README for

Wave-glider Surface Meteorology Data during the R/V Mirai MR20-E01 (YMC-BSM 2020)

Oct. 16, 2021

< Basic information >

Surface meteorological data were obtained by EasyJAMMET (consist of RPS8100 (pressure) at 0.8m MSL, MP102H (air temperature, relative humidity) at 0.9m MSL, Eppley SPP (shortwave radiation), Eppley PIR (longwave radiation) at 1.2m, R.M. Young 86000 (wind) at 1.2m MSL, and Vaisala WXT533 (precipitation) at 1.2m MSL, and Aanderaa 5860B (temperature, salinity) at -0.2m MSL. Data were collected every 10-min, whose data consisted of the average of two 1-minute mean values.

< Quality Control >

While we did not see any significant errors, biases, or drifts during the cruise by a technical check done at the Mutsu Institute of Oceanography / JAMSTEC after the cruise (done by the technical staff of Marine Works Japan Co. Ltd.), apparent bias of pressure in WG248 data and drift of salinity in WG196 data were found in the several periods. Those might be due to the water invasion into the system under the rough sea condition only in those periods. They were corrected based on the intercomparison of data taken when the three WGs occupied the same location after deployment and before recovery for a couple of hours for salinity data and based on the intercomparison among three for the designated period for pressure data assuming large-scale atmospheric condition dominance. In addition, spike noises were filtered out.

When we produce hourly data from 10-min data, samples from -50 min to 00 min or from -30 min to +20 min were used. They are indicated in the file name (e.g., *_from-30m.dat).

< Data Format >

Data are stored in ASCII as (1x,a12,f8.3,2f8.2,9f8.1,f8.2) for the following parameters. Missing values are expressed as “9999.”

Nominal time in UTC as YYYYMMDDHHmm
Julian Day
Longitude in degree East
Latitude in degree North
Pressure in hPa
Air Temperature in degree Celsius
Relative humidity in %
Precipitation in mm/hr
Zonal wind component in m/sec
Meridional wind component in m/sec
Downward shortwave radiation in W/m^2
Downward longwave radiation in W/m^2
Sea Surface Temperature in degree Celsius
Sea Surface Salinity in PSU

< Contact >

For more information, please contact “yoneyamak [at] jamstec.go.jp”