README for
m-TRITON Buoy CTD Data during the R/V Mirai MR20-E01 (YMC-BSM 2020)

Nov. 3, 2021

< Basic information >

Sea temperature and conductivity (salinity) were measured by SBE-37 IM MicroCAT system at 31 depths (nominal 1m, 5m, 10m, 15m, 20m, 25m, 30m, 35m, 40m, 45m, 50m, 55m, 60m, 65m, 70m, 80m, 90m, 100m, 110m, 120m, 130m, 140m, 150m, 160m, 170m, 180m, 190m, 205m, 260m, 310m, and 500m). Pressure sensors were equipped at 1m, 25m, 50m, 100m, 205m, and 500m depths, and the linear interpolation was applied to obtain depth information for non-depth sensor points. Their sample interval is 10 min, and data were processed from 06:10 UTC, Aug. 7, 2020 through 22:00 UTC, Sept. 7, 2020.

Note that although we deployed a current meter at 10m depth, it did not work in the sea. Thus, the current data were not included.

< Quality Control >

Based on the sensor calibration before/after the cruise at the Mutsu Institute of Oceanography / JAMSTEC (done by the technical staff of Marine Works Japan Co. Ltd.), slight drifts were found in the conductivity data (the differences were found at the 35/50/65-m depth sensors by 0.015/0.039/0.015 PSU, while others showed better than 0.01). As for the temperature and depth sensors, they did not show any significant drifts (all sensors were better than 0.003 degC and 0.3 dbar, respectively).

< Data Format >

Data are stored in ASCII as (1x,a12,f8.3,2f8.2,3f9.3) for the following parameters from the nominal 1m depth to the 500m depth (31 layers). Missing values are expressed as “9999.”

Date and time in UTC as YYYYMMDDHHmm
Julian Day
Longitude in degree East
Latitude in degree North
Depth in meter
Temperature in degree Celsius
Salinity in PSU

< Contact >

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