



PNRR Project EMM - Earth Moon Mars - Task 1500.4 Development and implementation of an ensemble data assimilation system for limited area models

Overview

Implementation of a data assimilation (DA) and weather forecasting system focused on hazardous extreme weather events.

Tools

- WRF (Weather and Research Forecasting model): meteorological model developed at the National Center for Atmospheric Research (NCAR, USA).
- DART (Data Assimilation Research Testbed): DA tool developed at the NCAR and based on the Ensemble Kalman Filter (EnKF).
- Dati assimilati: METAR, Boe, Mesonet, Sondaggi, ACARS, riflettività radar (CAPPI).

Objectives

The WRF+DART system can focus on research objectives as well as operational applications. A general experimental framework is illustrated in the figure below.

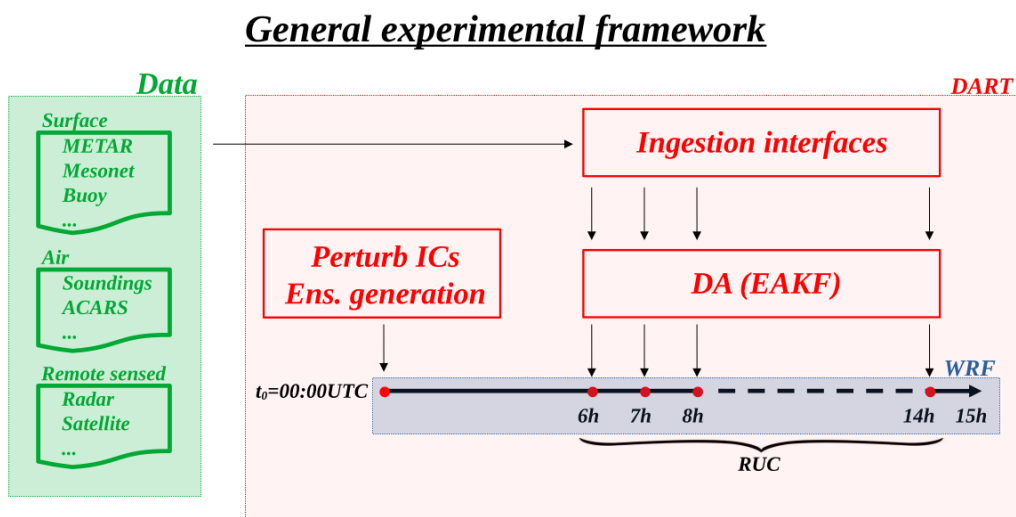


Figure. General experimental framework of the WRF+DART system.