Italian Air Force
Met Service

Operational Metorology in Italy

Col. Massimo Ferri

Summary

- The observational infrastructure
- NWP
- Climate / Services

RETE OSSERVATIVA OPERATIVA

QUADRATO: 50 x 50 km
VERDE = COPERTO

Stazioni aeroportuali
Stazioni isolate
Stazioni automatiche DCP
Stazioni aeroportuali + DCP
Stazioni isolate + DCP

RIEPILOGO DELLA COPERTURA:

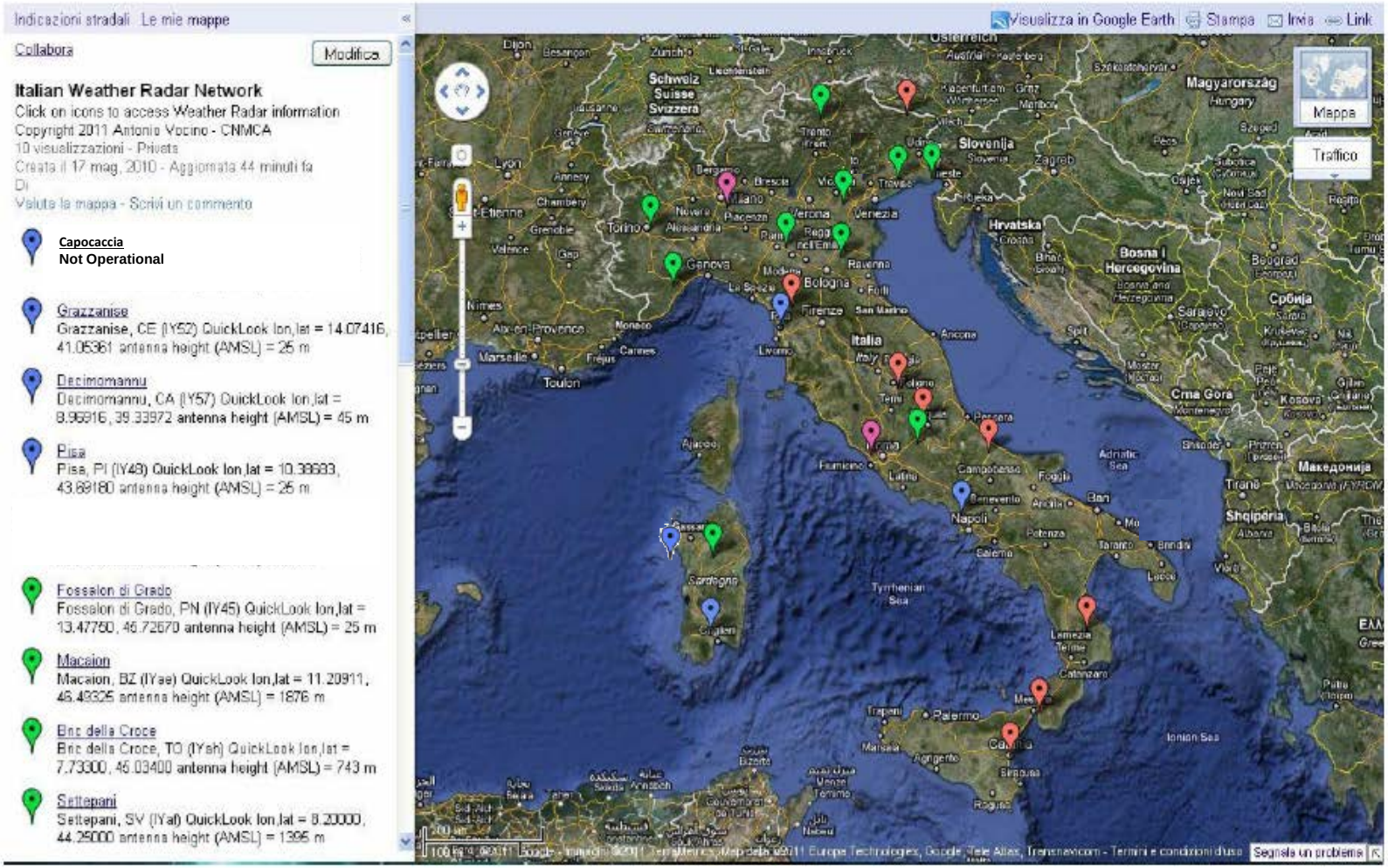
N. QUADRATI : 165
COPERTI: 124

Rete Lampinet

Sistema di accentramento ed Elaborazione rete

Sensori rete IMPACT

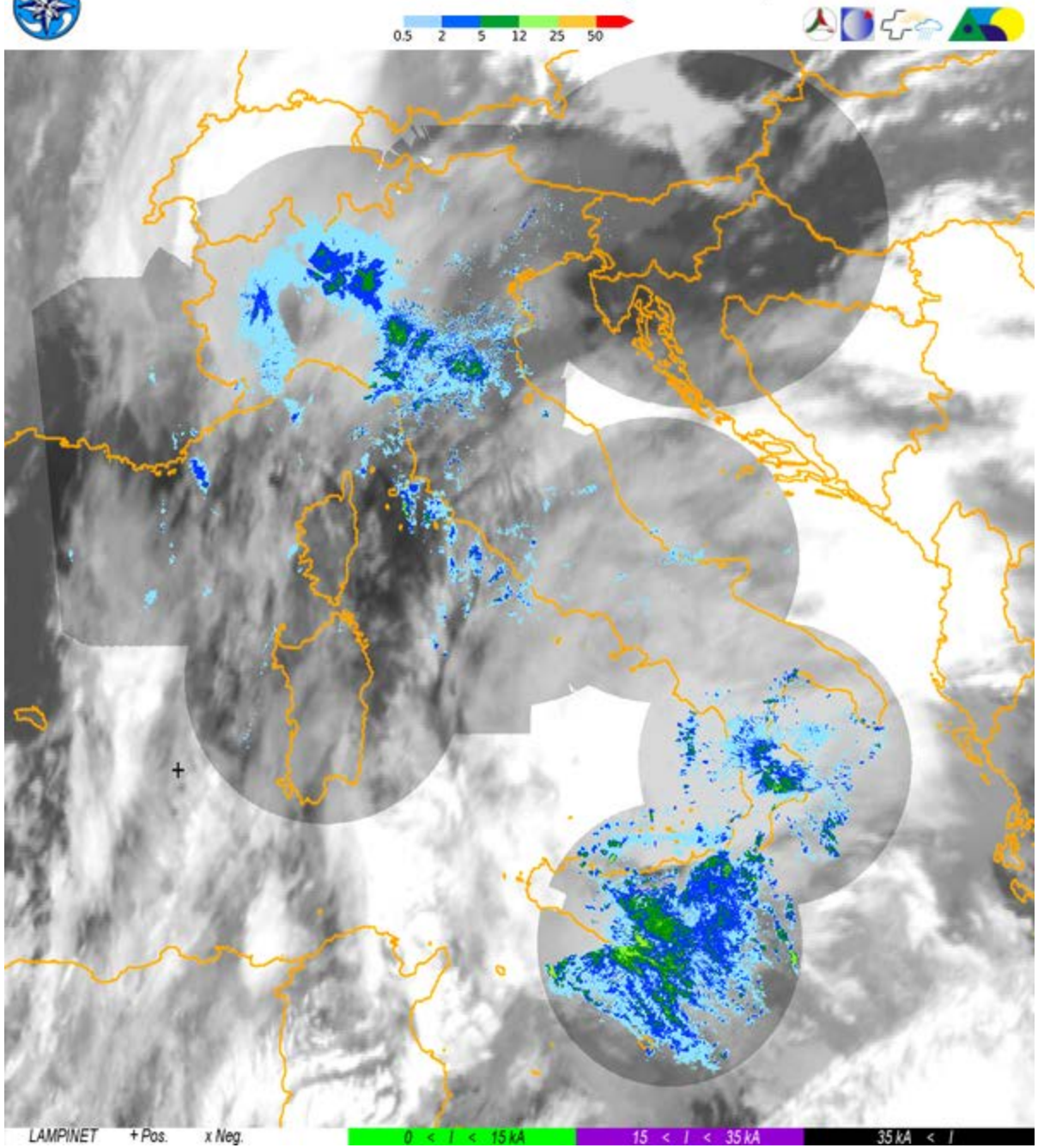
NATIONAL RADAR NETWORK



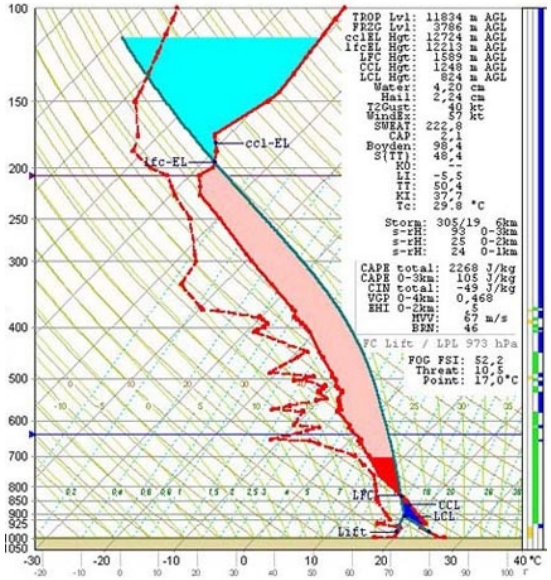
24 RADARs:

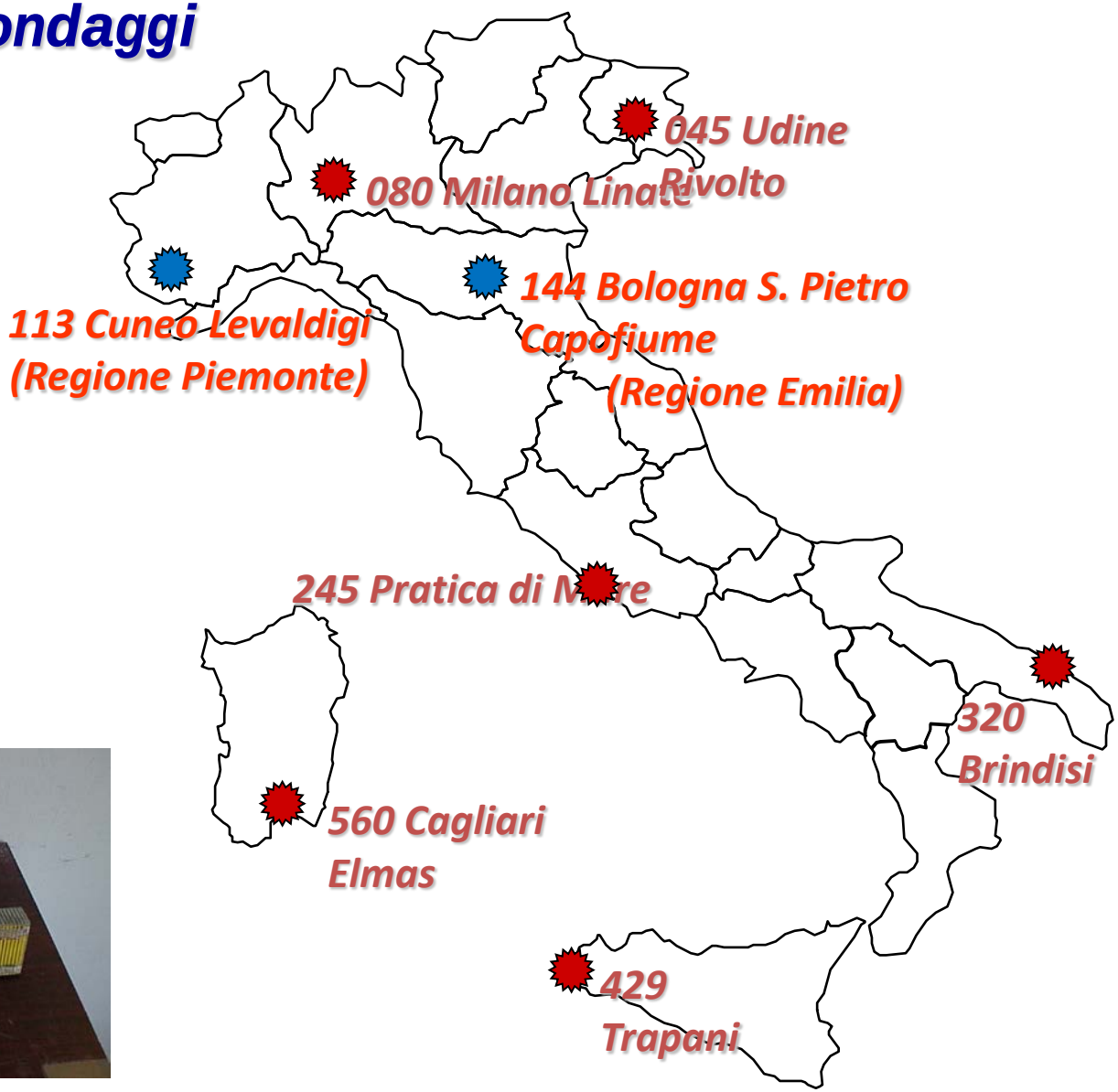
IT.A.F. (4)
Regional (10)
D.P.C. (8)
E.N.A.V. (2)

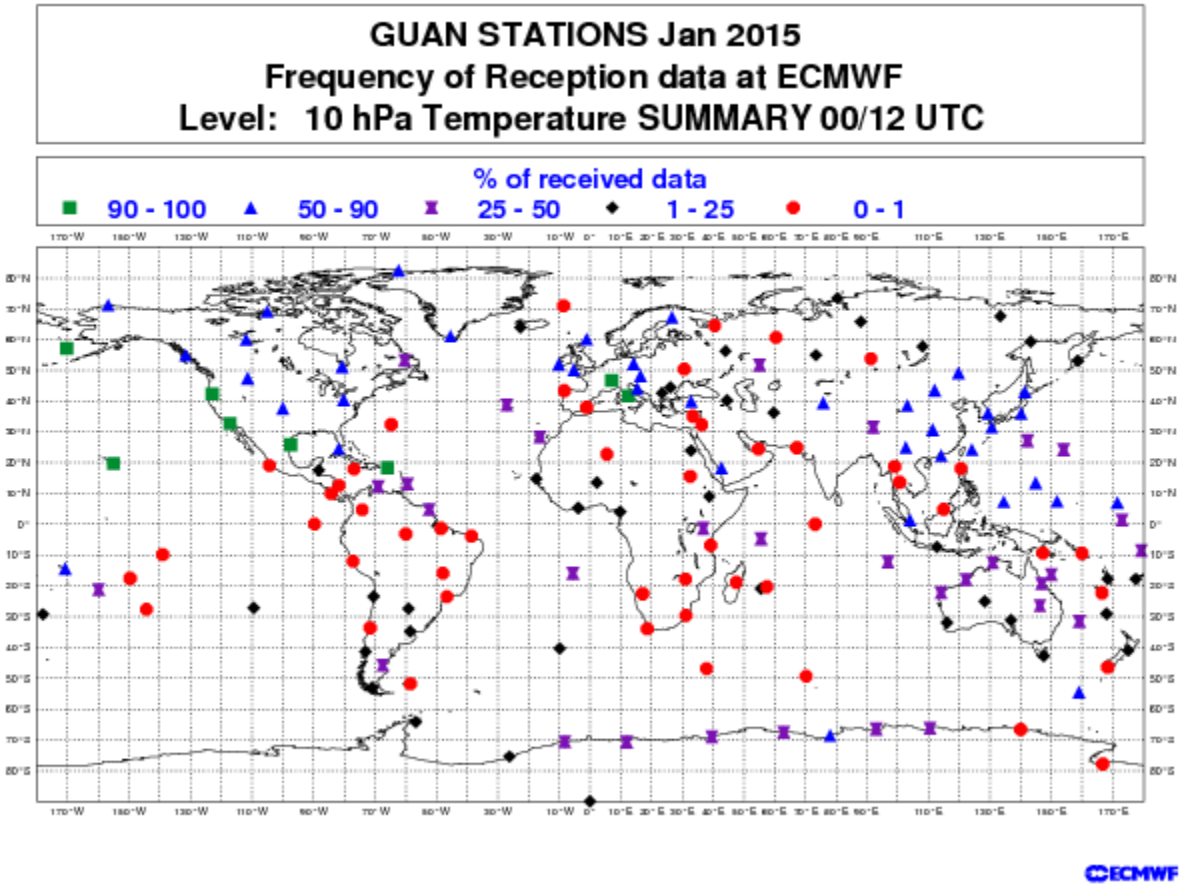
ITALIA 21-02-2015 22:10 UTC - Radar SRI mm/h + IR 10.8μ + Lampinet

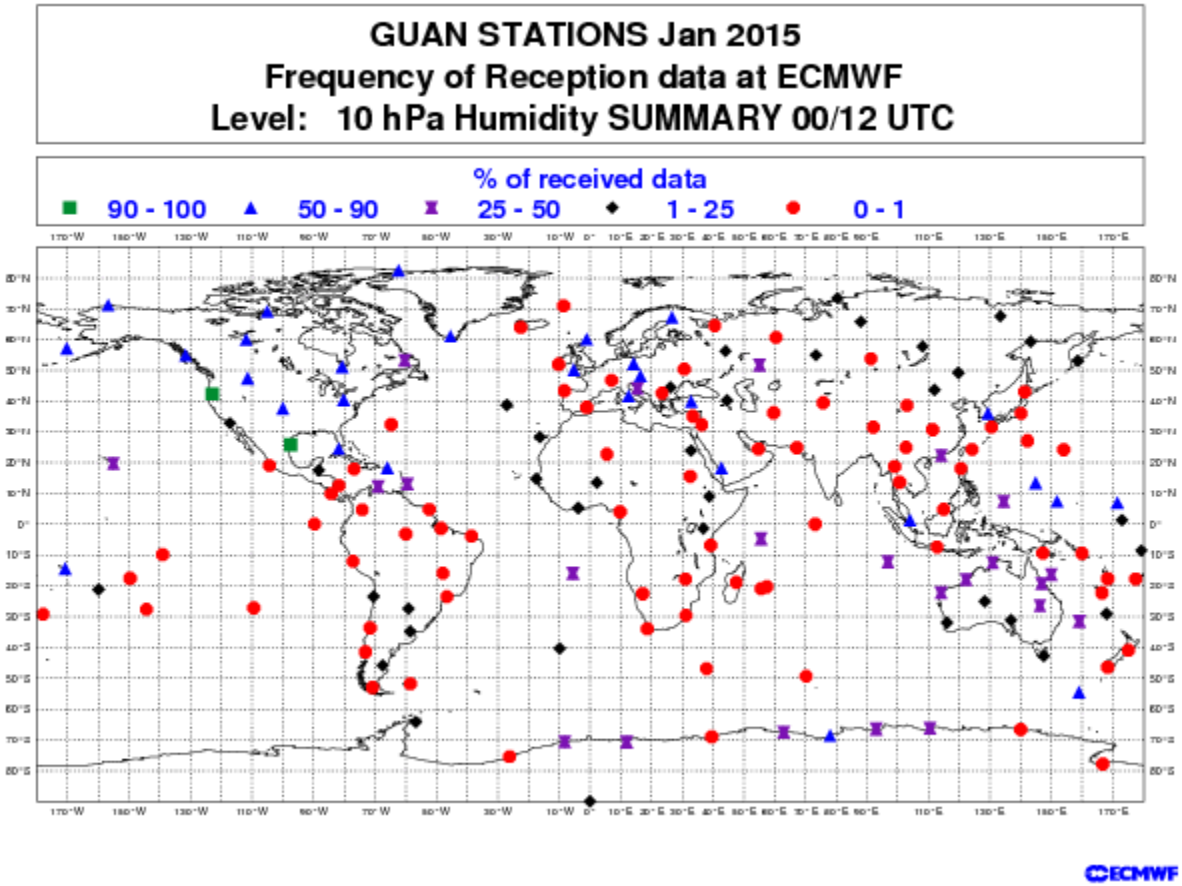


Rete per gli aerosondaggi






GUAN STATIONS Jan 2015
Frequency of Reception data at ECMWF
Level: 10 hPa Temperature SUMMARY 00/12 UTC
% of received data
90 - 100
50 - 90
25 - 50
1 - 25
0 - 1
ECMWF


GUAN STATIONS Jan 2015
Frequency of Reception data at ECMWF
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50 - 90
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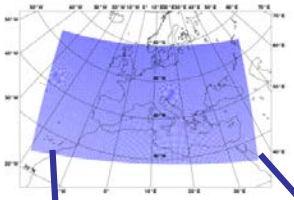
1 - 25
0 - 1
ECMWF

CNMCA OPERATIONAL NWP SYSTEM

LETKF ensemble analysis (40+1 members) every 6h using RAOB (also 4D), PILOT, SYNOP, SHIP, BUOY, Wind Profilers, AMDAR-ACAR-AIREP, MSG3-MET7 AMV, MetopA-B/Oceansat2 scatt. winds, NOAA/MetopA-B AMSUA/MHS/ATMS radiances
+ Land SAF snow mask,
IFS SST analysis once a day

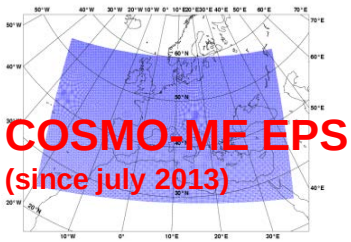
Ensemble Data Assimilation (since june 2011)



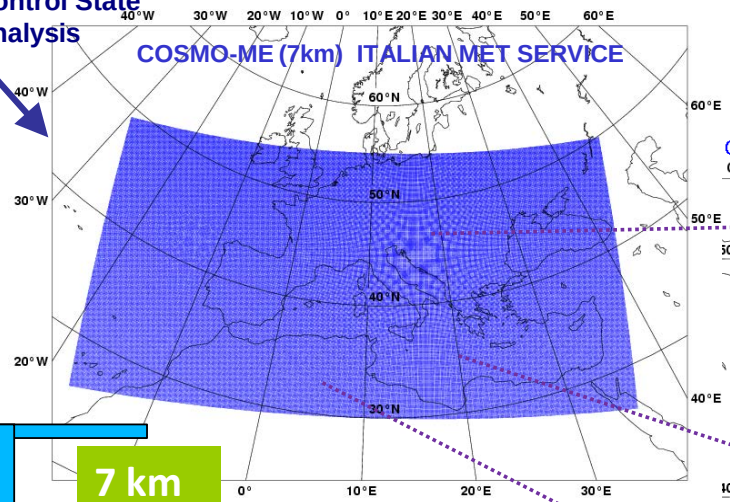
10 km
45 v.l.

Control State Analysis

LETKF Analysis

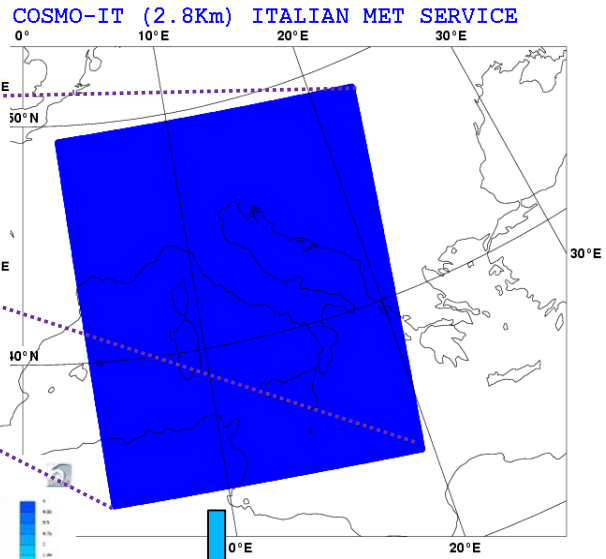


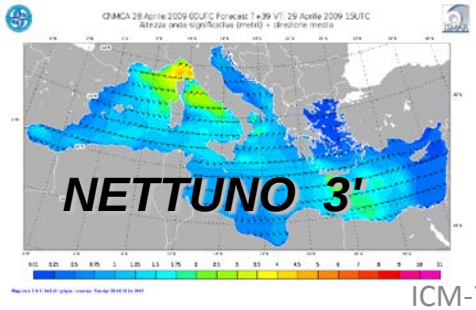
COSMO-ME EPS
(since july 2013)

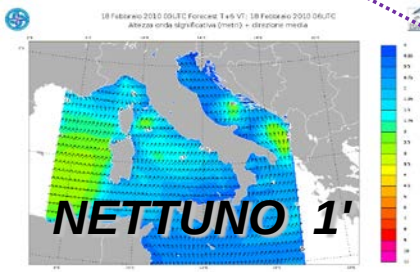


7 km
40 v.l.
- compressible equations
- parameterized convection

2.8 km
65 v.l.
- compressible equations
- explicit convection





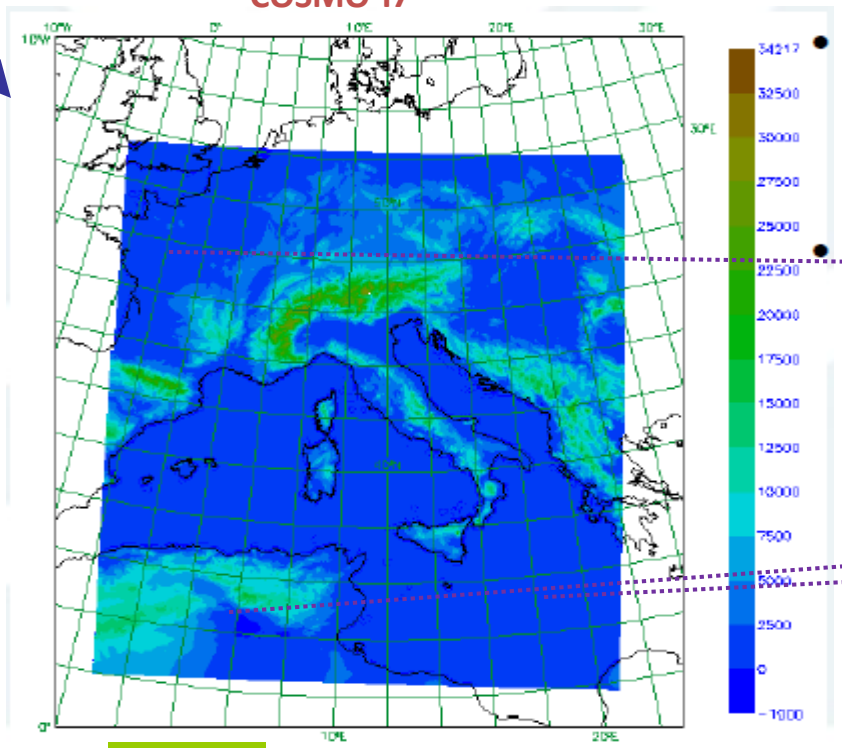


LAMI NATIONAL COOPERATION

(USAM, ARPA-ER, ARPA-Piemonte)

Initial conditions through **NUDGING** of observations

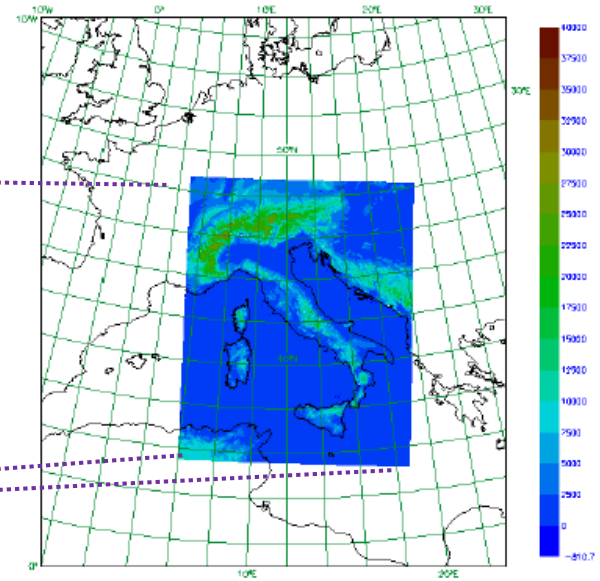
COSMO-I7



7 km
40 v.l.

- compressible equations
- parameterized convection

COSMO-I2



2.8 km
50 v.l.

- compressible equations
- explicit convection

NCSNI

(National Climate Service Network of Italy)

Network of Italian subjects with *activities* and *capabilities* in the field of operational climatology,
driven by national and regional organizations,
with the aim of achieving a coherent set of climate services
for national objectives
and of taking part in international programs on climate services (e.g., the Global Framework for Climate Service GFCS)

The committed organizations within the NCSNI are:
Italian Air Force Meteorological Service (AM)
Italian National Institute for Environmental Protection and Research (ISPRA), coordinator
Euro-Mediterranean Center on Climate Change (CMCC)
Institute of Atmospheric Sciences and Climate, National Research Council (ISAC-CNR)
Research Institute for Geo-Hydrological Protection, National Research Council (IRPI, CNR)
Department of Earth System Sciences and Environmental Technologies, National Research Council (DTA-CNR)
Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA)
Agency for Prevention and Environment of Emilia-Romagna Region, Hydro-Meteorological-Climate Unit (ARPA-SIMC)

Together with the WMO Italian Permanent Representative, NCSNI represents the Italian climate services in relation to WMO climate programs

Main issues:
climate monitoring
climate variation and trend assessment
seasonal forecasts
long-term climate projections for adaptation/mitigation strategies

The objective of NCSNI is intended
to provide improved and certified climate information and products
in order to contribute to a better management of the territory and so, more or less directly, favour social and economic development opportunities

The network addresses to a large spread of users categories and stakeholders, including national and local public institutions, research institutions and universities, private companies, non-governmental organizations and citizens.

Contact points:

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