LHC BWS Hybrid/Hybrid+ for EYETS 23/24

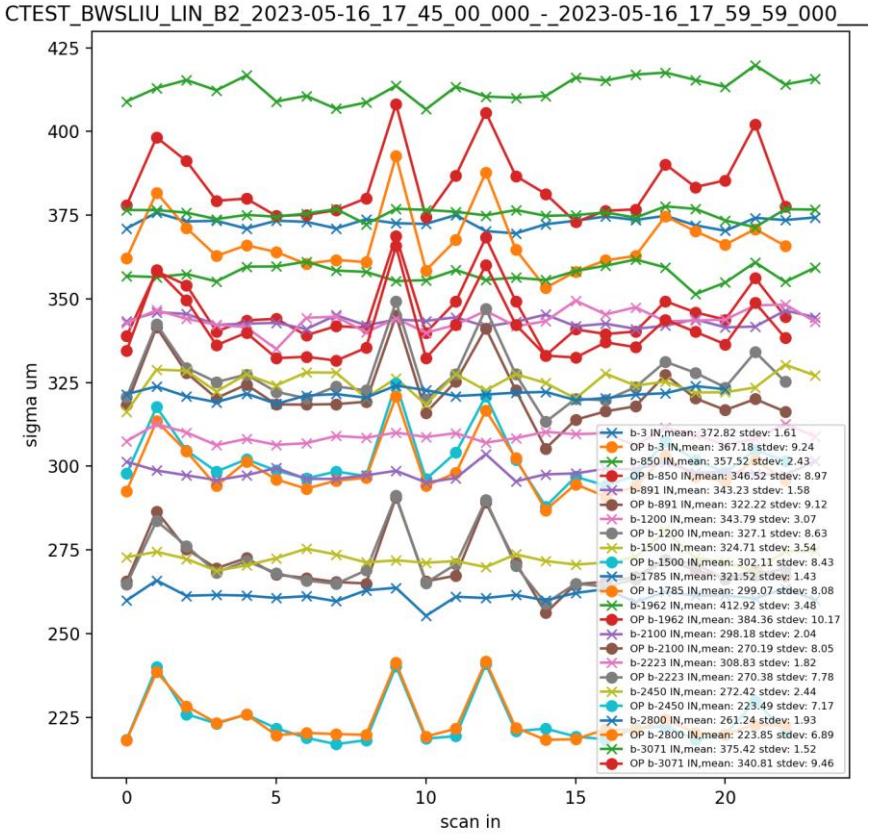
24.05.2023

LHC BWS CONS project team meeting #8

Some ‘definitions’

- Hybrid design
  - 2 instruments currently installed in the LHC
  - Compatible with the LIU control system
  - Using the existing support and infrastructure
  - 0/90 measurement configuration
  - Ball screw drive and encoder
  - All vacuum components (bellows, fork assemblies, feedthroughs) unchanged

- Hybrid+ design
  - Nothing currently installed in the LHC
  - Compatible with the LIU control system
  - Using the existing support and infrastructure
  - 0/90 measurement configuration
  - Ball screw drive and encoder
  - Re-design fork assemblies and feedthrough
  - Magnetically coupled drive depends on ongoing development



- Do we agree on the hybrid strategy that:
  - We aim to consider the 2 ‘Hybrid’ instruments as available for operations by end 2023
  - We aim to build and install 2 additional ‘Hybrid+’ designs, replacing 2 ‘legacy’ designs for YETS 23-4

R. Veness: https://indico.cern.ch/event/1270379/contributions/5387304/attachments/2639148/4566758/LHC%20BWS%20Mechanics%20update%200523.pdf

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What version could we install ?

Hybrid+

What new part in the vacuum?
- Forks
- Wire fixation for bakeout
- etc…

What validation should be done to assess these new parts before installation
- vacuum
- bakeout
- in motion, etc.)?

Hybrid

Repairs of the legacy bellows, what procedure?

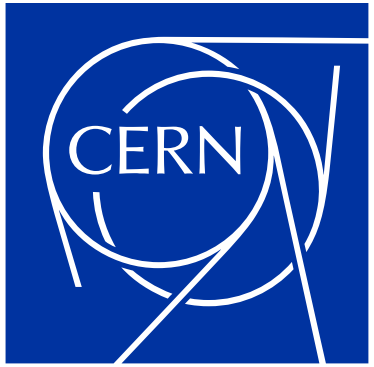
Procurement of the custom and standard parts

Production of min. 3 scanners (2 in LHC, 1 in the lab)

Vacuum acceptance test?

EYETS intervention

- **Which ‘legacy’ scanners to replace**
-
- **Work breakdown and rough planning**



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