

# FASER feedback on CERNbox

Jamie Boyd

8/12/21



# Intro

- FASER is a new LHC experiment
  - Constructed, commissioned and installed during LS2
- Have been using eos/CERNbox for storing calibration and commissioning data at all stages of the detector construction
  - Prototype component testing (starting 2019)
  - Commissioning of individual final components (2020)
  - Commissioning of detector sub systems on surface (2020)
  - Combined commissioning of the detector in the tunnel (since April 2021)
- Have not yet moved to the CTA\* system for storage of the detector raw data on tape
  - Currently using eos/CERNbox for this
  - Need to migrate well before first Run 3 physics

\* = <https://cta.web.cern.ch/cta/>

# Tracker calibrations – main usecase

- Tracker calibration RAW data stored on eos/CERNbox
  - For commisoining on surface transferred from the DAQ PC to CERNbox via automated synching (very useful)
  - For commissioning in tunnel, have not figured out how to get autosynching to work on rack based DAQ server (with no screen)
    - Need to type username/password into GUI
    - Re-starting after sync timeouts not easy to deal with in this case
- Tracker calibration analysis done on lxplus reading data from eos, and writing calibration analysis to eos/CERNbox
  - Nice to be able to go through calibration results (pdf files) directly from CERNbox folder through web browser
  - Sharing results across different people / computers in an easy way!
- Nice that data is automatically backed up
  - One incident when we accidentally deleted some data, it was easily recovered by CERN IT
  - Very nice!
- Typical sizes:
  - 1GB/tracker layer / calibration
  - Folder sizes:
    - 86 GB individual layer calibrations
    - 400 GB tracker station calibration on surface
    - 270 GB tracker station calibration in tunnel (since March 2021)

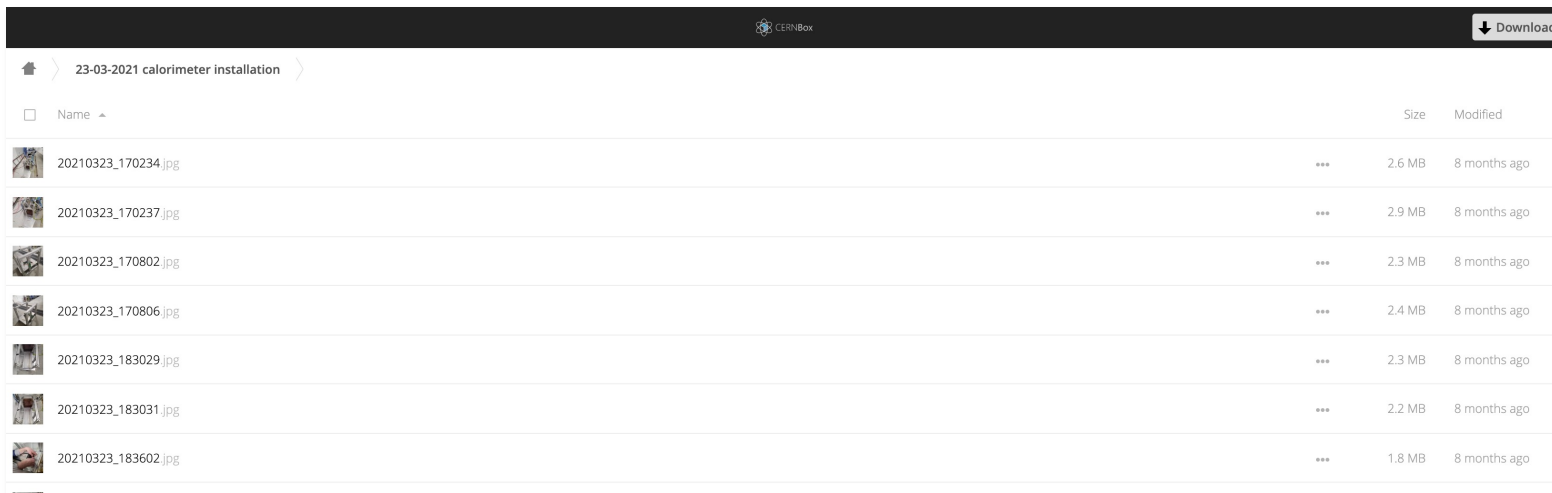
# Other uses

- Detector raw data
  - We are writing the raw FASER data to eos from the DAQ PC
  - 7.7 TB of data from the tunnel written since March 2021
  - 2.1 TB of data from testbeam in July 2021
  - In principle this data is available through CERNbox but we don't use this feature
  - No problems with this, except an accidental change of our quota which was quickly fixed by CERN IT
  - Need to migrate to CTA for this before physics
- Photos
  - Storing photos of the detector including high resolution images
  - Here we believe the CERNbox layout/functionality could be improved
- Documents
  - We use CERNbox to share standard documents, slides etc...
  - Very useful...

# Possible improvements

- Layout/functionality for displaying photos in CERNbox
  - Larger thumbnails (configurable?)
  - Faster loading of photos
  - Particularly relevant for larger collections of unsorted photos where one quickly wants to find one that shows for instance a specific detector part
- Use of auto-synching on server PC with no monitor
  - Possible without needing to type login details into a GUI?

Example photos  
CERNbox  
webpage



Name	Size	Modified
20210323_170234.jpg	2.6 MB	8 months ago
20210323_170237.jpg	2.9 MB	8 months ago
20210323_170802.jpg	2.3 MB	8 months ago
20210323_170806.jpg	2.4 MB	8 months ago
20210323_183029.jpg	2.3 MB	8 months ago
20210323_183031.jpg	2.2 MB	8 months ago
20210323_183602.jpg	1.8 MB	8 months ago