Data Acquisition System
Requirements Document
(DRD)

Roger Williamson
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Requirements Document

♦ Scope
  – All data, command, control, and electrical components of the instrument except for the ACD, CAL, and TKR detector front ends and structural components.

♦ Purpose
  – Establish and document the requirements imposed on the DAQ by the mission, spacecraft, and detectors.
Requirements Characteristics

- Clear and concise statement of a need
- Each requirement shall be verifiable by a single test or other action (inspection, analysis, demonstration)
- One “shall” per requirement
- The requirement shall be stated such that the verification is unambiguous (e.g. don’t use adjectives such as quickly)
Requirements Document Format

- **Introductory Material** *(Scope, Documents, Overview…)*
- **Requirements** *(list of “shall” with minimum explanatory text)*
- **Requirements Traceability Matrix (RTM)**
  - Identifies source of requirement (document and number)
- **Requirements Justification Matrix (RJM)**
  - Describes rationale for the requirement
- **Requirements Verification Matrix (RVM)**
  - Identifies verification method for each requirement
  - Test, Analysis, Demonstration, or Inspection
  - Requirements should be written to only need one test or ...
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DRD Science Requirements