

Actions from the meeting

Ray VENESS

Notes and actions

- Carsten: Funding situation looking positive for UK-HL phase 2
 - Budget for the design costs for the v3 prototype
 - Publications in high-impact journals.
- Ray: We have busy milestones— starting with BI beam size review in 10/19
 - Need to prioritise the vacuum control system – where do we test it?
 - Expertise for the high pressure simulations
 - Overlap between UK-HL phase 1 and 2?
- Amir: Good correlation with simulations – we are optimizing the v3 design
 - Need to have clear data for the gas jet through-thickness profile. Important for the instrument performance
 - Urgent to make tests with a higher pumping speed in the nozzle chamber and a smaller nozzle - will this improve jet density?
 - Duty cycle of turbo pumps?

Notes and actions

- Stefano: Yes!! We have actually seen something in the LHC...
 - Check for correlation with the expected signal strength for Pb ions
 - Can we use other gasses in the LHC (...)
 - Do we replace the existing system, or add a new one with the v3 instrument?
- Peter: Nice campaign at Munchen confirms simulations for protons
 - Is it possible to take new data for Ne with the correct filter?
 - Follow-up on interesting 370 nm line, or others that are only activated by one gas?
- Adriana: HEL test stand is going well – we need to be ready!
 - Need to review the optics for the new expected dimensions of the e-beam
 - We need to give urgent input for the test stand operating parameters (collector duty cycle) required to test the BGC

Notes and actions

- Tom: There are some really interesting long-term options for this work
 - Consider neutralizing the FIB
 - Show the equivalence with a carbon wire for a 'wire scanner' mode
 - Consider IPM (BGI) as an instrument for FCC (talk to James Storey)
- Robert: Very interesting picture of the advantages of a gas jet – if we can make it
 - How do we get $5e11$ Ne/cm³ in a gas jet?
 - Do we need additional diagnostics to validate a BGV jet, if so, what?
- Johanna: Engineering is on track for v3 phase 1 (...but don't think about skewing the BGC!)
 - Confirm the performance of valve actuators in magnetic fields (re: CMS)
 - Find a solution for cleaning out the CD nozzle
 - Qualify the new oxidized copper coating

Notes and actions

- Gerhard: There are so many things that need to be done to make this installation in the LHC!
 - Find a turbo pump that performs reliably at $10e-3$ mbar.
 - Consider options for the gas bottle and line: bakeout? Move to tunnel?
 - We need a final review of the coating wavelength coverage before production
- Ray: N₂ or Ne... hmmmm
 - Start the conversation with the vacuum group about N₂
 - Consider qualification of NEG cartridges at CI
- Hao: Still plenty to do at CI
 - Can we install a chiller on the intensifier?
 - Investigate the limits of the gas jet and optics towards a larger e-beam
 - Agree the priorities for budget spend upto end of contract