

What is new in community release version 3.2:

The following lists some of the new functions and changes included in the GSI release version 3.2 versus version 3.1:

New Features:

- New regional radiance bias correction scheme: Use global-regional blended vertical coordinate to obtain better vertical resolution in stratosphere and extend bias correction up to 0.3 hPa. Ozone profiles from GFS is also used.
- BUFRLIB update, no byte order dependency
- Dual-resolution option added to GSI-hybrid regional option
- Adjoint check for the observation operators (complement existing check in coding)
- Code updated for better portability on Linux platforms (operational)
- gfortran added to the supported compilers.

Observations:

- TDR data assimilation
- CrIS data assimilation
- New VAD wind generation

Application specific enhancements:

- RAP
 - Add soil temperature and moisture nudging and update the surface 2-m temperature based on the first level atmosphere analysis increments
 - Improved cloud analysis for RAP applications
- 2D-var enhancement for RTMA
 - Adds the option to use diurnal-dependent rejectlists for temperature and moisture observation, and direction-stratified accept lists for mesonet winds.
 - Adds cross-validation for visibility and gust
 - Adds a wind-direction based gross-error check to the 2DVar option
 - Removes, for the visibility analysis, the artificial escarpment in the (terrain-mapped) background error covariances along the coastlines
 - Adds fog observations to the visibility analysis.
 - Improves the weak-constraint for the analysis of visibility, wind gust, and PBLH.

Please note due to the version update, some diagnostic files and static information files, e.g. satinfo, have been changed as well.