

Naming of bio-Argo technical data

Argo data-management 14, Liverpool

- Proposed philosophy : all technical parameters transmitted during a cycle by a float are recorded in the Argo NetCDF technical file.
- The technical file is updated for each new cycle.
- Technical file organization : a series of “key – value – cycle number” records in a table
Example : PRES_DescentStartToPark_dBAR

Name	Definition	Comment
TECHNICAL_PARAMETER_NAME	char TECHNICAL_PARAMETER_NAME(N_TECH_PARAM, STRING128) TECHNICAL_PARAMETER_NAME:long_name = "Name of technical parameter"; TECHNICAL_PARAMETER_NAME:_FillValue = " ";	Name of the technical parameter. Example : "CLOCK_FloatTime_HHMMSS" See reference table 14 for standard technical parameter names.
TECHNICAL_PARAMETER_VALUE	char TECHNICAL_PARAMETER_VALUE(N_TECH_PARAM, STRING128) TECHNICAL_PARAMETER_VALUE:long_name = "Value of technical parameter"; TECHNICAL_PARAMETER_VALUE:_FillValue = " ";	Value of the technical parameter. Example : "125049"
CYCLE_NUMBER	int CYCLE_NUMBER(N_TECH_PARAM); CYCLE_NUMBER:long_name = "Float cycle number"; CYCLE_NUMBER:conventions = "0..N, 0 : launch cycle (if exists), 1 : first complete cycle"; CYCLE_NUMBER:_FillValue = 99999;	Cycle number of the technical parameter. Example : 157

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- Each technical parameter name has to be listed and clearly described in the « Argo parameter names table ».
- Today, there are about 700 official Argo parameter names.
- For bio-Argo floats, such as Probio, we would like to add an additional variable : `subcycle_number`:
“key – value – cycle number – `subcycle_number`”

Naming of bio-Argo configuration data

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- The configuration parameters of a float are recorded in its Argo NetCDF metadata file.
- Configuration parameters are float settings. They are not measurements reported by the float.
- Configuration parameters may or may not be reported by the float.
- Configuration parameters organization : a series of records in a table. “key – value – mission”

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- Each cycle is linked to a particular mission_number
- In probio floats, a mission may have up to 413 parameters for subcycle.
- Configuration number = 0 for deployment settings
- When one or many configuration parameters change, a new configuration is recorded. It contains all configuration parameters.
- For each cycle, trajectory and profile files refer to one configuration number.

Example of configuration parameters

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- CONFIG_<Sensor>PowerAcquisitionModeSubCycle<N>DepthZone<Z>_NUMBER
Power acquisition mode of the <Sensor> in the depth zone #<Z>
for the sub-cycle
#<N> for 0 : none, 2 : pulsed, 3 : continuous
<Sensor> can be: CTD, OPTODE, OCR, ECO3, FLNTU, CROVER, SUNA
Depth zone number: <Z> = 1..5
Sub-cycle number: <N> = 0..9
- CONFIG_<Sensor>AscendingProfileSamplingPeriodSubCycle<N>DepthZone<Z>_SECONDS
- CONFIG_<Sensor>Zone1Zone2ThresholdSubCycle<N>_dBAR

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Name	Definition	Comment
CONFIG_PARAMETER_NAME	char CONFIG_PARAMETER_NAME(N_CONF_PARAM, STRING128) CONFIG_PARAMETER_NAME:long_name="Name of configuration parameter"; CONFIG_PARAMETER_NAME:_FillValue = " ";	Name of the configuration parameter. Example : "CONFIG_ParkPressure_dBAR" See reference table 14b for standard configuration parameter names.
CONFIG_PARAMETER_VALUE	double CONFIG_PARAMETER_VALUE(N_MISSIONS, N_CONF_PARAM) CONFIG_PARAMETER_VALUE:long_name="Value of configuration parameter"; CONFIG_PARAMETER_VALUE:_FillValue = 99999.;	Value of the configuration parameter. Example : 1500
CONFIG_MISSION_NUMBER	int CONFIG_MISSION_NUMBER(N_MISSIONS); CONFIG_MISSION_NUMBER:long_name = "Unique number denoting the missions performed by the floatMission"; CONFIG_MISSION_NUMBER:conventions = "0..N, 0 : launch mission (if exists), 1 : first complete mission"; CONFIG_MISSION_NUMBER:_FillValue = 99999;	Unique number of the mission to which this parameter belongs. Example : 0 See note on floats with multiple configurations.
CONFIG_MISSION_COMMENT	char CONFIG_MISSION_COMMENT(N_MISSIONS, STRING256) CONFIG_MISSION_COMMENT:long_name="Comment on configuration"; CONFIG_MISSION_COMMENT:_FillValue= " ";	Comment on this configuration mission. Example : "This mission follows a 1000 dbar meddie during parking"