

Towards a Concept: NUSTAR Slow Control

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- i. project/problem description
- ii. conceptual approach
“docking stations”
- iii. imbedding front-end systems

Project/Problem Description

NUSTAR DAQ has to provide data and **control** handling for a **large number of subsystems**:

- beam preparation/guiding
- target station(s) / interaction zone
- detector systems
- computing/storage systems

FEE subsystems: **various standards & levels of integration**

Expected broad spectrum of experimental activities

- **flexibility** in subsystems
- **flexibility** in the structure of the complete setup

Costly beam time: **efficient & reliable** performance

Conceptual Approach

Subdivide NUSTAR DAQ system in “docking stations“

- data-transfer docking station(s) (station A)
- **slow-control docking station(s) (station B)**
(formation of working group @ KVI)
- time-synchronization docking station(s) (station C)

Conceptual Approach

Slow-control docking station (station B)

- checking hardware structure
- system initialisation
- providing (bi-directional) system parameters (data bank, slow-control events)
- system monitoring
 - scalars
 - digital signals (soft scope)
 - analogue signals
 - subsystem timing

System Embedding

Start working group @ KVI: 2007

orientation phase 1/2007 - 6/2007, input from detector groups
end 2007 conceptual design report

projected development phase 5 years

- identification station-hardware standard (e.g. VME based)
- identification station software systems
- identification of relevant system information
 - parameters
 - module templates
 - relevant signals
 - etc.