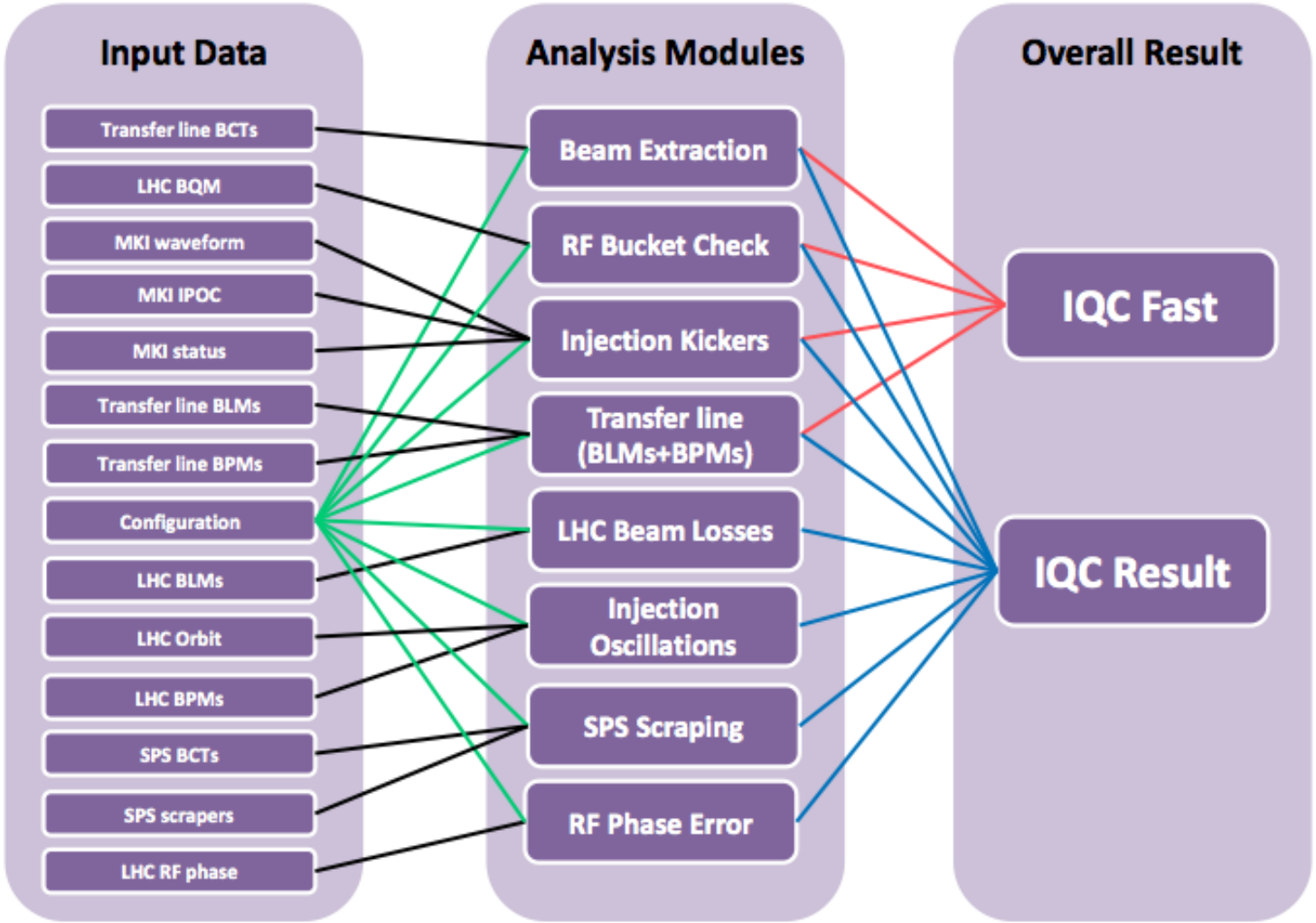
IQC status

IQC Modules

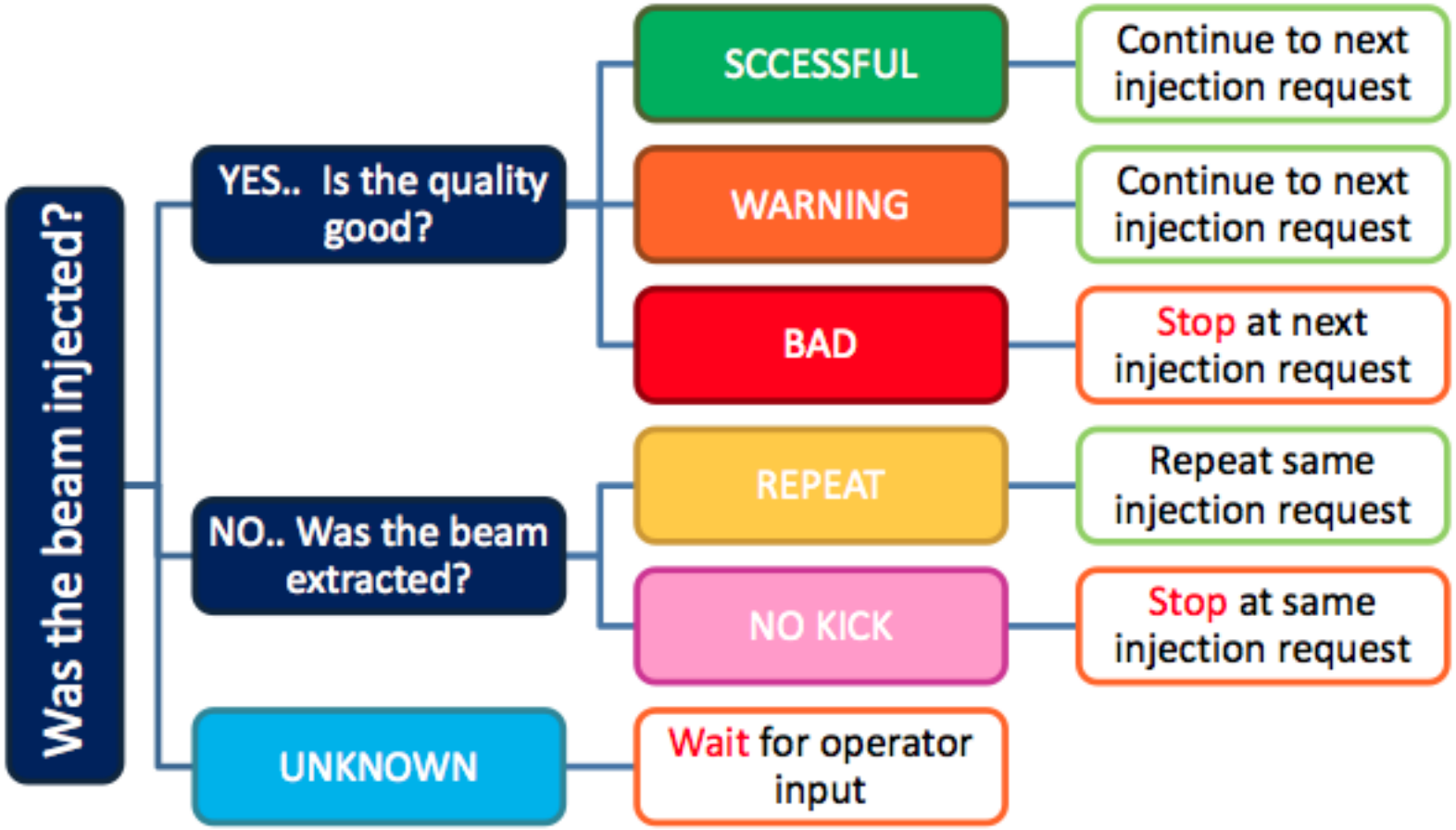
- The IQC consists of 8 modules per beam

IQC Results

IQC Result after 13 s. IQC Fast after 2.5 s.



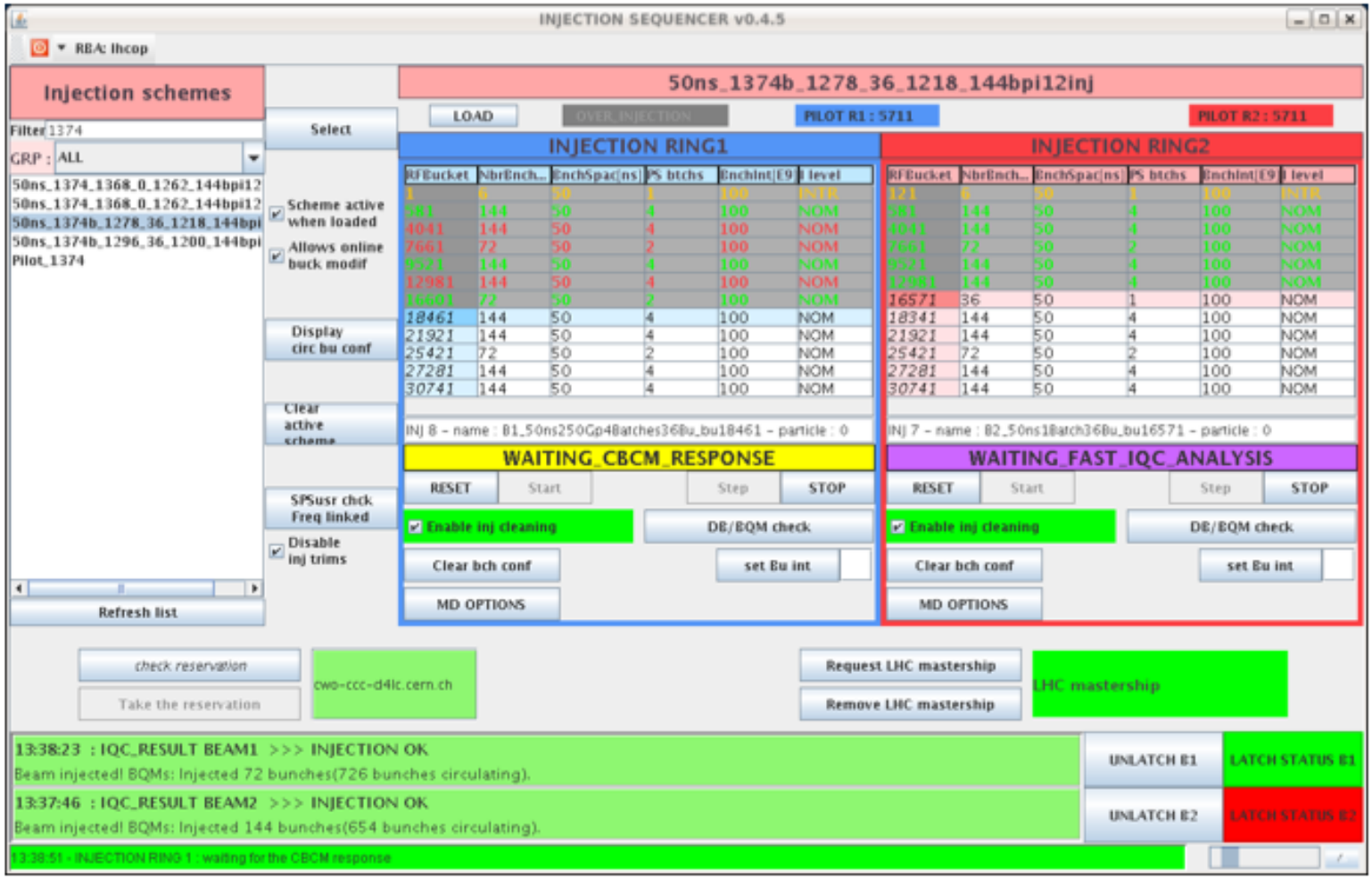
Results for Injection sequencer



Results “BAD”, “NO KICK” and “UNKOWN” interlock the next injection via the SIS. While the IQC is still analyzing it also interlocks.

Additional interlock for injection oscillation amplitude.

Communication with Injection Sequencer



Module Details

Module	Description	Thresholds	Thresholds updated	Masked
TL BCT	Checks whether beam extracted	No	-	No
Injection kicker	Checks length, rise time, abort gap,…of MKI kick	Yes	No (made large for commissioning)	No
BLMs	Compares beam loss to quality thresholds. Intensity scaled	Yes	Yes (20 % of dump threshold for 288 bunches)	No
RF bucket	Compares injected bunch pattern with requested	No	-	No
Inj. Osc.	Checks bunch-by-bunch oscillation amplitude	Yes	Yes	No
TL	Trajectory byb, BLMs	Yes	No	Yes
RF phase	Injection phase error	Yes	Yes	No
Scraping	Scraped intensity, scraper position	No	-	No

All thresholds are in LSA and managed by MCS

Status

- The IQC is operational.
- But some of the inputs still need commissioning:
  - Or re-commissioning after software changes
  - Do not get the injected bunch pattern yet from BQM
- Thresholds will have to be updated as soon as we have the reference trajectory in the line
- New modules are being prepared to survey the extraction losses
- Injection oscillation interlock on SIS not tested yet
- Issue with SIS IQC interlock – experts checking