

DSG-R&D Phoebus Meeting Minutes

Date: August 04, 2023

Time: 2:00 PM – 2:30 PM

Attendees: Peter Bonneau, Aaron Brown, Pablo Campero, Tyler Lemon, and Marc McMullen

1. NPS Detector Signal Simulator & Alarm Test

Peter Bonneau

1. Reviewed the integration of the alarm system with the signal simulator
 - NPS detector signal simulator generates EPICS PVs
 - SoftIOc EPICS database formed from 12 VisualDCT templates
 - Templates are based on initial simulator parameter settings and EPICS alarm limits
 - Each of the 12 templates is dedicated to a simulated signal type and section of the detector or instrumentation measurement
 - Phoebus alarm system server programmed to monitor simulator PVs
 - Successfully debugged alarm server
 - The add node/PV Phoebus utility for alarm system didn't work for some nodes
 - Used alarm server console to export .XML file for PVs that were monitored
 - Used format from exported .XML file to create new file with all simulated PVs and nodes
 - Imported new .XML to alarm server via console control
 - All PVs and nodes were checked via alarm server console
 - Test of alarm system monitoring of PVs in progress
 - User interface controls and monitoring screens debugged
 - Alarm table, alarm tree, and alarm area panel working correctly

The screenshot displays the Phoebus Alarm Test Station interface. On the left is the 'Hall-C-NPS Alarm Area Panel' with buttons for various temperature and humidity sensors. Below it is the 'Hall-C-NPS Alarm Tree' showing a hierarchical view of the alarm system. The main window shows 'Back Crystal Zone Temperature Sensor Alarm Testing [°C]' with a table of sensor data. Below that is the 'Hall-C-NPS Alarm Table' showing active alarms.

PV name	Crystal	read	HIHI set	HIHI read	HIGH set	HIGH read	LOW set	LOW read	LOLO set	LOLO read	Alarm status	Alarm severity	Scan rate	range [°C]	Min T [°C]	Max T [°C]
hcnps_intlk_cz_t_back	0	19.47	23.00	23.00	20.00	20.00	5.00	5.00	0.00	0.00	NO_ALARM	NO_ALARM	1 second	6	15	21.00
	5	17.38	23.00	23.00	20.00	20.00	5.00	5.00	0.00	0.00	NO_ALARM	NO_ALARM	1 second	5	15	20.00
	10	17.11	23.00	23.00	20.00	20.00	5.00	5.00	0.00	0.00	NO_ALARM	NO_ALARM	1 second	5	15	20.00
	15	17.95	23.00	23.00	20.00	20.00	5.00	5.00	0.00	0.00	NO_ALARM	NO_ALARM	1 second	5	15	20.00
	20	19.70	23.00	23.00	20.00	20.00	5.00	5.00	0.00	0.00	NO_ALARM	NO_ALARM	1 second	5	15	20.00
	25	16.55	23.00	23.00	20.00	20.00	5.00	5.00	0.00	0.00	NO_ALARM	NO_ALARM	1 second	5	15	20.00
	30	19.87	23.00	23.00	20.00	20.00	5.00	5.00	0.00	0.00	NO_ALARM	NO_ALARM	1 second	5	15	20.00
	35	18.30	23.00	23.00	20.00	20.00	5.00	5.00	0.00	0.00	NO_ALARM	NO_ALARM	1 second	5	15	20.00
	180	17.81	23.00	23.00	20.00	20.00	5.00	5.00	0.00	0.00	NO_ALARM	NO_ALARM	1 second	5	15	20.00
	185	16.86	23.00	23.00	20.00	20.00	5.00	5.00	0.00	0.00	NO_ALARM	NO_ALARM	1 second	5	15	20.00
	190	15.04	23.00	23.00	20.00	20.00	5.00	5.00	0.00	0.00	NO_ALARM	NO_ALARM	1 second	5	15	20.00
	195	19.50	23.00	23.00	20.00	20.00	5.00	5.00	0.00	0.00	NO_ALARM	NO_ALARM	1 second	5	15	20.00
	200	19.06	23.00	23.00	20.00	20.00	5.00	5.00	0.00	0.00	NO_ALARM	NO_ALARM	1 second	5	15	20.00

PV	Description	Alarm Severity	Alarm Status	Alarm Time	Alarm Va...A	PV Severity	PV Status
hcnps_intlk_cz_t_back_1	Crystal Zone Back Temperature 1	MINOR	HIGH_ALARM	2023-07-31 16:31:50.044	20.0493018...	OK	NO_ALARM

Phoebus Alarm Test Station – Detector Simulator Controls & Monitoring / NPS Alarm Table / Alarm Tree / Alarm Area Panel Nodes

2. Development of EIC DIRC Phoebus alarm system test

Peter Bonneau and Tyler Lemon

1. Phoebus alarm system will monitor EIC DIRC interlock PCB
2. Researched and procured readout hardware
 - PO issued for National Instruments hardware
3. Build of second Phoebus development computer for JLab tests
 - Ordered SSD for Linux laptop build