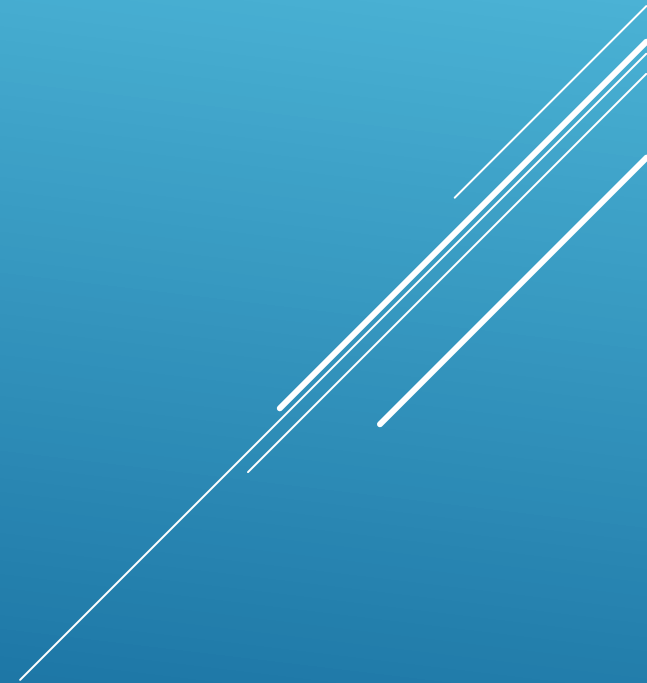


**WINDS IN LITHUANIA AND BALTIC STATES
DURING THE PERIOD 1961–2023 IN
RETROSPECT**



Criteria of winds in LITHUANIA:

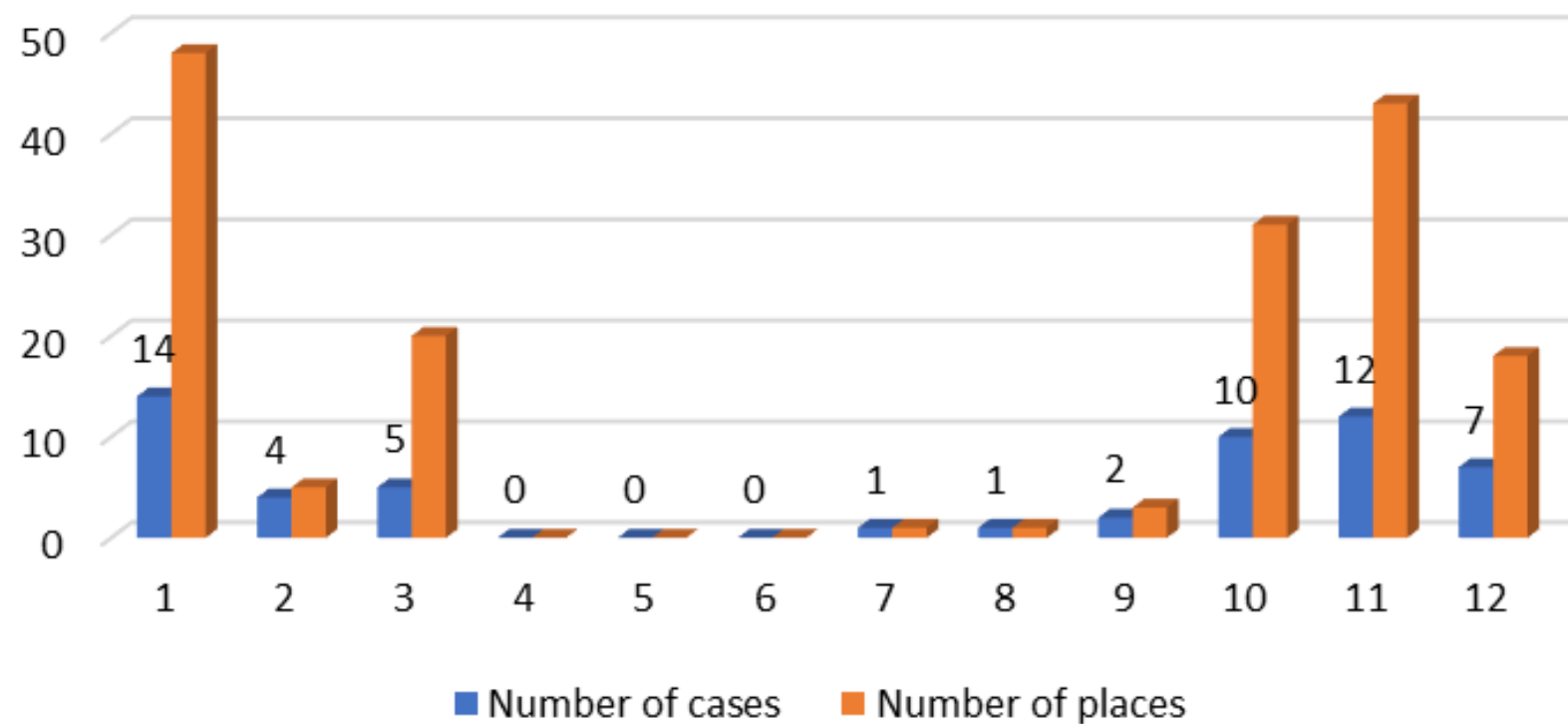
- ▶ Strong – $\geq 15 \dots < 28$ m/s
- ▶ Very strong – $28 \dots < 33$ m/s
- ▶ Catastrophic – ≥ 33 m/s

Statistics 1961–2023

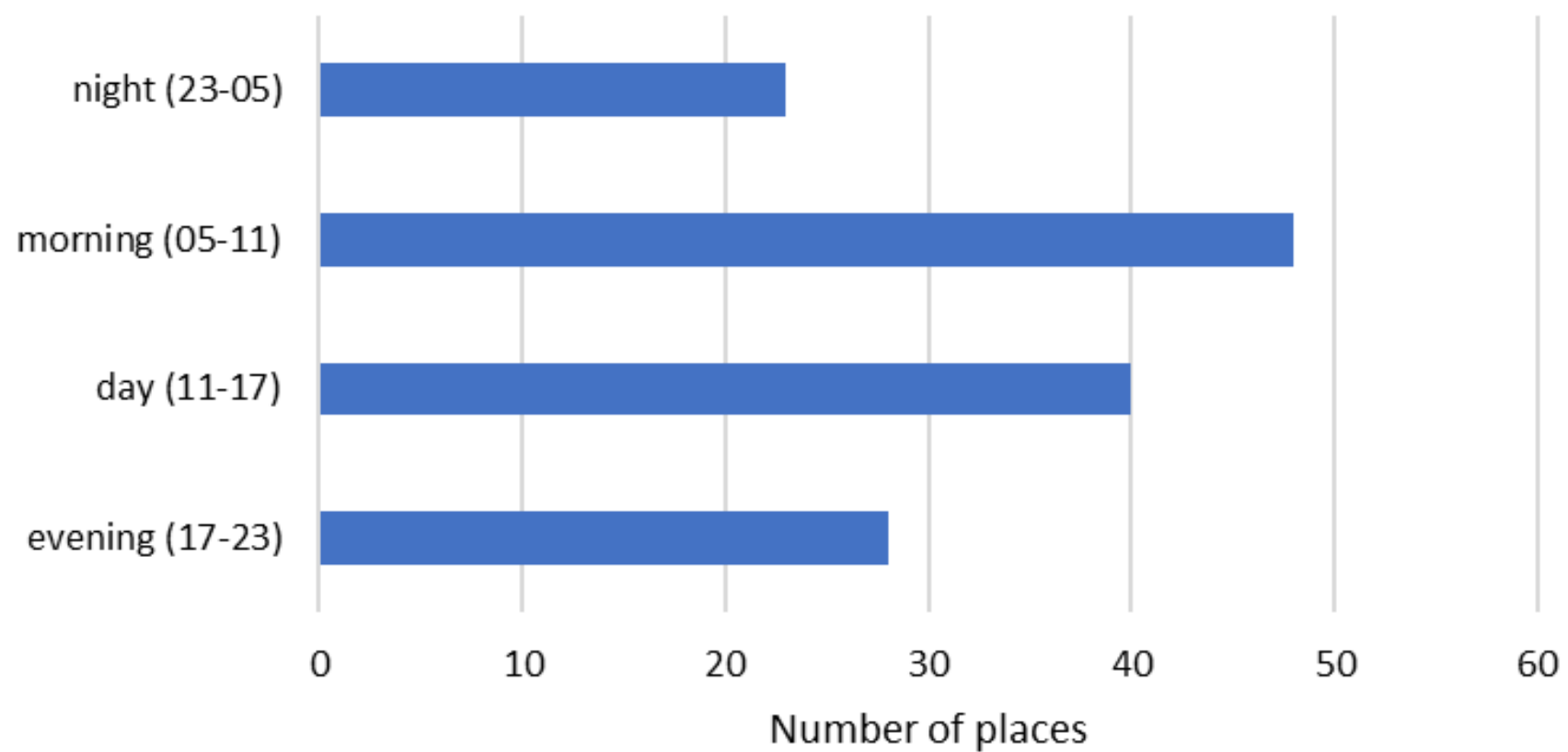
66 cases in 183 observation sites:

$\geq 28 \dots < 33$ m/s	in 134 sites (73 %)
$\geq 33 \dots < 37$ m/s	in 37 sites (20 %)
≥ 37 m/s	in 12 sites (7 %)

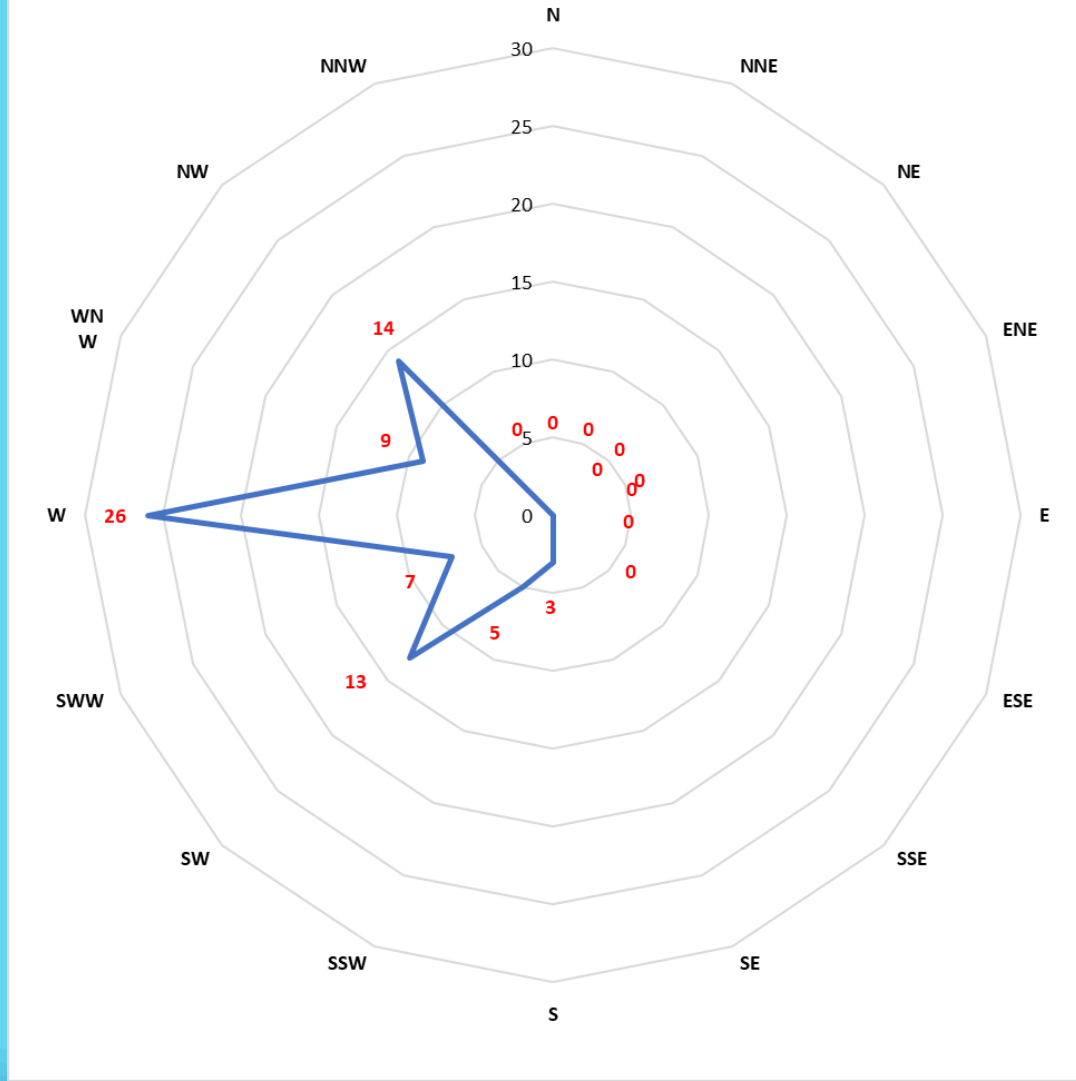
Monthly distribution of very strong winds in 1961–2021

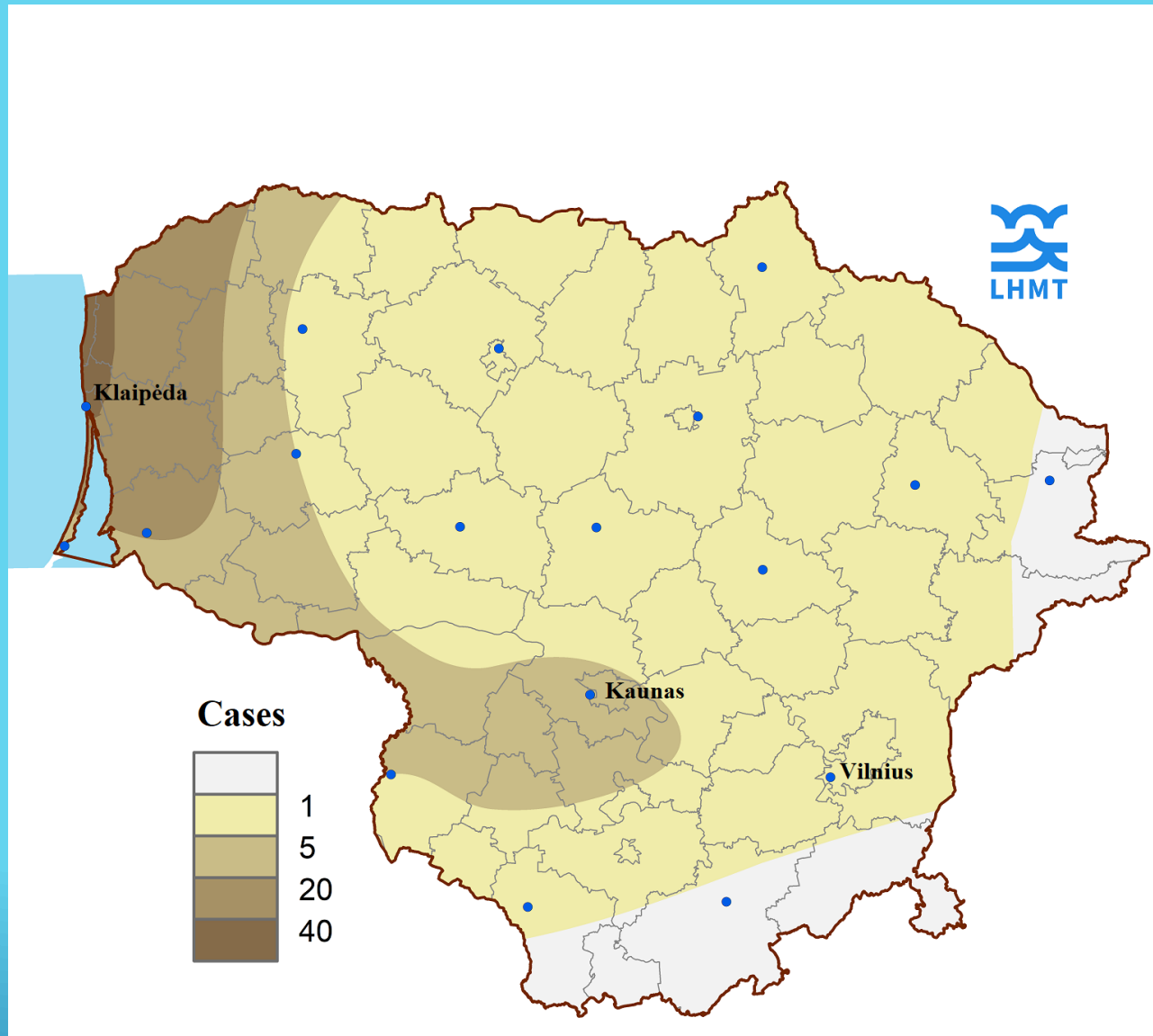


Distribution by time

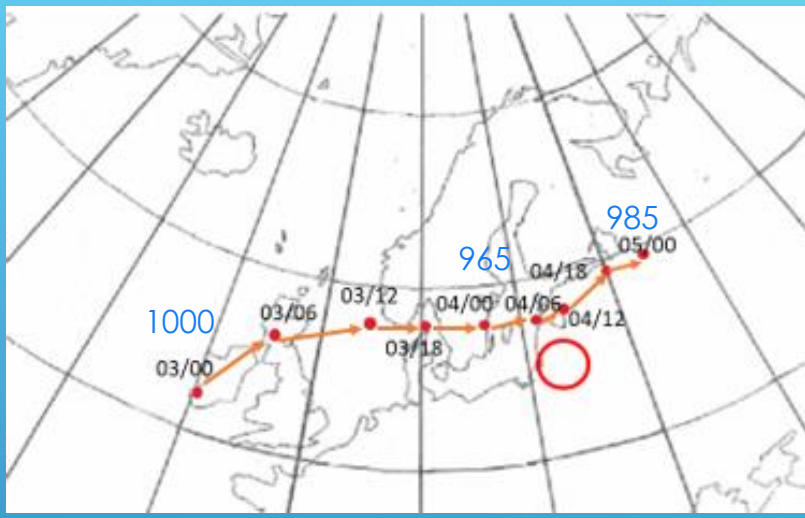


Prevailed wind direction and number of cases

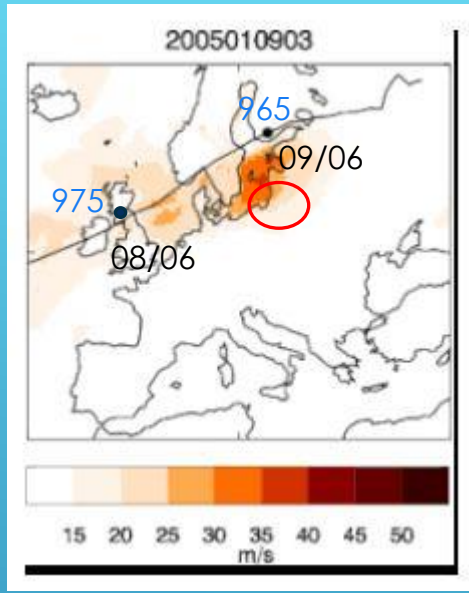




DISTRIBUTION OF WIND CASES



“Anatolij”, 04/05-12-1999, 40 m/s



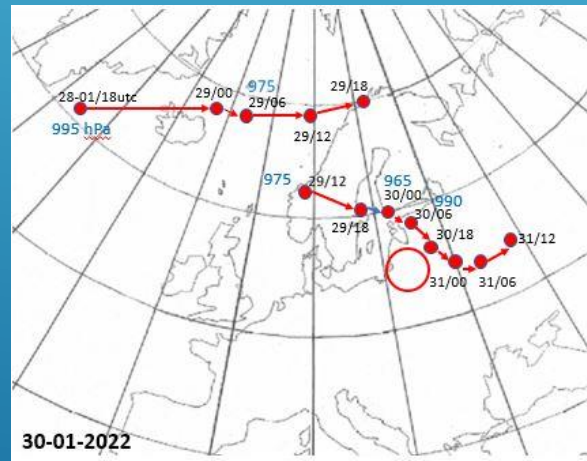
“Erwin”, 09-01-2005, 32–37 m/s



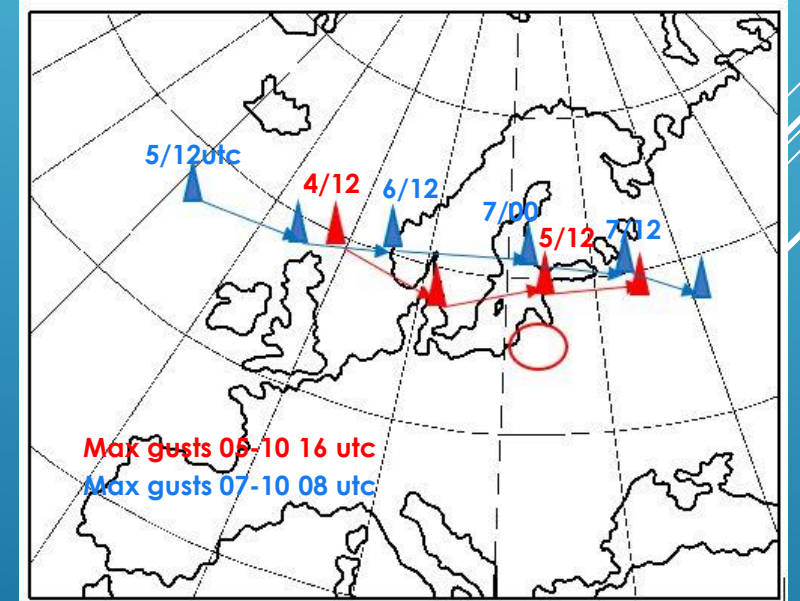
“Per”, 14/15-01-2007, 32 m/s



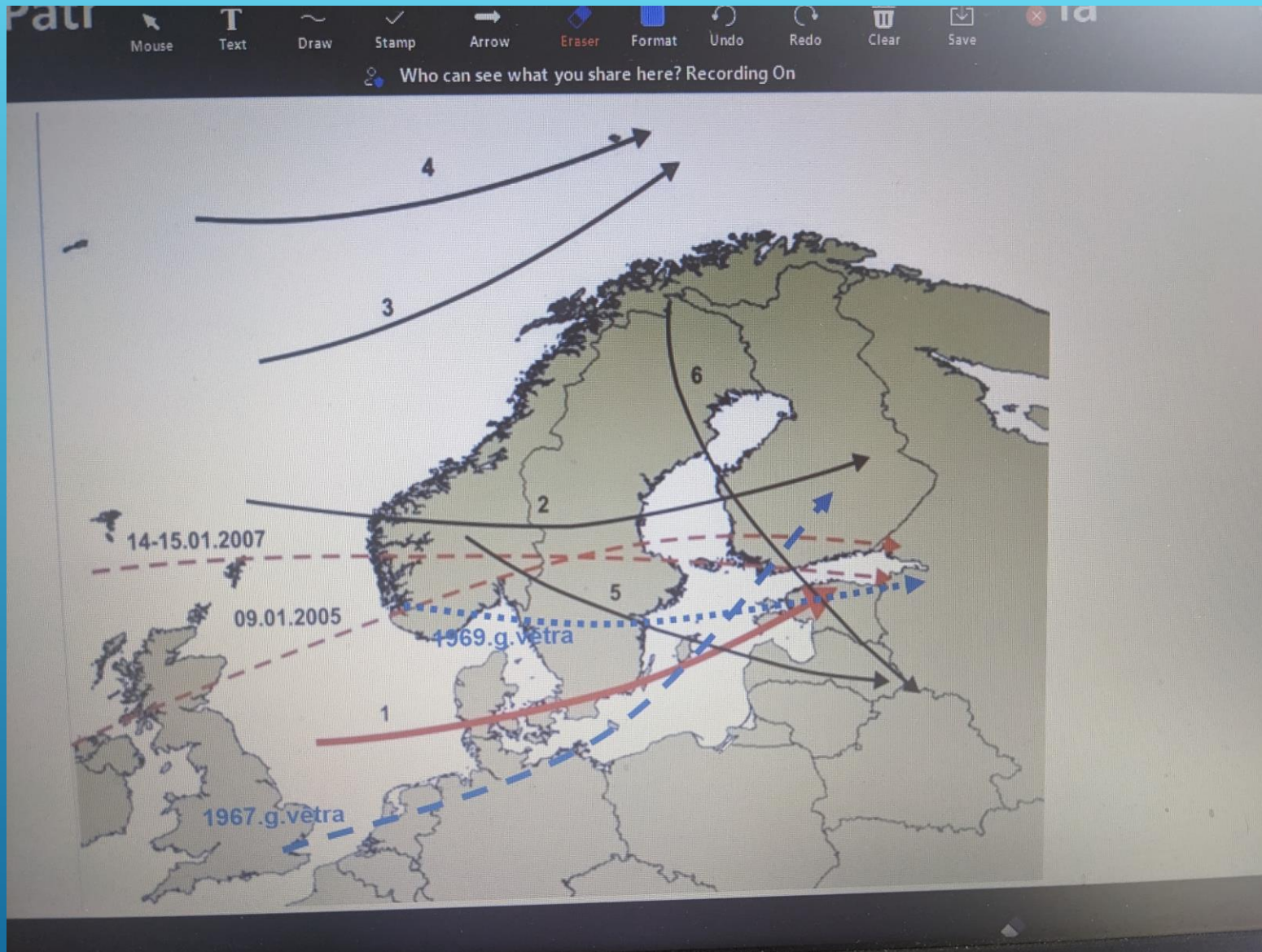
“Felix”, 11-01-2015, 31 m/s



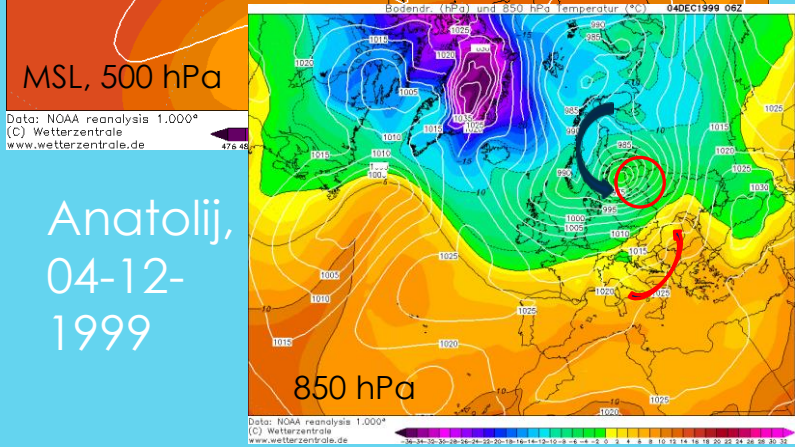
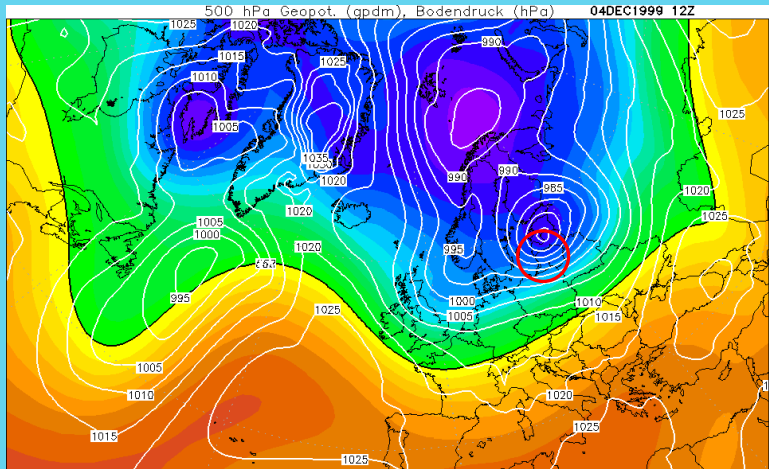
“Malik”, 30-01-2022, 35 m/s



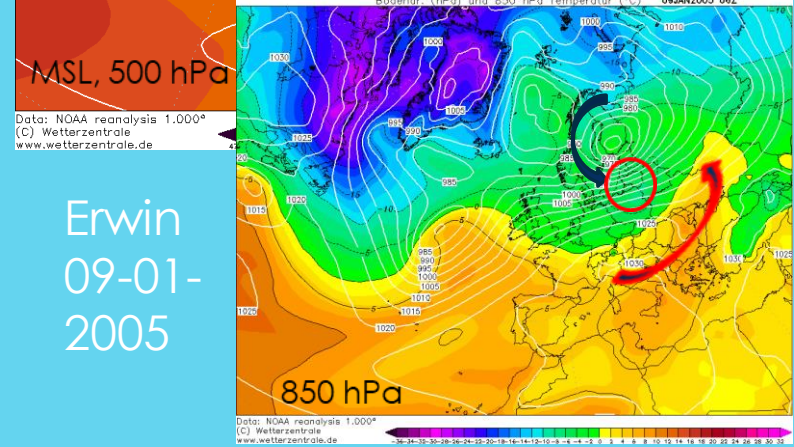
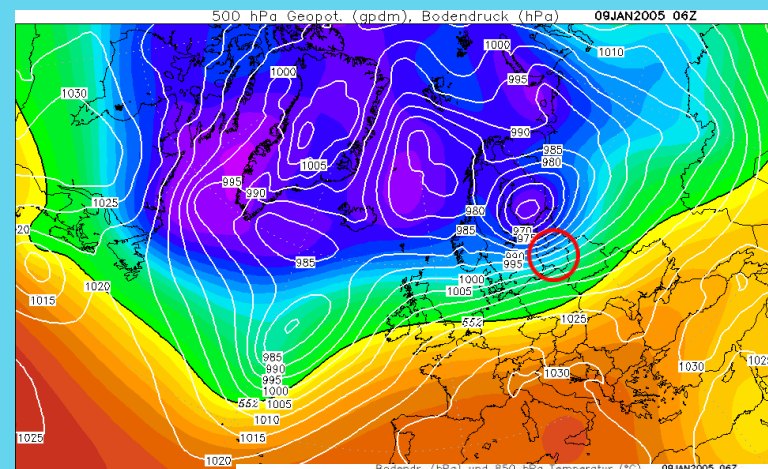
TRACKS OF THE MOST POWERFUL CYCLONES



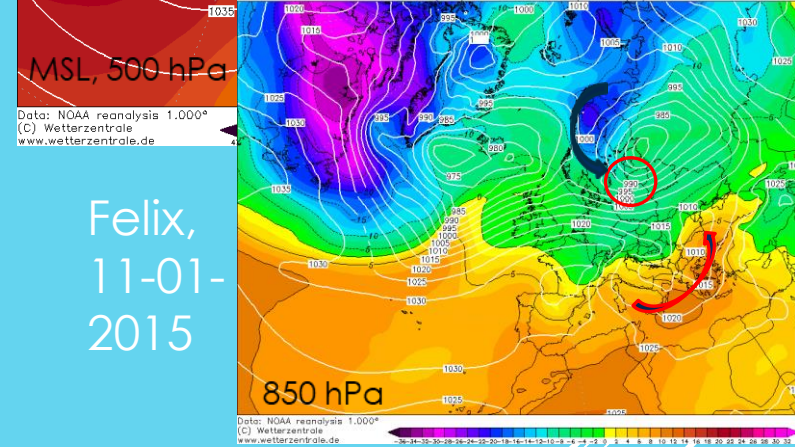
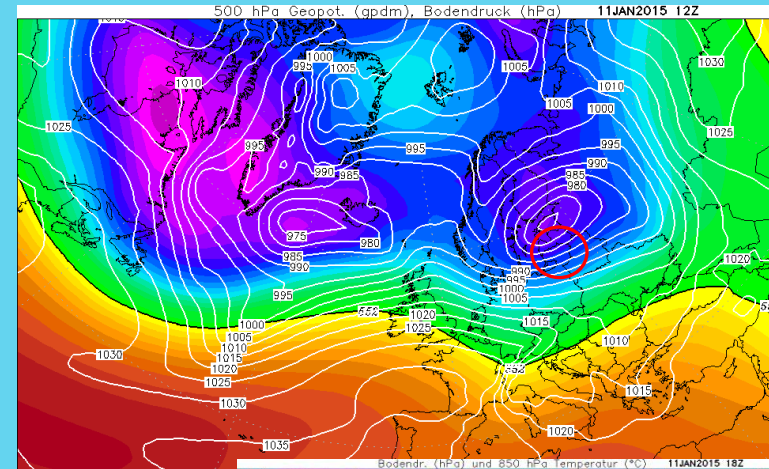
GUSTS IN LATVIA (BY K. PAPS)



Anatolij,
04-12-
1999



Erwin
09-01-
2005

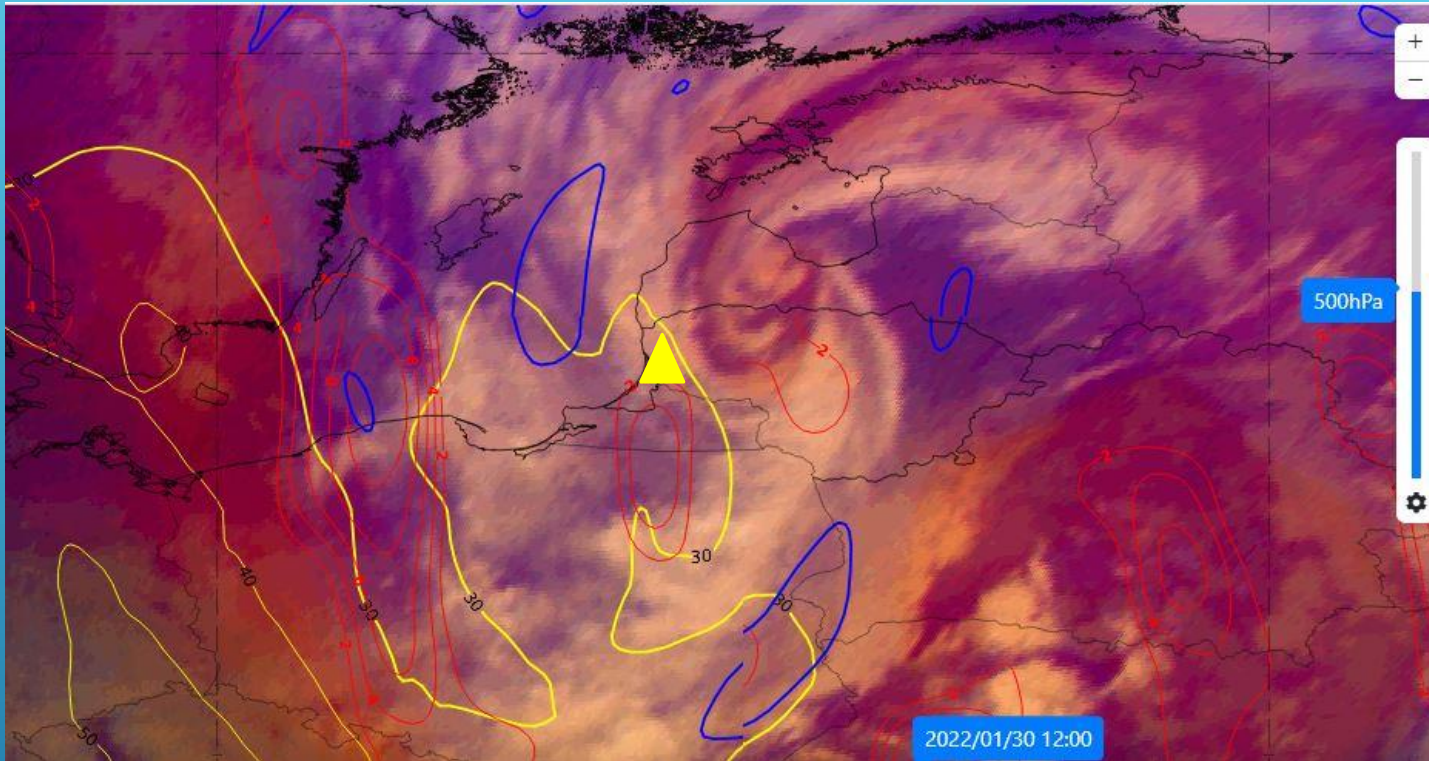


Felix,
11-01-
2015

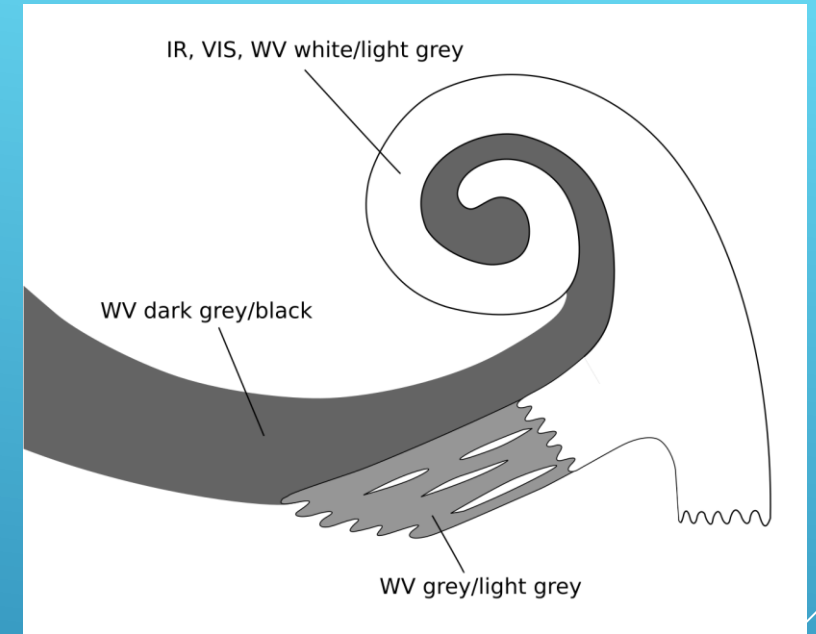
TYPICAL SYNOPTIC SITUATIONS (AT MSL, 850 HPA AND 500 HPA)

VERY POWERFULL WINDS IN 2022–2023

- **2022:**
- **14 January** (28–36 m/s)
- 17 January (28–29 m/s)
- 20 January (28–31 m/s)
- **30 January** (29–35 m/s) (storm “Malik”)
- **2023:**
- 18 February - 29,9 m/s)
- 4 October - 28,7 m/s (squall)
- 5 October - 28,6 m/s
- 7 October – 28,3 m/s

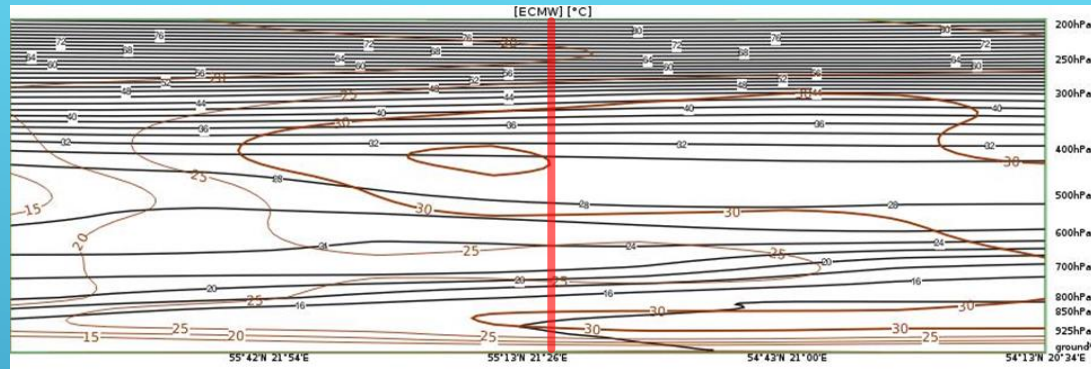


30-01-2022

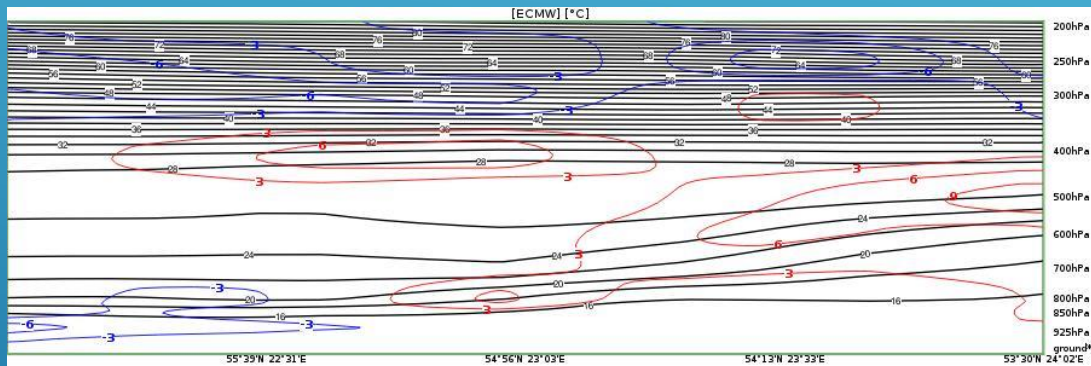


RaCy
 CAD
 CF
 Comma

SATELLITE DATA AND PHYSICAL PARAMETERS (ECMWF)



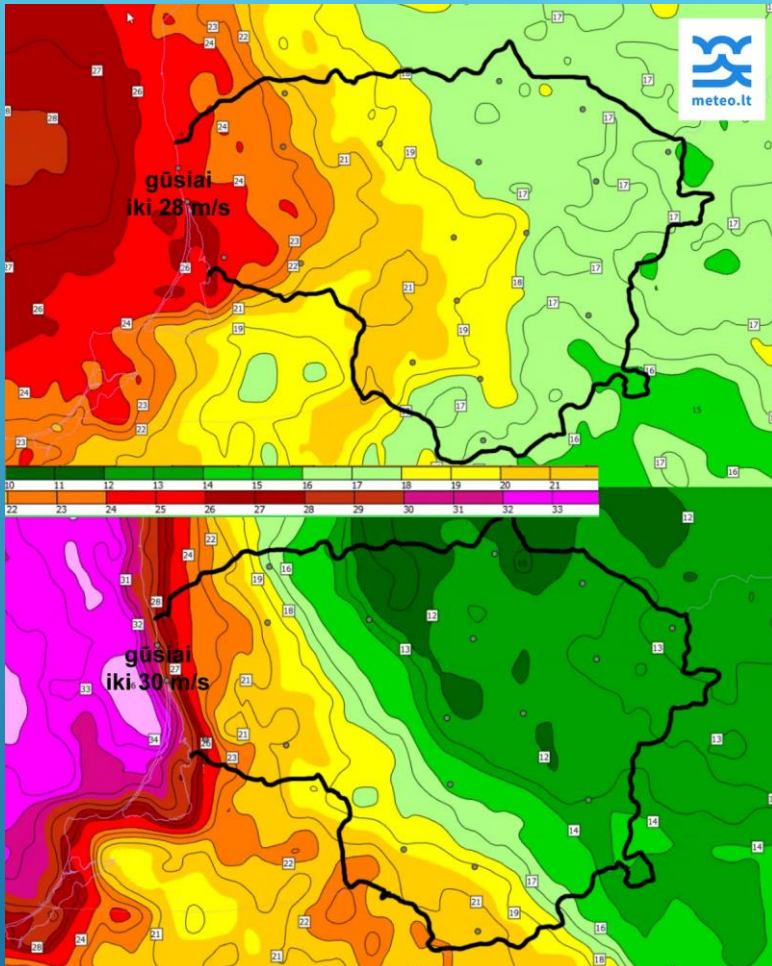
Cross-Section from map **Equivalent Potential Temperature** and **Isotachs**
for 56°12'N 22°22'E - 54°13'N 20°34'E, valid 30.01.2022 12:00



Cross-Section from map **Equivalent Potential Temperature** and **Temperature Advection**
for 56°22'N 21°59'E - 53°30'N 24°02'E, valid 30.01.2022 12:00

VERTICAL PROFILES (ECMWF)

FORECAST



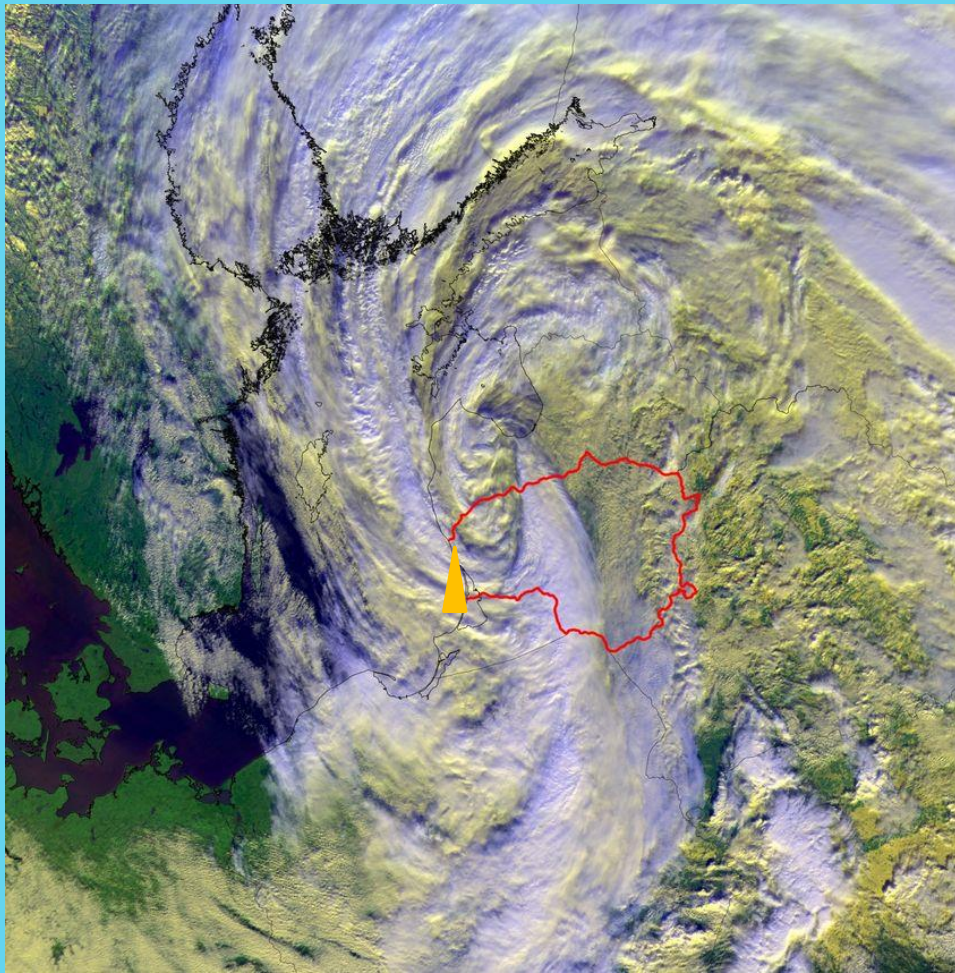
At night

30-01-2022

At day

ECMWF forecast (MSL, 850, 500 hPa) was accurate 10 days (30 Jan) before the event; Forecast/warning at LHMS issued 2 days in advance

Harmony 00UTC run



...ON 30 OF JANUARY

Look at:

- ▶ Cyclone track – fact/forecast
- ▶ Monitor the cyclogenesis (RaCy)
- ▶ Cold air intrusion
- ▶ Jet stream: direction and speed

MAIN RECOMMENDATIONS

A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the top right, set against a blue background.

THANK YOU!

