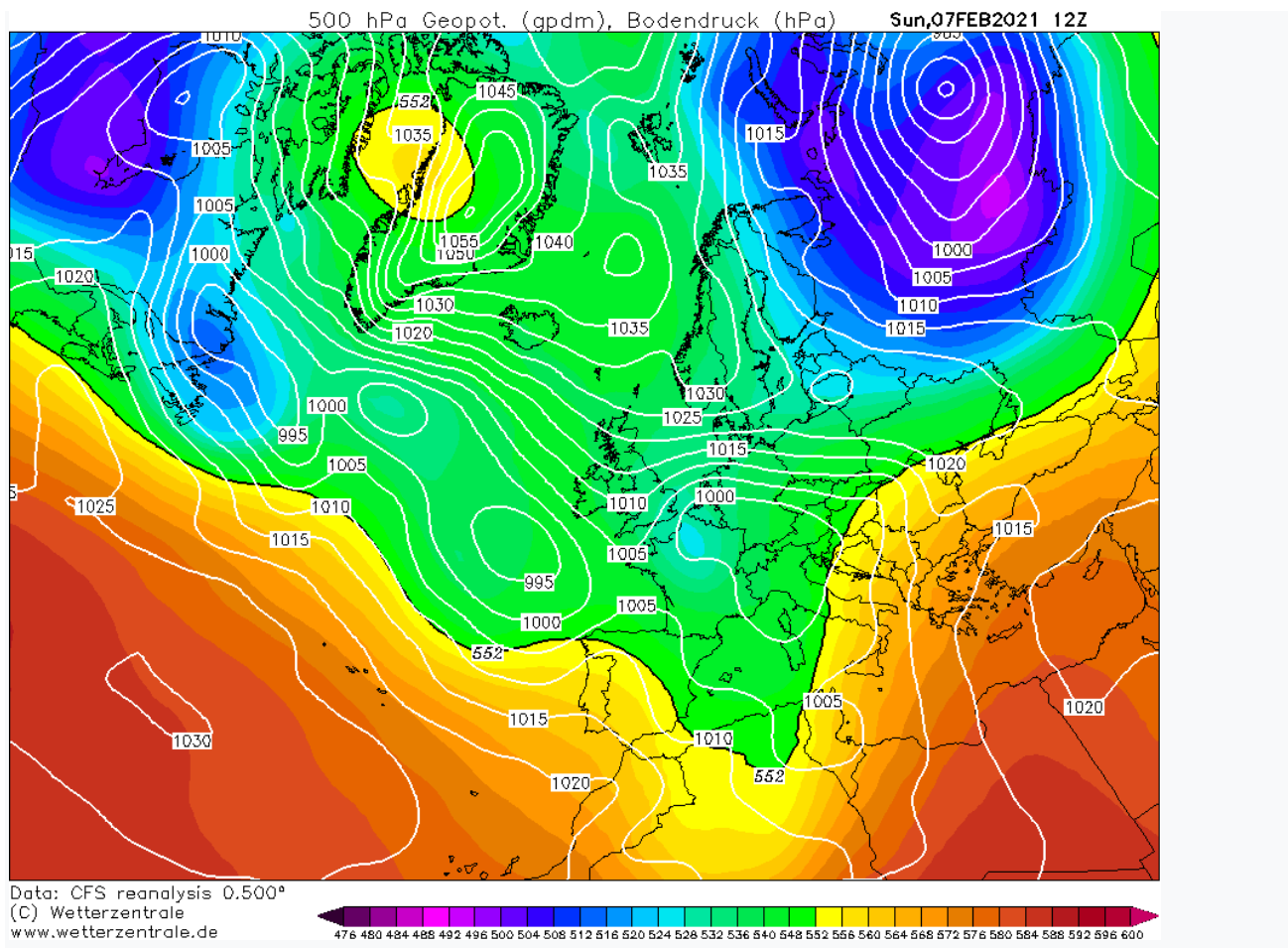


Figure 2 - ground map and geopotential 500 hPa, relative at 12PM of February 7th

The persistence of a high dynamic pressure of subtropical matrix did not favor nocturnal irradiation, even in the presence of frequent serenity of the sky so that, at least in the valley floor, the number of frosty nights was limited to five, consecutive between 13 and 17.

The short cold phase is derived from the advection of intermediate Arctic air which took place between 12 and 15 and caused by the expansion of the subtropical anticyclone up to the Svalbard Islands, with consequent descent of extremely cold currents (temperatures down to -12°C in free atmosphere at an altitude of about 1300 m.) and annexed core of unstable air in retrograde descent from northern Russia (figs. 3 and 4). However, the minimum temperatures reached were not noteworthy, never below -4°C .

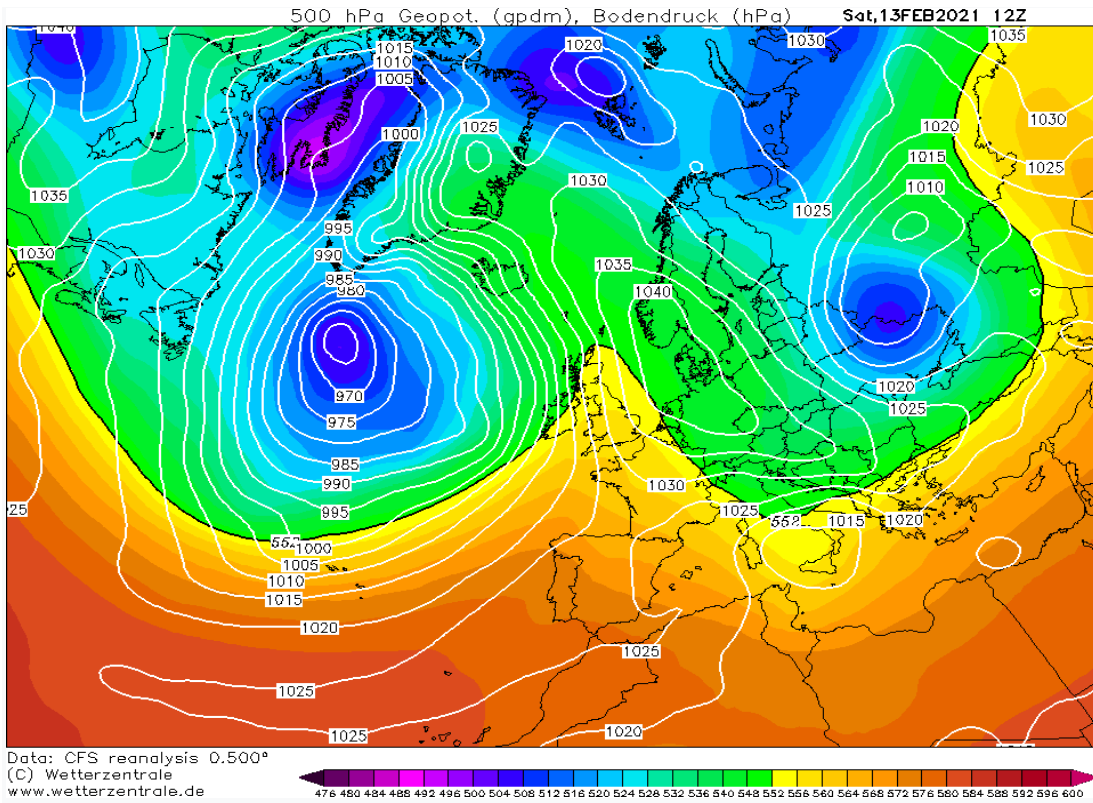


Figure 3- ground map and geopotential 500 hPa, related to 12 pm on february 13th

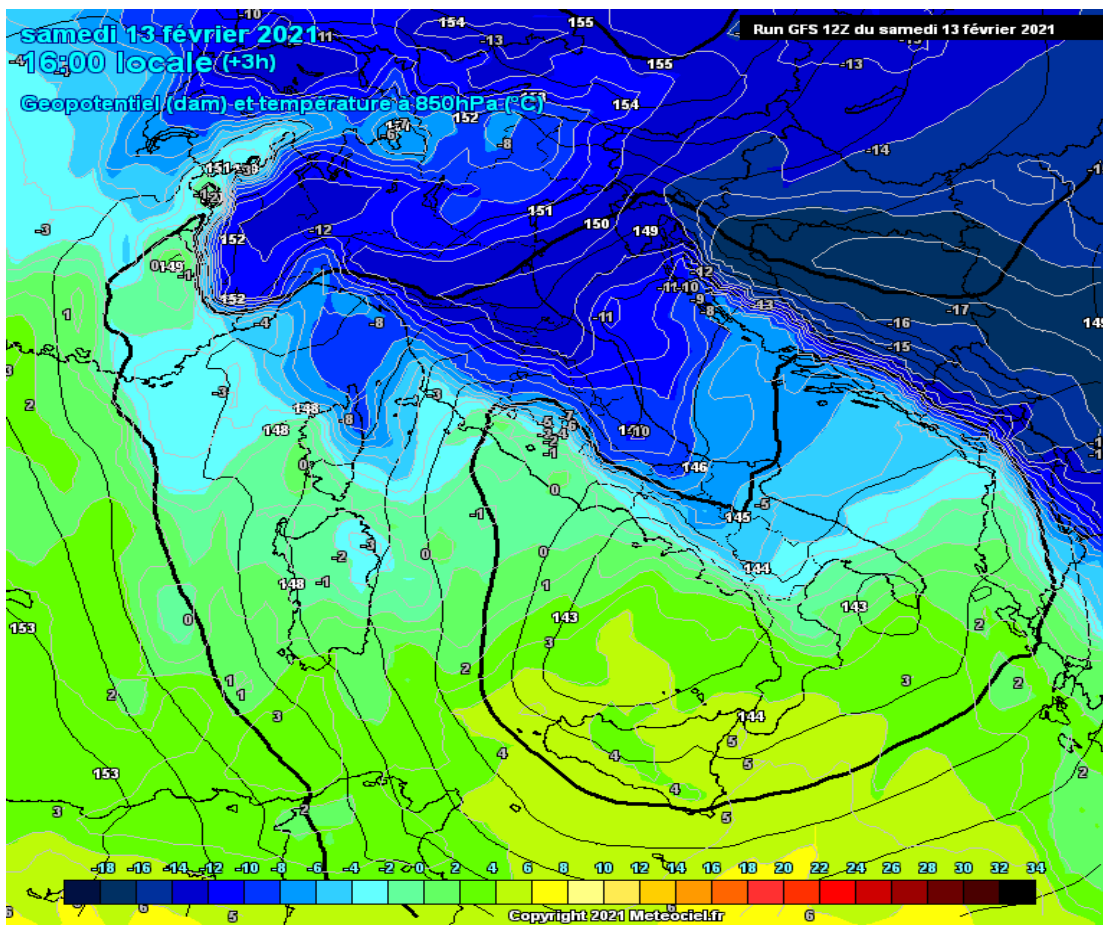


Figure 4 – temperature in FA at about 1300 m. in the afternoon of 13 February

From the analysis of the complete thermometric data (table 1), it can be observed that the average monthly temperature was approximately 9.3 ° C, the average minimum and maximum respectively of 3.8 ° C and 14.8 ° C; consequently the average daily temperature range was found to be about 11 ° C higher than the climatic average with the climatic average - about 9.5 ° C.

Compared to the monthly climatological average calculated for the meteorological station of Ascoli Piceno and relating to the period 1981-2015 - of about 7.7 ° C, - there is a marked positive difference of about 1.6 ° C, greater in the maximum values (1.8 ° C) compared to the minimum ones (1.4). If we consider the monthly average data of the last fifteen years and related to the station under analysis, instead, we observe a perfect identity in the average values.

With regard to rainfall, the monthly cumulative, as previously highlighted, reached 25 mm distributed over 3 days with cumulative liquid or equivalent from the solid > 1mm. Considering a monthly climatic average referred to the Ascoli Piceno weather station is about 65 mm, the monthly cumulative recorded shows a deficit in the cumulative of 220%. The wettest day, however, recorded a cumulative of less than 12 and the snowfalls occurred on days 13 and 14 reached a cumulative in the city center of about 8 cm.

Figure 5 and Table 1 show the thermo-pluviometric graph and the daily climatic data with the respective monthly averages.

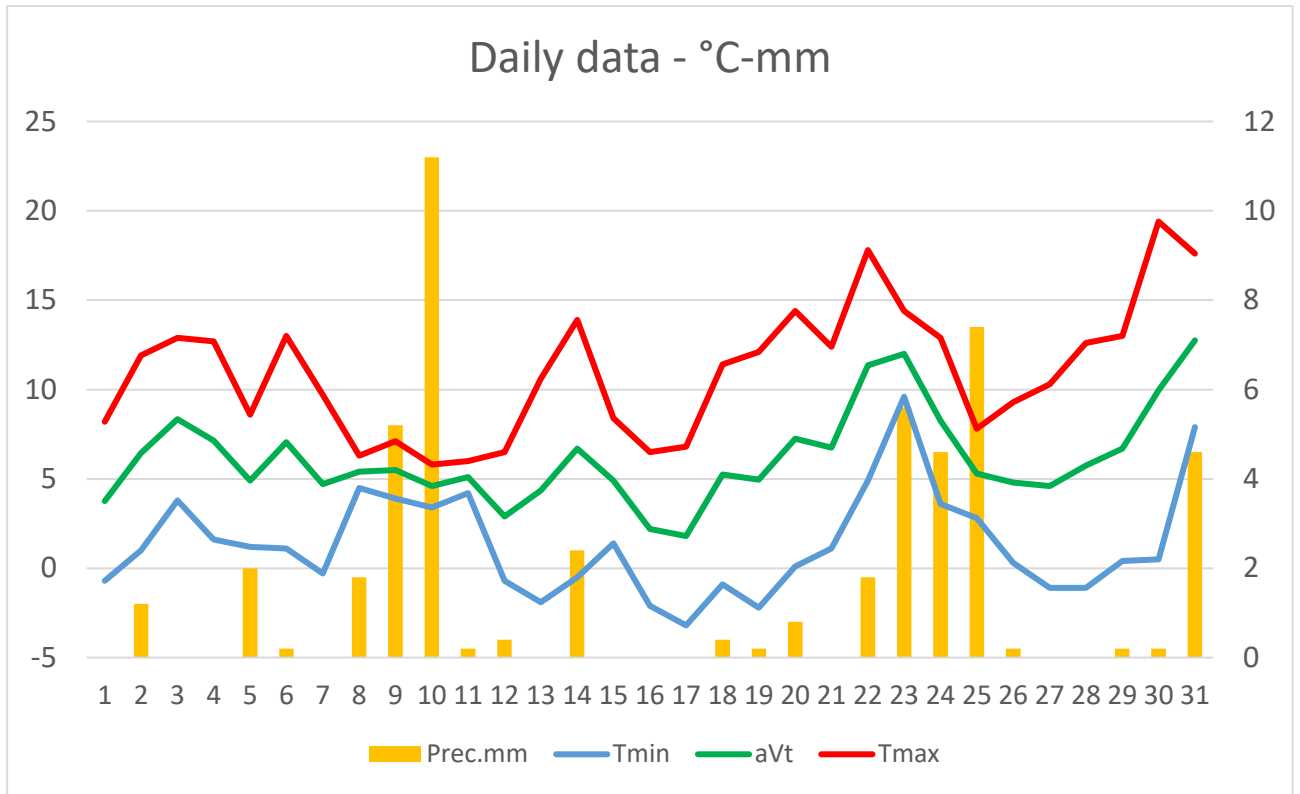


Figure 4 - meteorological daily data

Y	M	D	Tmin	avt	Tmax	Prec.mm	RD	SD	ID	
2021		1	1	-0,7	3,8	8,2	0		*	
2021		1	2	1	6,5	11,9	1,2 *			
2021		1	3	3,8	8,4	12,9	0			
2021		1	4	1,6	7,2	12,7	0			
2021		1	5	1,2	4,9	8,6	2			
2021		1	6	1,1	7,1	13	0,2			
2021		1	7	-0,3	4,7	9,7	0		*	
2021		1	8	4,5	5,4	6,3	1,8 *			
2021		1	9	3,9	5,5	7,1	5,2 *			
2021		1	10	3,4	4,6	5,8	11,2 *			
2021		1	11	4,2	5,1	6	0,2			
2021		1	12	-0,7	2,9	6,5	0,4		*	
2021		1	13	-1,9	4,4	10,6	0		*	
2021		1	14	-0,5	6,7	13,9	2,4 *		*	
2021		1	15	1,4	4,9	8,4	0			
2021		1	16	-2,1	2,2	6,5	0		*	
2021		1	17	-3,2	1,8	6,8	0		*	
2021		1	18	-0,9	5,3	11,4	0,4		*	
2021		1	19	-2,2	5,0	12,1	0,2		*	
2021		1	20	0,1	7,3	14,4	0,8		*	
2021		1	21	1,1	6,8	12,4	0			
2021		1	22	4,9	11,4	17,8	1,8 *			
2021		1	23	9,6	12,0	14,4	5,6 *			
2021		1	24	3,6	8,3	12,9	4,6 *			
2021		1	25	2,8	5,3	7,8	7,4 *			
2021		1	26	0,3	4,8	9,3	0,2			
2021		1	27	-1,1	4,6	10,3	0		*	
2021		1	28	-1,1	5,8	12,6	0		*	
2021		1	29	0,4	6,7	13	0,2			
2021		1	30	0,5	10,0	19,4	0,2			
2021		1	31	7,9	12,8	17,6	4,6 *			
AVER				1,4	6,2	11,0	50,6	10	0	12
aver 81-15				2,1	6,4	10,7	84			7,3
aver 03-19					7,6					

Table 1 – daily summary of available meteorological data. LEGEND: Tmin: minimum temperature; avt: average temperature; Tmax: maximum temperature; prec. mm: daily precipitation; monthly sum of total precipitation; RD: days with precipitation > 1mm, SD : days with snow; ID: days of frost (Tmin < 0°C).