

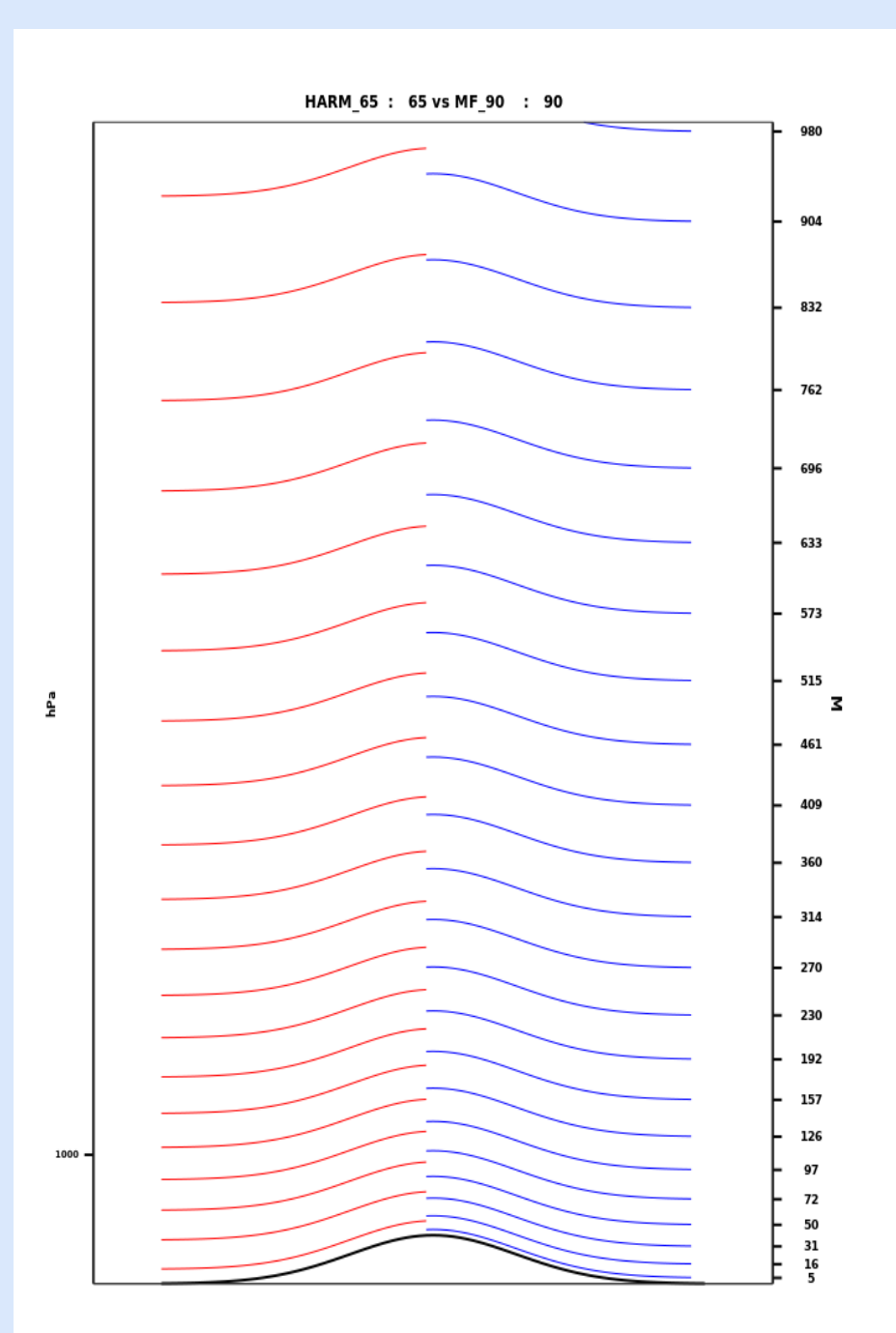
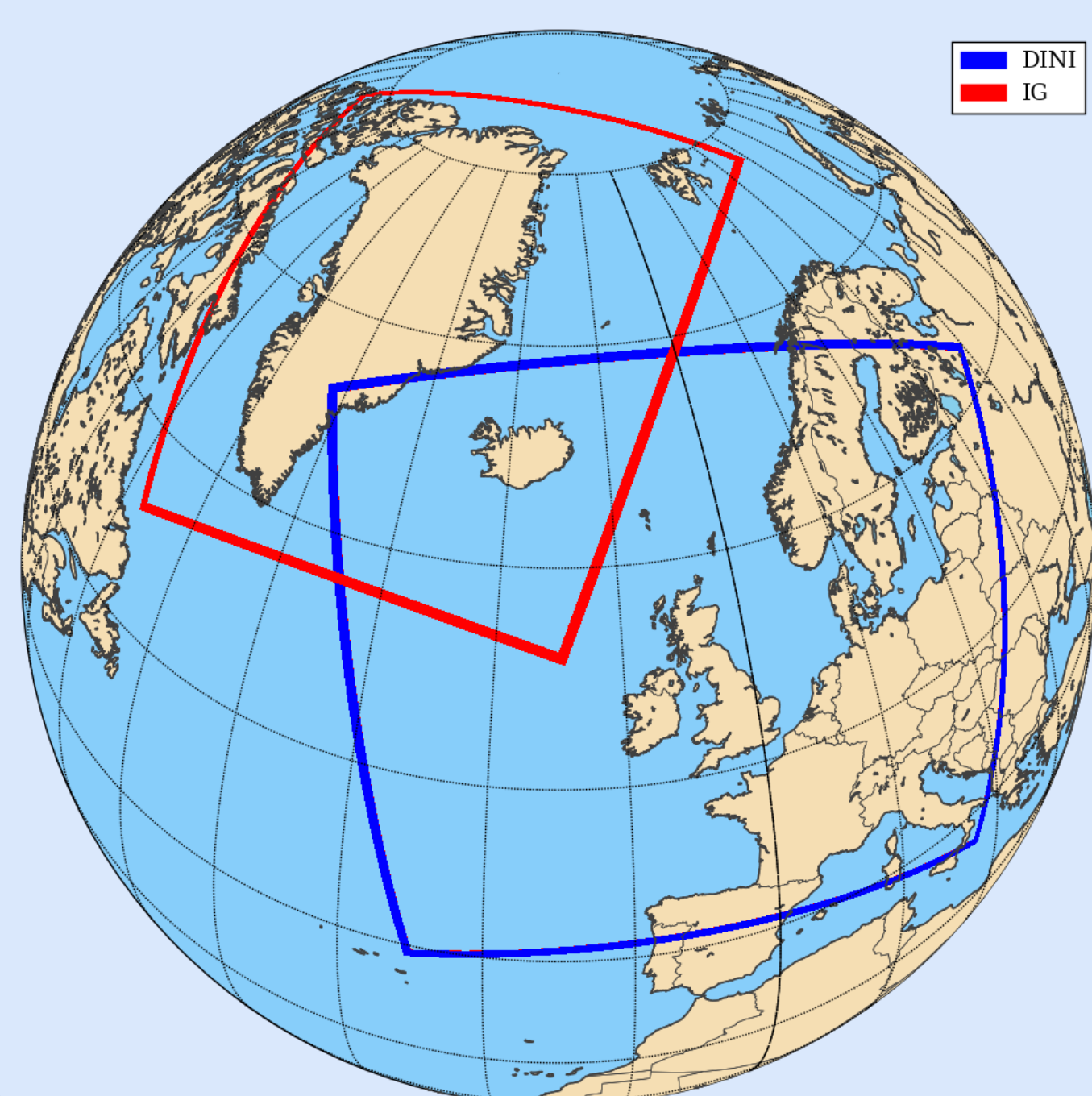


The Collaboration

- United Weather Centres is an operational NWP collaboration between eleven countries
- The operational cooperation between DMI, IMO, Met Éireann and KNMI is called UWC West.
- UWC West went live on March 19th, 2024
- Common Operational NWP on HPE supercomputer hosted by the Icelandic Met Office

Common Operations – Cycle 43

- DINI: “Continuous” EPS on DINI
- IG: Deterministic
- Model configuration:
 - Harmonie-Arome 43h2.2
 - 2.0 km grid-spacing
 - 90 vertical levels (MF90)
 - Single precision for forecast
- 60 h forecast each hour for DINI-EPS
- 72 h forecast every three hours for IG
- 1+5 continuous EPS with hourly updates
 - IFS-ENS (1+30 LBCs)
 - surface perturbations and SPP (5 param.)
- 3D-Var using three-hour window
- Observations assimilated:
 - Conventional, Mode-S EHS (EMADDC), AMV, Scatterometer, AMSU-A, MHS, MWHS2, ATMS, IASI, Radar (OIFS)
- gl used for forecast product processing
- gridPP used for EPS product generation

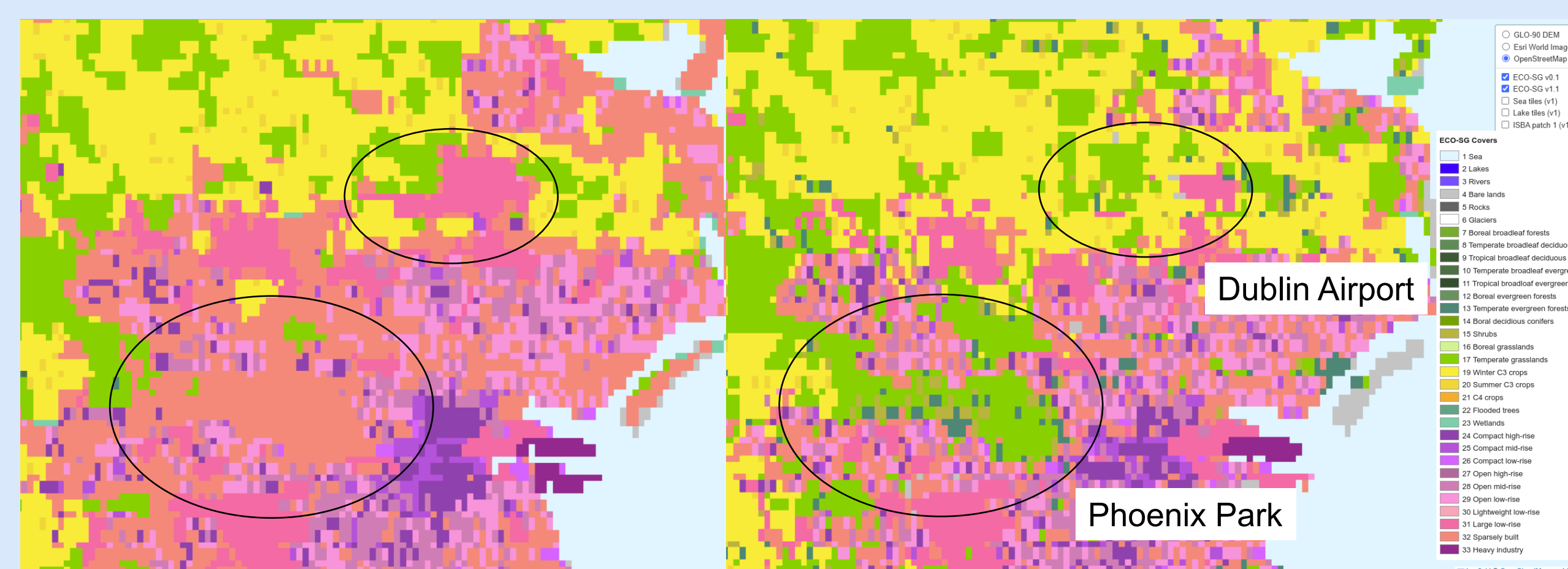


NWP Issues

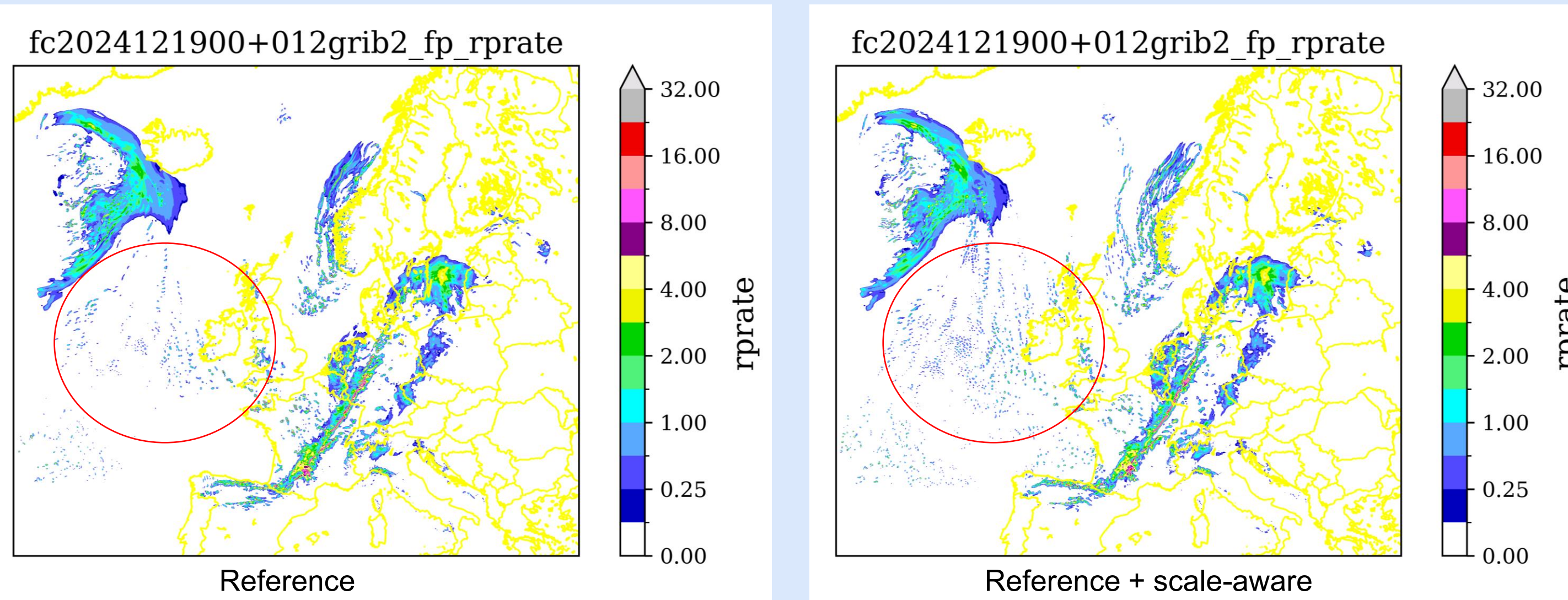
- Frontal clouds optically too thick
- Overestimation of Sc in open cell convection
- Underestimation of Sc in strong inversion
- Shadowing effect on precipitation too strong
- Shallow showers missing $0^{\circ}\text{C} > T_{\text{cltop}} > -15^{\circ}\text{C}$
- Overestimation of fog in spring
- Low temperatures (Jan 2026 - snow)

e-suite – Cycle 46

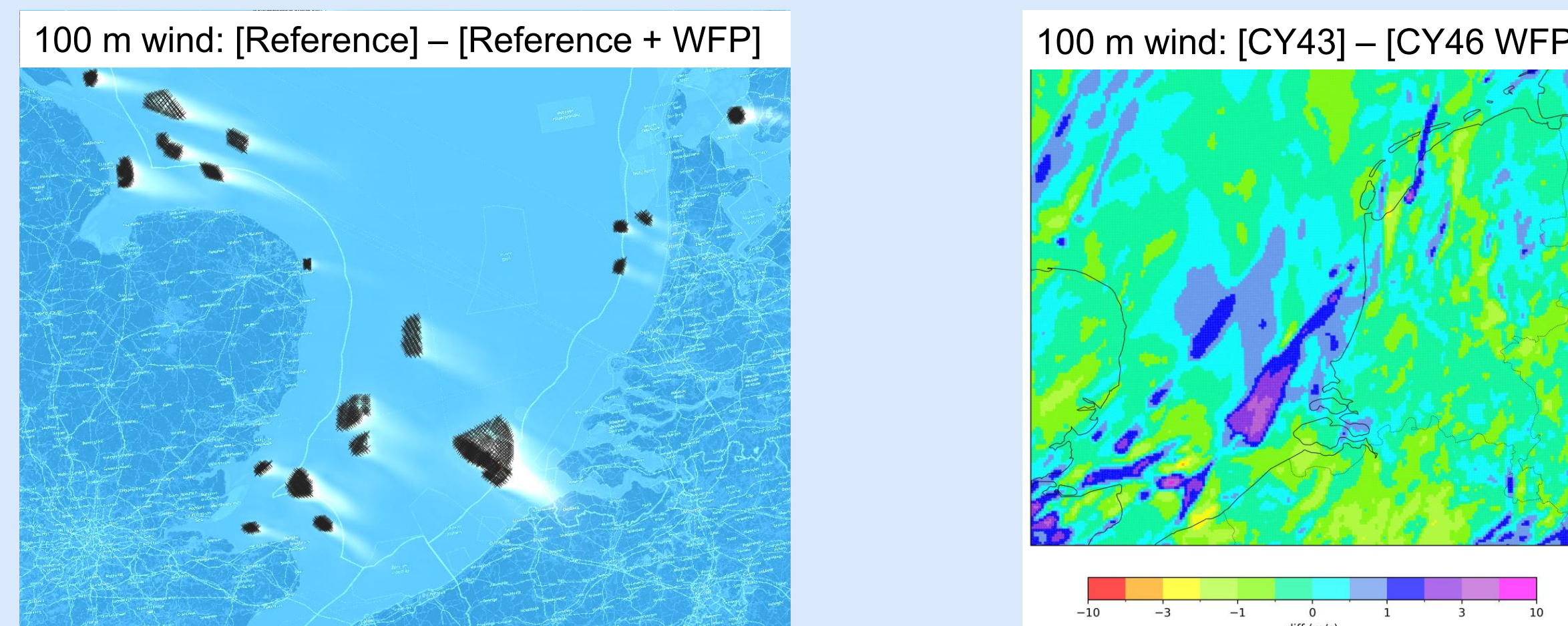
- Configuration approved summer 2025
- Based on Harmonie-Arome 46h1.1.1
- Real-time d-suites since September 2025
- New developments:
 - New physiography and lakes



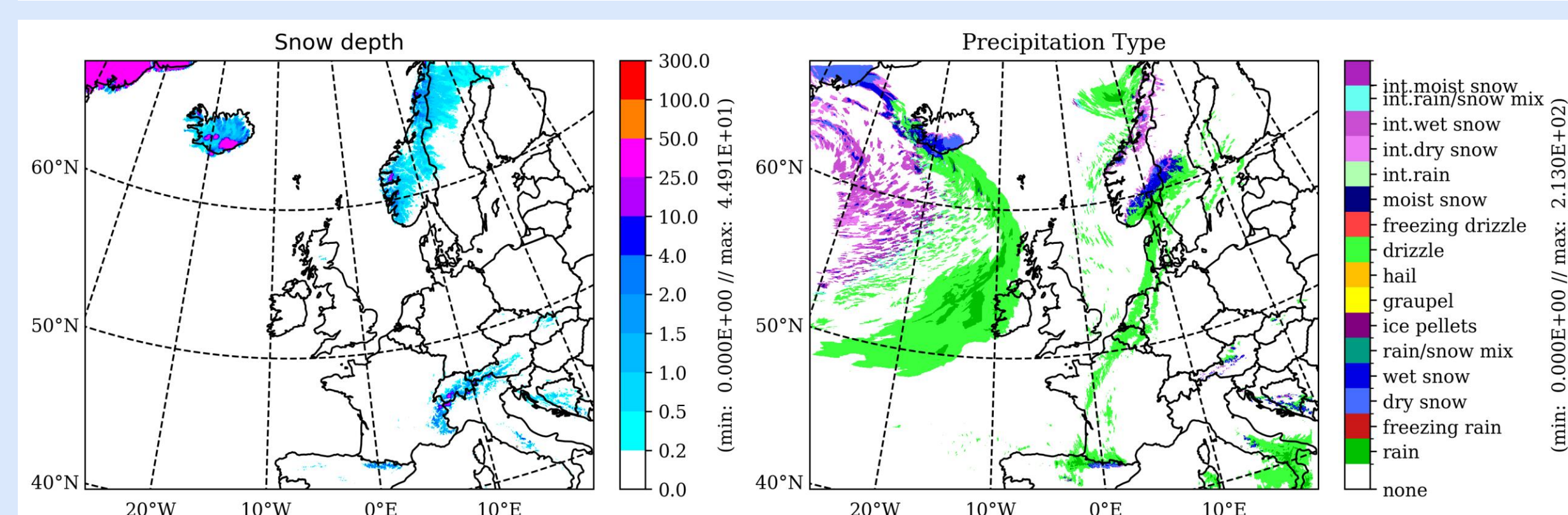
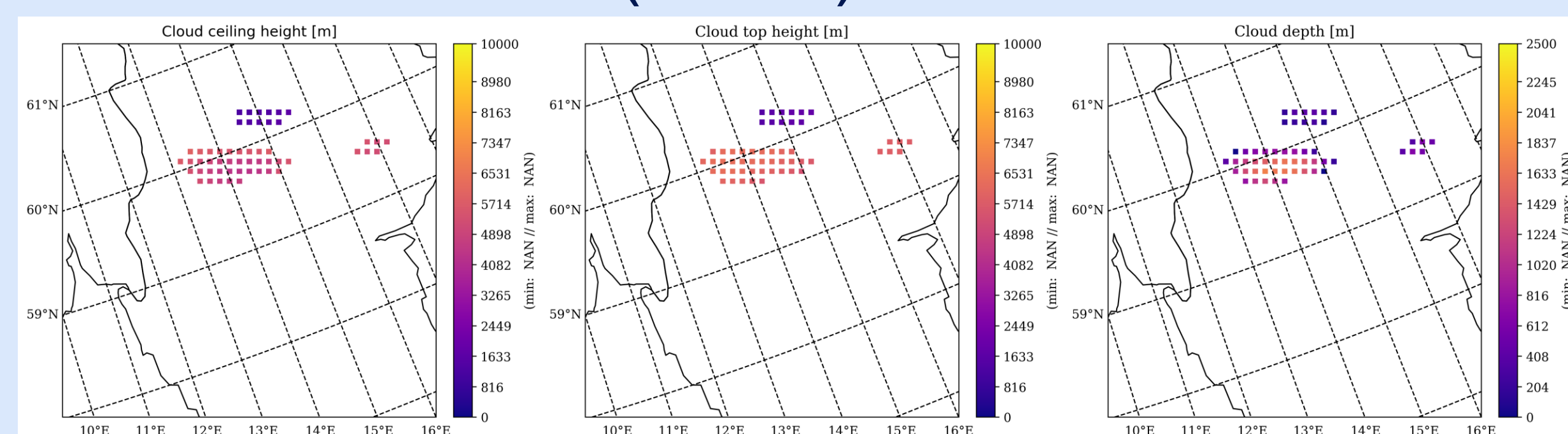
- Scale-aware shallow convection



- Windfarm parametrization



- ECUME6 for sea-surface fluxes
- Update SST/SIC during forecast (LBCs)
- Assimilate screen-level T2/RH2
- Assimilate low-peaking MWRAD channels
- Addresses some forecast issues
 - Shallow convection
 - Springtime evaporation
- Move to FullPOS (WMO) GRIB2 instead of FA



Operational October 2026