

**Starting discussion for
next data taking**

General points

- This year the coordination of the data taking will be done in team by Silvia, Michela and me
 - One meeting will be done in the week of 14-18 July, others will follow... A doodle will be circulated soon.
- The release of the irradiated materials is still a huge problem
 - Already asked for a meeting with the CNAO Radioprotection Office in July to define a strategy (especially for bulky detector with heavy materials), this may become even more urgent if a data taking at GSI will be scheduled in 2026! Waiting for answer...
- A new alignment strategy will be used this year using the laser tracking system available in CNAO. Some changes in the mechanical structures will be necessary, working on it.

Detector Status

As said in Cherasco we have to keep the detectors active during the year.

- Lots of detectors are still at CNAO and it does not allow to perform tests in our laboratories before the data taking. In parallel to the procedure for the release of the material, if someone needs to perform few days of tests without beam, we can arrange them at CNAO.

So far:

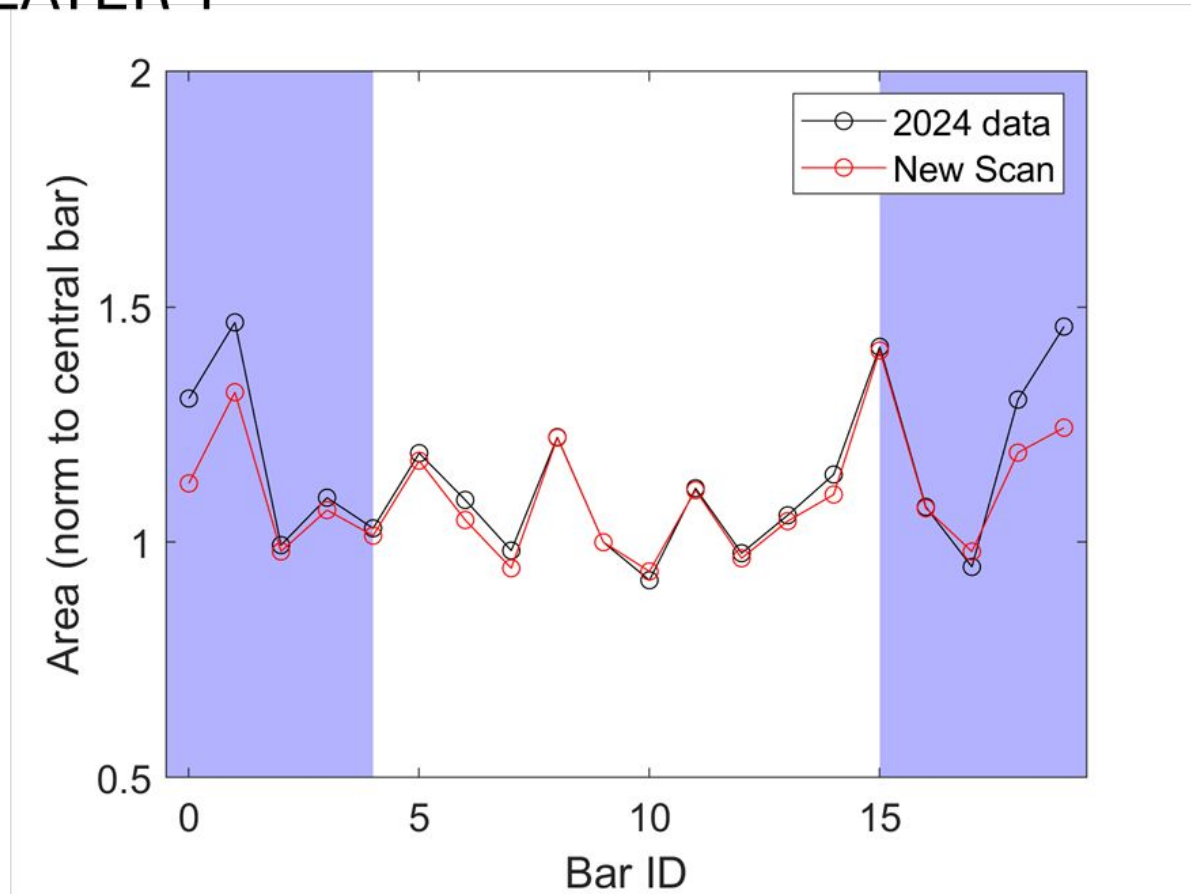
- DAQ test in Bologna
- VTX test in Bologna
- TW tested in CNAO few weeks ago

→ Updates from other detectors?

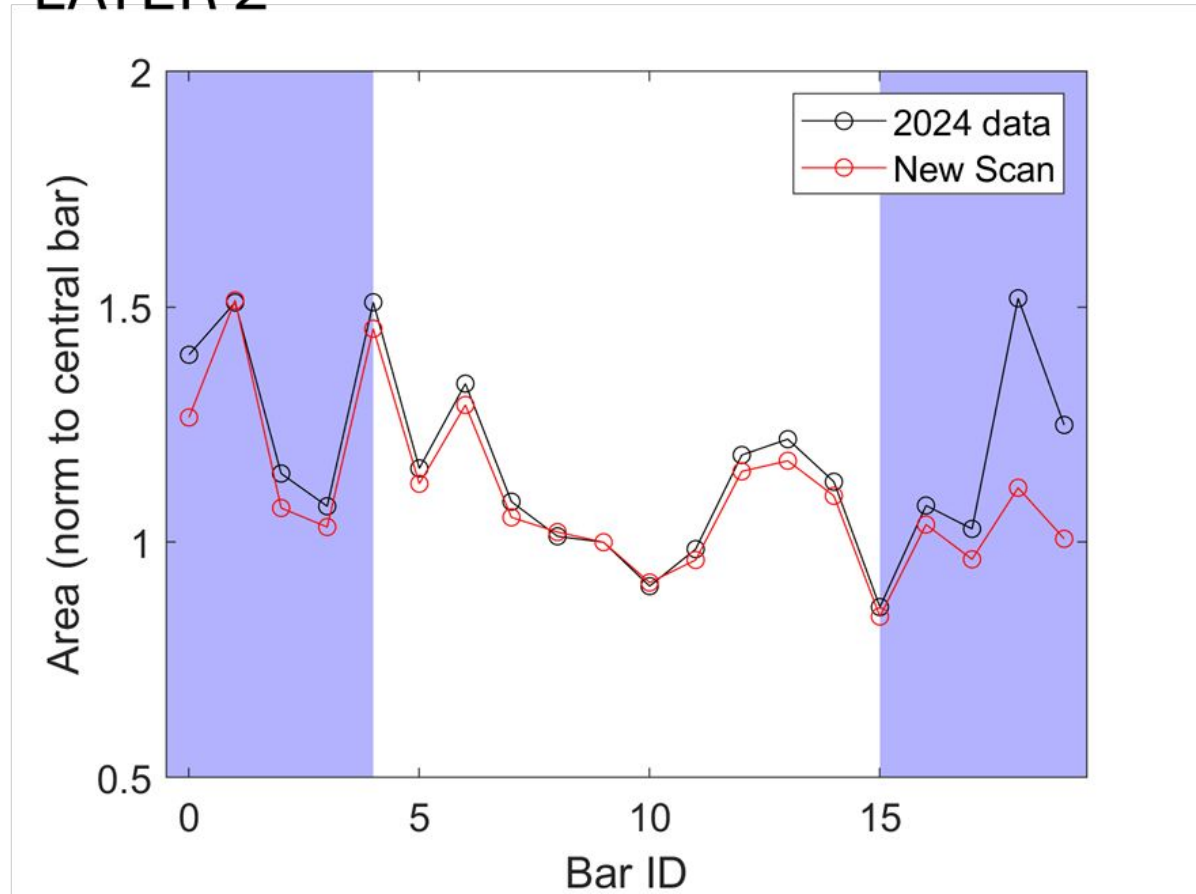
TW update

Comparison between the signal obtained in CNAO2024 (extracted from the calibration) and the signal obtained in a new scan with 200 MeV/u Carbon ions. Signal normalized to the value of bar 9 of each layer.

LAYER 1



LAYER 2



Schedule – Tracker test

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1 Sept. Arrival at CNAO / Installation	2 Sept. Installation (alignment and DAQ tests)	3 Sept. IT tests	4 Sept. IT tests	5 Sept. IT tests	6 Sept. <i>22:00 - 24:00</i> <i>Beamtime</i>	7 Sept. <i>00:00 - 06:00</i> <i>Beamtime</i>
8 Sept. Dismount	9 Sept. Dismount					

- ***No access will be possible in the weekend, except for the allocated beamtime***
- ***Access to the experimental room is possible from about 9:00 to about 17:30 in working days***

Schedule – Data taking

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
17 Nov. Access to XPR room	18 Nov. Installation	19 Nov. Installation / Alignment	20 Nov. DAQ tests	21 Nov. DAQ tests 22:00 - 24:00	22 Nov. 00:00 - 06:00 22:00 – 24:00	23 Nov. 00:00 - 06:00 22:00 – 24:00
24 Nov. 00:00 - 04:00	25 Nov.	26 Nov.	27 Nov.	28 Nov.	29 Nov. 14:00 - 24:00	30 Nov. 00:00 - 06:00 14:00 – 22:00
1 Dec. Dismount	2 Dec. Dismount	3 Dec.	4 Dec.	5 Dec.	6 Dec.	7 Dec.

- ***No access will be possible in the weekend, except for the allocated beamtime***
- ***Access to the experimental room is possible from about 9:00 to about 17:30 in working days***

An additional shift is foreseen for the beam tuning (but lot of beams were already tuned last year)

Tracker tests - Discussion

There are tests that need to be performed without the beam, this is the main reason of installing the setup the 1st and 2nd of September

- Check the IT cabling (detector map)
- Threshold scan
- DAQ tests

Other tests may be done just with a radioactive source, but the availability of beta sources in the experimental room need to be investigated, if we are interested

- Detector map
- Basic checks on sensors response

Tracker tests - Discussion

Tests with beam (let's remember that we have 8 hours only in September!)

- Energy/Threshold scan with protons for VTX/IT
- 200 MeV/u Carbon for global alignment, for IT inter/alignment, for test global tracking without magnetic field?
- The plan depends also on the results obtained the 3rd-5th September on IT

Other points:

- Which detector do we want to use in the test?
 - SC, BM, VTX, IT, MSD, TW... All of them to test global tracking w/o B-field
- Do we need beam settings that have not been tuned at the moment?
- People involved in the data taking will be asked for the required documents (radioprotection, etc...). For the general data taking we have more time....

General Data Taking

We have a total of 46 hours of beamtime

- We expect that this year the larger part of the time will be dedicated to physics data taking, however some detector tuning may be needed
 - it is important to schedule all the tests of the single detectors in advance, especially if a particular setup is needed.
 -

Analysis strategy before CNAO2025

Check of global tracking in different campaigns:

- CNAO2024 with / without TG, with / without B field
- CNAO2023 with / without TG, with B field (VTX eff not optimized)
- CNAO2022 with / without TG, without B field (VTX eff not optimized)

using different subset of the setup or the full setup

Many people involved in understanding global tracking in terms of many outputs including XS

(Giacomo, Roberto, Yun, Giuseppe, Luana, Matilde)

