

METEOROLOGICAL REPORT AND ACTIVITIES ATTACHED TO THE RURITAGE PROJECT

October 2020

As happened in the past year, October has not shown any typical character of an autumn month - in which, according to the meteoric regime of the area occurs the maximum absolute meteoric - proving to be decidedly dry. Vice-versa, temperatures have remained well below - about two degrees - of the thirty-year seasonal averages and the last fifteen years

With regard to the pluviometric situation, it is necessary to underline that the monthly cumulate has just exceeded the 33 mm distributed in only five days with rain. Only on three occasions, the diurnal cumulate meteors have exceeded the 5 mm in days 7, 15 and 24 - tab. 1 and fig 4) while numerous they have been the derisory contributions - 0,2 mm deriving from the presence of thick hazes or of banks of mist on the pluviometer.

The persistent lack of significant precipitation was due to the lack of Mediterranean cyclogenesis or frontal passages of Atlantic or continental matrix on the Italian peninsula's Middle Adriatic sector (fig.1). All this in a picture of NAO altogether negative and therefore favorable to phases of disturbed time (fig.1)

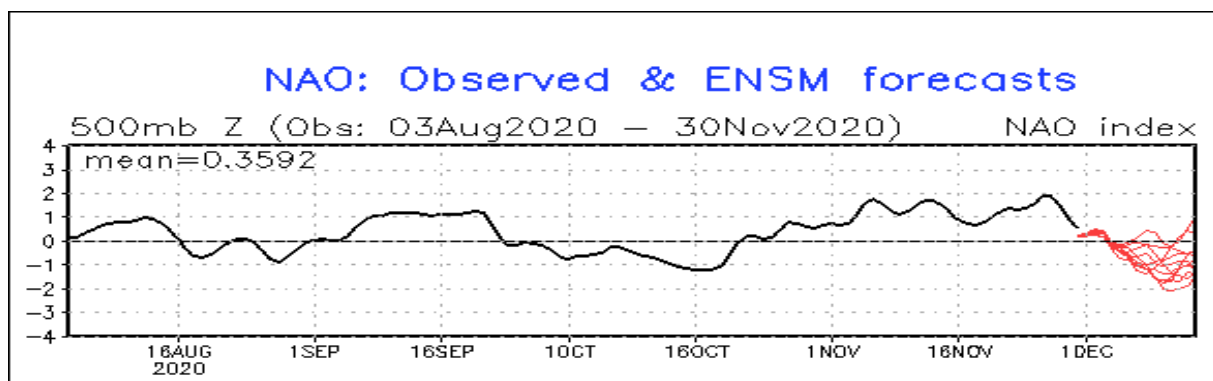


Figure 1 -NAO normalized signal for October 2020

The frequent cloudiness of the sky, determined by the presence of the semi-anticyclonic structure - permanent dynamic type - has, however, caused strong nocturnal irradiation with consequent minimum temperatures of about 2,5 ° C below the averages of the period and moderate thermal inversions in the bottom on the valley

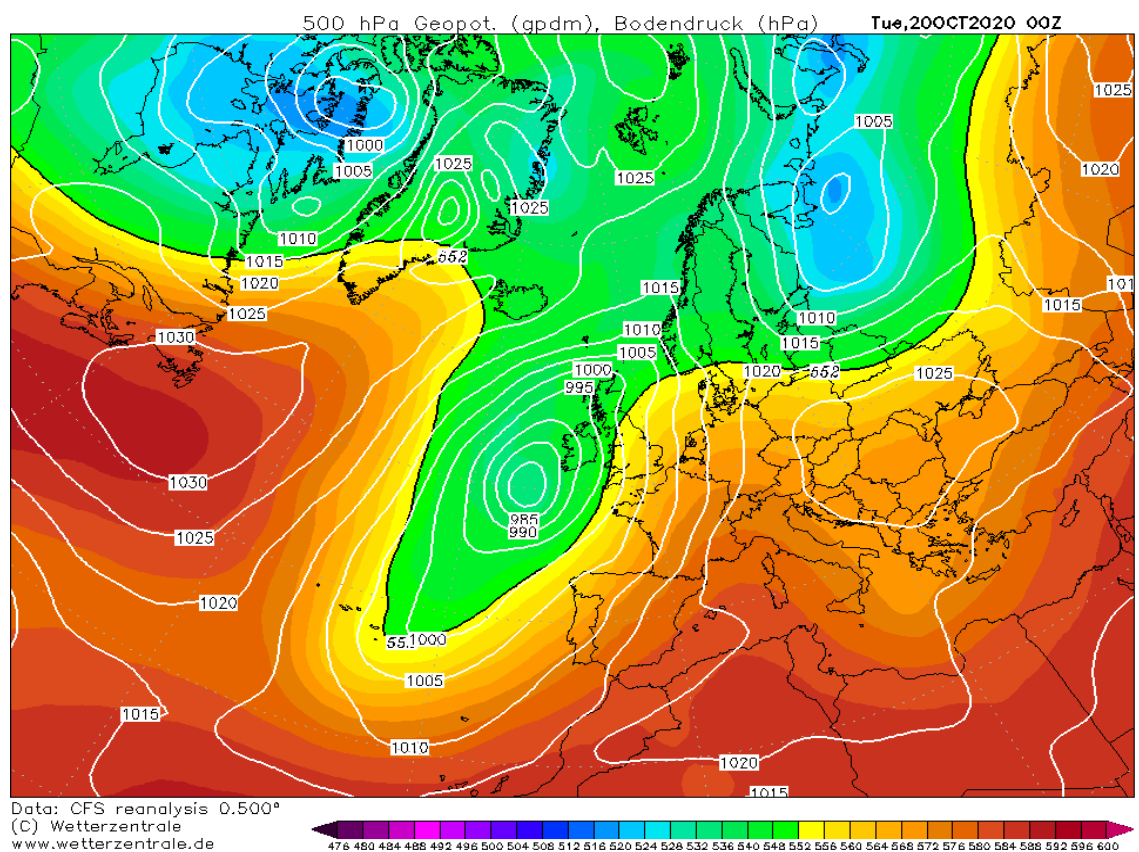


Figure 2 - ground map and geopotential 500 hpa, related to 00Z of October 20th

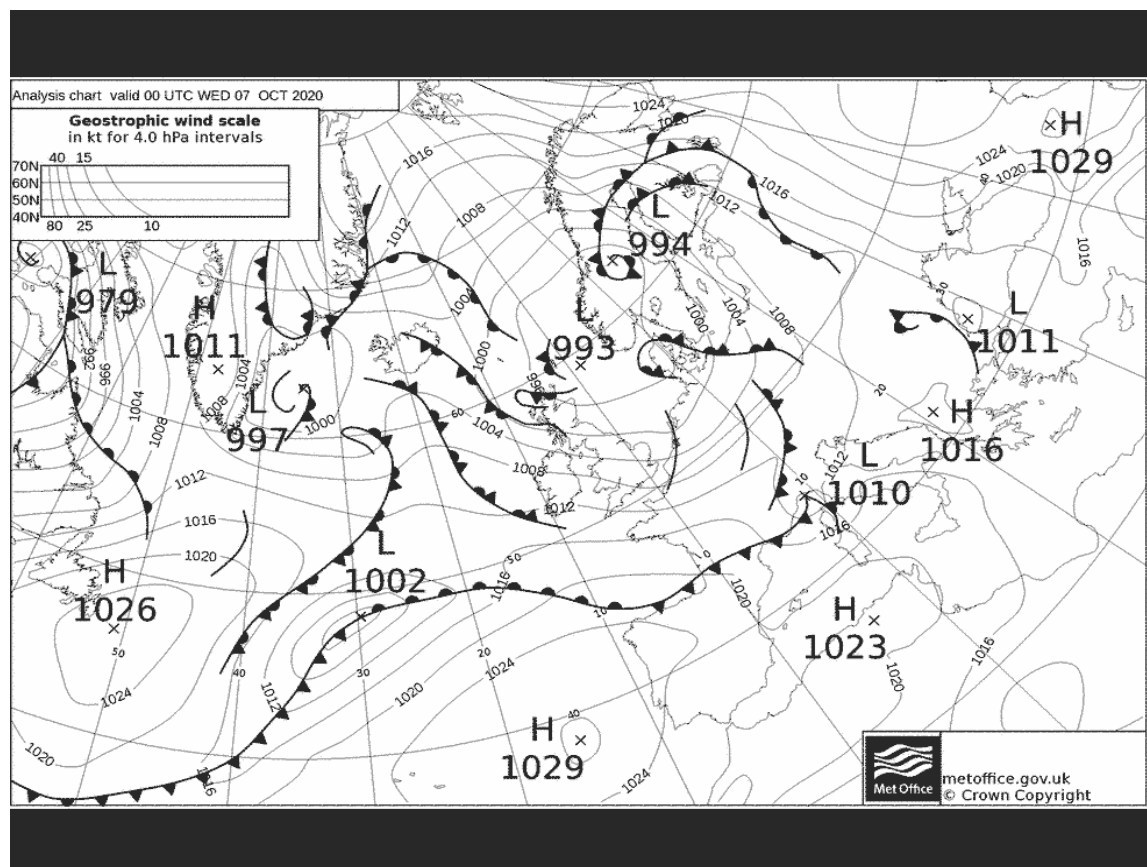


Figure 3- Map on the ground with fronts, relative to 00 Z on October 7th

The only front worthy of note has journeyed on our region in the day of the 7 when a low-pressure formed on the Gulf of Genoa has temporarily interested with its cold sector our zone bringing you moderate rains (fig.2).

From the analysis of the thermometric data, complete (Table 1), it can be observed that the average monthly temperature was about 14.8 °C, the average minimum and maximum respectively of 8,8°C. The average daily temperature range was therefore about 12° C compared to an average of about 11° C. The absolute minimum temperature was 4,7°C on day 10, while the absolute maximum was recorded on day 3 with 27,3°C C.

Compared to the monthly climatological mean calculated for the meteorological station of Ascoli Piceno and relative to the period 1981-2015 - of approximately 16,7 °C, - there is an evident negative difference of approximately 1.9°C, greater for the minimum values, 2,5° C against the maximum ones - about 1.3° C. If the average monthly data for the last 15 years and for the station under analysis are taken into account, an average value of about 1,6°C is observed.

With regard to precipitation, the monthly sum has, as previously highlighted, reached 33 mm distributed over 5 days with daily cumulated > 1mm. They consider a monthly climate average for the meteorological station of Ascoli Piceno is about 135 mm, the monthly cumulative recorded is less than it, about 75%.

This repeated signal becomes more and more critical if we think that, at least in the area under study, the month of October is climatologically the second wettest month of the year and thanks to the frequent frontal passages, the aquifers have occasion to recharge to often evidence a water surplus, after a strong deficit existing for over two year.

Figure 4 and Table 1 show the thermo-pluviometric chart and the daily climate data with the respective monthly averages.

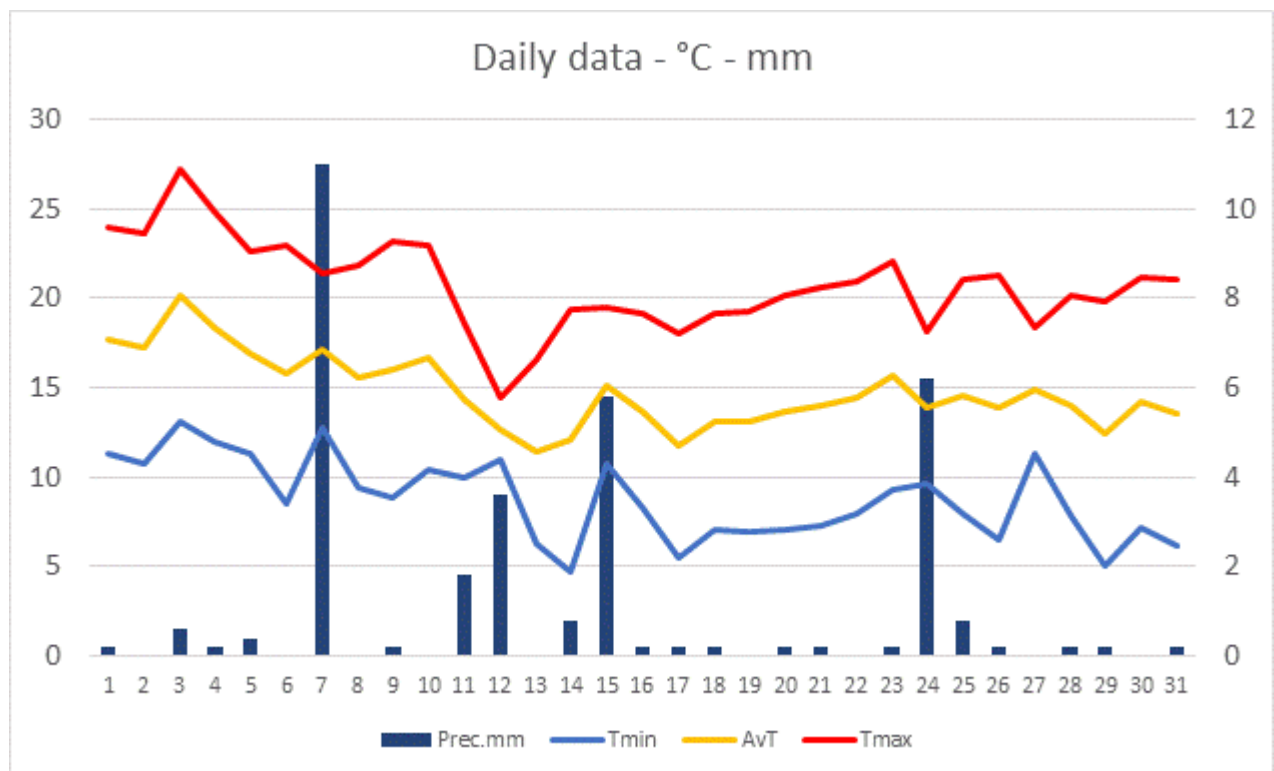


Figure 4 – daily pluvio-thermal data

Y	M	D	Tmin	AvT	Tmax	Prec.mm	RD	Ts	Id
2020	10	1	11,3	17,65	24	0,2			
2020	10	2	10,8	17,2	23,6	0			
2020	10	3	13,1	20,15	27,2	0,6			
2020	10	4	12	18,4	24,8	0,2			
2020	10	5	11,3	16,95	22,6	0,4			
2020	10	6	8,5	15,75	23	0			
2020	10	7	12,8	17,1	21,4	11	*		
2020	10	8	9,4	15,6	21,8	0			
2020	10	9	8,8	16	23,2	0,2			
2020	10	10	10,4	16,65	22,9	0			
2020	10	11	10	14,3	18,6	1,8	*		
2020	10	12	11	12,7	14,4	3,6	*		
2020	10	13	6,3	11,45	16,6	0			
2020	10	14	4,7	12,05	19,4	0,8			
2020	10	15	10,8	15,15	19,5	5,8	*		
2020	10	16	8,3	13,7	19,1	0,2			
2020	10	17	5,5	11,75	18	0,2			
2020	10	18	7,1	13,1	19,1	0,2			
2020	10	19	7	13,1	19,2	0			
2020	10	20	7,1	13,65	20,2	0,2			
2020	10	21	7,3	13,95	20,6	0,2			
2020	10	22	7,9	14,4	20,9	0			
2020	10	23	9,3	15,7	22,1	0,2			
2020	10	24	9,6	13,85	18,1	6,2	*		
2020	10	25	8	14,5	21	0,8			
2020	10	26	6,5	13,9	21,3	0,2			
2020	10	27	11,3	14,85	18,4	0			
2020	10	28	7,8	14	20,2	0,2			
2020	10	29	5	12,4	19,8	0,2			
2020	10	30	7,2	14,2	21,2	0			
2020	10	31	6,2	13,6	21	0,2			
AVER			8,8	14,8	20,7	33,6	5		
AVER 81-15			11,3	16,7	22	135	6,3		
AVER 03-19				16,4					

Tabella 1 – daily summary of available meteorological data. LEGEND: Tmin: minimum temperature; avt: average temperature; Tmax: maximum temperature; prec. mm: daily precipitation; monthly summation total precipitation; RD: days with precipitation > 1mm; TS: days with thunderstorm; id: days of frost (Tmin < 0°C)