

Short slabs production

Frédéric Magniette

Results of the beam-test

- Very good results...
- Perfect calibration pre-test



- Full position scan → good pedestal and MIP uniformity
- Shower tests with different W configurations
- A lot of coherent events
- Real-time monitoring
- 1T magnet experiment with remote harware

...but a lot of noise problems

- A lot of channels had to be masked
- Noise conduction problem
 - BCID 2500
 - All connection pieces had to be remade in plastic
 - The back plate had to be protected with kapton scotch
 - When the scotch had been scratched by W plates \rightarrow BCID 2500 appeared again
- We need to isolate the circuits inside the slabs
- Conclusion
 - \rightarrow A noise analysis had to be performed
 - \rightarrow Need for a redesign of the slabs or FEV or SMB

3 slabs are broken

- Slabs 13, 14 and 15 are unusable for data taking
- Too much noise prevent signal acquisition
- This problem appears suddenly during a manipulation phase (pre-beamtest calibration)
- Quick observation of the slabs dont reveal an obvious problem
- Conclusion
 - \rightarrow Complete analysis has to be performed
 - \rightarrow no new slabs until the cause has not been found and solved
 - \rightarrow These slabs need to be repaired

Hardware avaibility

- All mechanical pieces of slabs are available except the U
- Nobody has any experience on it at workshop
- We need two months to produce new ones
- Perhaps we need to extend the U size to avoid contact problem with backplate and W plates
- Conclusion

 \rightarrow we need to perform continuity tests before any new production of U to improve the slab design

Our plan are modified by these problems

- We need to post-pone the production of new slabs
- In the meantime
 - Noise analysis in time (on HV)
 - Complete analysis of slabs 13, 14 and 15
 - Design and production of FEV13 and SMBV5 (with Omega team)
 - Possible redesign of U and production
- First possible time for slabs production
 January 2018