README for Surface Meteorological Data during MR20-E01

Second released: May 18, 2023
First released: Nov. 1, 2021

"smet10min.dat" contains 10-min mean values of surface meteorological data as ASCII format. Time stamp is the end of average. Original data were sampled at every 6 sec.

This data set was produced from two surface meteorological measurement systems (SMET/MIRAI Surface Meteorological observation system, and SOAR/Shipboard Oceanographic and Atmospheric Radiation measurement system), and one sea surface water monitoring system (TSG/Thermosalinograph). Details of these systems can be found in MIRAI MR20-E01 Cruise report. Available from
https://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR20-E01_all.pdf

Sensor types whose data are adopted and their equipped height from the sea level

Barometer (pressure):	Setra System, Model-370	... 13 m
		* converted to 0 m sea level *
Thermometer (T, RH) :	Vaisala, HMP155	... 21 m
Thermometer (intake SST) :	SeaBird Electronics, SBE38	... - 5 m
Anemometer (wind) :	R. M. Young, 05106	... 25 m
Rain gauge (rainfall) :	R. M. Young, 50202	... 24 m
Radiometer (short wave) :	Hukseflux Thermal Sensors B.V., SR20	... 25 m
Radiometer (long wave) :	Hukseflux Thermal Sensors B.V., IR20	... 25 m

Remarks. Pressure, T/RH data are adopted from SMET, SST is from TSG, and others are taken from SOAR.
Rainfall data have been replaced from optical rain gauge data (as of Nov 2021) to capacitive rain gauge data since May 2023. This was done based on the further correction procedure removing some noises.

Observation Period (in UTC)
August 1, 2020, 00:10 - September 13, 2020, 23:00

Parameters and their units (format = 1x, a12, f9.4, 2f9.3, 7f7.1, f8.2, 2f6.0)
Date and Time “YYYYMMDDHHMM” (UTC)
Time in Julian day (1.0000 = January 1, 0000Z)
longitude (degree East)
latitude (degree North)
pressure (hPa)
air temperature (degree Celsius)
dew point temperature (degree Celsius)
relative humidity (%)
in-take sea surface temperature (degree Celsius)
zonal wind component (m/sec)
meridional wind component (m/sec)
precipitation (mm/hr)
downward shortwave radiation (W/m2)
downward longwave radiation (W/m2)

Remarks. Missing values are expressed as "9999".

For more information
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