

Specifications (as of 31 December 2020) – an excerpt from the Joint WMO Technical Progress Report on the Global Data Processing and Forecasting System and Numerical Weather Prediction Research Activities for 2020

Local Analysis specifications

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| Analysis time | 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22 and 23 UTC |
| Analysis cycle | The three-hour analysis cycle repeats hourly assimilation with 3D-Var and one-hour forecasts. |
| Data cut-off time | 30 minutes for analysis at 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22 and 23 UTC |
| First guess | Initial fields produced by the latest MSM |
| Domain configuration | Japan and its surrounding area Lambert projection; 5 km at 60°N and 30°N, 633 × 521 Grid point (1, 1) is at the northwest corner of the domain. Grid point (449, 361) is at 140°E, 30°N |
| Vertical coordinate | z-z* hybrid |
| Vertical levels | 48 levels up to 22 km |
| Analysis variables | Wind, potential temperature, surface pressure, pseudo-relative humidity, skin temperature, ground temperature and soil moisture |
| Observations (as of 31 December 2018) | SYNOP, SHIP, BUOY, AMeDAS, TEMP, PILOT, Wind Profiler, Weather Doppler radar (radial velocity, reflectivity), AIREP, AMDAR; AMVs from Himawari-8; radiances from NOAA-15, 18, 19/ATOVS, Metop-A, B/ATOVS, Aqua/AMSU-A, DMSP-F17, 18/SSMIS, GCOM-W/AMSR2, GPM-core/GMI, WV-CSRs of Himawari-8; soil moisture from GCOM-W/AMSR2, Metop-A B/ASCAT; total precipitable water vapor from ground-based GNSS |
| System documentation URL | https://www.jma.go.jp/jma/jma-eng/jma-center/nwp/nwp-top.htm |