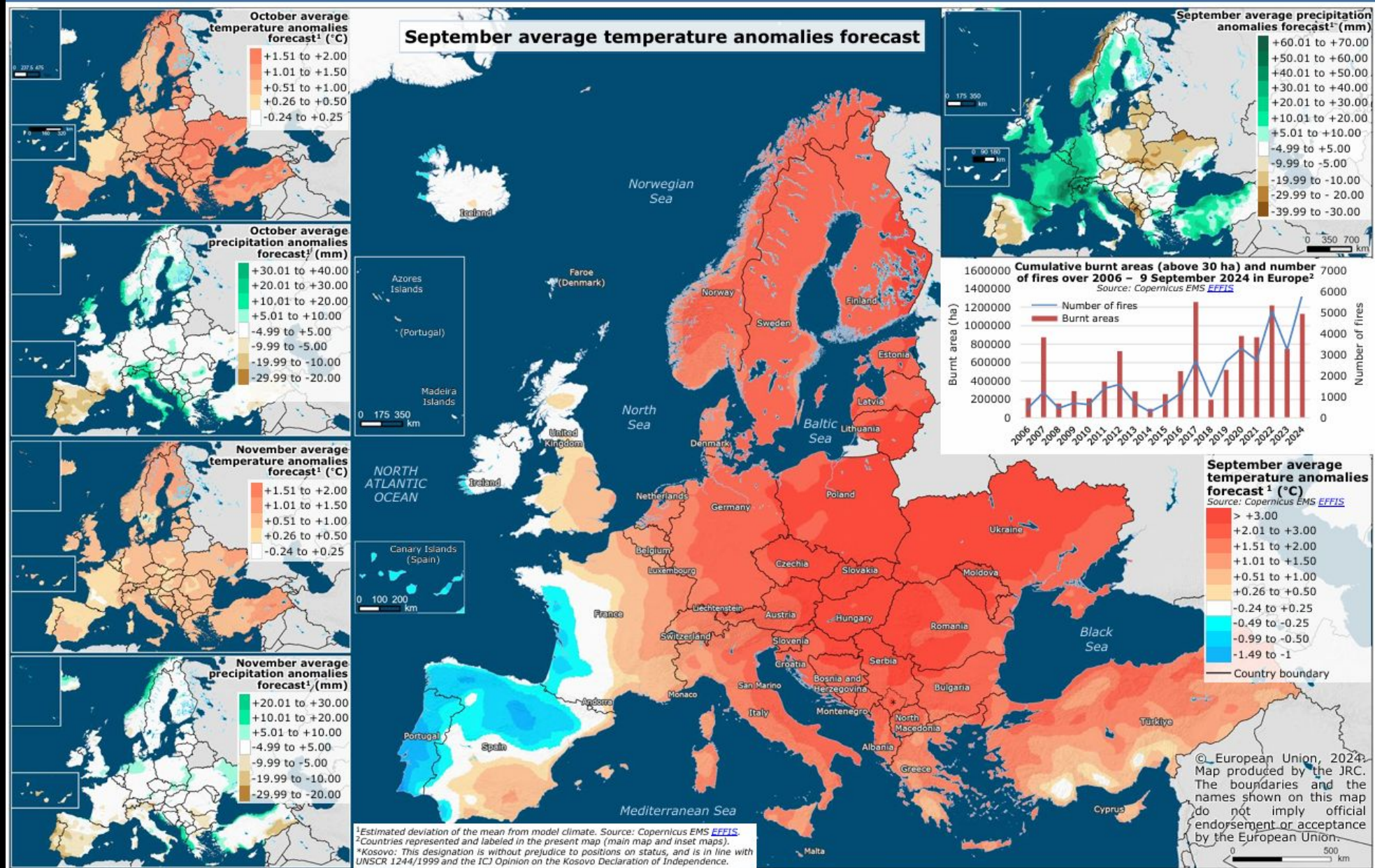
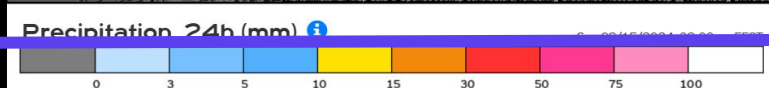
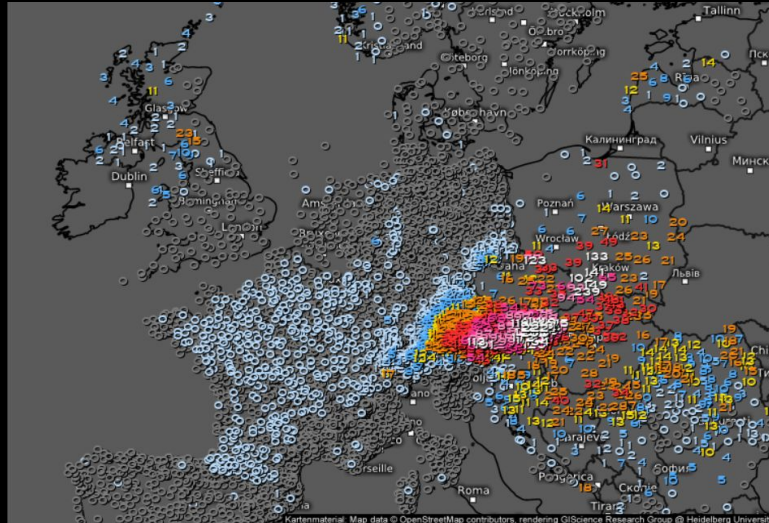
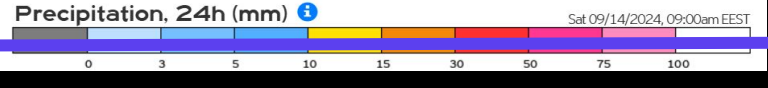
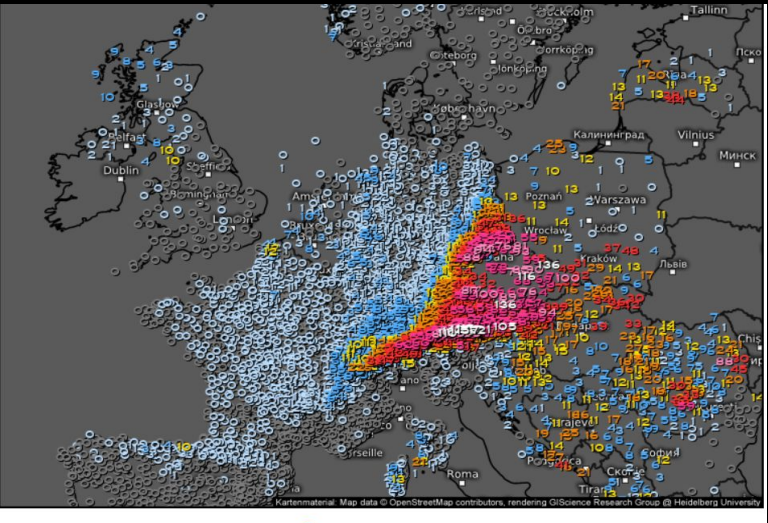
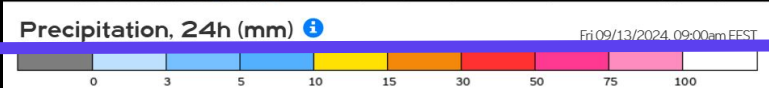
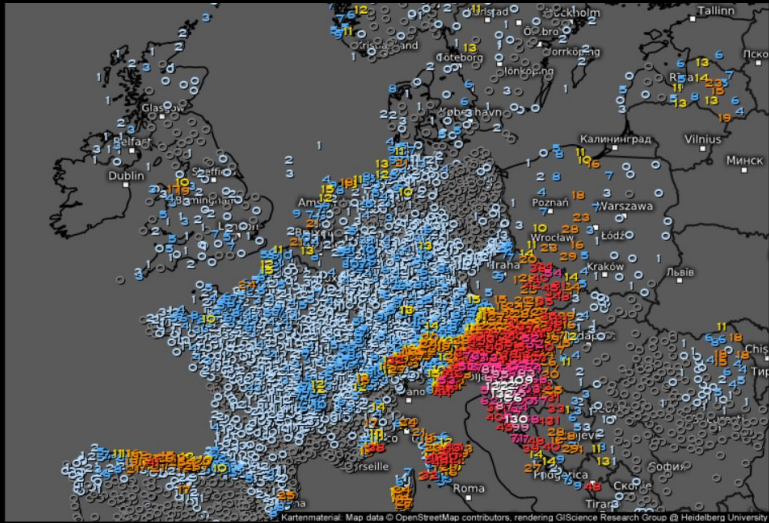


Abundant precipitation in the eastern Romania in September 2024

Andrei - Adrian Domocoș, Carleta Elena Pasat

National Meteorological Administration of Romania





Flooded Franciscan monastery complex in Kłodzko, Poland, 15 September



Rescue boat in Ostrava, Czech Republic



Flooding in Ostrava, capital of the Moravian-Silesian Region in Czechia, September 2024. Credit: Fire and Rescue Service, Moravian-Silesian Region.



Flooding in Lower Silesian Voivodeship, Poland, September 2024. Credit: State Fire Service, Poland (Państwowa Straż Pożarna)



Iron Bridge in Kłodzko, flood

POLITICĂ ACTUALITATE ECONOMIE EXTERNE SPORT TV MAGAZIN MAI MULTE

HOME > Știri > Actualitate > Evenimente > CJSU Galați a decis evacuarea oamenilor din zonele cu potențial de risc de inundații

VIDEO

CJSU Galați a decis evacuarea oamenilor din zonele cu potențial de risc de inundații

Data actualizării: 29.09.2024 14:07
Data publicării: 29.09.2024 14:06

SUA Galați a dislocat în teren unitate, staționate pe podurile cu risc, pentru a se putea interveni cât mai rapid posibil. Imagine cu caracter ilustrativ. Sursa foto: Inquam Photos / George Călin

Totale persoanele din județul Galați care locuiește pe albia râurilor și în zonele cu potențial de risc la inundații vor fi evacuate, potrivit deciziei luate duminică în cadrul Comitetului Județean pentru Situații de Urgență (CJSU).

Măsura a fost luată în contextul în care județul Galați se va afla, începând cu ora 20.00, sub avertizare hidrologică și meteorologică de Cod Portocaliu iar de la ora 00.00 și până luni, ora 9.00, sub avertizare Cod Roșu de ploi și inundații.

Summary

Climatologic description

Forecast models:

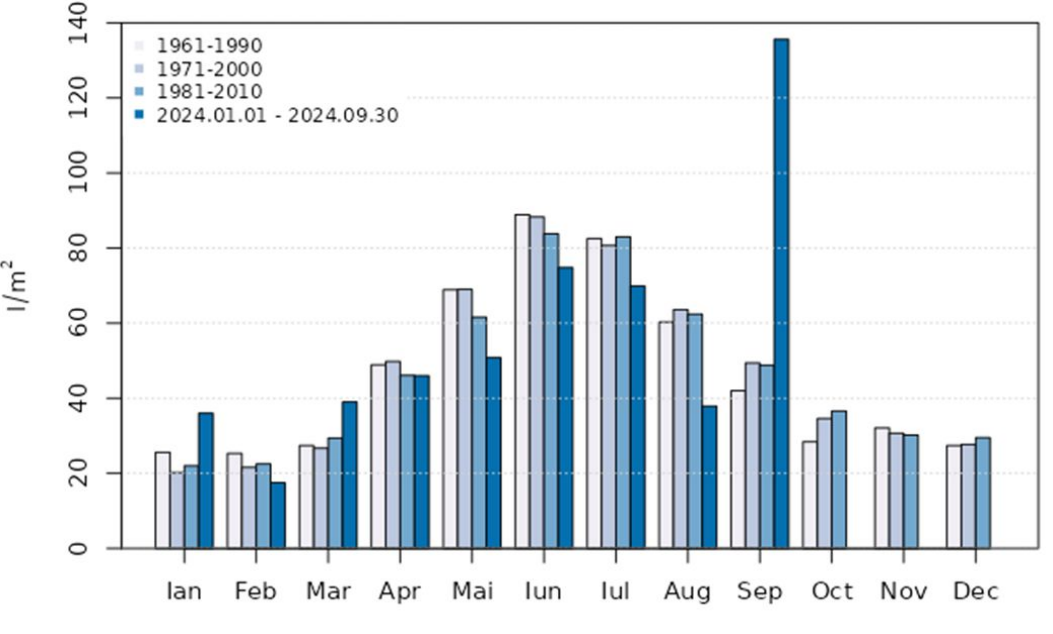
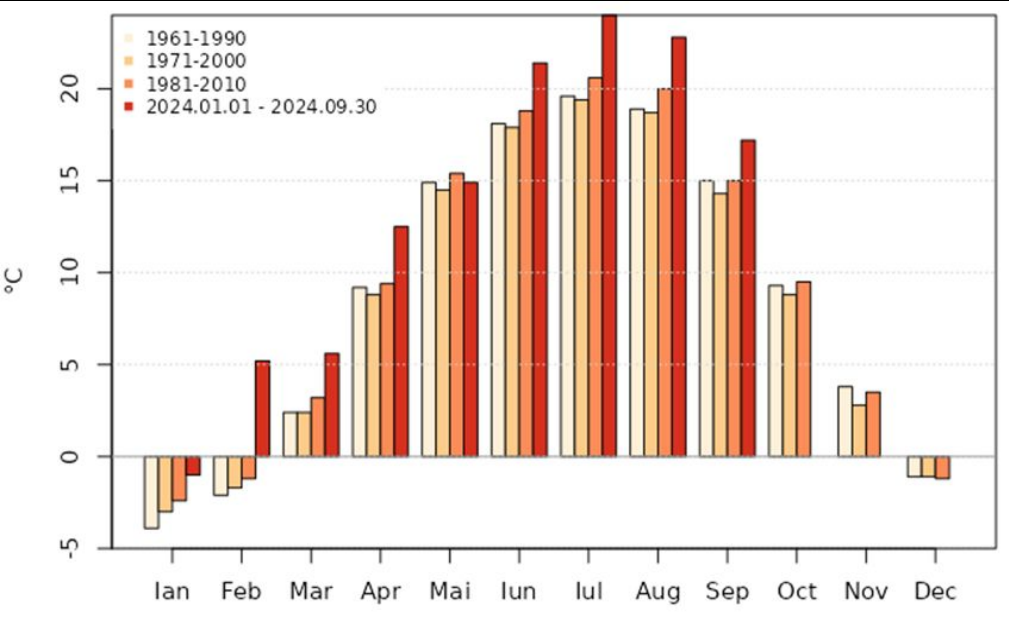
- instability fields, instability index, humidity/wind, estofex
- Precipitations
- ground level pressure maps and fronts

Satellite imagery

Radar Analysis

Conclusions

Climatology of September 2024

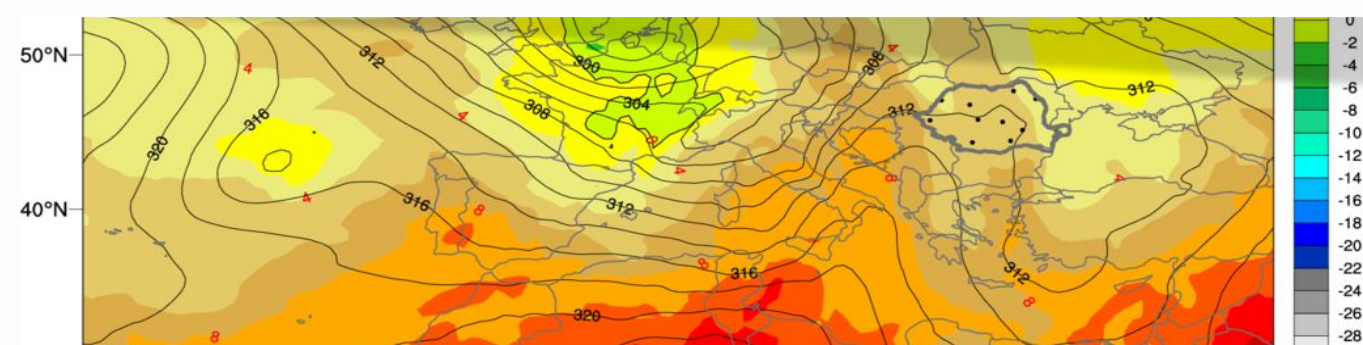
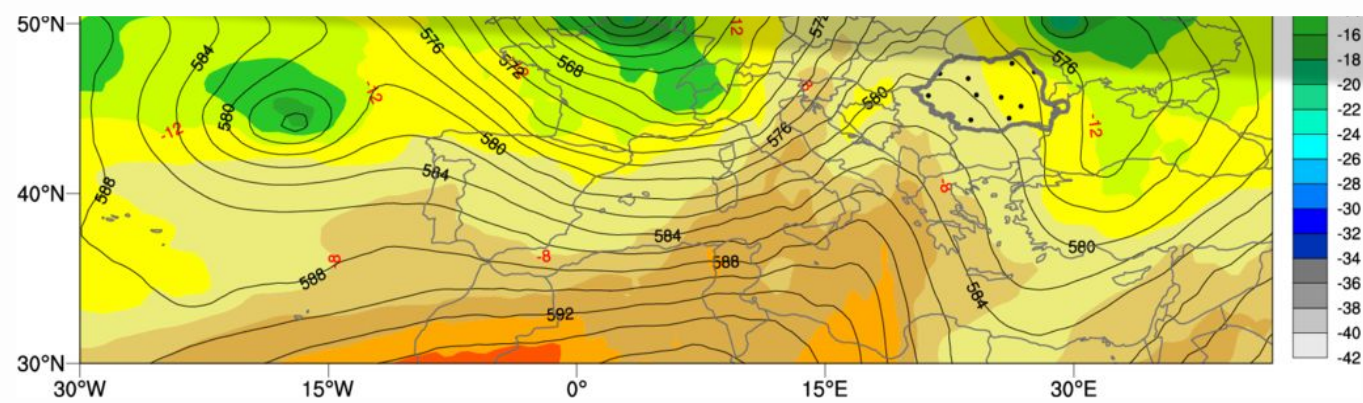
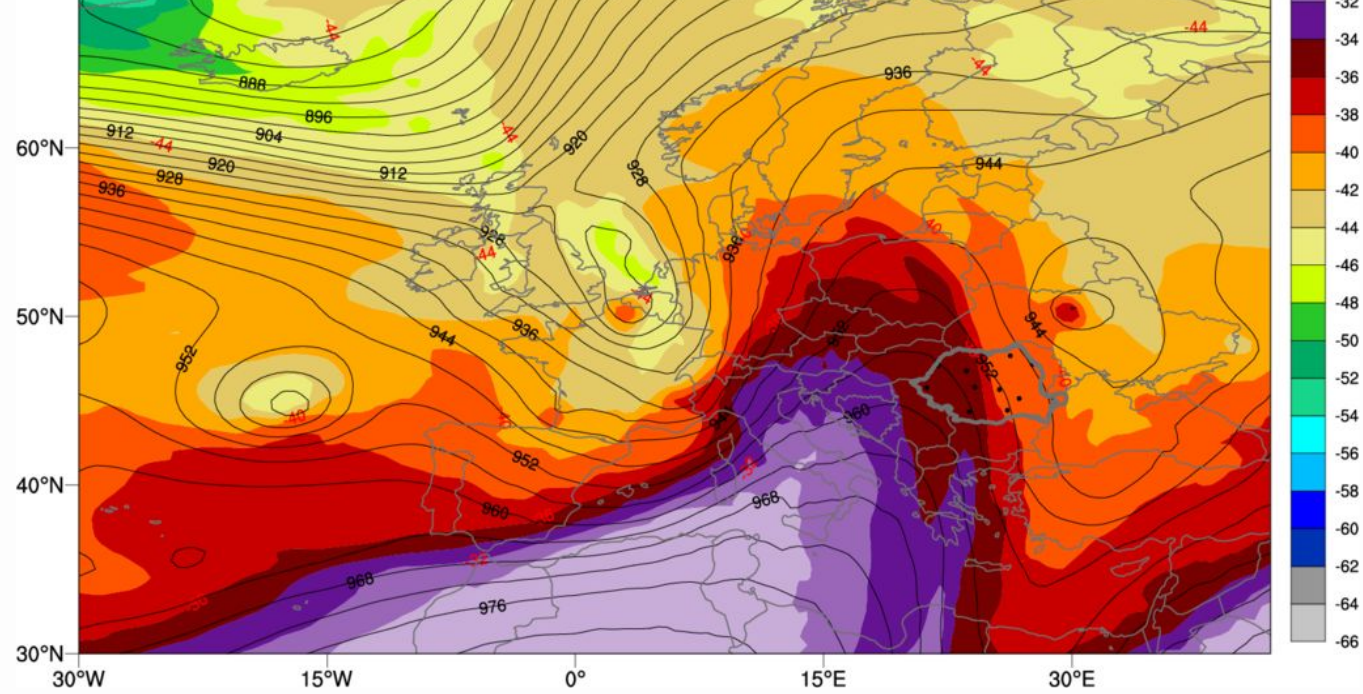


Average temperature September (°C)	
Normala (1961-1990)	15,0
Normala (1971-2000)	14,3
Normala (1981-2010)	15,0
2024/09/01 2024/09/30	17,2
Abatere (1961-1990)	2,2
Abatere (1971-2000)	2,9
Abatere (1981-2010)	2,2

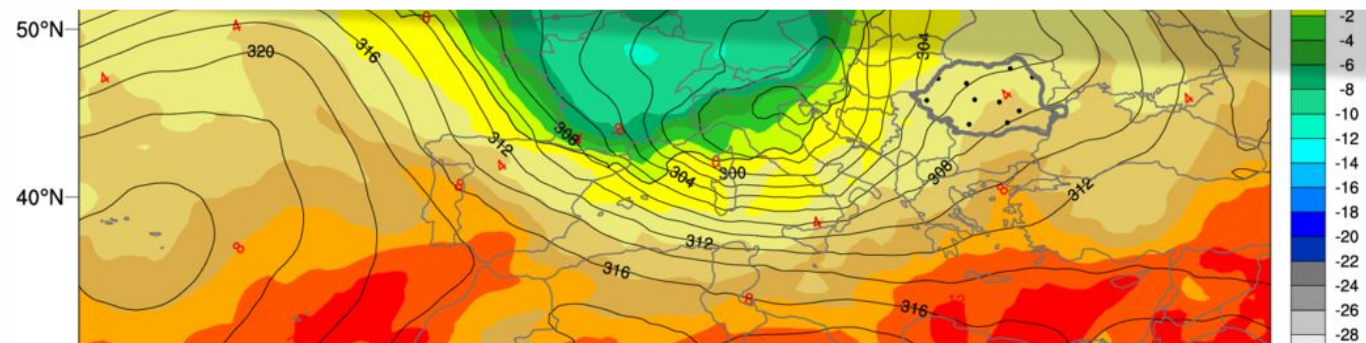
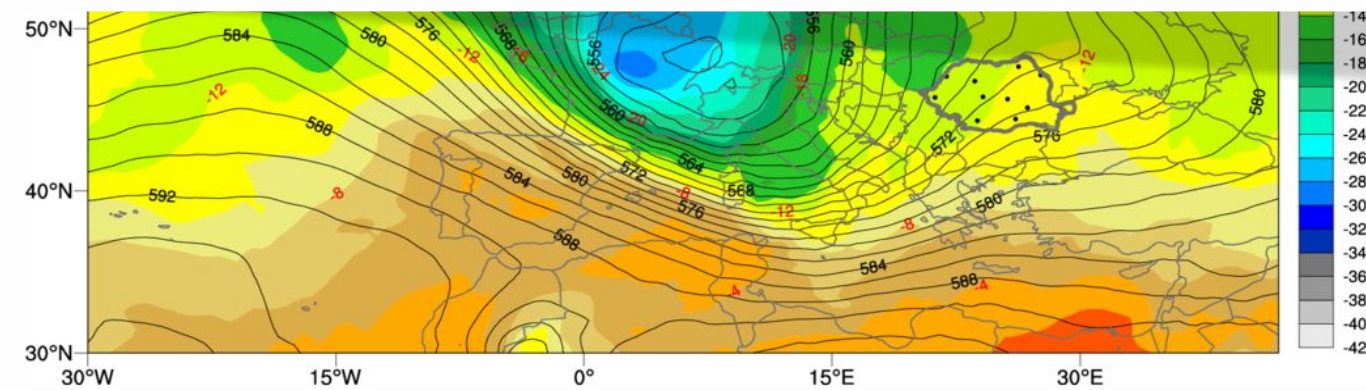
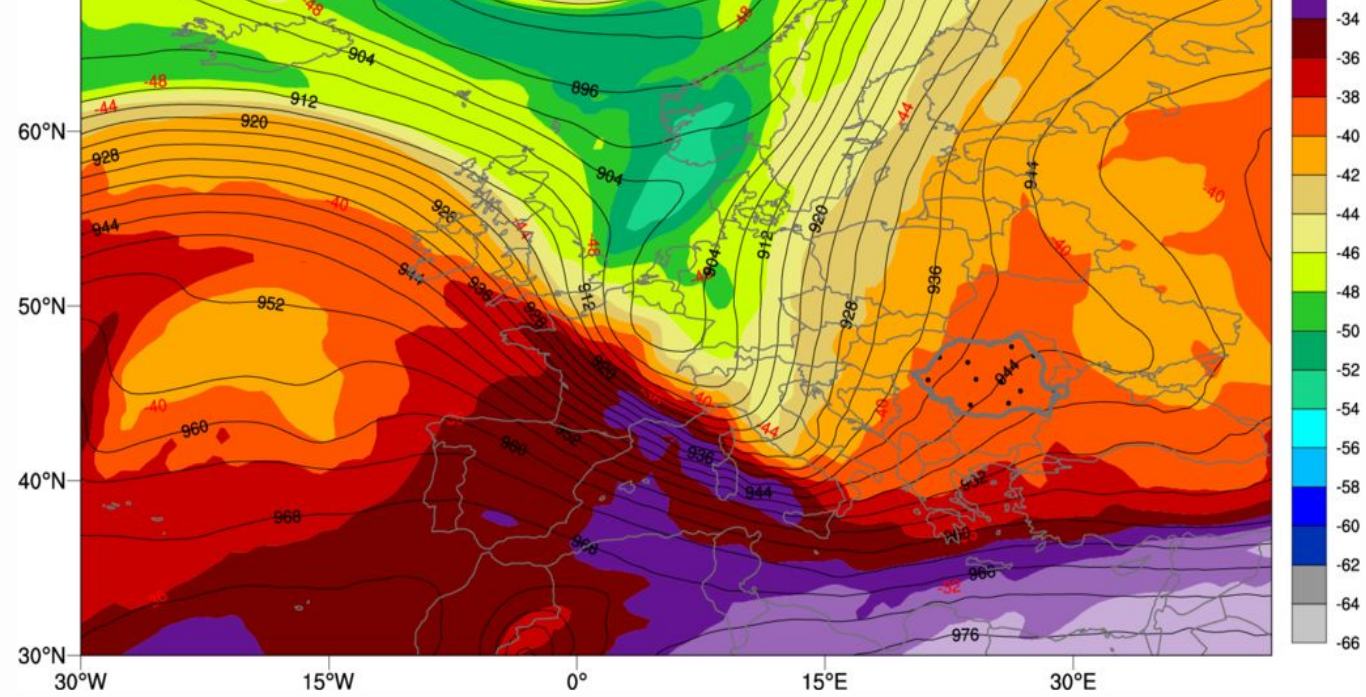
crt. no.	Meteorological station	Monthly precipitation (mm) record	Year of recording	Monthly precipitation (mm), September 2024
1	Bacău	207,9	1912	215,2
2	Bârlad	154,5	2007	160,9
3	Bârnova (radar)	85,3	2007	211,8
4	Cernavodă	120,3	1999	129,9
5	Constanța	149,8	2005	153,4
6	Negrești (Vaslui)	160,3	1995	172,2
7	Vaslui	162,3	1904	200,8

Average monthly precipitation in September (mm)	
Normala (1961-1990)	42,0
Normala (1971-2000)	49,4
Normala (1981-2010)	48,8
2024/09/01 2024/09/30	135,6
Abatere (1961-1990)	93,6
Abatere (1971-2000)	86,2
Abatere (1981-2010)	86,8

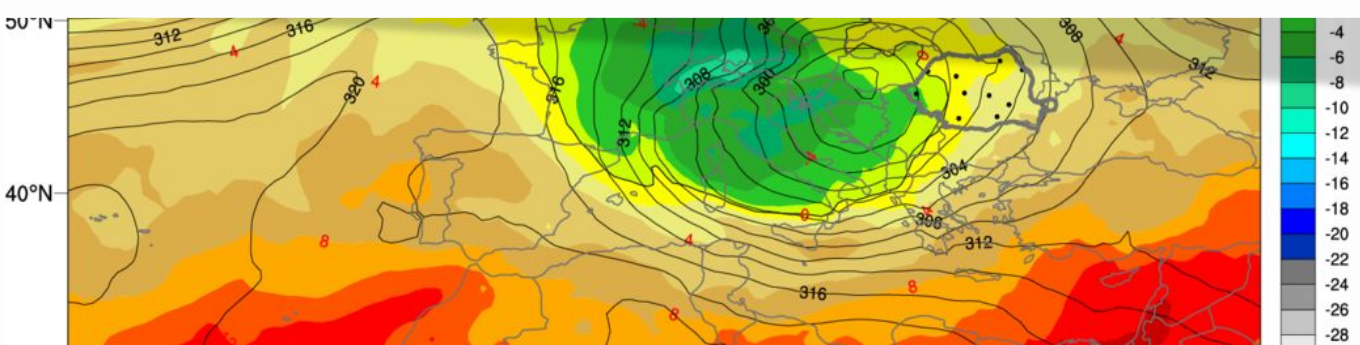
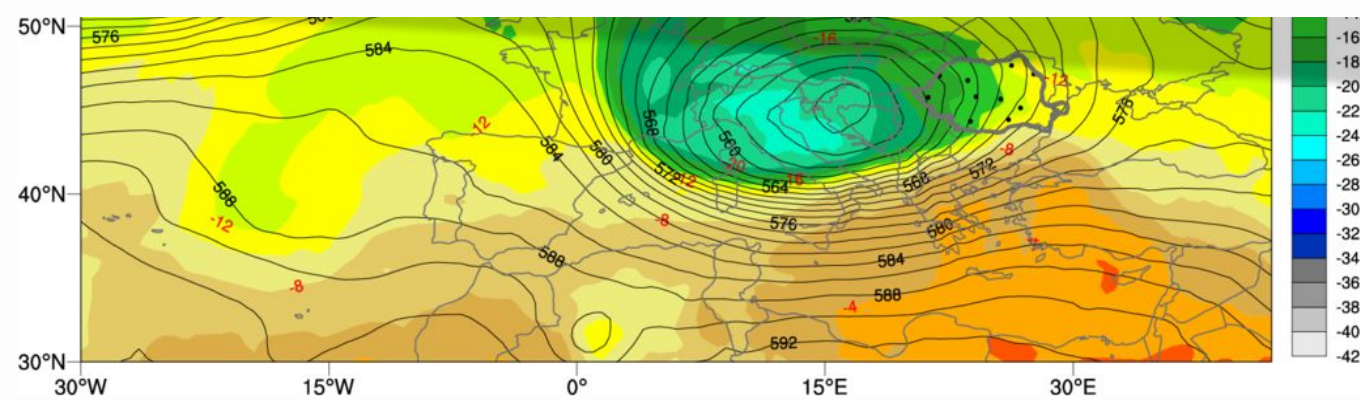
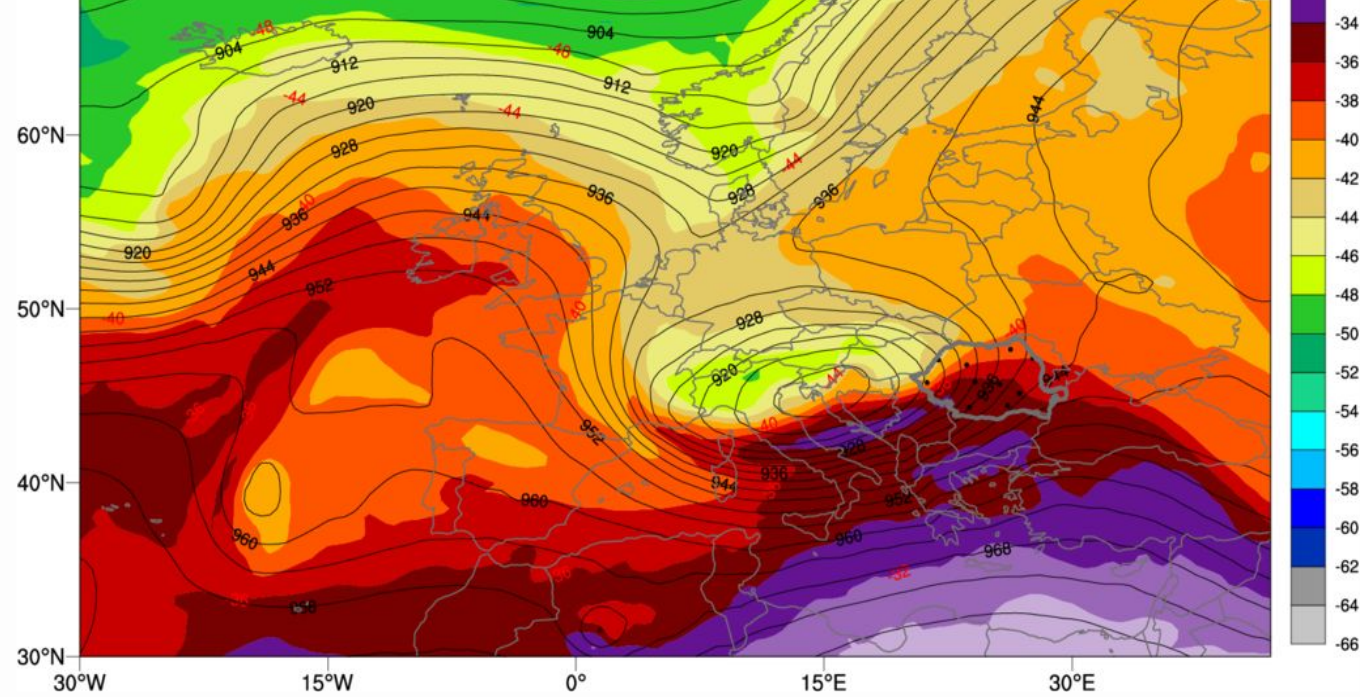
September 9th
2024 h00



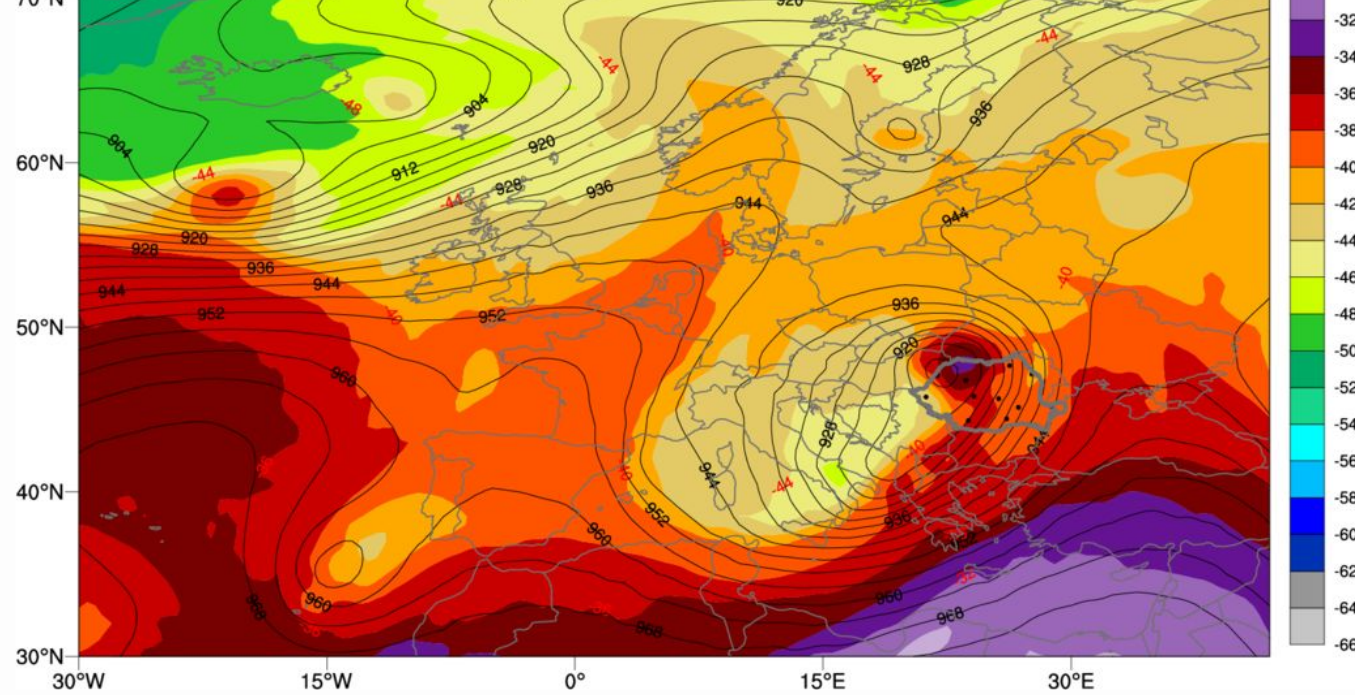
September 13th
2024 h00



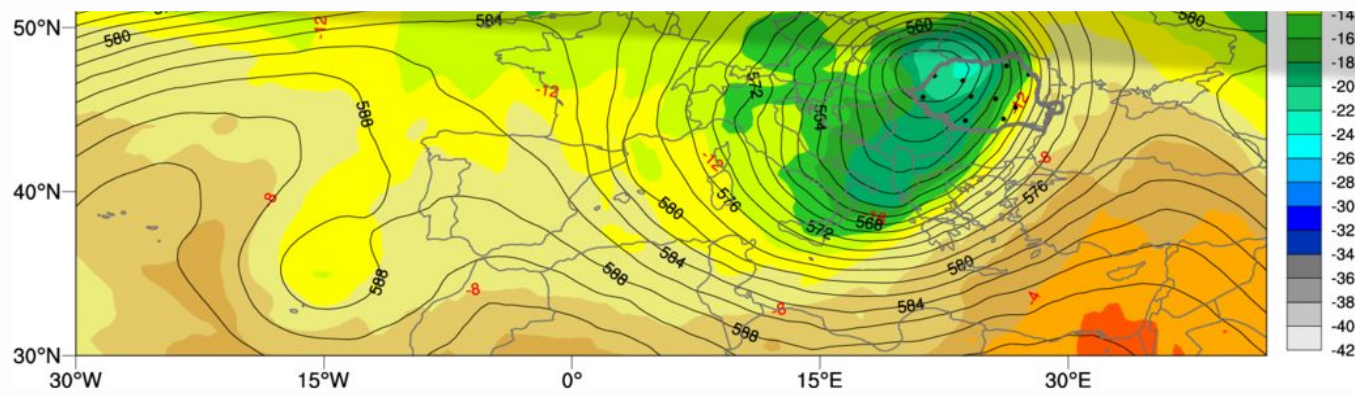
September 14th
2024 h00



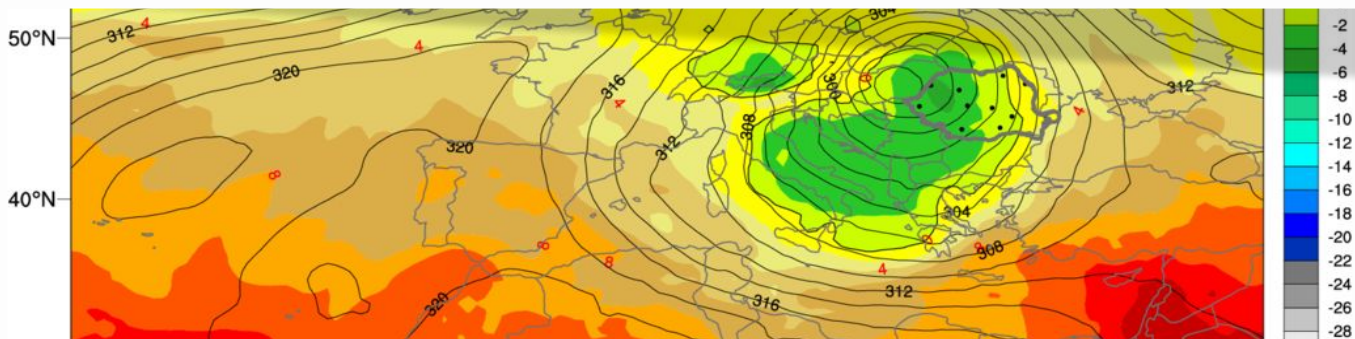
September 9th
2024 h00



300 hPa

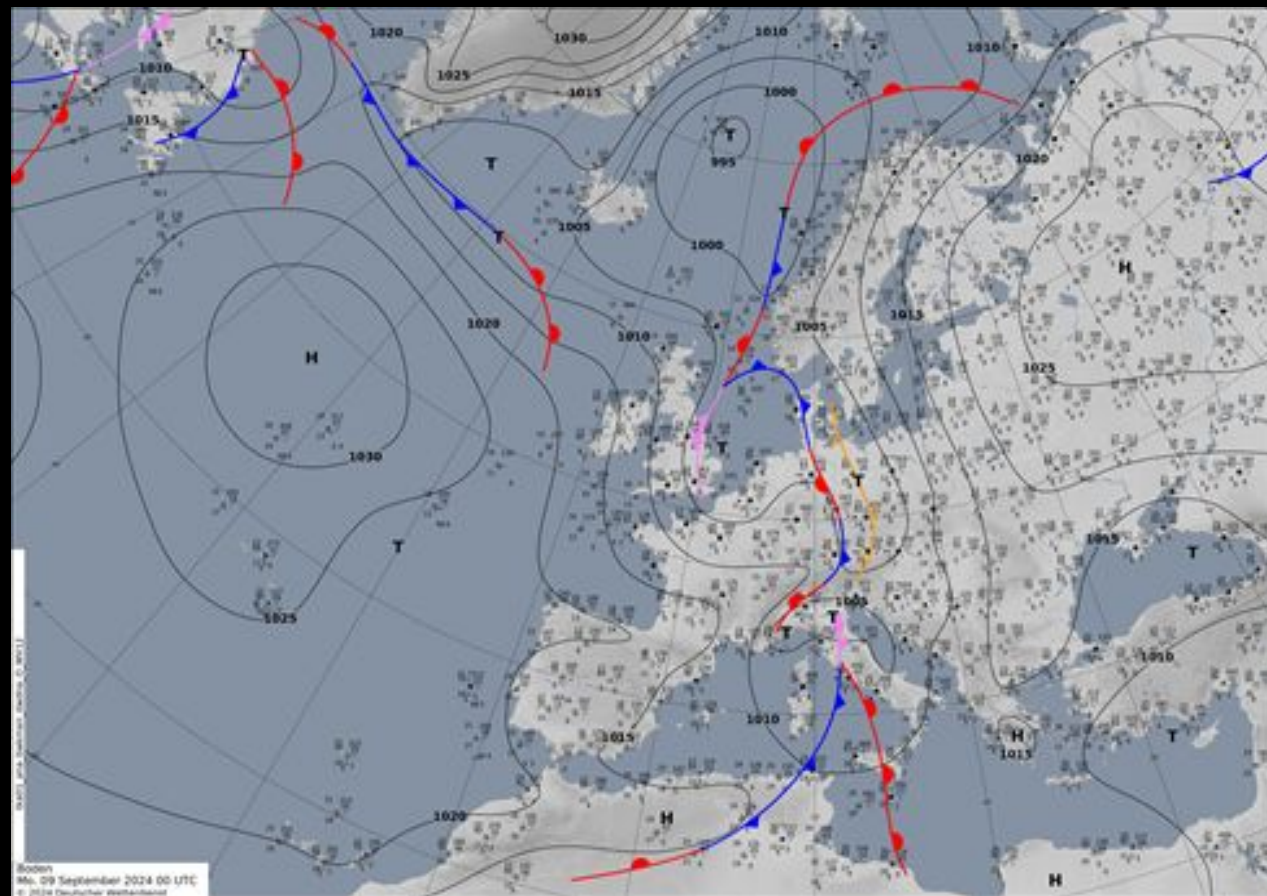


500 hPa

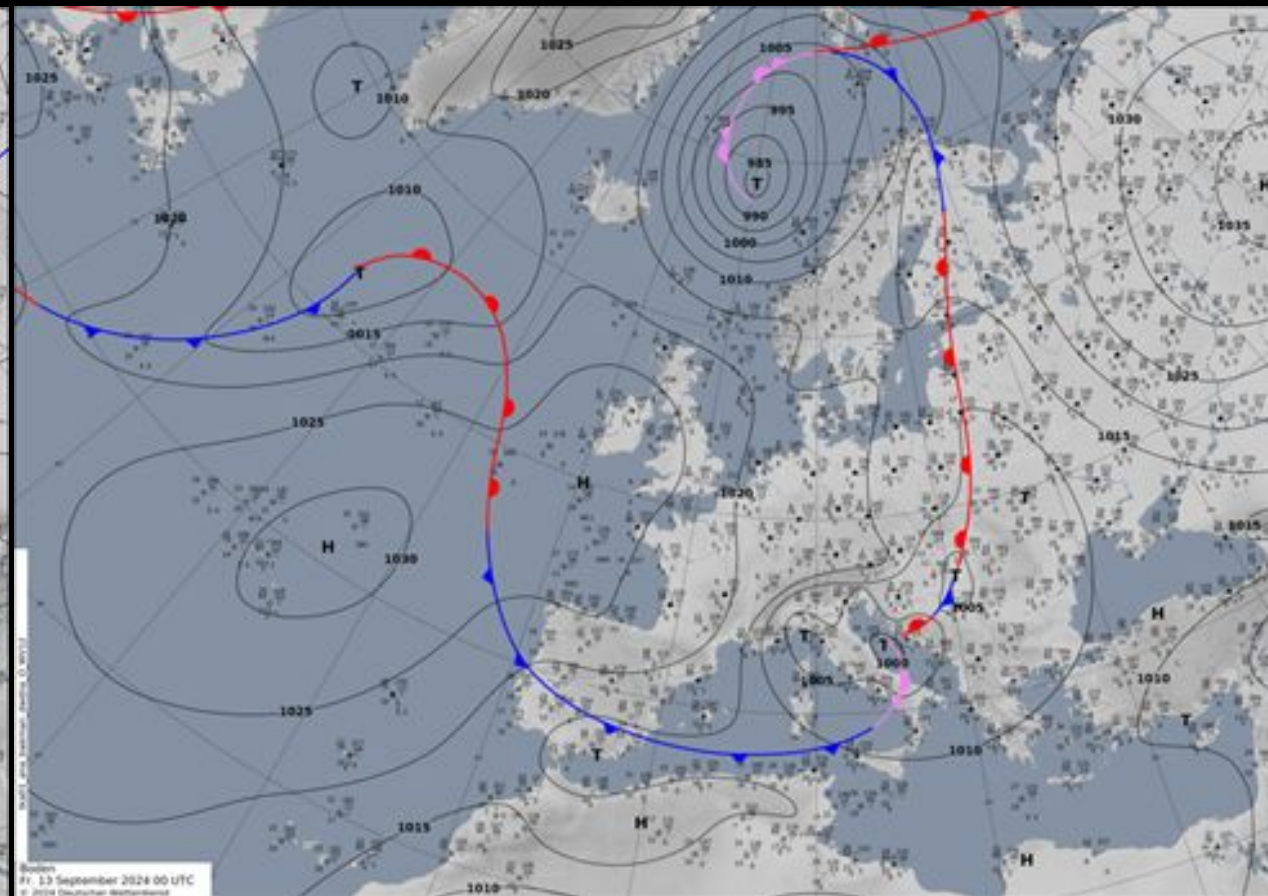


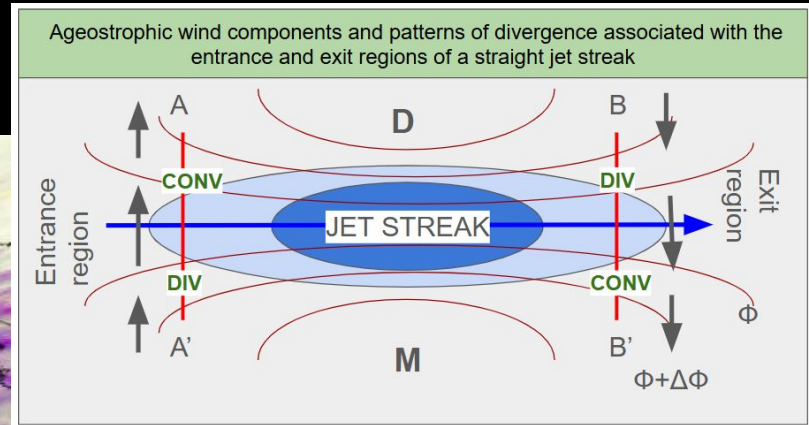
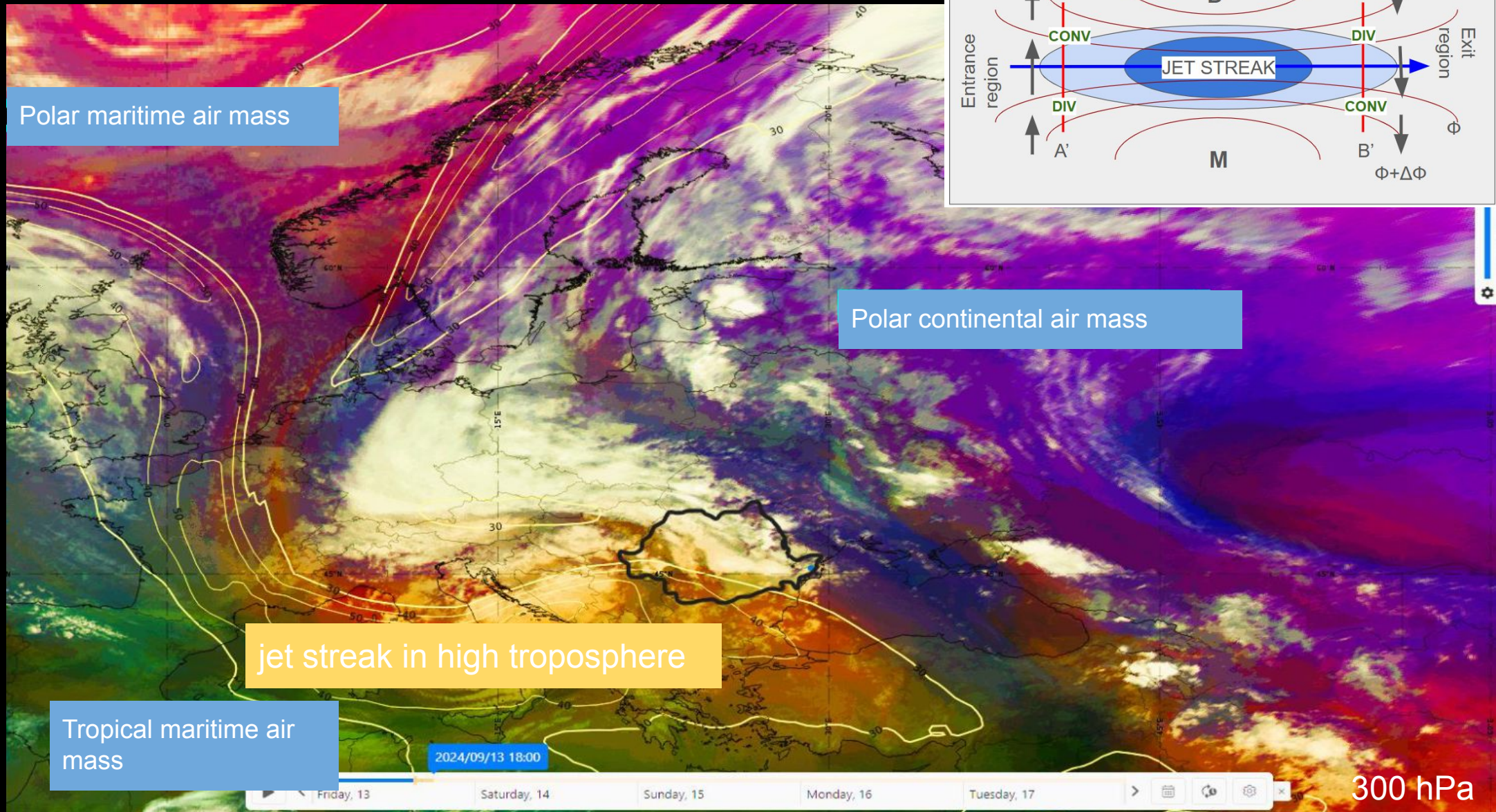
700 hPa

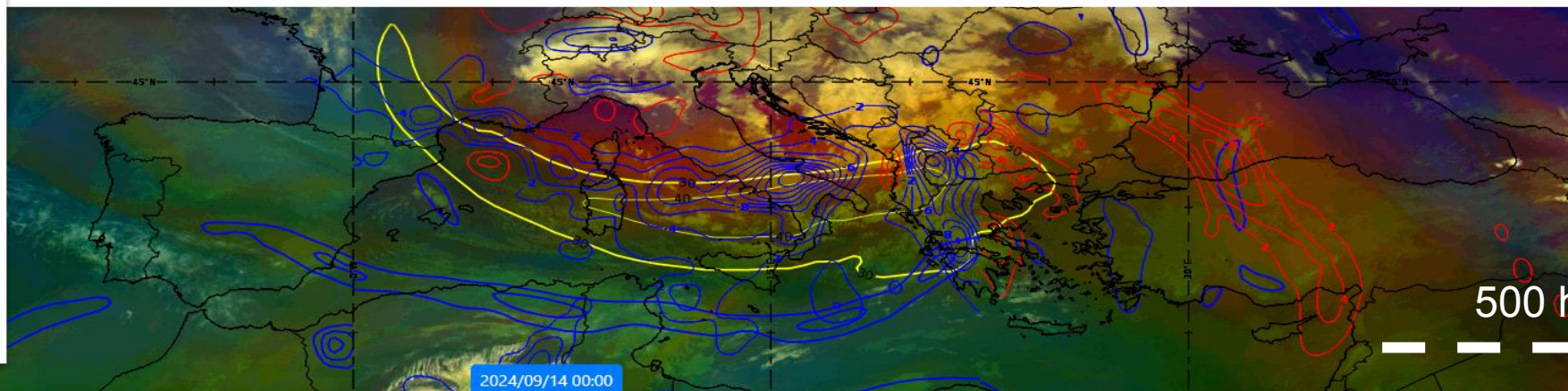
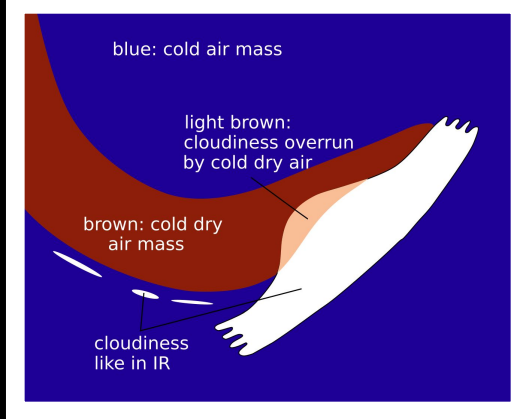
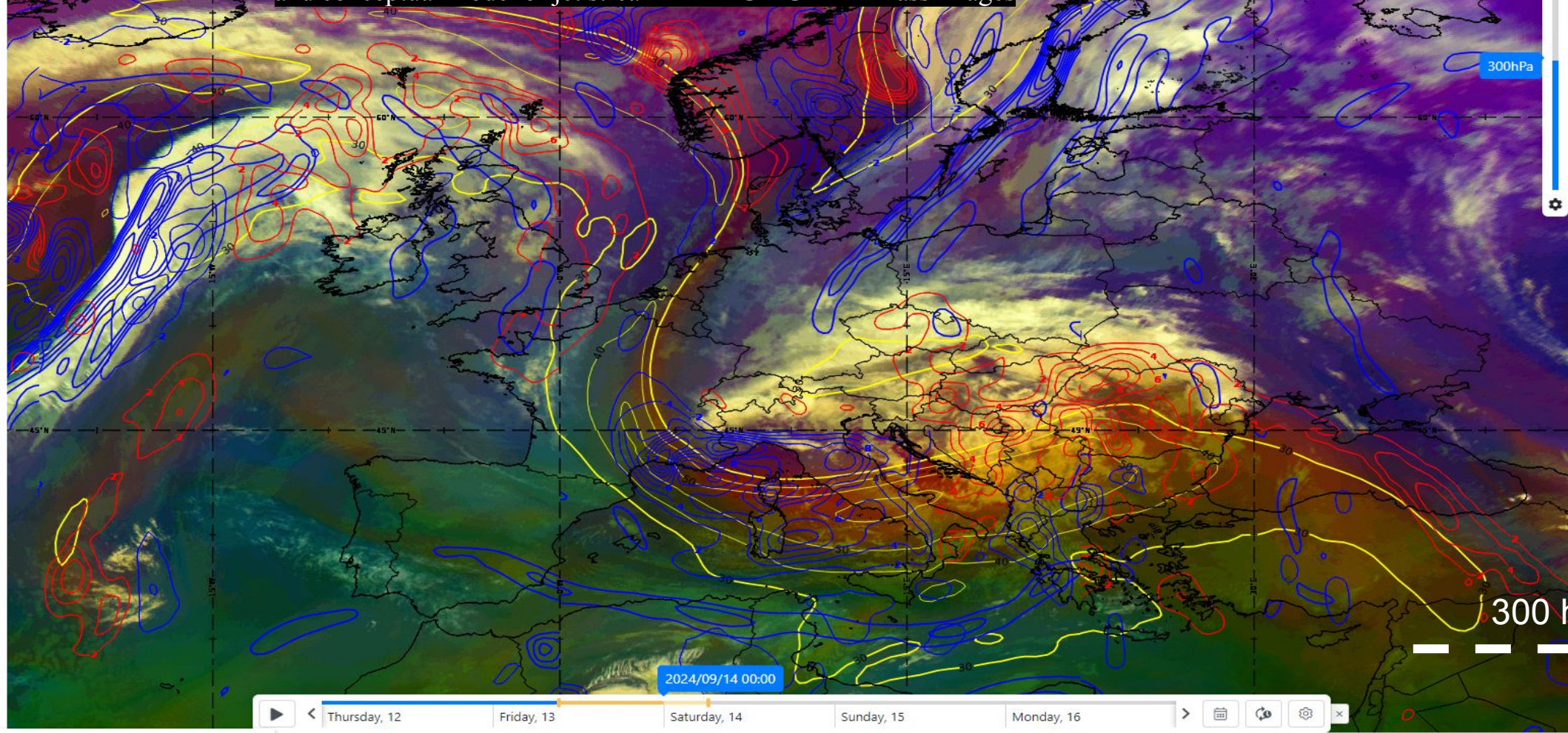
September 9th 2024 h00



September 13th 2024 h00

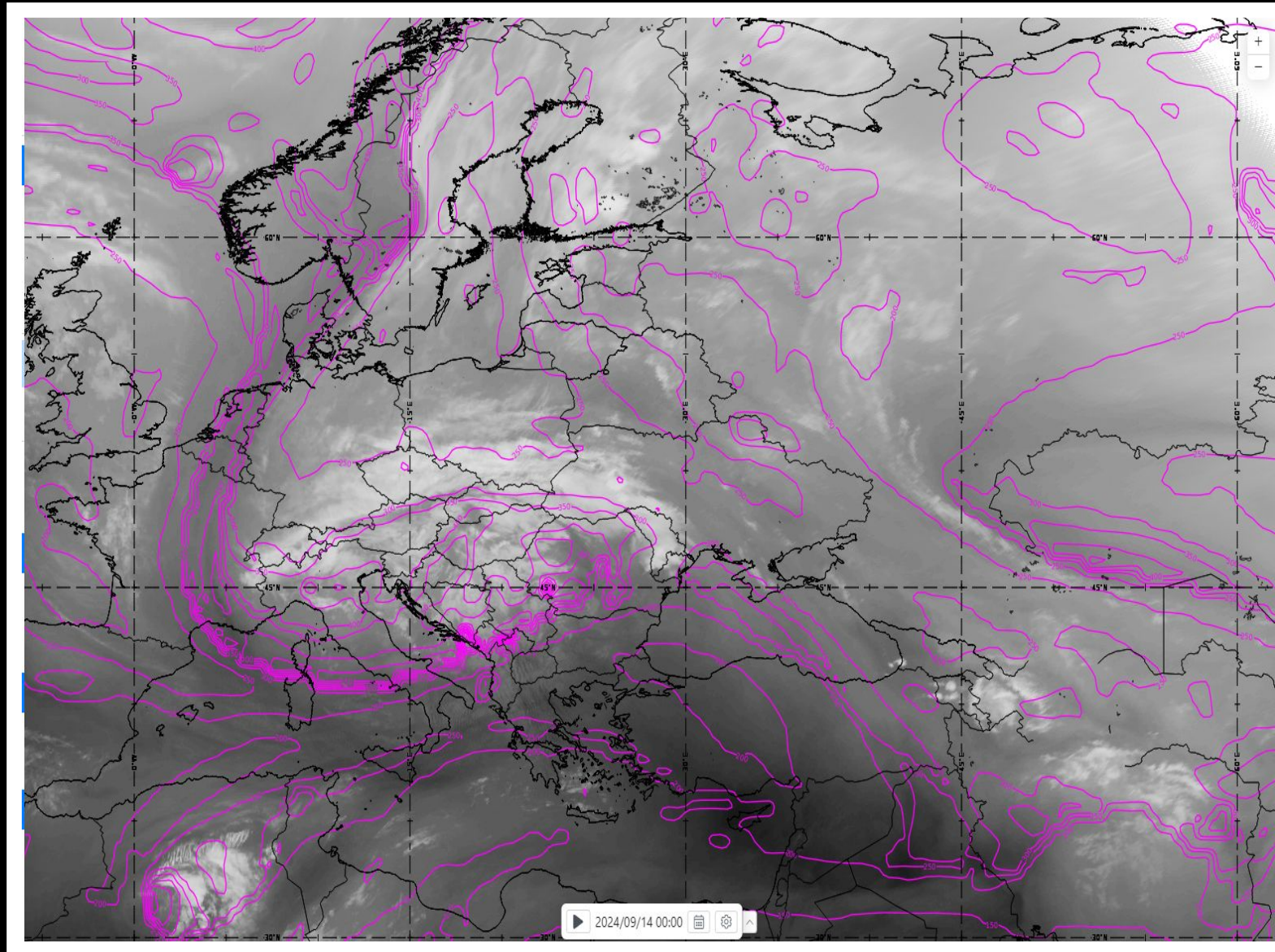




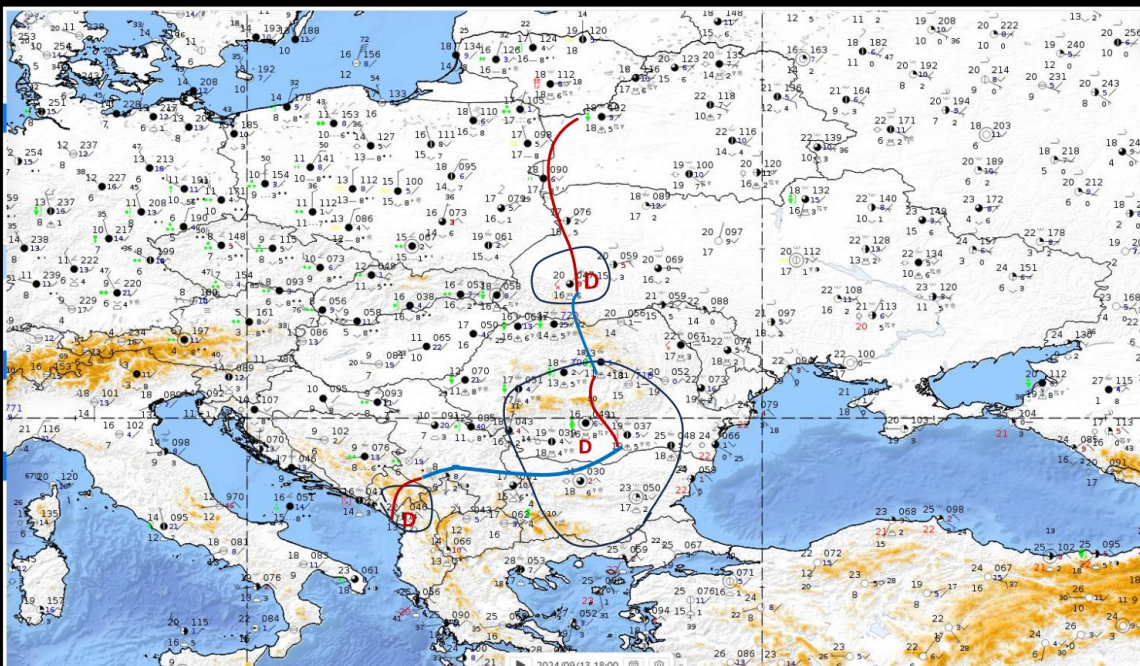


PV 1.5 level on 14.09.2024 h00 UTC and MSG WV 6,2 μm

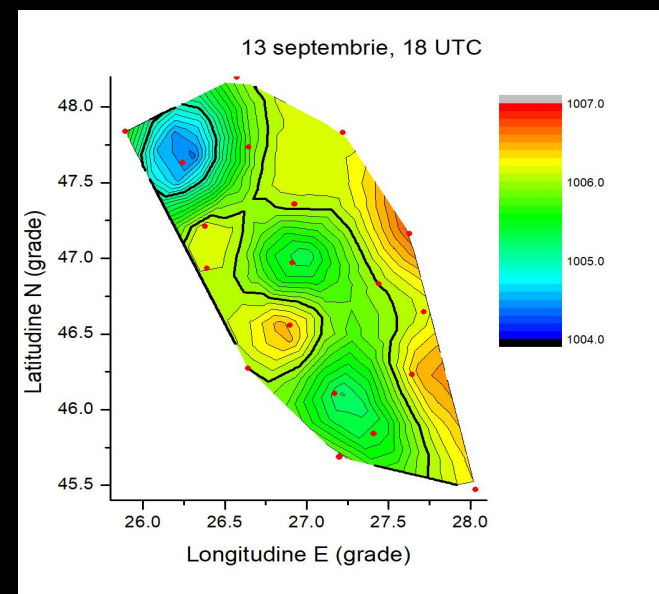
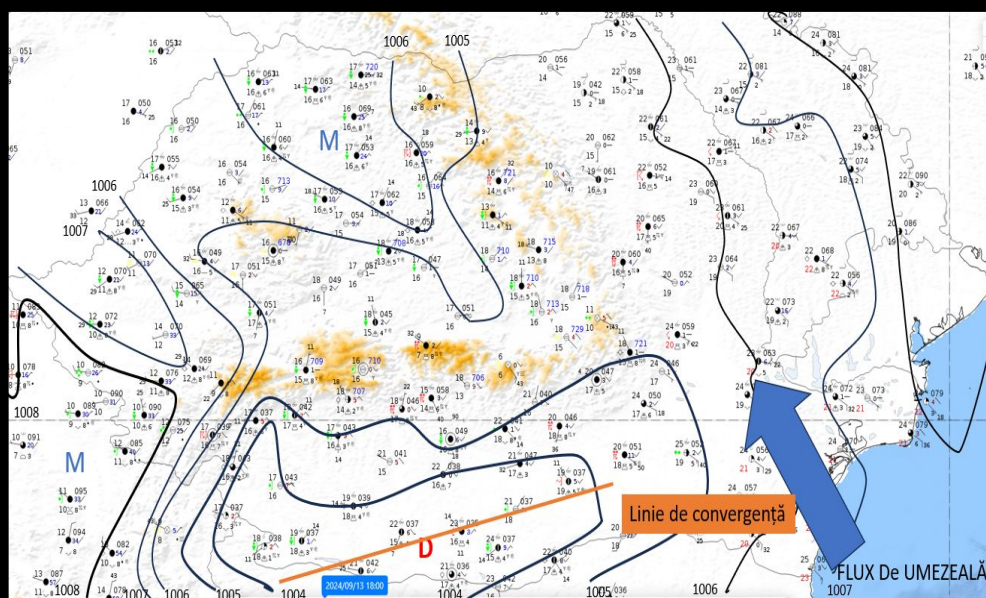
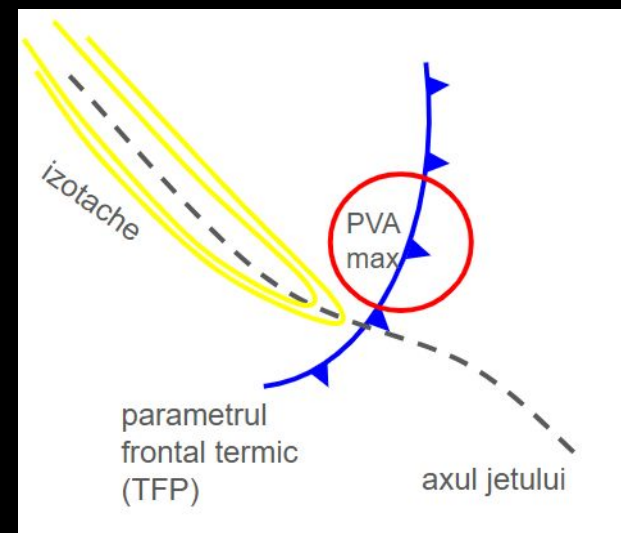
- Indicates the presence of tropospheric currents down to 500 hPa level



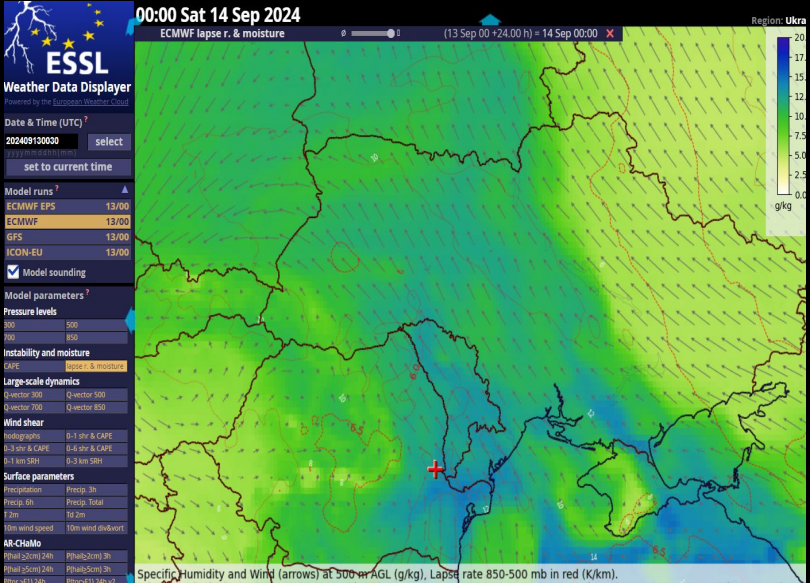
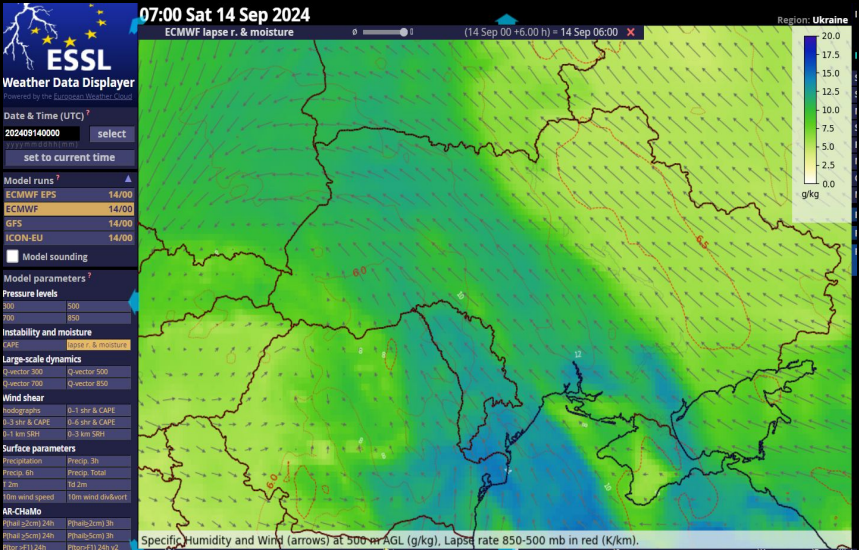
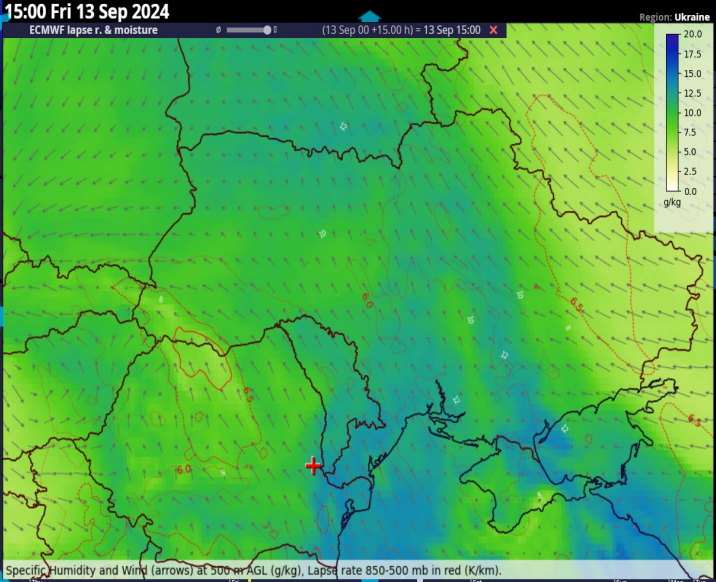
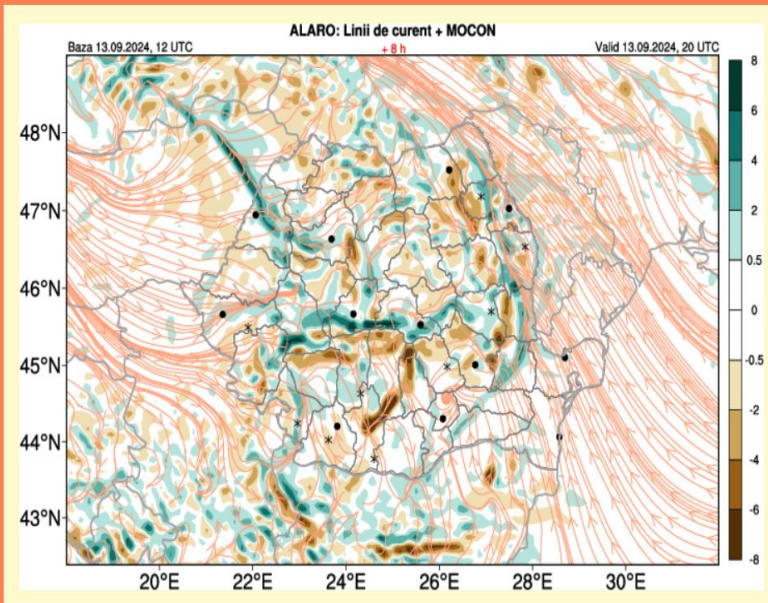
mesoscale and synoptic pressure field analysis



max vorticity advection when crossing a cold front

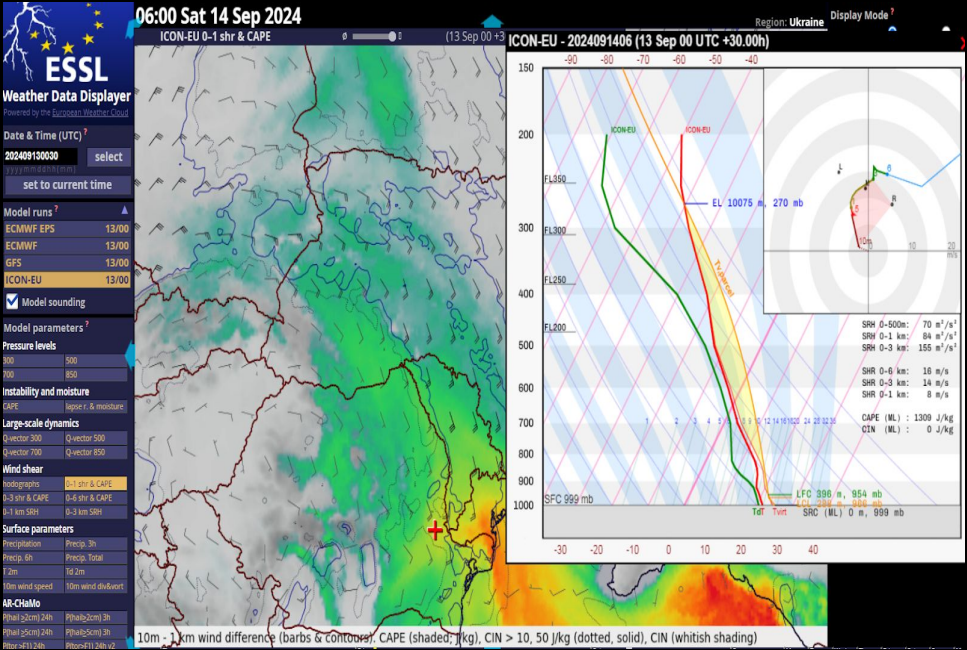
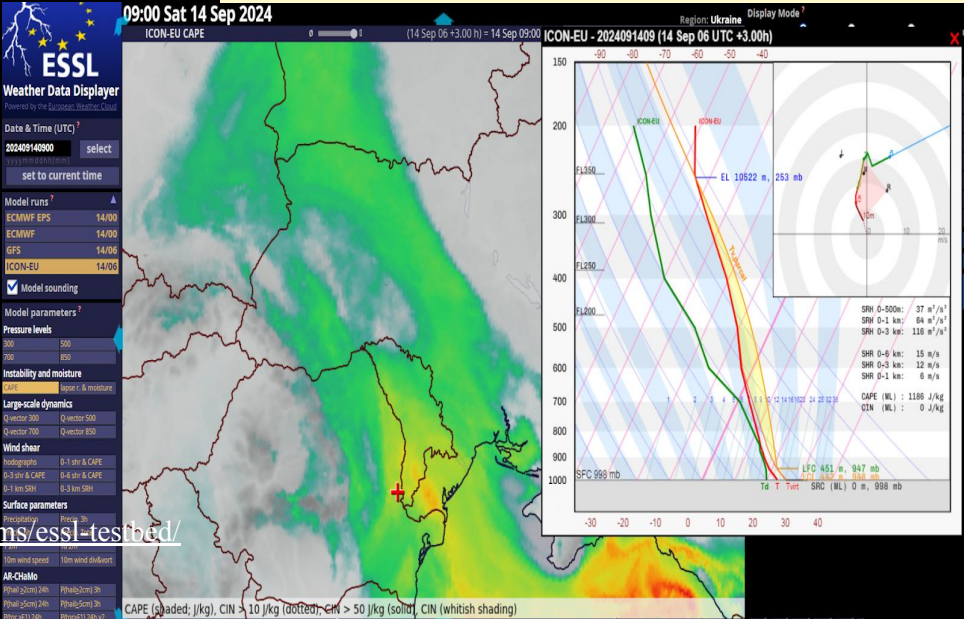
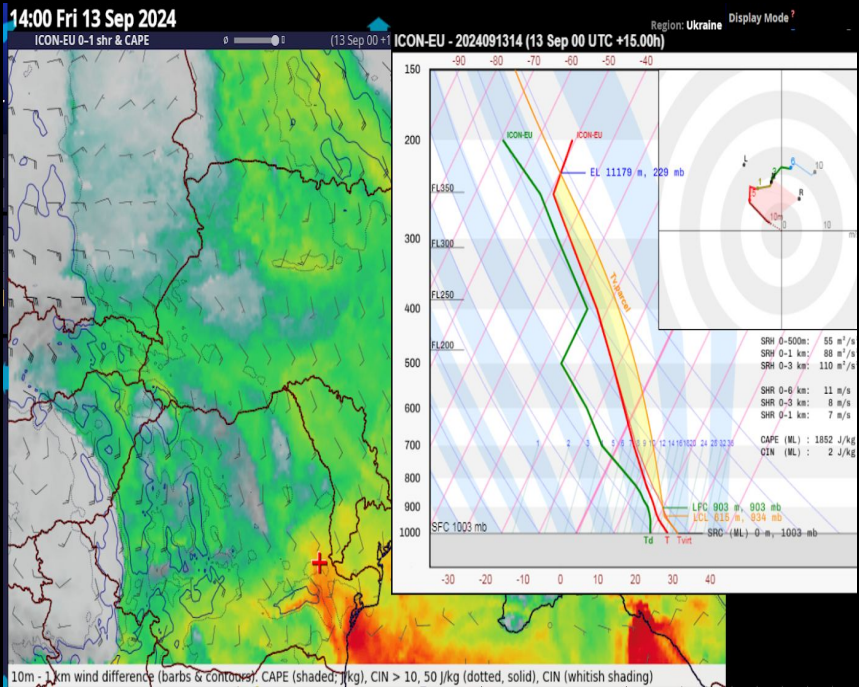
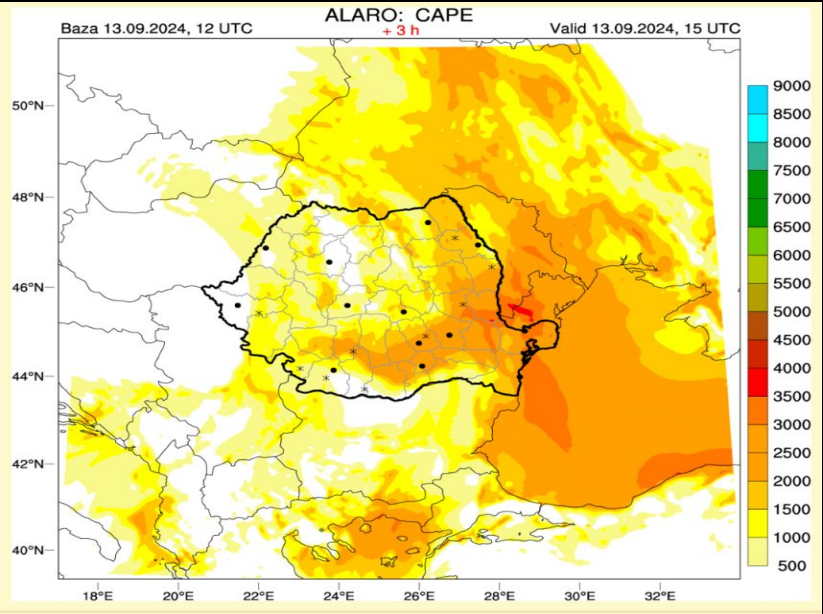


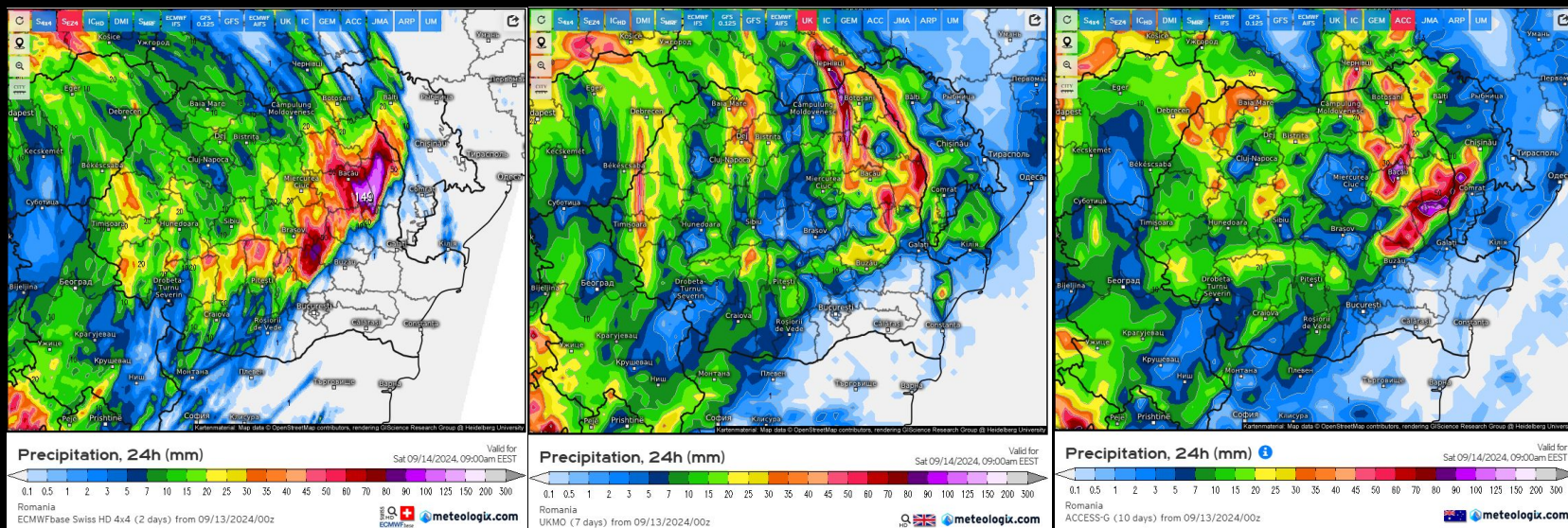
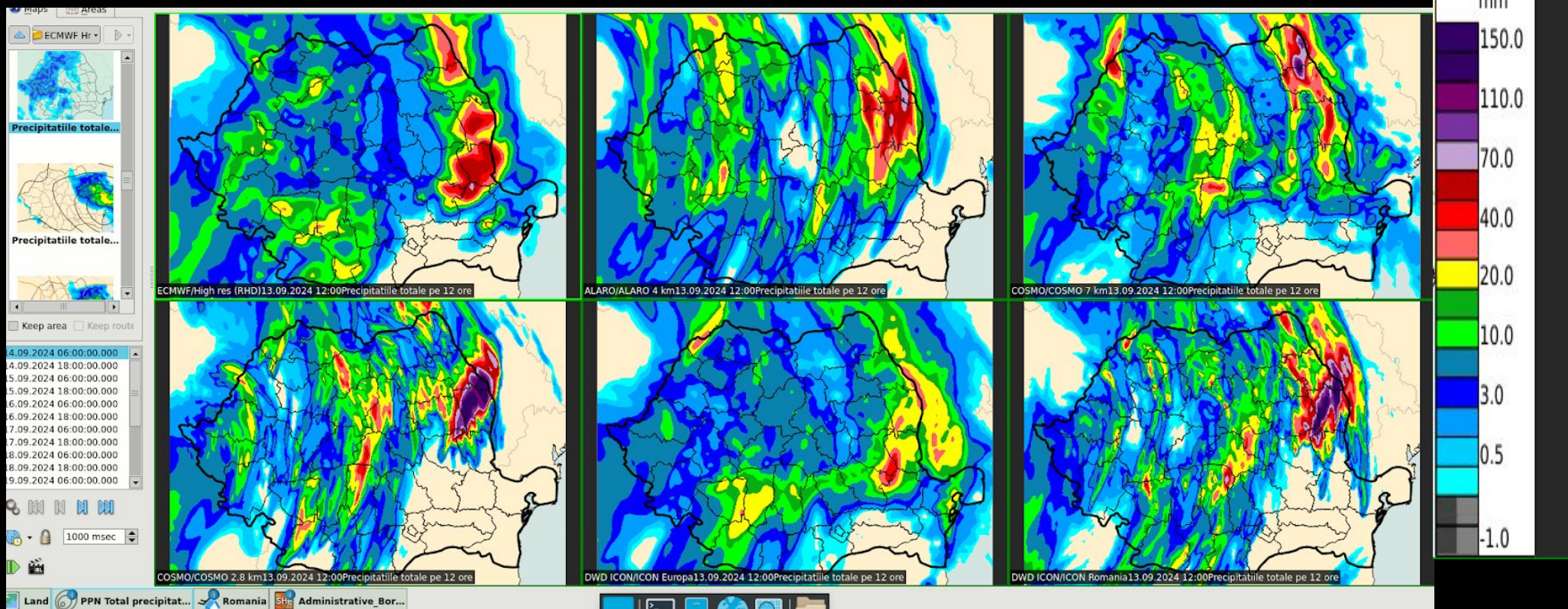
ECMWF: Specific humidity and wind speed at 500 m on September 13, 15 UTC and September 14, 00 UTC, 06 UTC
ALARO: stream lines + humidity convergence



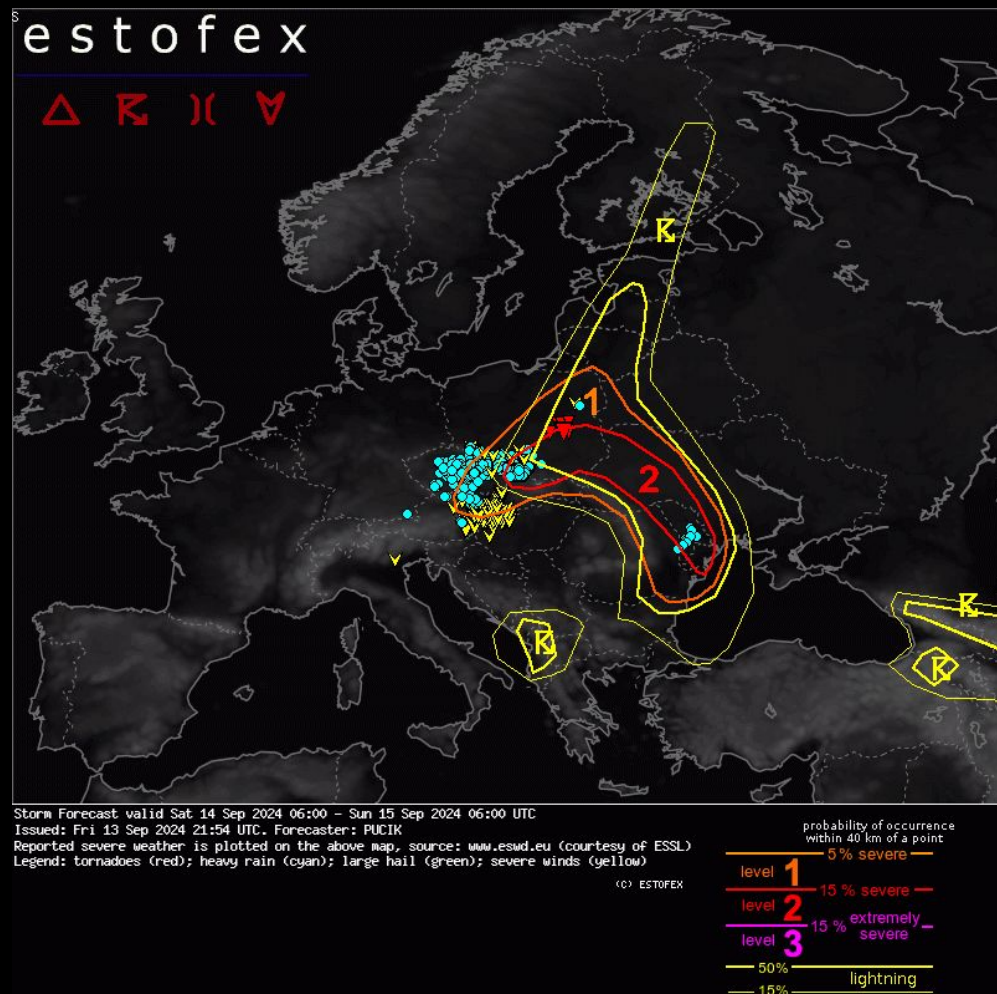
ICON: SHEAR coefficient and CAPE (convective potential energy),
Cape: peste 1800 J/Kg

ALARO: CAPE





estofex forecast for 14th-15th September 2024



<https://www.estofex.org/>

 MINISTERUL MEDIULUI, APELOR ȘI PĂDURILOR  ADMINISTRAȚIA NAȚIONALĂ DE METEOROLOGIE

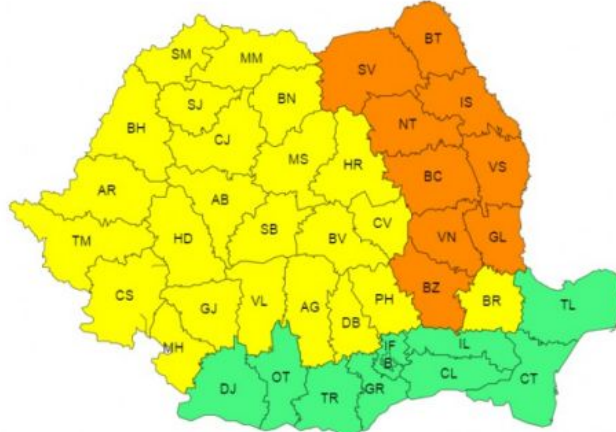
ADMINISTRAȚIA NAȚIONALĂ DE METEOROLOGIE

Ziua/Luna/Anul/Ora: 13.09.2024 10:00 Număr Mesaj: 127

COD PORTOCALIU

Interval de valabilitate: 13 septembrie, ora 18 – 14 septembrie, ora 15
Fenomene vizate: averse torențiale și importante cantitativ
Zone afectate: județele Buzău, Vrancea, Galați, Vaslui, Bacău, Neamț, Iași, Botoșani și Suceava

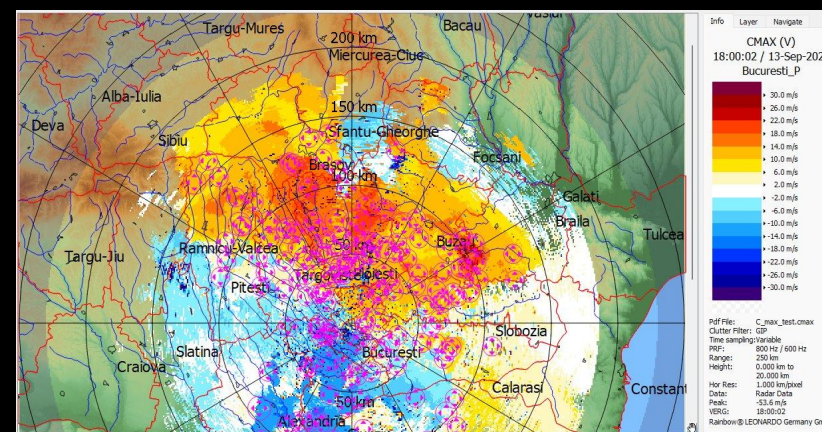
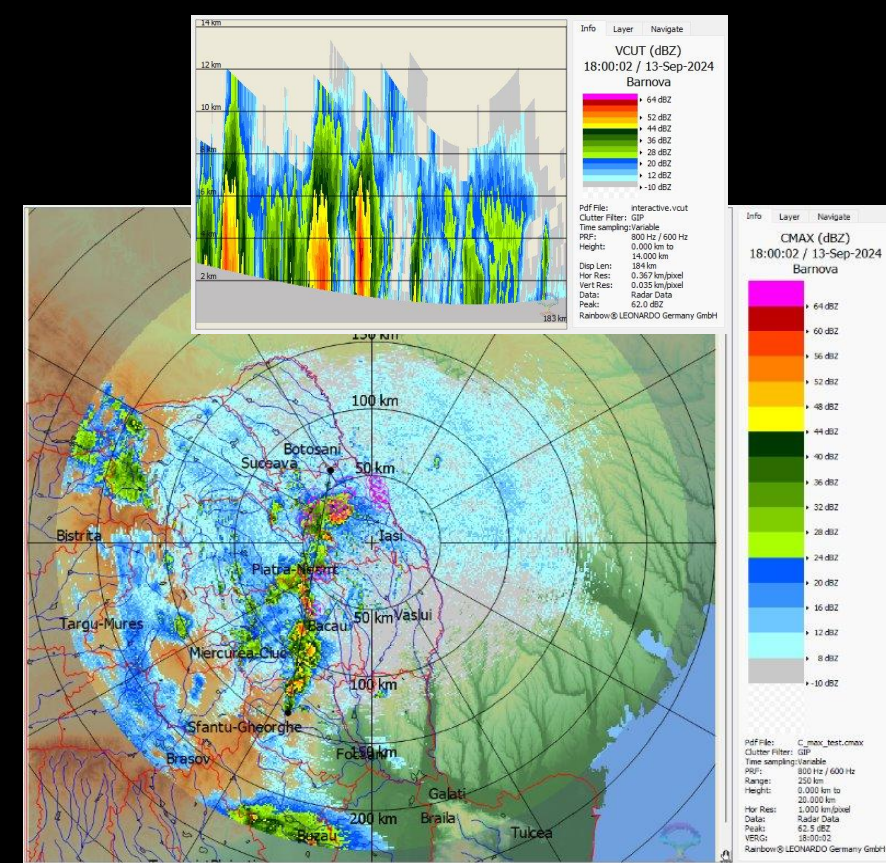
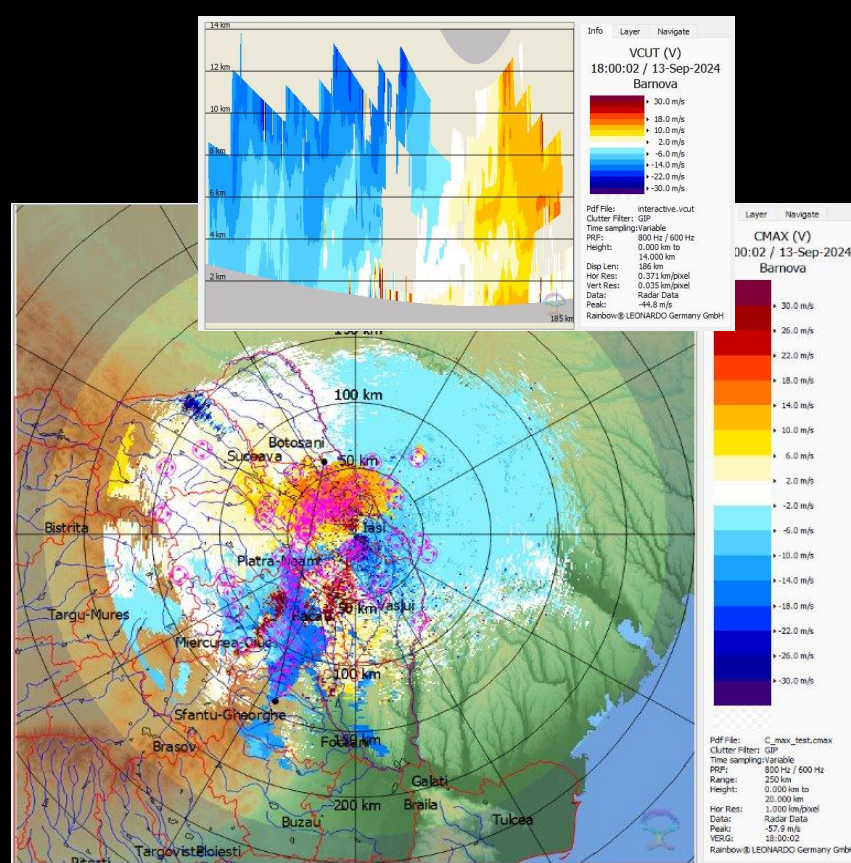
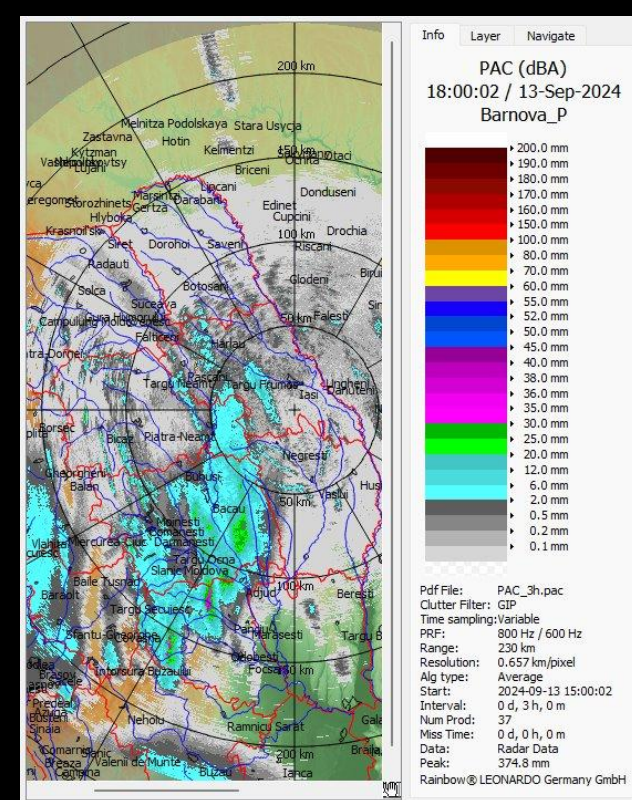
În intervalul menționat, în județele Buzău, Vrancea, Galați, Vaslui, Bacău, Neamț, Iași, Botoșani și Suceava vor fi perioade cu averse torențiale. În intervale scurte de timp sau prin acumulare cantitățile de apă vor fi de 40...60 l/mp și izolat de peste 70...80 l/mp.



În funcție de evoluția și intensitatea fenomenelor meteorologice, Administrația Națională de Meteorologie va actualiza prezentul mesaj.

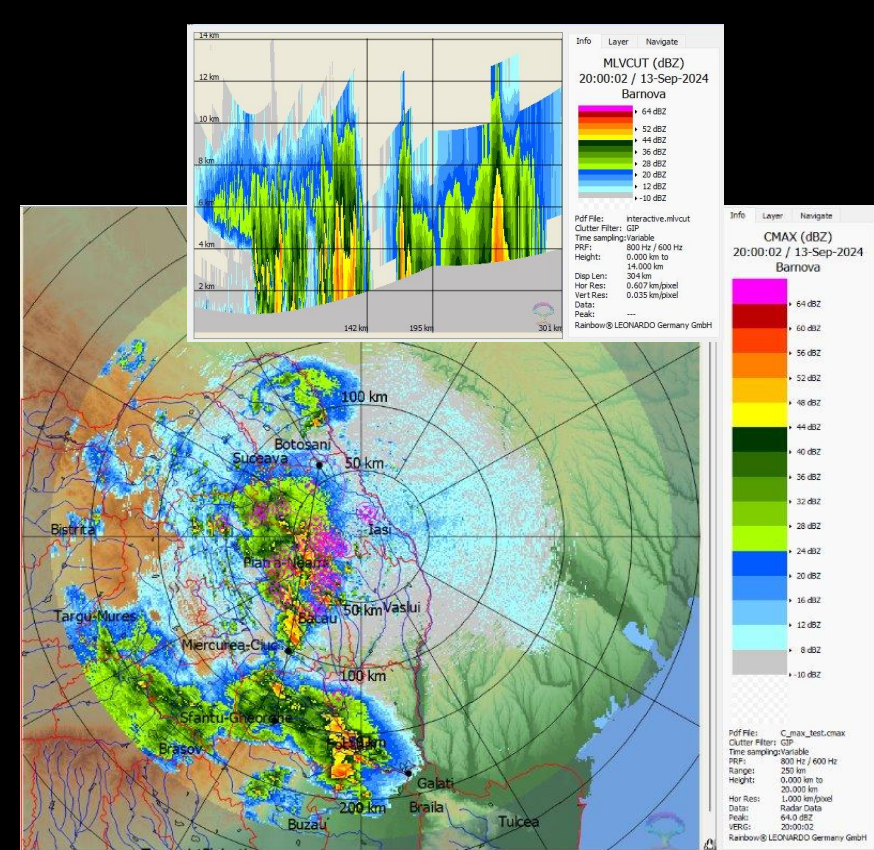
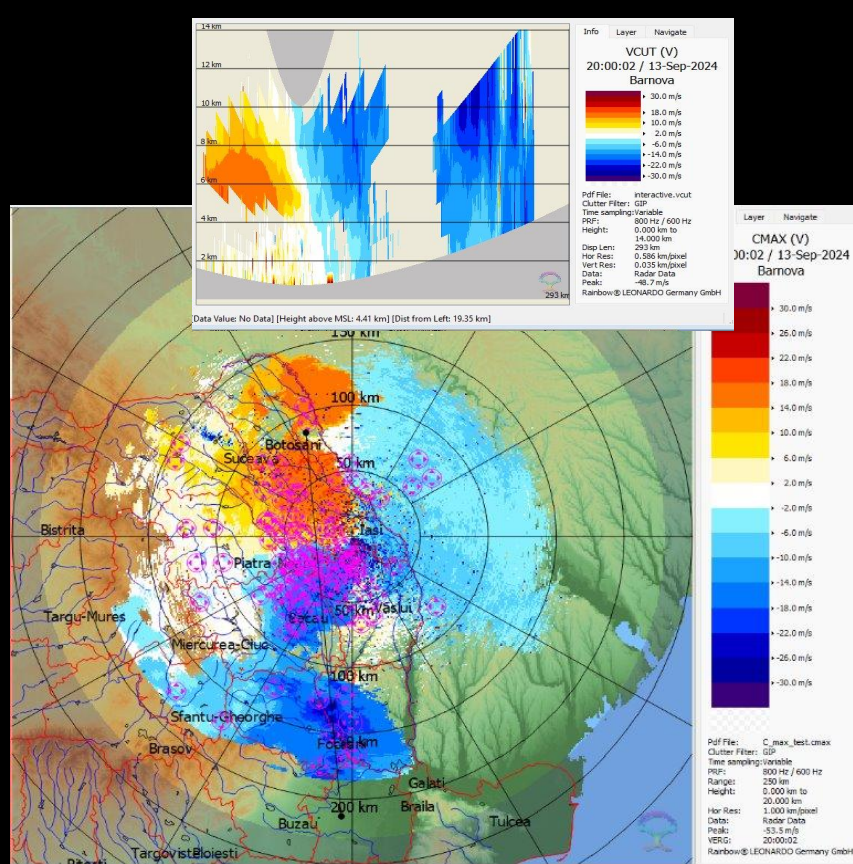
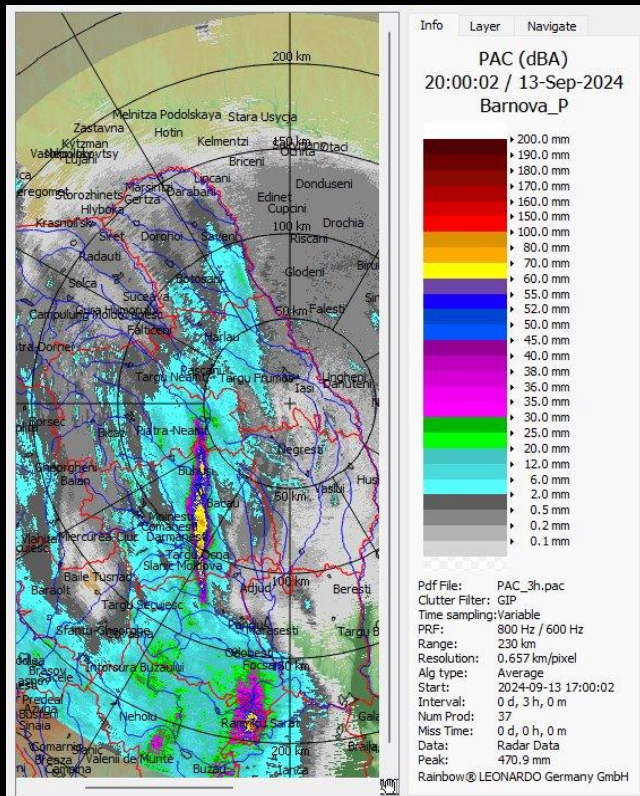
Secția emitentă: Centrul Național de Prognose Meteorologice București

Aprobat,
Director Prognostic Meteorologică
Dr. Florina Georgescu

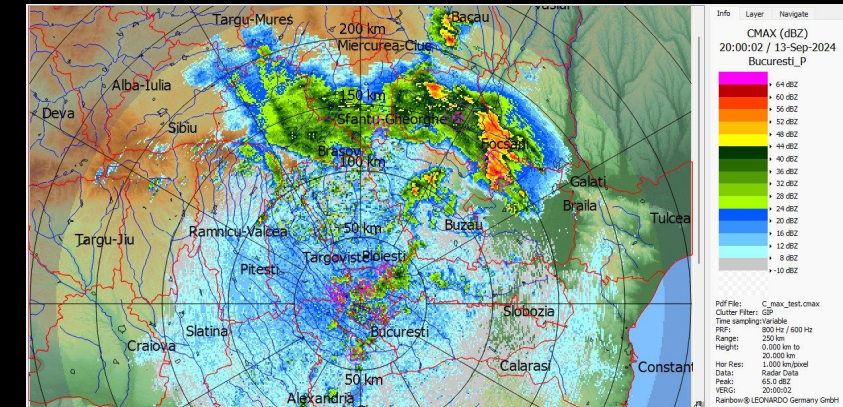
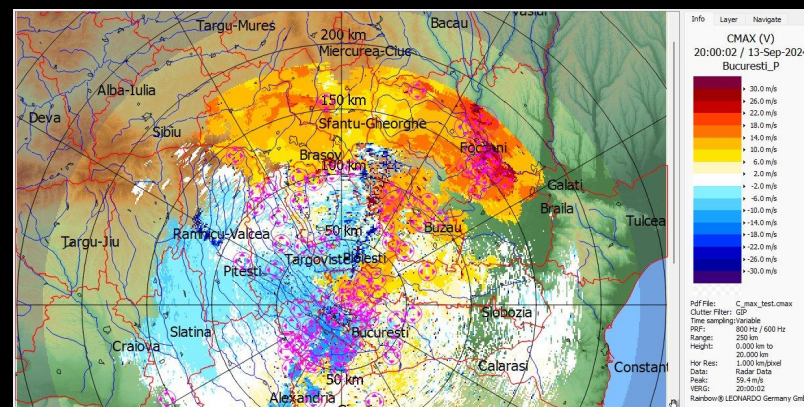
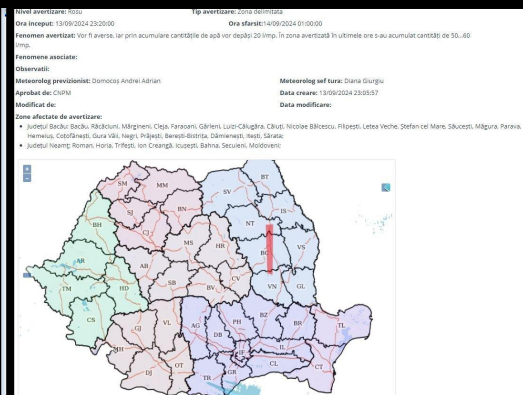


Maximum radial velocity + divergence

Maximum reflectivity + convergence

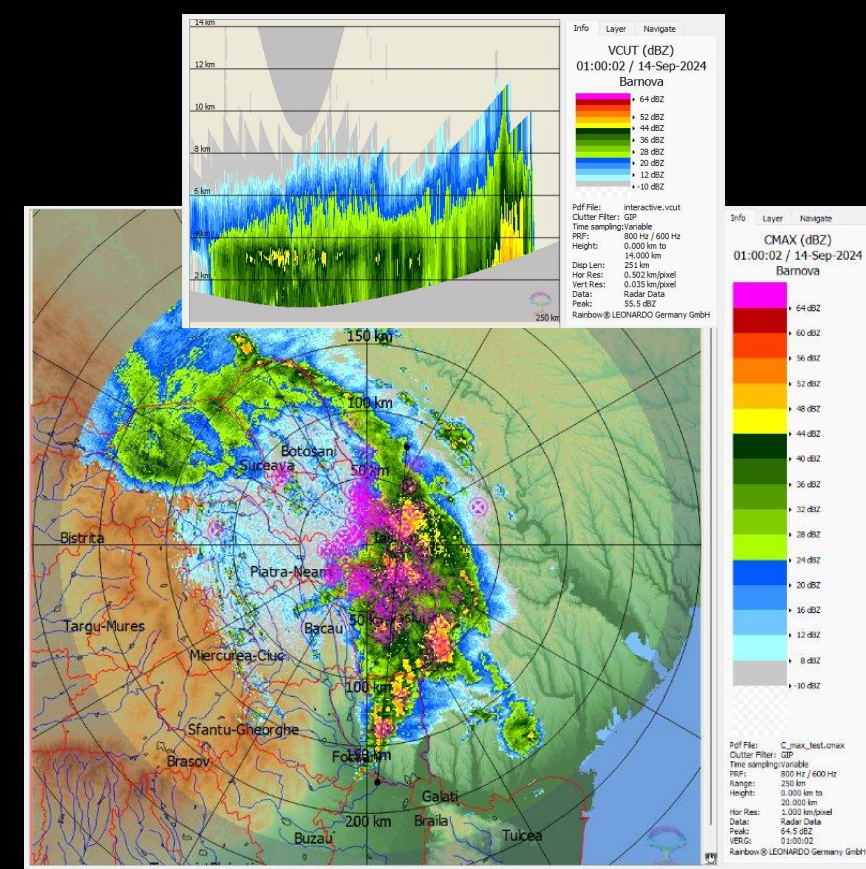
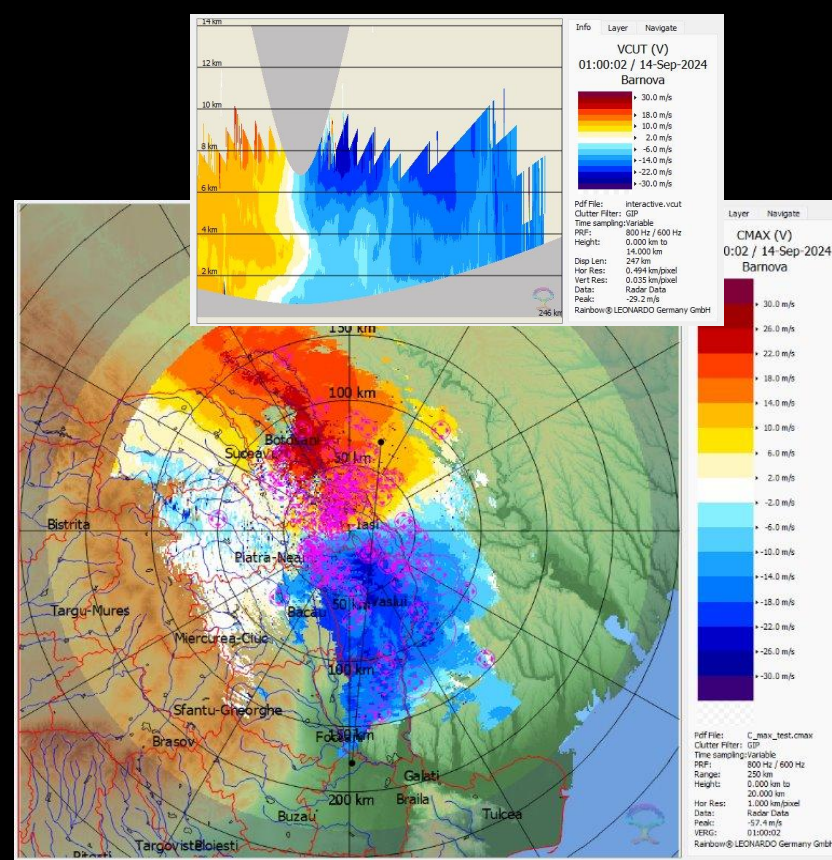
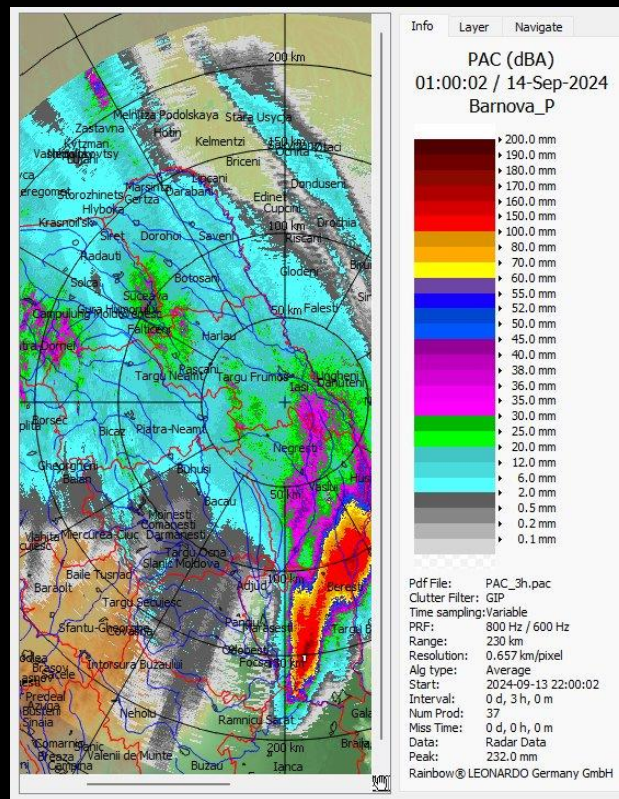


3h accumulated precipitations

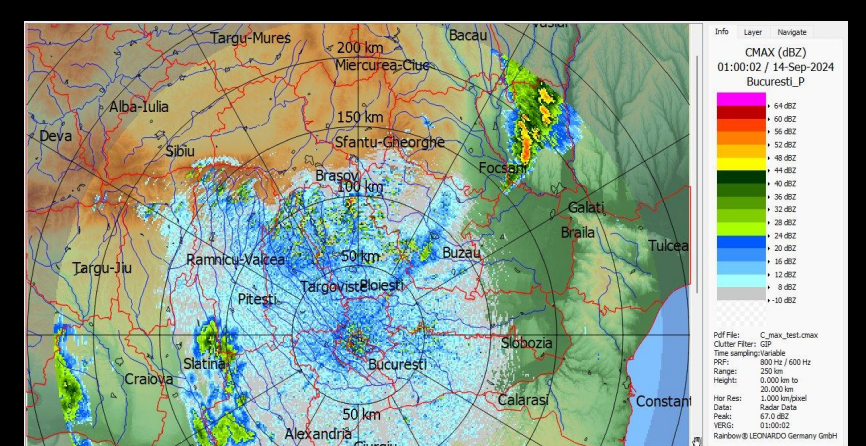
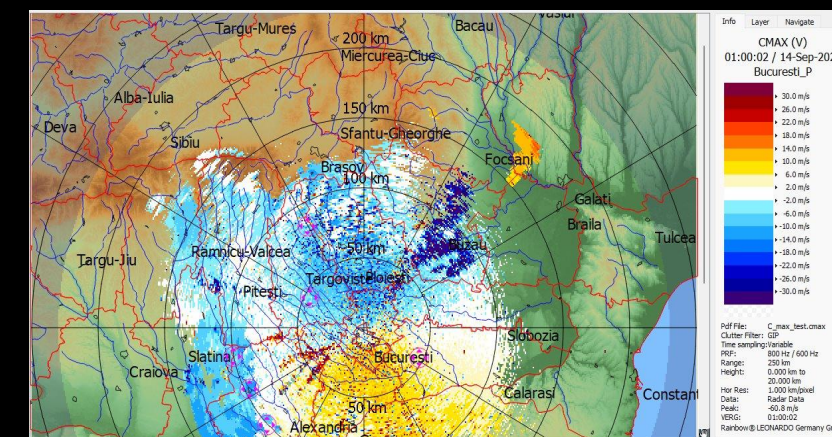


Maximum radial velocity + divergence

Maximum reflectivity + convergence



3h accumulated precipitations



Maximum radial velocity + divergence

Maximum reflectivity + convergence

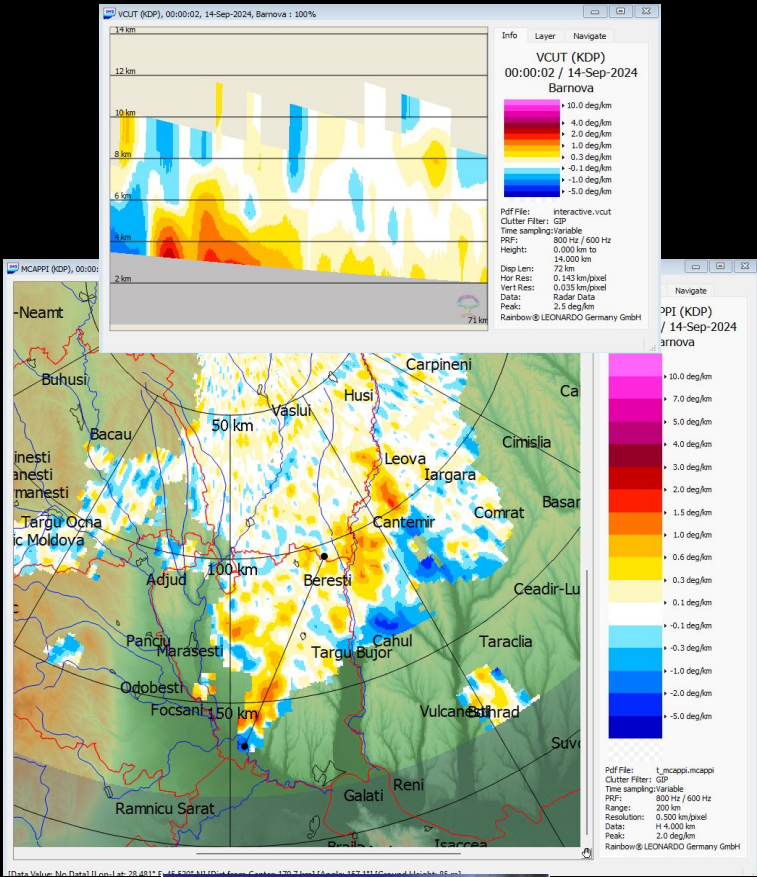
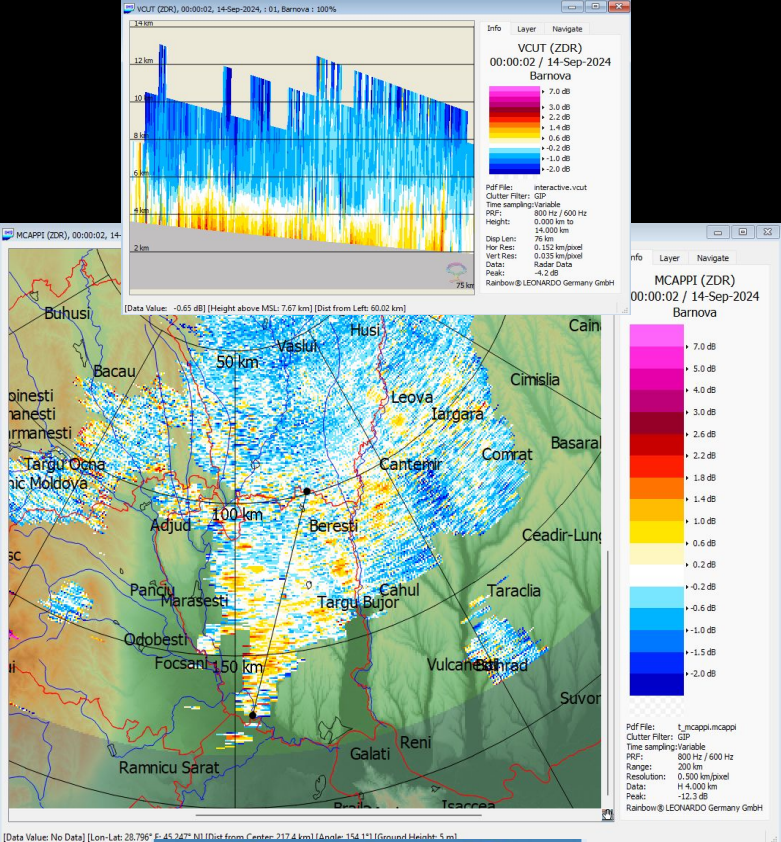
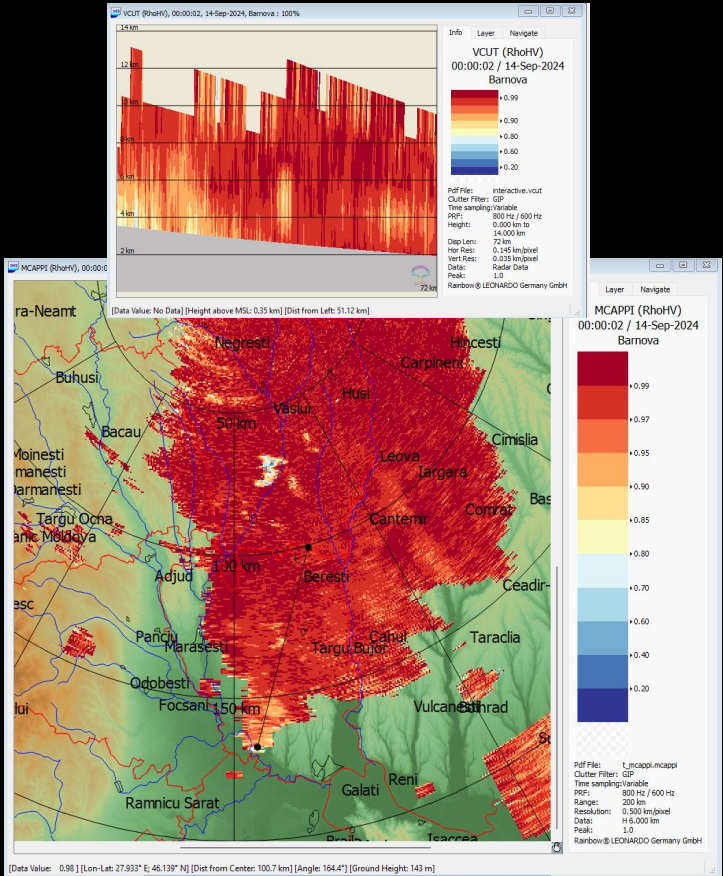
Cross-correlation coefficient (RhoHV)

- measure of the variability of scattering properties

Differential reflectivity ZDR (dB)

- The difference between horizontal and vertical reflectivity

Specific differential overrun KDP (grad/km)



Typical Values (Hail)

	Classic	Melting	Large (D > 2")
Z	> 55 dBZ	> 60 dBZ	40 – 80 dBZ
ZDR	0 – 1 dB	> 1 dB	-0.5 – 1 dB
CC	0.95 – 0.97	~ 0.95	< 0.9
KDP	~ 0 deg/km	> 3 deg/km	N/A

Differential Reflectivity - ZDR

- Definition:
- Difference between horizontal and vertical reflectivity factors = Drop Shape
- ZDR values for rain typically > 1 to as high as 5 for large drops
- ZDR values for snow typically less than 0.5 (except for wet or melting snow when it's much higher)
- ZDR for hail generally between -1 and +1 (larger values for melting)

Range of Values	Units	Abbreviations
-7.9 to 7.9	decibels (dB)	ZDR or Z _{DR}

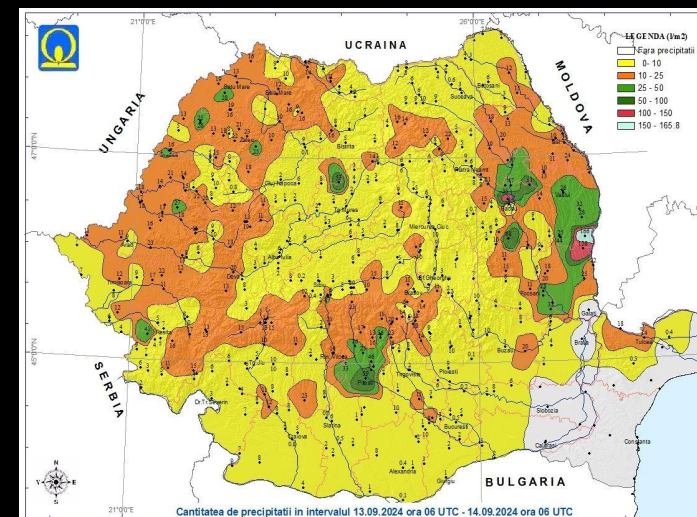
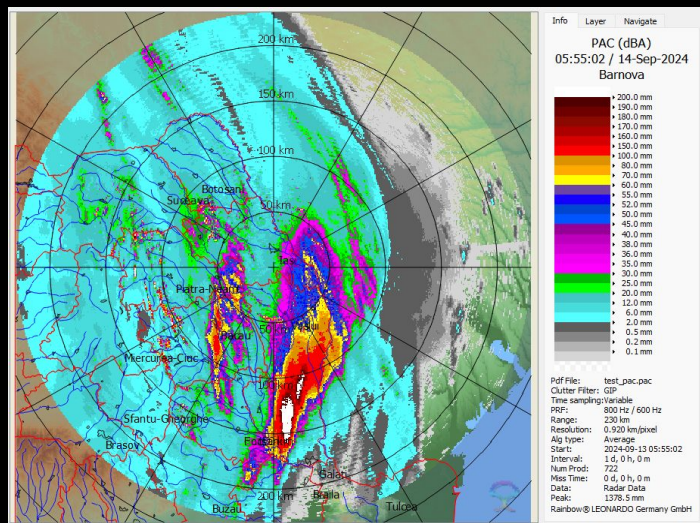
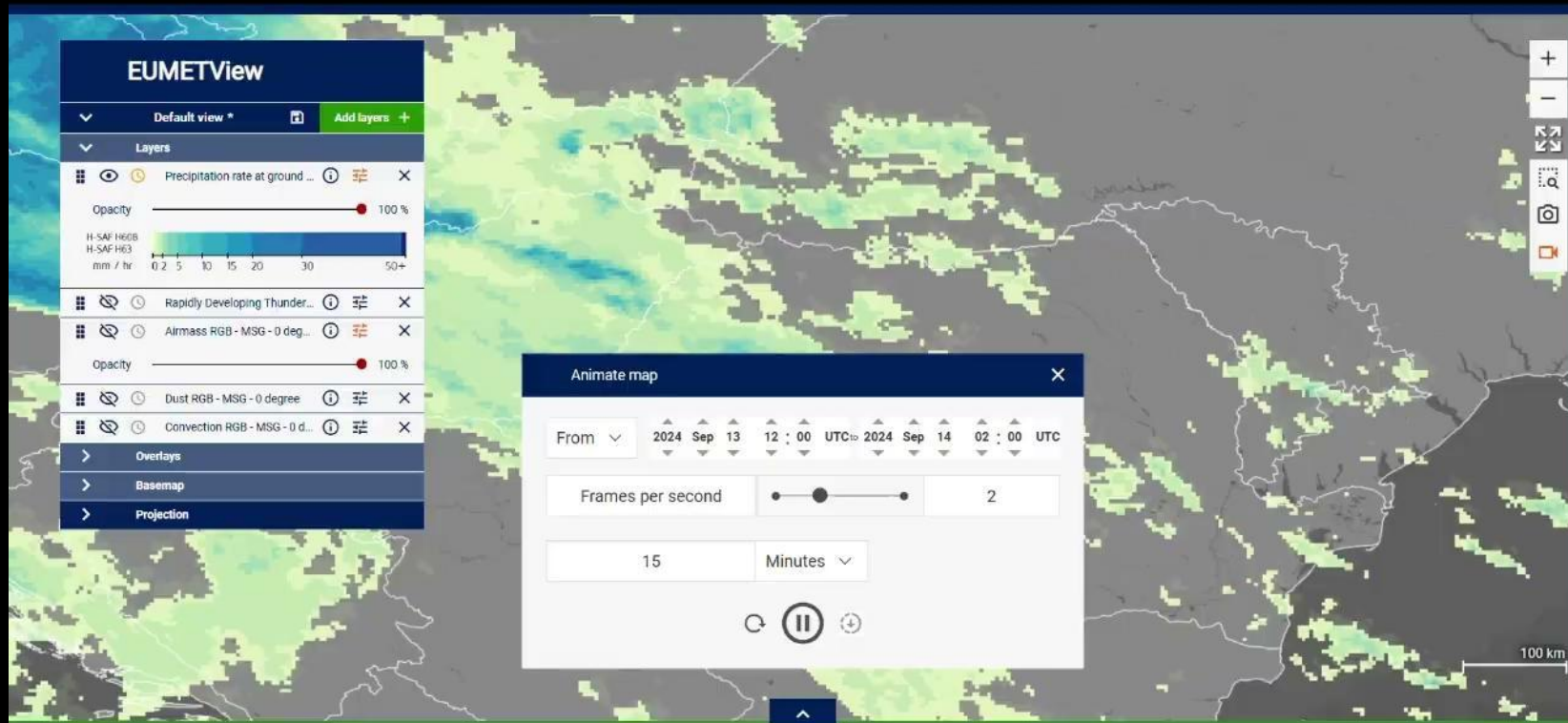
Specific Differential Phase KDP

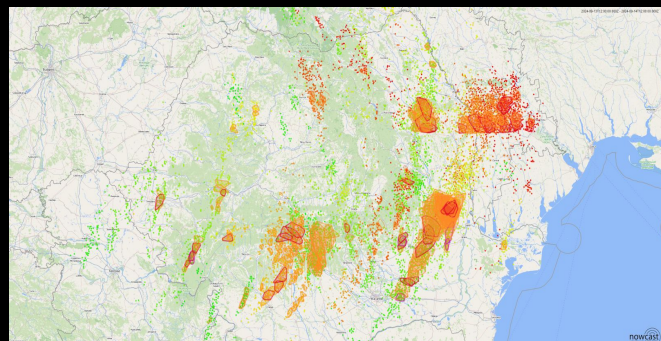
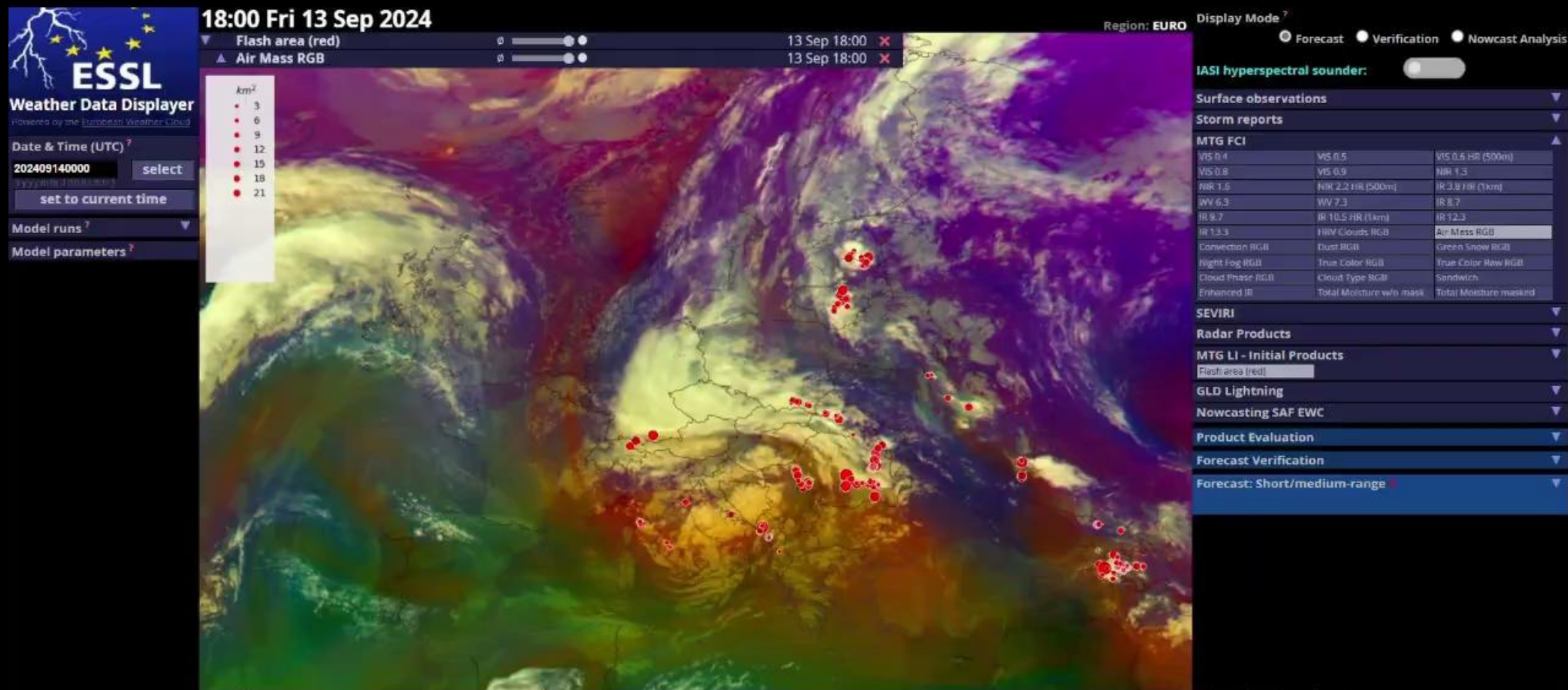
- Range derivative of the differential phase shift along a radial
- Non meteorological echoes aren't shown
- Similar to ZDR
- Used for:
 - Heavy Rain
 - Heavy Rain mixed with hail
 - Cold vs. Warm Rain

Particle Concentration

KDP = 0, KDP = (+), KDP = (-)

KDP = (+), KDP = (-)



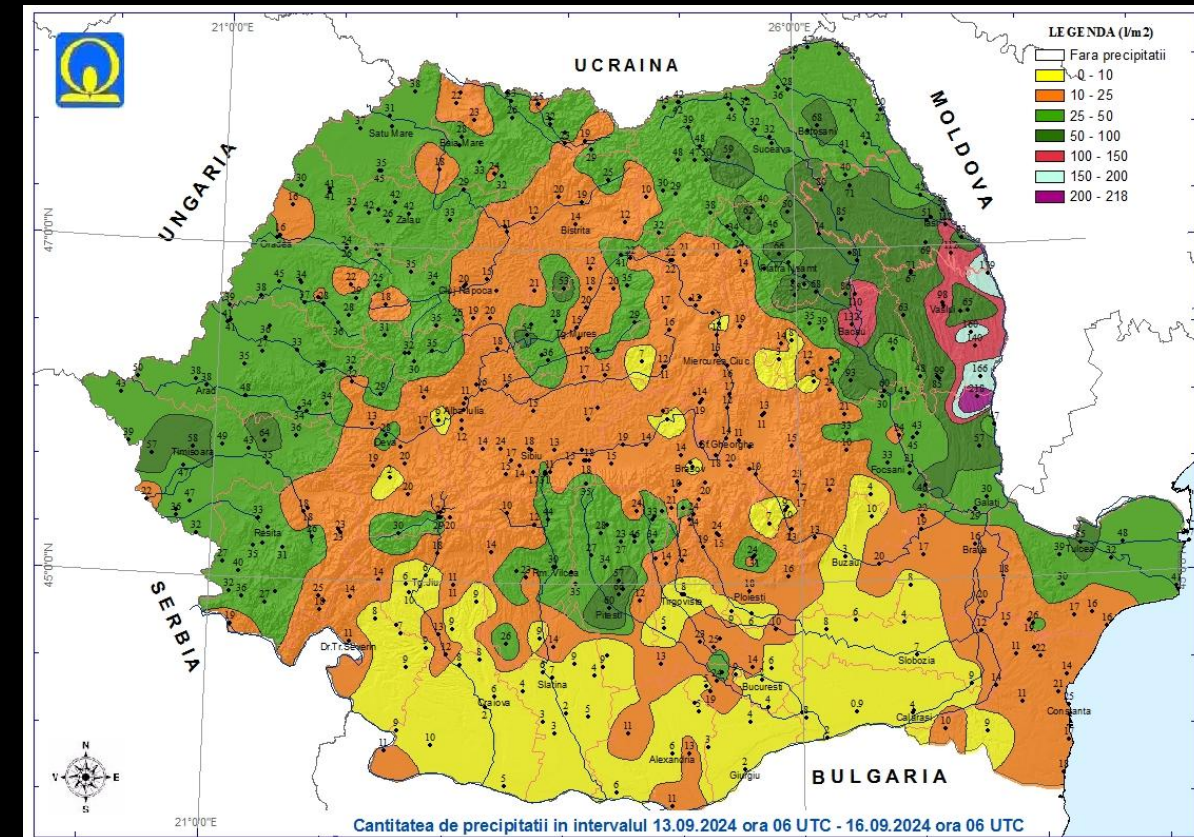
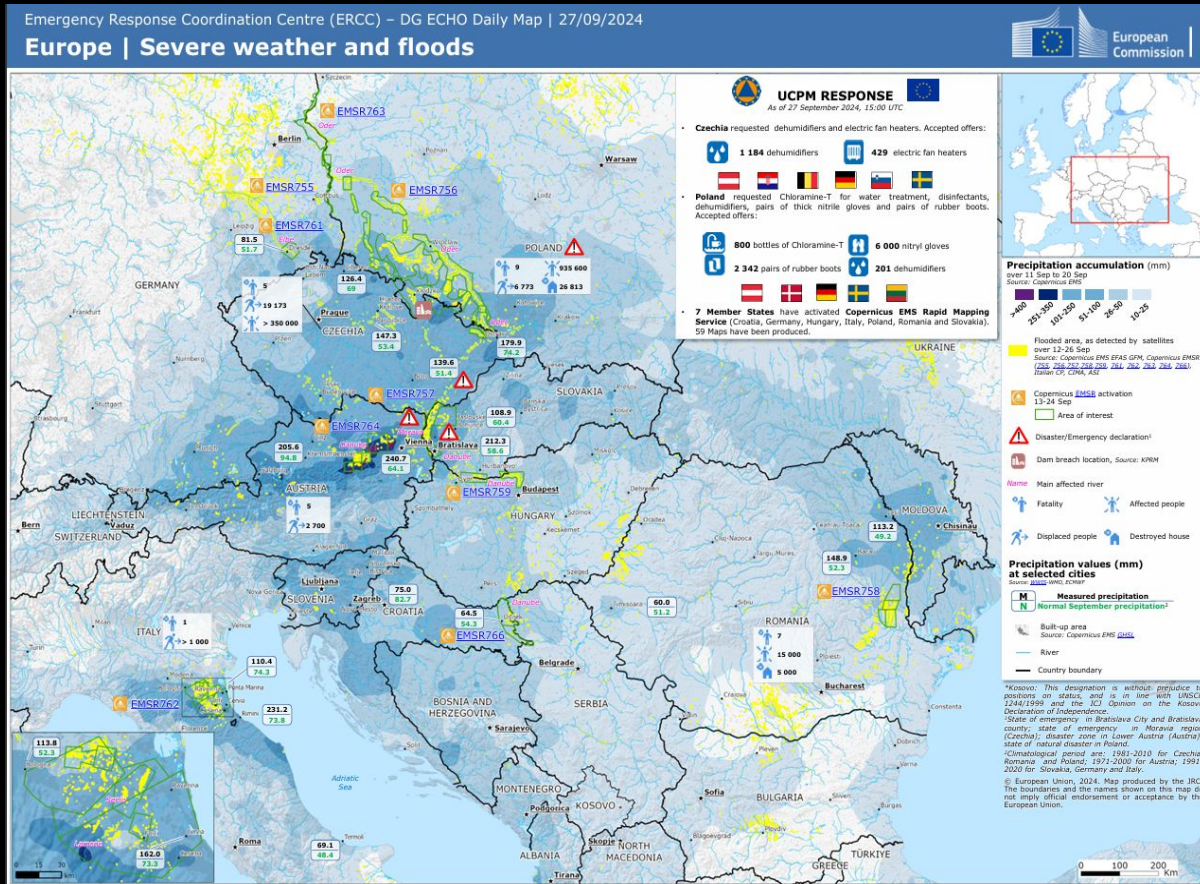


LINET view – Lightning

Detection Visualisation

Conclusions

- Floods in Romania were caused by the existence of a cyclone which evolved in the central-east part of Europe and fueled continuously from the Black Sea surface.
- the retrograde development of this cyclone was caused by a blockage in the atmospheric pressure field, both from eastern and central-western part of the continent
- precipitation bands who followed the next days had caused a “train effect” , causing important floods in eastern Romania.



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