

A Second Look at Engineering Data Files

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EDF goals

- Inter-comparison between parameters of different SLR stations
- Rapid identification of system drifts or degradation effects
- Correlation of system data with bias reports based on orbit analysis
- Continuous system history over a wide variety of parameters
- Easy implementation
- Flexibility

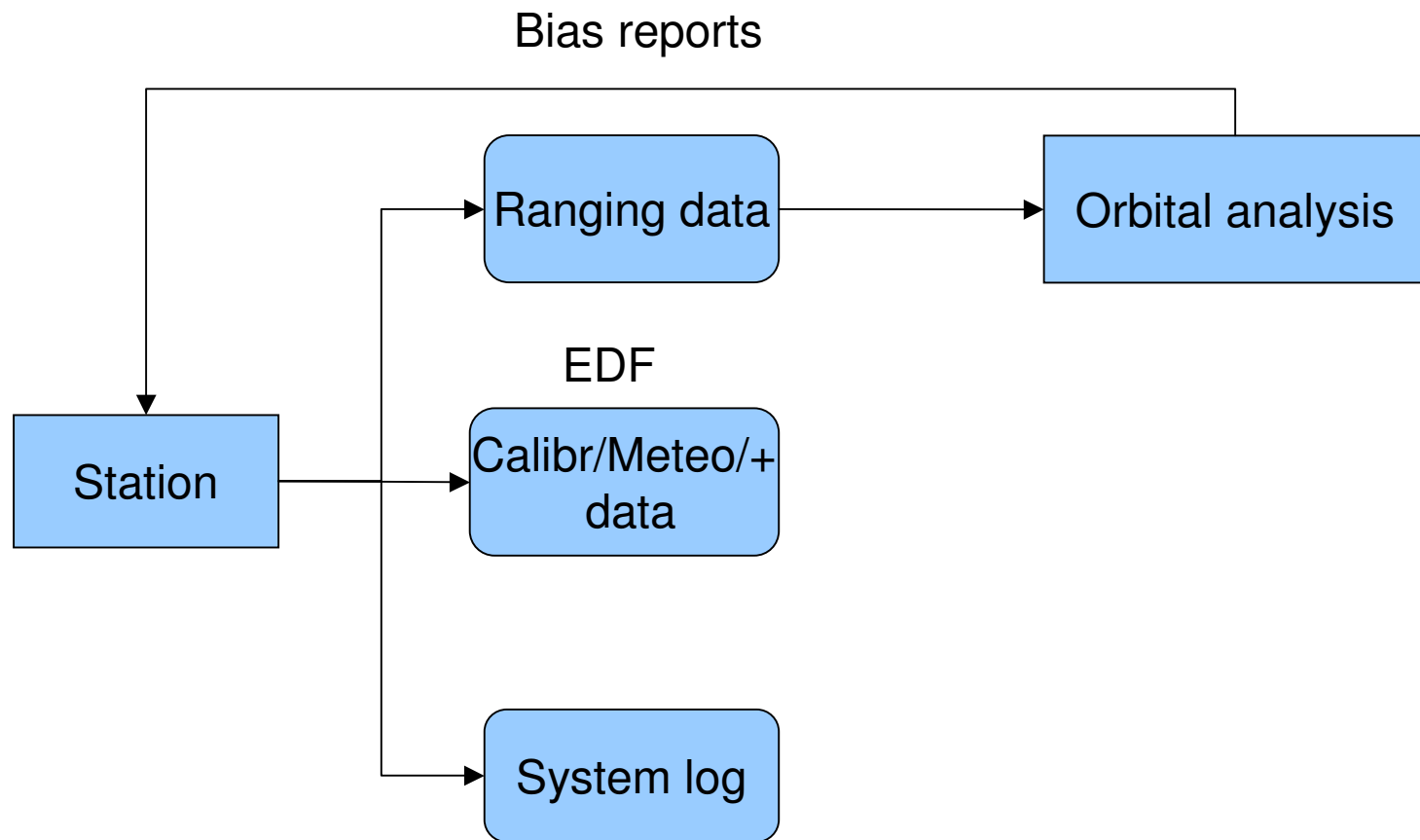
EDF example

```
<EDF Version="1.0" MJD="55660.999375" Epoch="2011-04-09T23:59:06"
xmlns:Wettzell="http://www.astr.lu.lv/Wettzell">
  <Station SOD="88341001" SCH="0" SCI="2" CalibMethod="1"
TimeScale="3" Name="Wettzell" />
  <Hardware>
    <Laser Wavelength="532.0" Energy="0.075" PulseWidth="60"
Divergence="0.000250" RepRate="10" />
    <Receiver>
      <Detector Model="ITT F4129F" DeviceID="1" DetectorType="MCP"
TWCompensation="No" />
      <Filter Model="BARR ASSOCIATES" DeviceID="1002347"
BandWidth="0.35" />
    </Receiver>
    <Timer Model="PET4" DeviceID="Module 1+2+3+4"
CorrectionID="0" />
  </Hardware>
  <Meteo Temperature=" 7.99" Pressure="949.29" Humidity="52.40" />
  <Calibration TargetDistance="10.345" CalValue="2572"
PeakMinusMean="-9" RecordedPoints="1200" AcceptedPoints="1146"
SigmaUsed="2.2" RMS="31" Skew="0.0010" Kurtosis="0.0000"
Wettzell:ReturnQuote="95.50" />
  <CustomData></CustomData>
</EDF>
```

EDF and CRD

Record	Full Rate	Sampled Engineering (Rarely used)	Normal Point	Calibr./EDF
Header Section				
H1 – Format	√	√	√	√
H2 – Station	√	√	√	√
H3 - Target	√	√	√	√
H4 -Session (Pass)	√	√	√	√
H8 - EOS	√	√	√	√
H9 - EOF	√	√	√	√
Configuration Section				
C0 – System Conf	√	√	√	√
C1 – Laser Conf	Rec	rec	rec	√
C2 – Detector Conf	Rec	rec	rec	√

EDF v2



10.10.2008. TD = 153.56. RC = 7.30 m

29.05.2009. TD = 153.47. RC = 7.38

09.07.2009. TD = 153.51. RC = 7.36

27.07.2009. TD = 153.52. RC = 7.34

12.08.2009. TD = 153.53. RC = 7.34

20.08.2009. TD = 153.53. RC = 7.33

28.08.2009. TD = 153.51. RC = 7.33

14.09.2009. TD = 153.51. RC = 7.35

06.10.2009. TD = 153.52. RC = 7.34

13.10.2009. TD = 153.50. RC = 7.36

23.10.2009. TD = 153.48. RC = 7.37

29.10.2009. TD = 153.47. RC = 7.38

18.12.2009. TD = 153.47. RC = 7.36

06.01.2010. TD = 153.48. RC = 7.38

12.01.2010. TD = 153.42. RC = 7.39

20.01.2010. TD = 153.41. RC = 7.40

18.03.2010. TD = 153.41. RC = 7.39

27.03.2010. TD = 153.41. RC = 7.38

22.05.2010. TD = 153.41. RC = 7.36

22.07.2010. TD = 153.43. RC = 7.34

03.08.2010. TD = 153.45. RC = 7.32

26.09.2010. TD = 153.45. RC = 7.33

15.09.2010. TD = 153.45. RC = 7.34

8.10.2010. TD = 153.45. RC = 7.35

18.10.2010. TD = 153.43. RC = 7.33

27.10.2010. TD = 153.43. RC = 7.35

02.11.2010. TD = 153.44. RC = 7.34

01.12.2010. TD = 153.42. RC = 7.36

28.01.2011. TD = 153.42. RC = 7.38 (25)

23.02.2011. TD = 153.42. RC = 7.40

NOMAINA optiskais kabelis.

04.03.2011. TD = 234.075. RC = 7.40

18.03.2011. TD = 234.075. RC = 7.43

25.03.2011. TD = 92.757. RC = 7.42

EDF v2

Main components

1. Calibration history and used hardware configuration
2. Correlation with bias reports based on orbit analysis
3. Snapshot of the important station information, list of events

Possible contents:

- Basic statistics (# passes, #calibrations)
- Information about resources (e.g. # days since last laser service)
- Notices about repairs, cable replacements,...
- ...