

Background

ICOADS (<http://icoads.noaa.gov/>) Release 3.0 (R3.0.0) (Freeman et al., 2016) individual observations span the years 1662-2014. Additionally, following the official end date of R3.0 (December 2014), "preliminary" (note: subject to change and not officially part of R3.0; release numbered as R3.0.1) near-real-time (NRT) monthly updates (available 2-5 days after the end of each data month) augment this collection and extend the dates from 2008 to the most recent month available. The NRT observations are based on blended marine Global Telecommunication System (GTS) observations from NOAA's National Centers for Environmental Prediction (NCEP) and NOAA's National Centers for Environmental Information (NCEI).

All observations available in this directory (<http://www.ncei.noaa.gov/data/marine/icoads3.0/>) R3.0 and NRT updates, are "enhanced" filtered. The enhanced filter option is designed to select most available observations, including from ships, buoys, and additional platforms such as oceanographic profilers. Furthermore, this filter excludes ("trims") outliers that fall outside 4.5 standard deviations from the smoothed median. For more information on enhanced observations please read: http://icoads.noaa.gov/e-doc/stat_trim [note: to be updated to R3.0-stat trim, when available]. From the project website (<http://icoads.noaa.gov/products.html>) you can find out about other filtering operations, as well as about monthly summary statistics (basic gridded) products, provided from the other ICOADS project partners.

Data Format and Access

All observations are in the International Maritime Meteorological Archive (IMMA) format, version 1 (Smith et al., 2016). Format documentation and field descriptions can be found in the abridged version at: http://icoads.noaa.gov/e-doc/imma/R3.0-imma1_short.pdf. Software to read and write the IMMA1 format is available at <http://icoads.noaa.gov/software/rwimma1>.

Filename Descriptions

1. Release 3.0 observations (1662-2014):

IMMA-MarineObs_icoads3.0.0_dYYYYMM_cYYYYMMDDhhmmss.dat.gz

IMMA-MarineObs = International Maritime Meteorological Archive (IMMA) Format (currently version 1, i.e. IMMA1)

icoads3.0.0 = Release 3.0.0 observations

d = date indicator (e.g. year/month) of data contained within the file

YYYYMM = year/month of data in file

c = creation date timestamp indicator

YYYYMMDDhhmmss = year/month/day/hour/minute/seconds create date timestamp

dat = file format extension

gz = GNU zip compression

2. NRT (preliminary) extensions to R3.0 created from a blend of NCEI/NCEP GTS (2015-present):

IMMA-MarineObs_icoads3.0.1-Prelim_dYYYYMM_cYYYYMMDDhhmmss.dat.gz

IMMA-MarineObs = International Maritime Meteorological Archive
(IMMA) Format (currently version 1, i.e. IMMA1)

icoads3.0.1-Prelim = Preliminary NRT Release 3.0.1 observations

d = date indicator (e.g. year/month) of data contained within the file

YYYYMM = year/month of data in file

c = creation date timestamp indicator

YYYYMMDDhhmmss = year/month/day/hour/minute/seconds create date
timestamp

dat = file format extension

gz = GNU zip
compression

References

Freeman, E., S.D. Woodruff, S.J. Worley, S.J. Lubker, E.C. Kent, W.E. Angel, D.I. Berry, P. Brohan, R. Eastman, L. Gates, W. Gloeden, Z. Ji, J. Lawrimore, N.A. Rayner, G. Rosenhagen, and S.R. Smith, 2016: ICOADS Release 3.0: A major update to the historical marine climate record. *Int. J. Climatol.*, [doi:10.1002/joc.4775](https://doi.org/10.1002/joc.4775).

Smith, S.R., E. Freeman, S.J. Lubker, S.D. Woodruff, S.J. Worley, W.E. Angel, D.I. Berry, P. Brohan, Z. Ji, and E.C. Kent, 2016. The International Maritime Meteorological Archive (IMMA) Format. <http://icoads.noaa.gov/e-doc/imma/R3.0-imma.pdf>

Contact Points

For information on the NCEI ICOADS collection in this directory and ICOADS or marine observation data access at NCEI, please contact:

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Document Revision Information

Previous document version: R2.5-README_ICOADS_NCDC_20120214, added external URL for data access to these files, and various changes and updates to reflect data and documentation for R3.0, rather than for R2.5.