

CREDO - data format

Search of pre-showers in CREDO - minimal information:

- particles detected at large distances - **POSITION**
- measurements correlated in time - **TIME**
- particles are approximately parallel - **DIRECTION** (if available)

Identification of measurements:

- experiment identification - **EXPID**
- detector (station) identification - **DETID**
- detector type - **DETTYPE** (not for all experiments necessary)

Detector activity information (in a header) - **STARTTIME + ENDTIME**

- for proper likelihood estimations (5 hits in 10 stations may mean more than 10 hits in 1000 stations)
- for background estimation
- for data quality (identification of incorrectly working stations)

This list is not exhaustive, full common format has to be open to extensions



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Accuracy of the values

- **POSITION** - GPS position accuracy is sufficient
- **TIME** - GPS time accuracy is sufficient, but some experiments may provide more precise timing
- **DIRECTION** - 1 degree should be sufficient

For simplicity integer values are preferable

File format

- ◆ pure text file (readable by any tool, no extension possible)
- ◆ json, xml (readable using appropriate libraries, easy extension)
- ◆ ROOT (most suitable for analysis, extension may be problematic)

json or xml seems to be most useful for common full data format
ROOT (or text) can be used for actual analysis or shortened data

