Progress report on the Cluster-Jet Target Slow Control

CM22/3 - CM23/2

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Work on the "Cluster-Jet Target Slow Control Final Design Report" has been completed following critical remarks of the Targets and the Detector Control System Coordinators. It has been demonstrated at CM22/3 that the concept of Slow Control presented in the Report works correctly. Therefore Lars Schmitt, the PANDA Technical Coordinator accepted the current milestone M7 of the Contract PSP 1.4.1.2.4 with FAIR as reached and paved the way towards starting work on the prototype.



Although not all formal obstacles on that way have yet been removed additional steps performed since CM22/3 are worth to be communicated:

* EPICS Device Support used in CM22/3 demonstration software has been rewritten, following recommendations of Florian Feldbauer. The new DS permits to pass data from/to the VAL field only (the direction is record type dependent), and alarms from MicroBlaze to EPICS only.

Output (EPICS to MicroBlaze) processing is asynchronous now: it is completed by an arrival of status from MicroBlaze, so when EPICS record PACT becomes 0, its alarm fields reflect the status.

Input processing as previously uses record processing callback, when data from MicroBlaze is ready to be put into the record.

- * A software repository is organized at the PANDA GitLab and the following elements have been located therein for an easy access and examination by the authorized staff:
 - Cluster-Jet Target Slow Control Final Design Report v.22.02.2023;
 - The complete software used in the demonstration;
 - There are two versions of the EPICS Device Support:
 - + A copy used in the CM22/3 demonstration;
 - + A copy corrected following Florian Feldbauer's remarks;

* EPICS Device Support is a project to be continued by incorporating the control of additional target devices not addressed in the demonstrator version. This will arise as a part of the work on the prototype of the target slow control, on the way towards the milestone M8.

* The first steps with GitLab hitherto performed indicate that a

"Best practices tutorial for GitLab" would be a very useful help for the beginners, as we found, if it existed.

THANK YOU FOR YOUR ATTENTION!