

Background

ICOADS (<http://icoads.noaa.gov/>) Release 3.0 (R3.0.0) (Freeman et al., 2017) individual observations span the years 1662-2014. Additionally, following the official end date of R3.0.0 (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 2014 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/enhanced-trim/>), 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/R3.0-stat_trim.pdf. 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, 2017: ICOADS Release 3.0: A major update to the historical marine climate record. *Int. J. Climatol.* ([CLIMAR-IV Special Issue](#)), 37, 2211-2237 ([doi: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-imma1.pdf>

Dataset DOI Citation

Cite this dataset when used as a source:

National Centers for Environmental Information; Cooperative Institute for Research in Environmental Sciences, University of Colorado; Research Data Archive, Computational and Information Systems Laboratory, National Center for Atmospheric Research, University Corporation for Atmospheric Research; Earth System Research Laboratory, NOAA, U.S. Department of Commerce; NERC National Oceanography Centre, Natural Environment Research Council, United Kingdom; Met Office, Ministry of Defence, United Kingdom; Deutscher Wetterdienst (German Meteorological Service), Germany; University of Washington, Department of Atmospheric Science; Center for Ocean-Atmospheric Prediction Studies, Florida State University (2016): International Comprehensive Ocean-Atmosphere Data Set (ICOADS) with Enhanced Trimming, Release 3. [indicate subset used]. NOAA National Centers for Environmental Information. doi:10.7289/V5930R58 [access date].

Contact Points

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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.

6/22/2017: Link to data updated and minor content revisions.

8/0/2017: Added data DOI citation information.