

FIELD CAMPAIGN SUPPORT BY NCAR

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EXPERIENCE

NCAR, through its Earth Observing Laboratory, has served the global atmospheric science research community for more than 40 years with experience in coordinating and supporting field campaigns globally. Over the past 10 years, EOL has supported:



- More than 70 campaigns
- 23 campaigns outside the continental US
- 17 complex campaigns involving multiple observing systems and investigators teams and requiring advanced planning and logistics.

FACILITIES & SUPPORT

NCAR has multiple facilities available for deployment including aircraft, radars, lidars, surface & sounding systems, and in situ & remote sensing instrumentation.

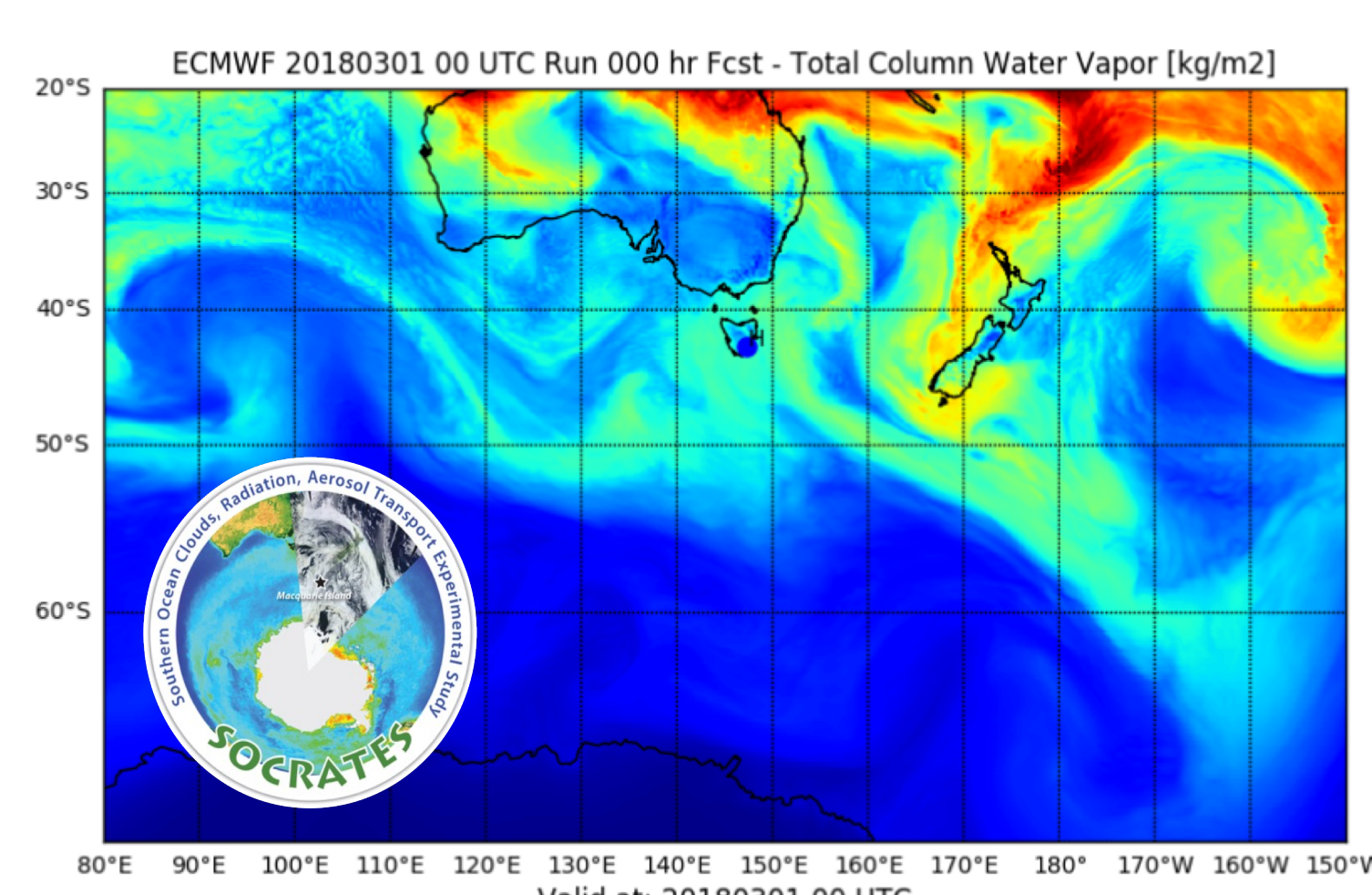
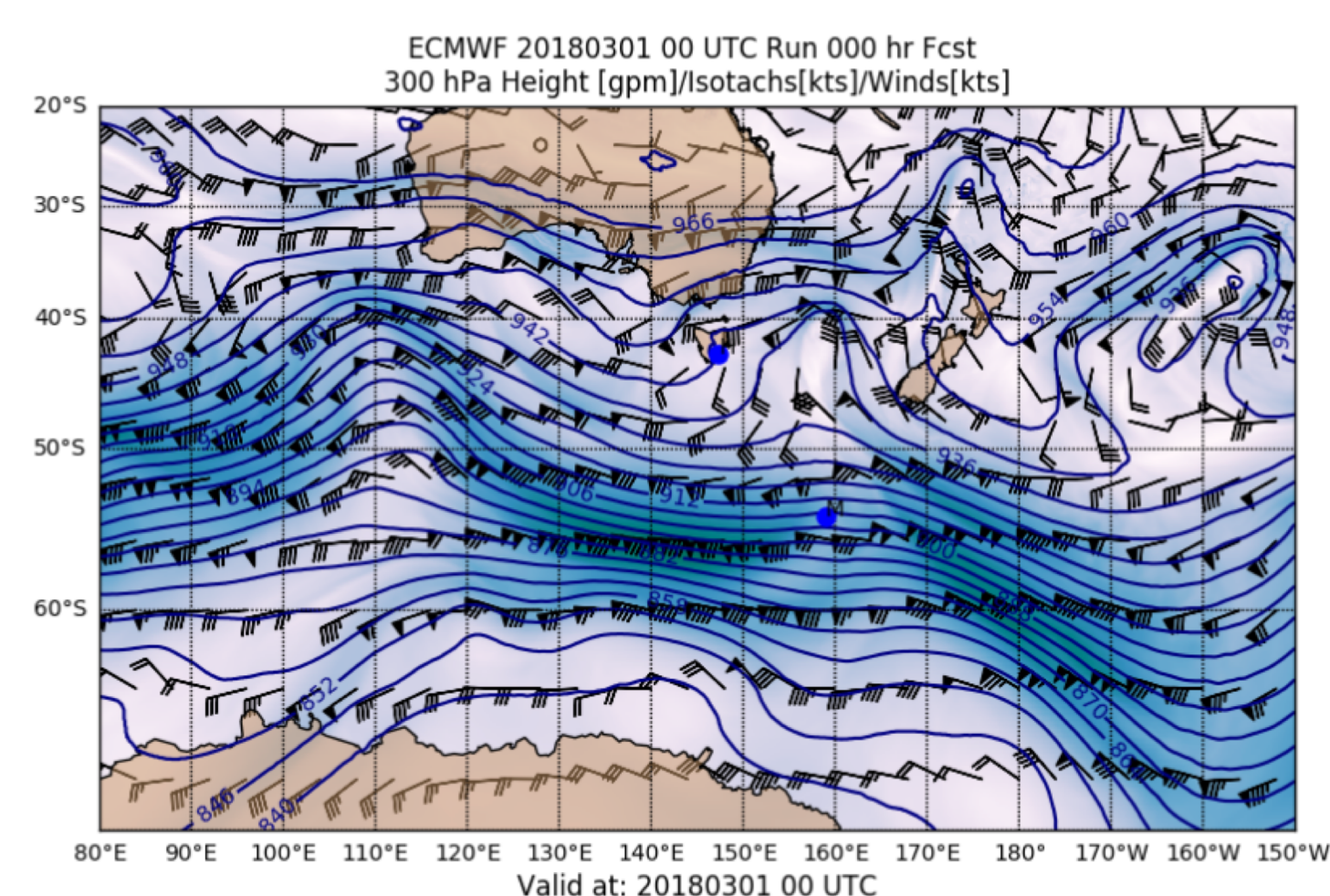


EOL also offers scientific, technical, operational, data and logistics support for field campaigns.



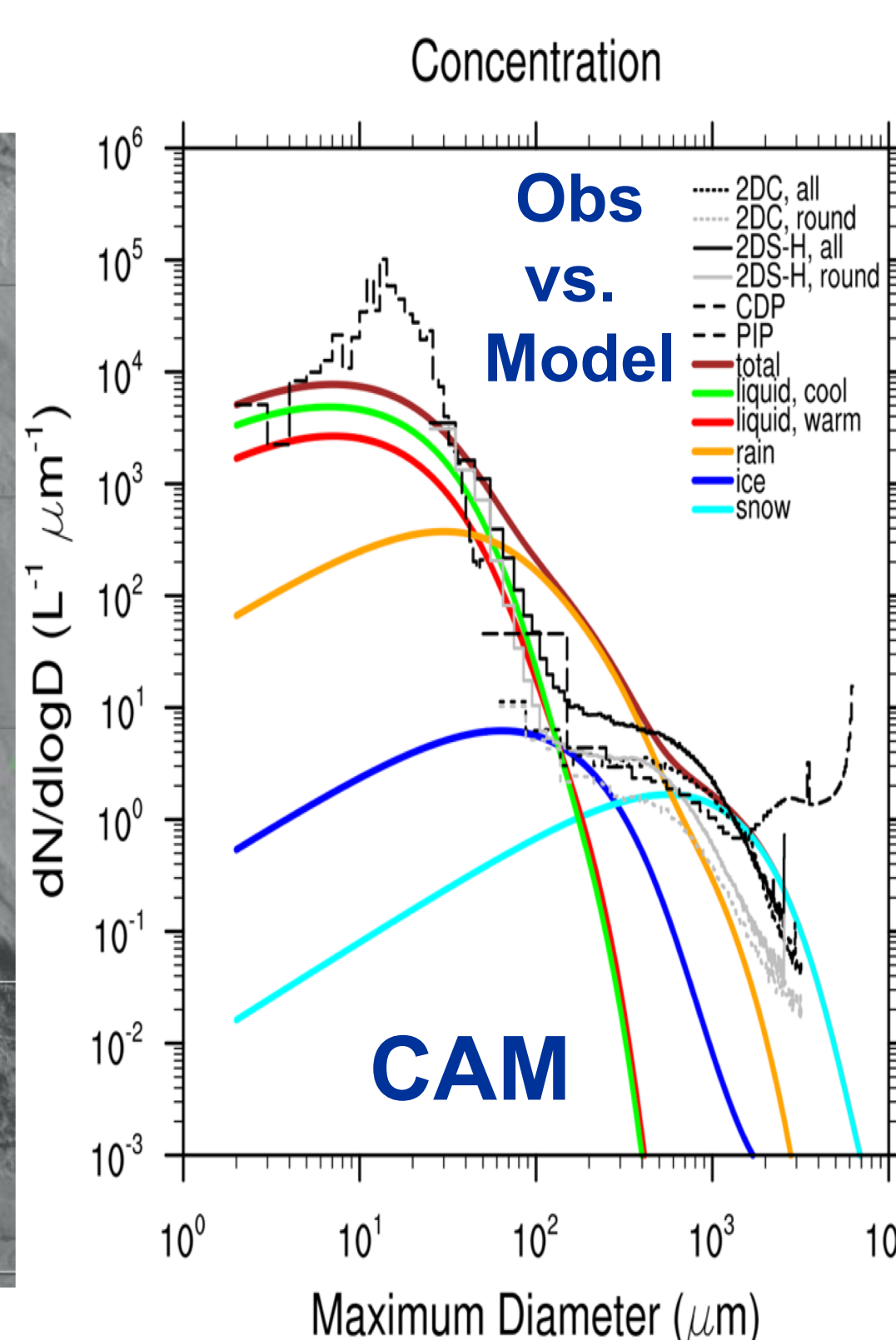
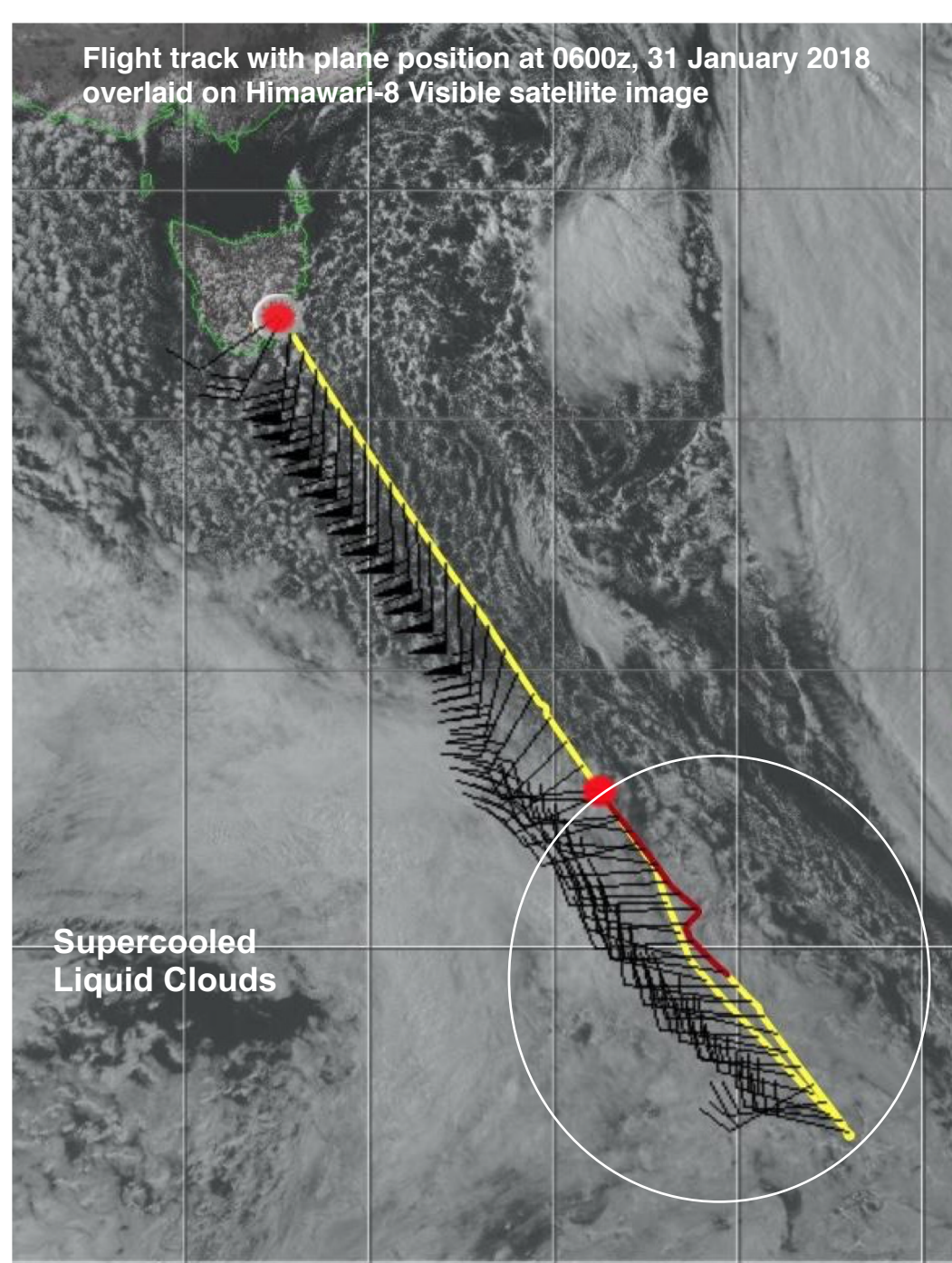
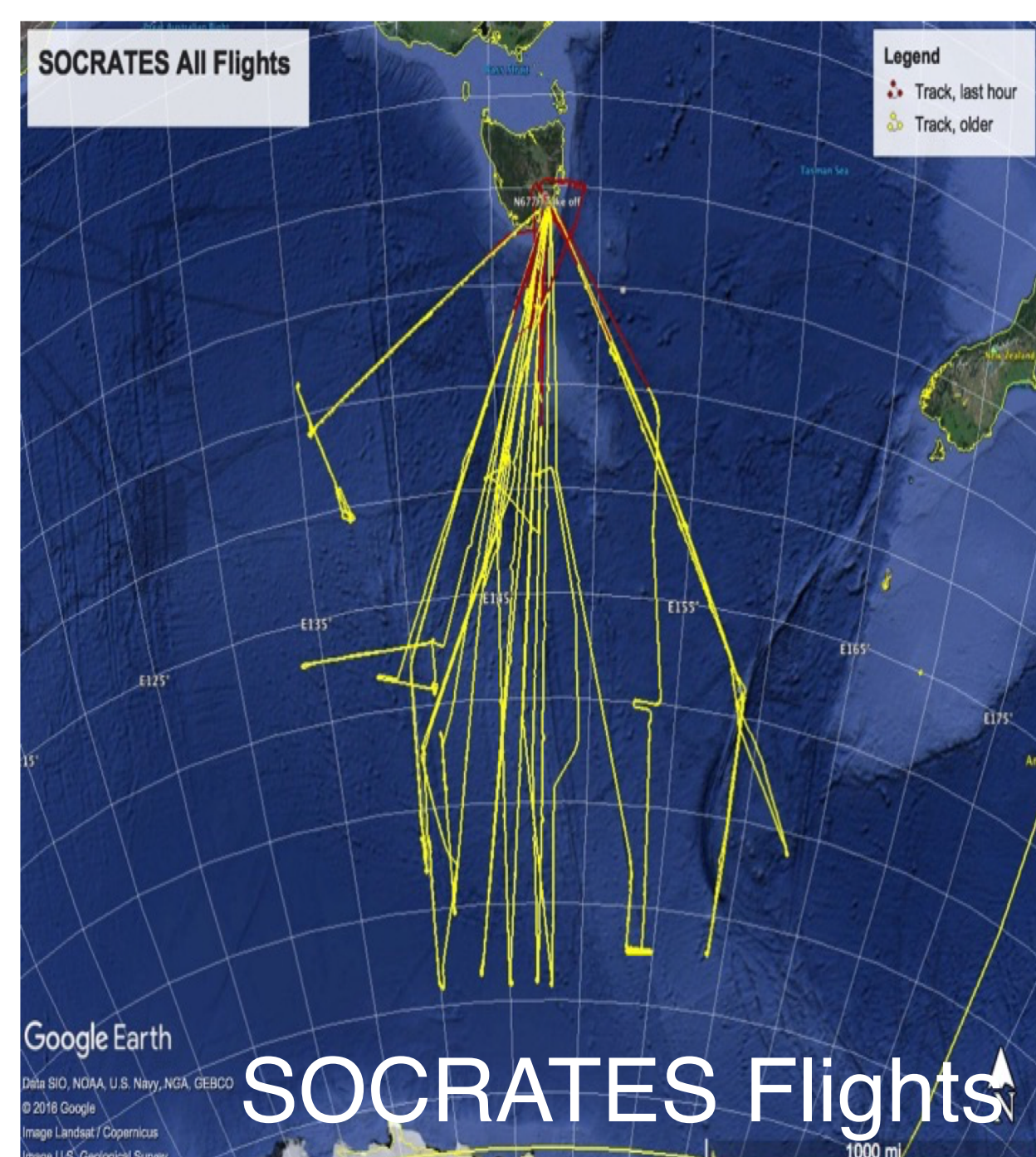
ECMWF FORECASTS IN EOL FIELD CAMPAIGNS

Forecasts provided by NWP models, including the ECMWF IFS, have a regular presence in EOL supported field campaigns and are used to plan missions, guide field operations, and to initialize research model runs.



EOL has been using ECMWF HRES IFS forecasts to support a number of recent campaigns, including SOCRATES and RELAMPAGO.

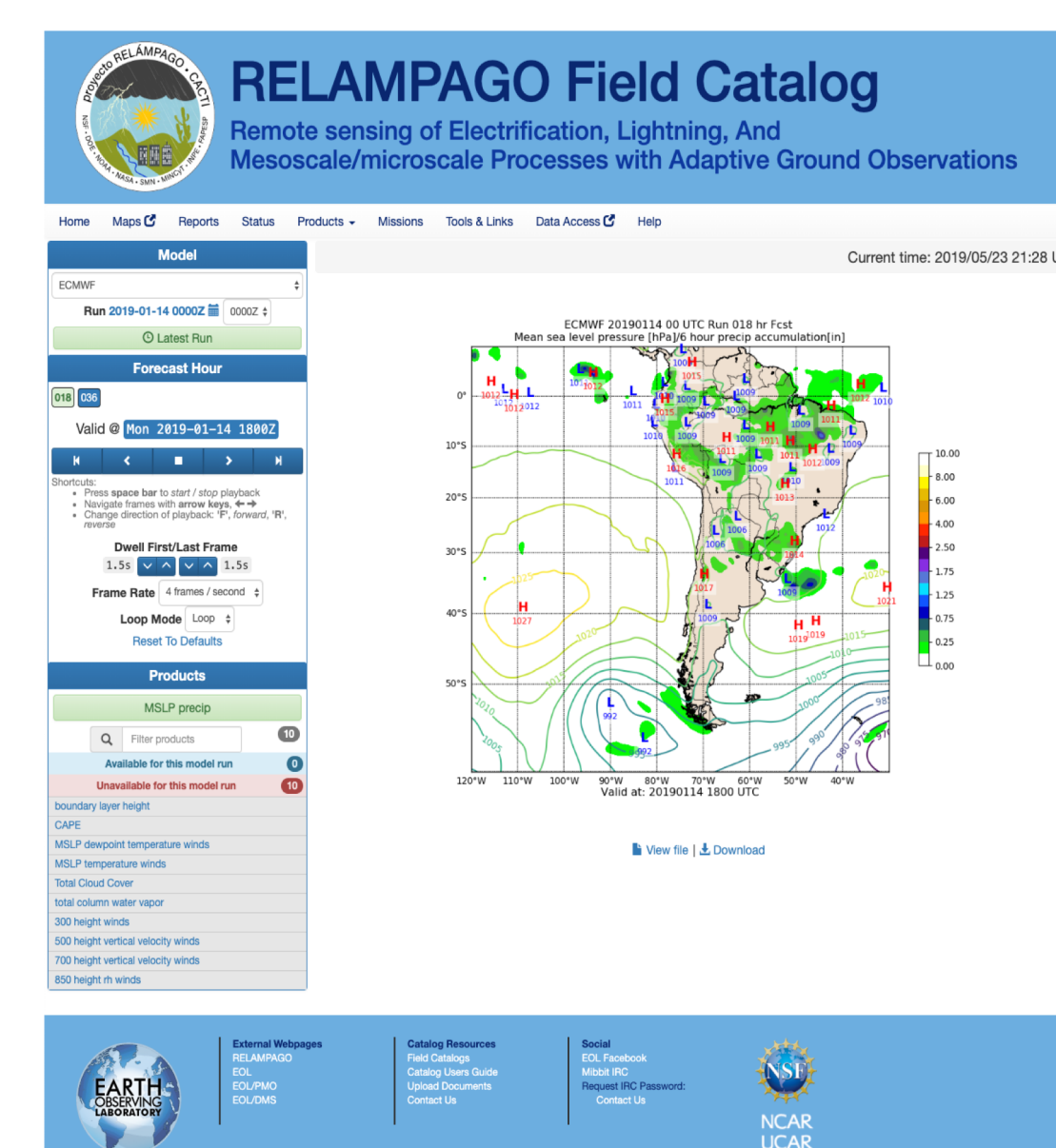
In SOCRATES, which employed aircraft and ship observations to sample clouds over the Southern Ocean, ECMWF forecasts were used to do flight planning for regimes where the investigators noted the divergence between forecasts and satellite observations.



Preliminary comparisons between observations and model-predicted size distribution of cloud particles. A collaborate effort with ECMWF on advancing the IFS cloud schemes is planned to convene in Summer 2019 (A. Gettelman, NCAR).

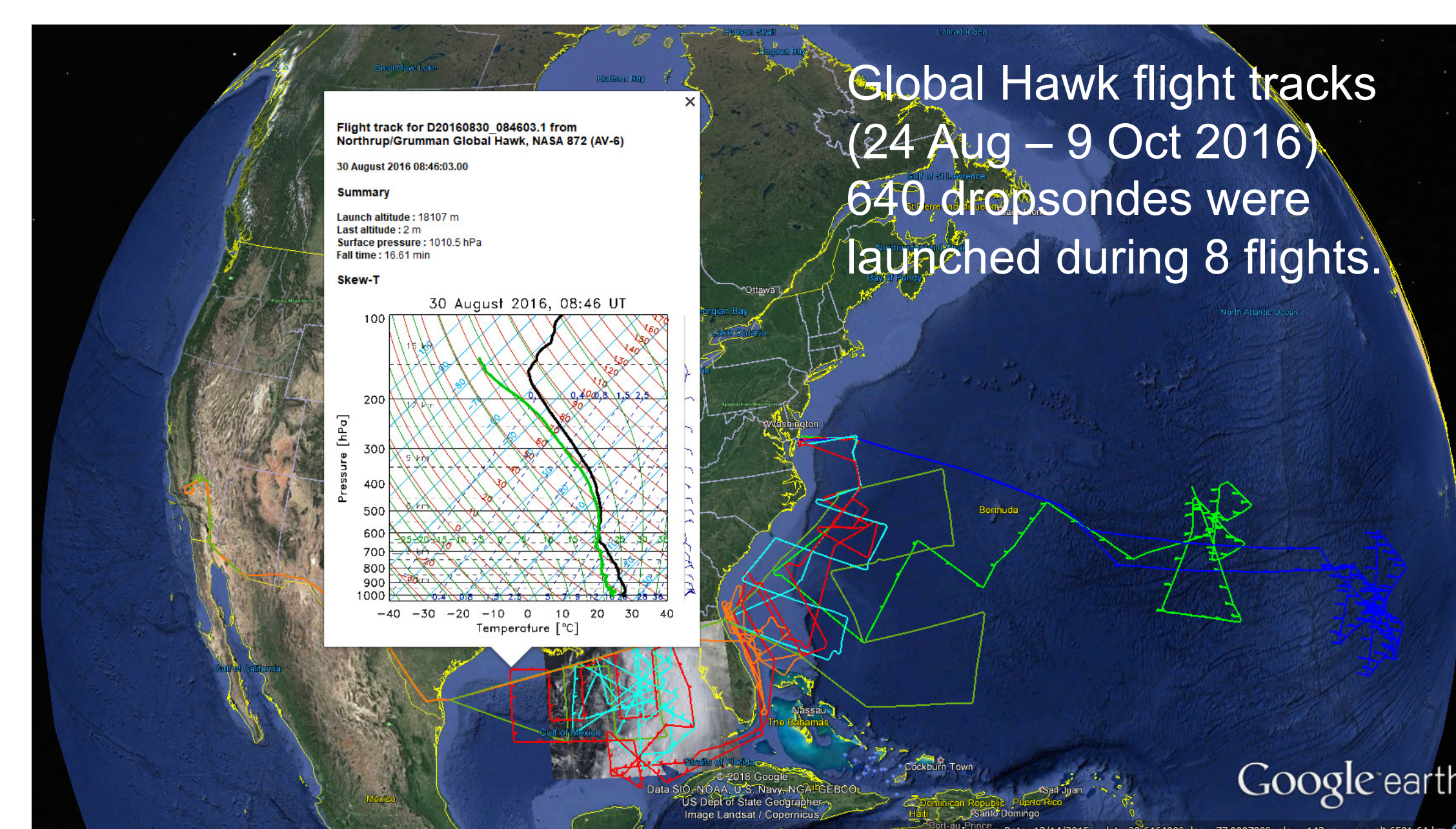
FIELD CATALOG AND DATA ARCHIVE

All analysis and forecast products in EOL-supported campaigns are saved in the Field Catalog – a web-based tool intended for:



- Collecting, organizing, and presenting mission plans and reports
- Viewing quick-look data products
- Finding and updating status information on deployed observational assets

The EOL Data Archive contains multi-disciplinary data collected as part of 577 field campaigns NCAR has supported from 1967 to today. The field project data comes from a variety of sources such as operational and research observing systems and models.



EOL Data Archive contains dropsonde data from various campaigns, including NASA SHOUT (2016). For NCAR dropsonde, see poster by Vömel et al.