

ISOLDE Report FOM 2020/08/11 (Week from 08/04 to 08/10)

ISOLDE low energy hardware commissioning :

- **Electrostatic quads and steerers polarity tests:** all done except for
 - the 2 new front-end, not in place
 - the RBO line: damaged connectors – need to be changed

- **Vacuum systems** (J. Ferreira Somoza): progressing as planned
 - From Friday all Low energy lines are pumping. (too much outgassing in sector with the new tape station, and leak in CA10 sector)

REX/HIE-ISOLDE hardware commissioning :

➤ Beam instrumentation tests of:

- Voltage of the electron suppressor completed (All the FCs except for the three new ones)
- Gain for all the FCs
- Integration window
- Movement tests.

➤ Pending issues: Several devices don't respond to the movement requests. E. Bravin, S. Sadovich working on the problem.

➤ Cryogenics and SRF (W. Venturini, D. Valuch): progressing as planned

- The tunnel was opened on Thursday morning to carry out on CM4 for the installation of the solenoid leads (heaters and thermostats).
- Cool down of SC cavities continued

➤ REXEBS (Fredrik Wenander, Gunn Khatri, M. Lozano Benito): progressing

- Optimization of the beam charge breeding in the REX-EBIS after injection from the REX-TRAP local ion source. Trap, BTS, EBIS and Separator tuned for 39K10+ and 208 mA electron beam.
- Several mass-scans of REXEBIS contaminants done to investigate the reason of poor efficiency.

➤ Pending issues. (Oasis support)

TOF functionality (BTS.BO30 and RFQ.BO30) _ XBTS.BO30-TOF-CH signal seems just noise

Pending issues Reported on July 28th

The screenshots show the INCA control system interface for two different locations: ISO:HRS - PSB.USER.ALL - (INCA) and ISO:CA0+LA0+LA1 - PSB.USER.ALL - (INCA). The top row shows the system at 11:48:19 on August 10, 2020, in a normal state. The bottom row shows the system at 11:52:13 and 11:52:13 on the same date, where various components are in error or exception states. A red arrow points from the top-left screenshot to the bottom-left screenshot, indicating a transition from a normal state to a glitched state.

ISO:HRS - PSB.USER.ALL - (INCA) - 11:48:19

Component	Mode	State	Voltage CCV [V]	Voltage AQN [V]
YHRS.QP840-V	OFF	OFF	900.0	1.4
YHRS.BE750-V	OFF	OFF	1940.0	11.1
YHRS.Q5730-V	1066.0	1.9	0.0	0.3
YHRS.Q5830-V	1800.0	1.7	-80.0	-0.2
YHRS.SEPMAG0DEG	OK	ON	180.75	183.31
YHRS.SEPMAG0DEG	OK	ERROR	180.67	183.74
HRS.MAG90	ON	OK	false	ON
HRS.MAG60	ON	OK	false	ON

ISO:CA0+LA0+LA1 - PSB.USER.ALL - (INCA) - 11:48:19

Component	Mode	State	Voltage CCV [V]	Voltage AQN [V]
YCAO.KI10-V	OFF	OFF	1540.0	10.1
YCAO.QP50-V	OFF	OFF	1005.0	2.1
YCAO.DE60-V	OFF	OFF	0.0	0.0
YCAO.KI70-V	OFF	OFF	0.0	0.0
YLAO.BE10-V	OFF	OFF	0.0	0.0
YLAO.QP20-V	OFF	OFF	0.0	0.0
YLAO.QP30-V	OFF	OFF	0.0	0.0
YLAO.KI70-V	OFF	OFF	0.0	0.0
YLA1.BE10-V	OFF	OFF	0.0	0.0
YLA1.QP20-V	OFF	OFF	0.0	0.0

ISO:HRS - PSB.USER.ALL - (INCA) - 11:52:13

Component	Mode	State	Voltage CCV [V]	Voltage AQN [V]
YHRS.QP840-V	OFF	A single exception fo...	900.0	A single exception fo...
YHRS.BE750-V	OFF	A single exception fo...	1940.0	A single exception fo...
YHRS.Q5730-V	1066.0	Multiple exce...	0.0	Multiple exce...
YHRS.Q5830-V	1800.0	Multiple exce...	-80.0	Multiple exce...
YHRS.SEPMAG0DEG	OK	ON	180.75	183.31
YHRS.SEPMAG0DEG	OK	ERROR	180.67	183.74
HRS.MAG90	ON	OK	false	ON
HRS.MAG60	ON	OK	false	ON

ISO:CA0+LA0+LA1 - PSB.USER.ALL - (INCA) - 11:52:13

Component	Mode	State	Voltage CCV [V]	Voltage AQN [V]
YCAO.KI10-V	OFF	A single exception fo...	1540.0	A single exception fo...
YCAO.QP50-V	OFF	A single exception fo...	1005.0	A single exception fo...
YCAO.DE60-V	OFF	Multiple exceptions f...	0.0	Multiple exceptions f...
YCAO.KI70-V	OFF	Multiple exceptions f...	0.0	Multiple exceptions f...
YLAO.BE10-V	OFF	Multiple exceptions f...	0.0	Multiple exceptions f...
YLAO.QP20-V	OFF	Multiple exceptions f...	0.0	Multiple exceptions f...
YLAO.QP30-V	OFF	Multiple exceptions f...	0.0	Multiple exceptions f...
YLAO.KI70-V	OFF	Multiple exceptions f...	0.0	Multiple exceptions f...
YLA1.BE10-V	OFF	Multiple exceptions f...	0.0	Multiple exceptions f...
YLA1.QP20-V	OFF	Multiple exceptions f...	0.0	Multiple exceptions f...

Intermittent glitches in the control system. All controls freeze for around five seconds. Observed from time to time but less of last week.