

Status Forward Endcap EMC

PANDA Collaboration Meeting 23/2, June 2023, Prague

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Forward Endcap Move to Jülich/COSY beam times

- March Meeting: Chiller system already shipped (1st truck load)
- The week after: 2nd truck load with main detector elements (backplane, frame, cooling manifolds etc.)
- This week: 3rd and final truck load (electronics racks, insulation material)
- In between: Numerous items moved in cars and vans
- Three weeks left to prepare detector for first week of beam at COSY
- Final FWEC COSY beam time: 2nd week of August

Forward Endcap Move to Jülich: Two days, four cranes



Forward Endcap Move to Jülich: Getting out the Lab



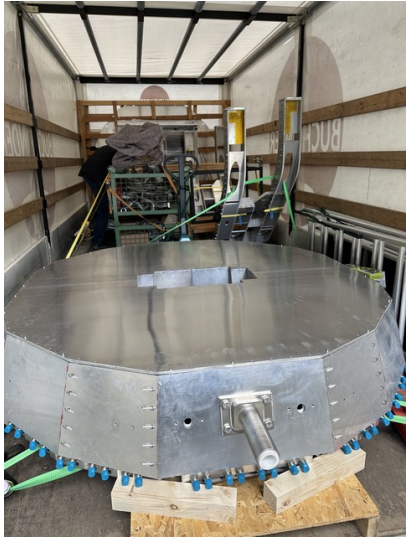
Forward Endcap Move to Jülich: 2nd Crane



Forward Endcap Move to Jülich: 2nd Truck Load



Forward Endcap Move to Jülich: 2nd Truck Load



Forward Endcap Move to Jülich: 3rd Crane



Forward Endcap Move to Jülich: 4th Crane



Forward Endcap Move to Jülich: Brass Feet Remachining

- "New" brass feet of aluminum frame (larger contact area, hook wrench turnable) did not match thread!



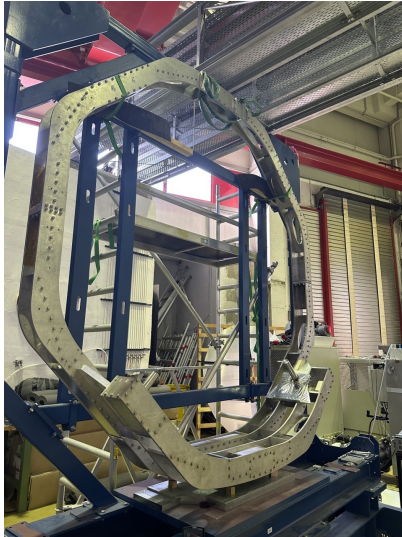
- IKT workshop: Remachining of threads during (our) lunch break

Forward Endcap EMC at COSY: Parting Blue Frame

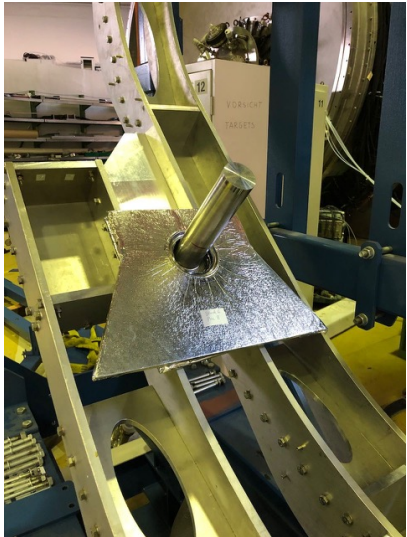


- Suspension/transportation frame designed to be parted
- Necessary for insertion into PANDA magnet
- Here: Necessary to insert aluminum frame, bring in backplate

Forward Endcap Move to Jülich: Reversed Frame



Forward Endcap Move to Jülich: Backplate Mounting



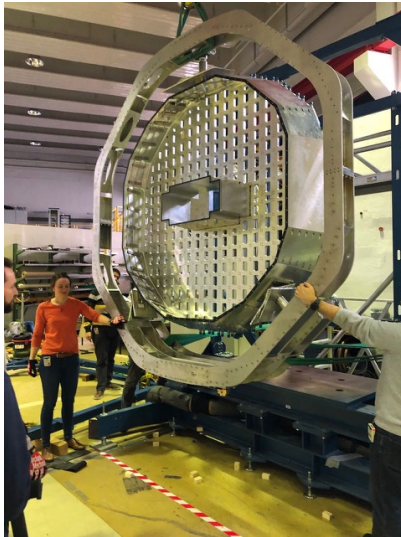
Forward Endcap Move to Jülich: Backplate Mounting



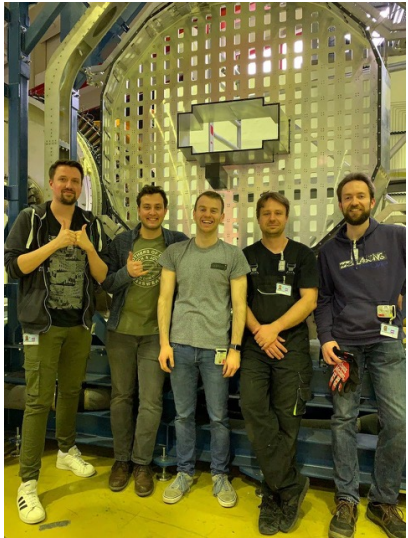
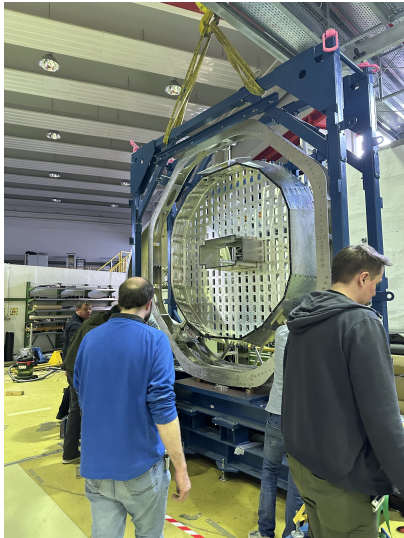
Forward Endcap Move to Jülich: Backplate Mounting



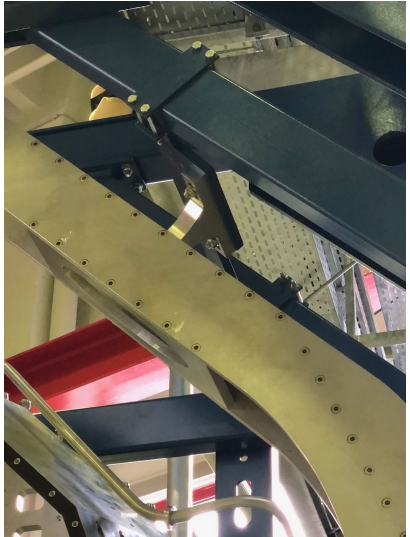
Forward Endcap Move to Jülich: Turning the Detector



Forward Endcap Move to Jülich: Frame Work Finished



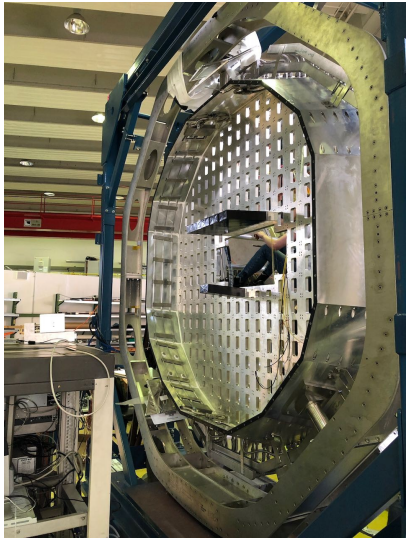
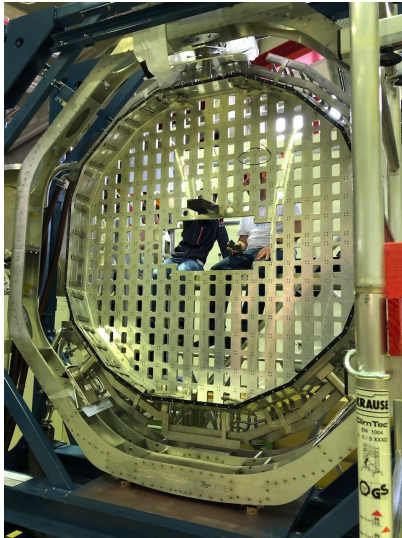
Forward Endcap Move to Jülich: Top Suspension



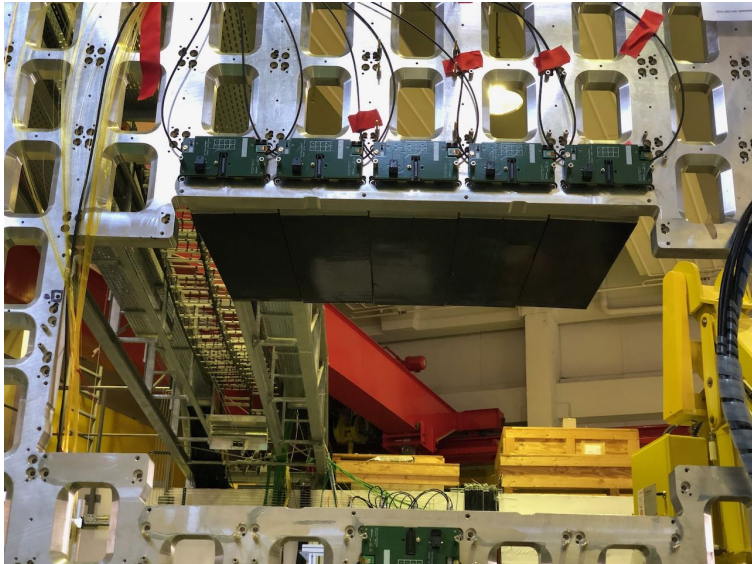
Forward Endcap Move to Jülich: Test Mount Front Lid



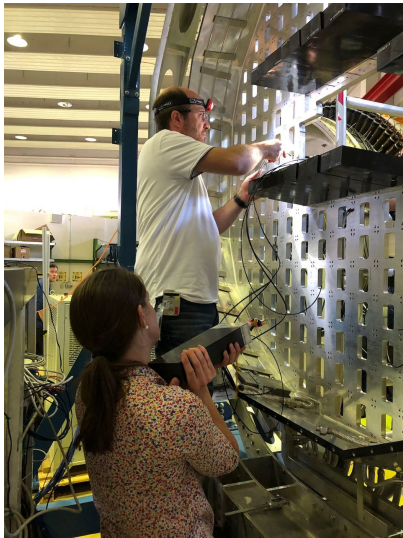
Forward Endcap Move to Jülich: Mounting Submodules



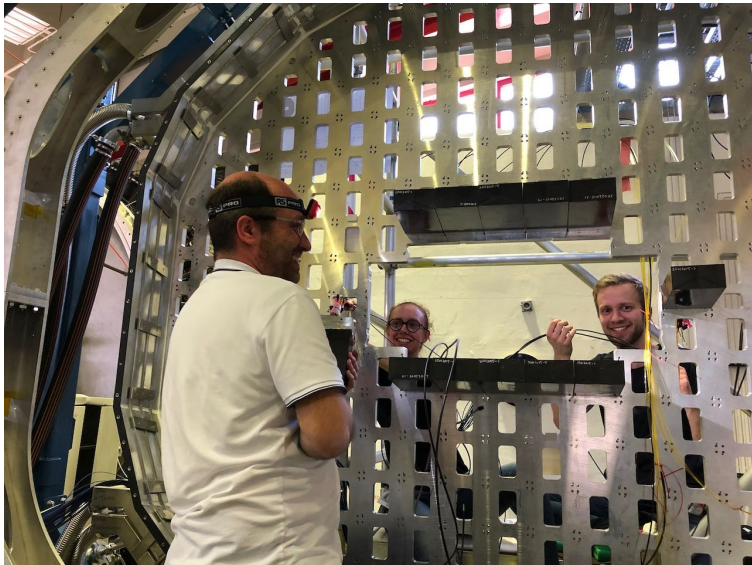
Forward Endcap EMC at COSY: Mounting Submodules



Forward Endcap EMC at COSY: Mounting Submodules



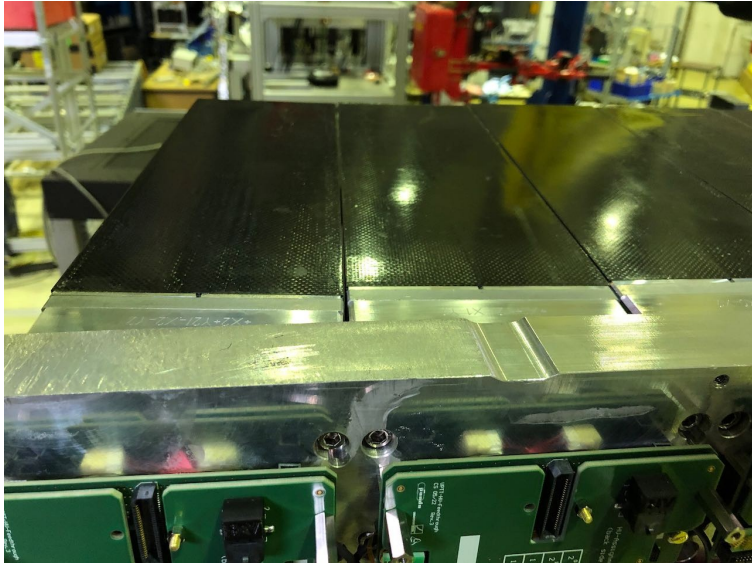
Forward Endcap EMC at COSY: Mounting Submodules



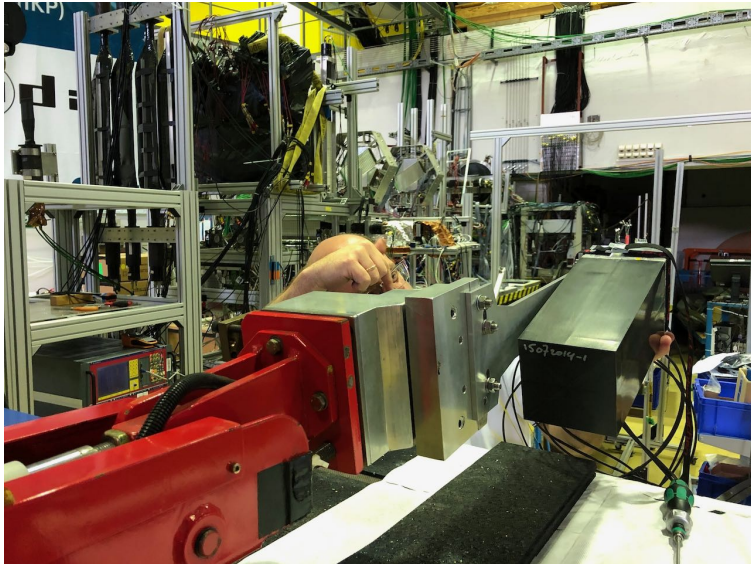
Forward Endcap EMC at COSY: Mounting Submodules



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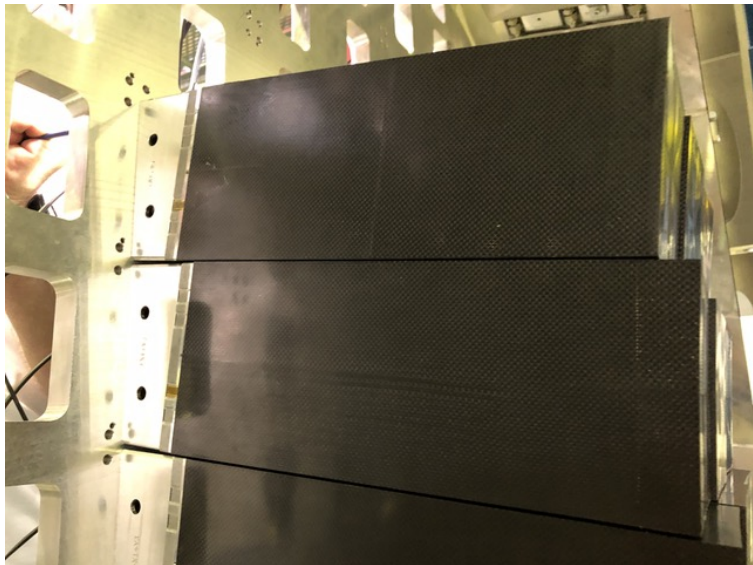
Forward Endcap EMC at COSY: Mounting Submodules



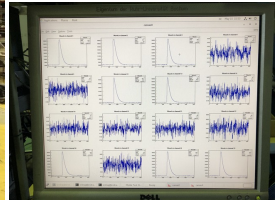
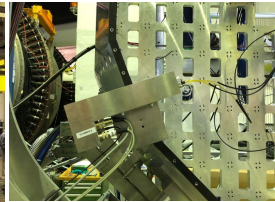
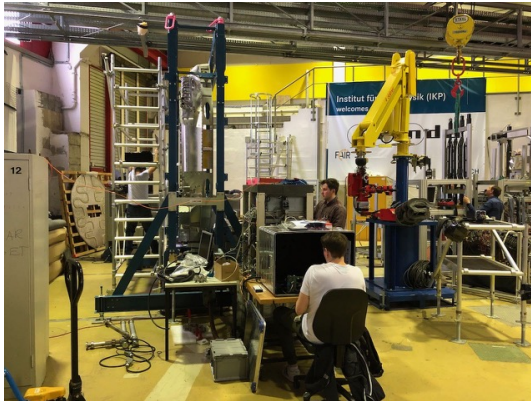
Forward Endcap EMC at COSY: Mounting Submodules



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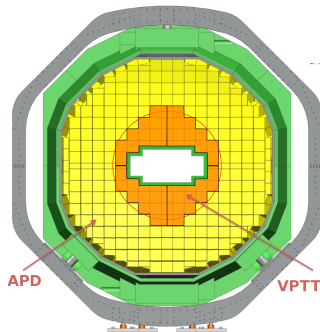
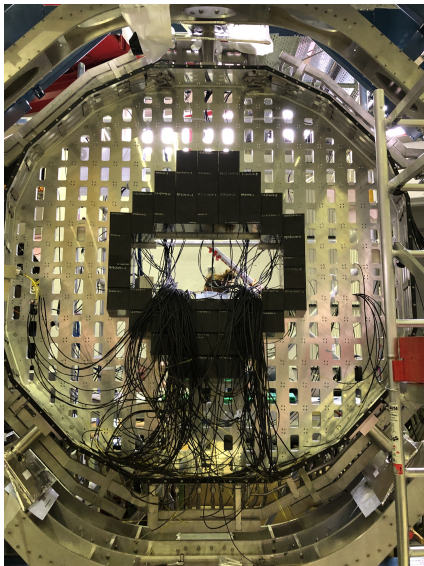


Forward Endcap EMC at COSY: Mobile Test Stand



- All Submodules tested w/ mobile test stand
- Tested prior to mounting and immediately after mounting incl. connector board

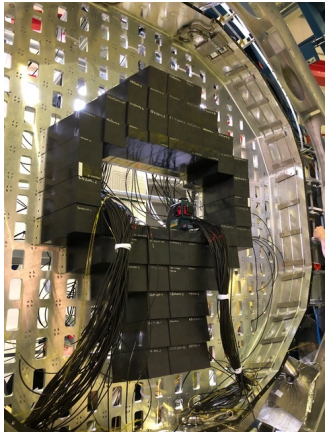
Forward Endcap EMC at COSY: Mounting Submodules



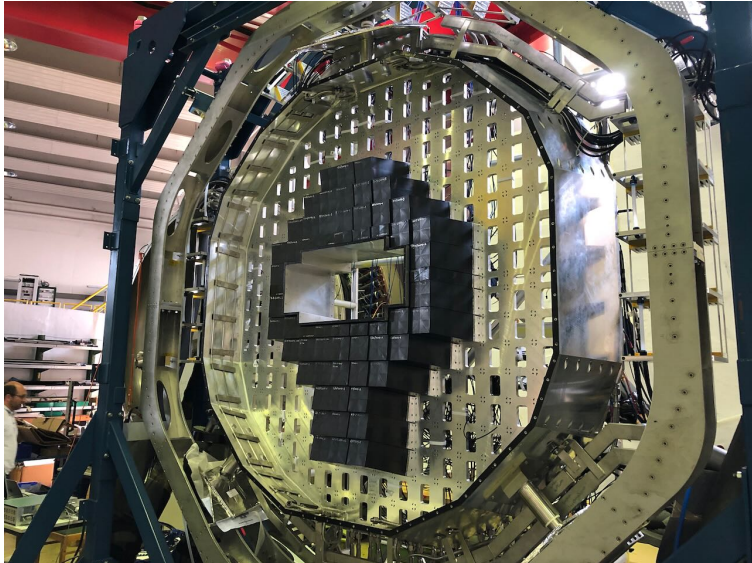
- All VPTT-equipped submodules mounted
- Peak rate: 11 pieces a day
- In addition: 6 APD-equipped submodules

PANDA Forward Endcap EMC at COSY

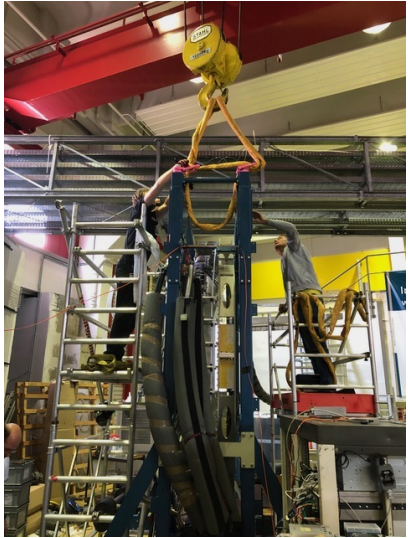
- Setup for COSY beam time ("elephant head"):
864 crystals (96 APD-read out)



Forward Endcap EMC at COSY



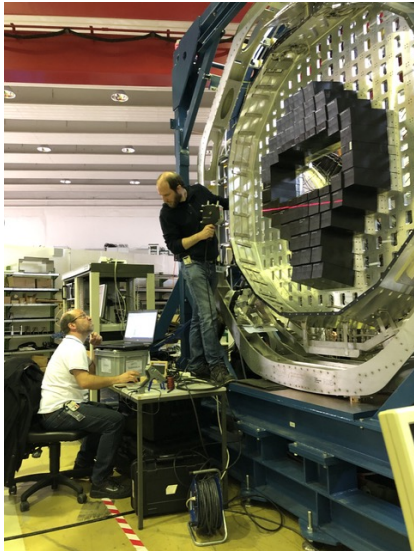
PANDA Forward Endcap EMC at COSY: Repositioning



Forward Endcap EMC at COSY: Lowering



Forward Endcap EMC at COSY



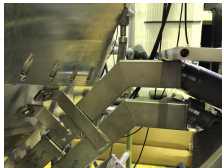
- Laser scanning of detector w/ "million dollar" machine from Bonn
- Seperate talk by Christian Hammann on how to and outcome



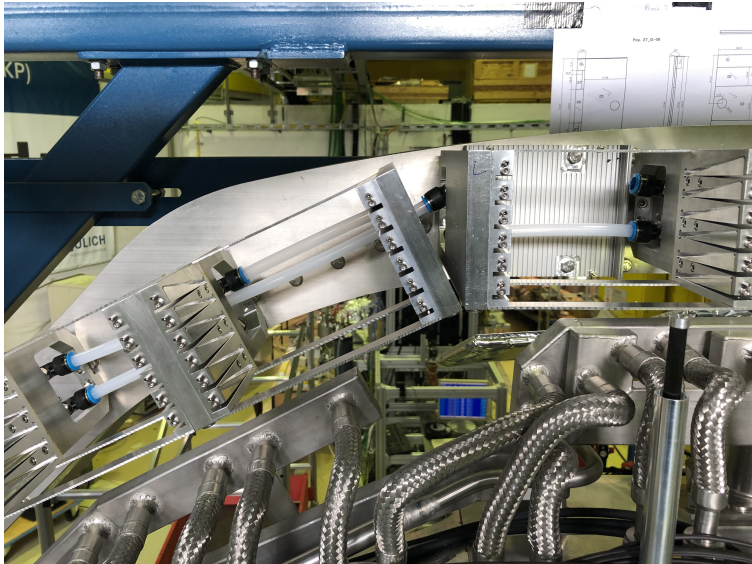
Forward Endcap EMC at COSY: 15-SADC Crates



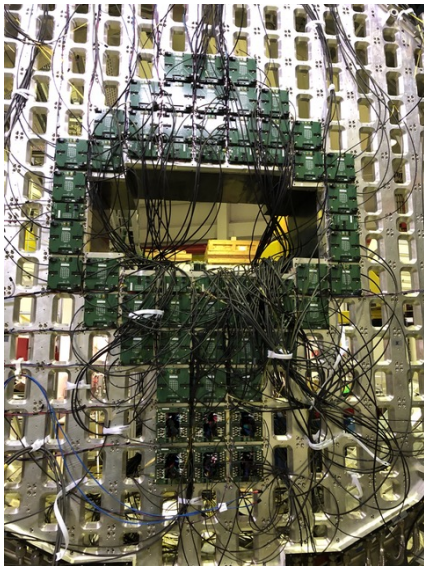
- Missing sagging of not fully equipped FWEC creates clashes between SADC crates connected to aluminum frame and cooling manifolds connected to backplane
- Remedy for beam time: leave out 3x6-SADC crates and "first floor" of 5x15-SADC crates



Forward Endcap EMC at COSY: 6-SADC Crates

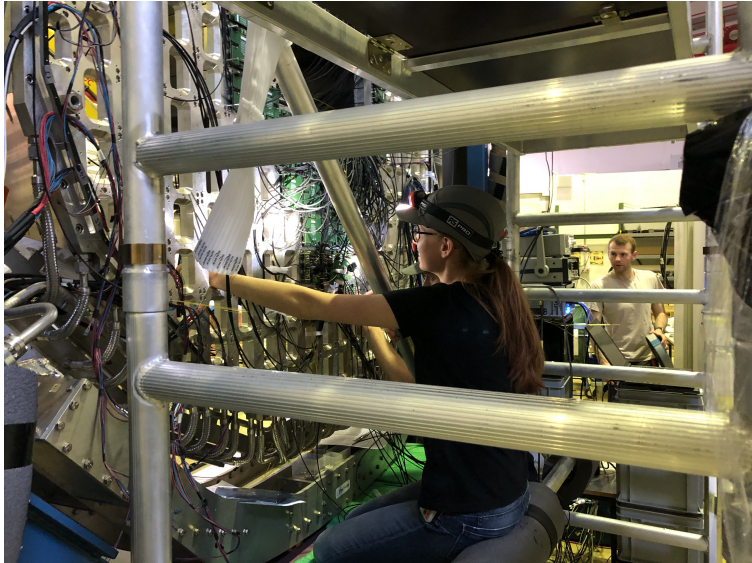


Forward Endcap EMC at COSY: Cabling

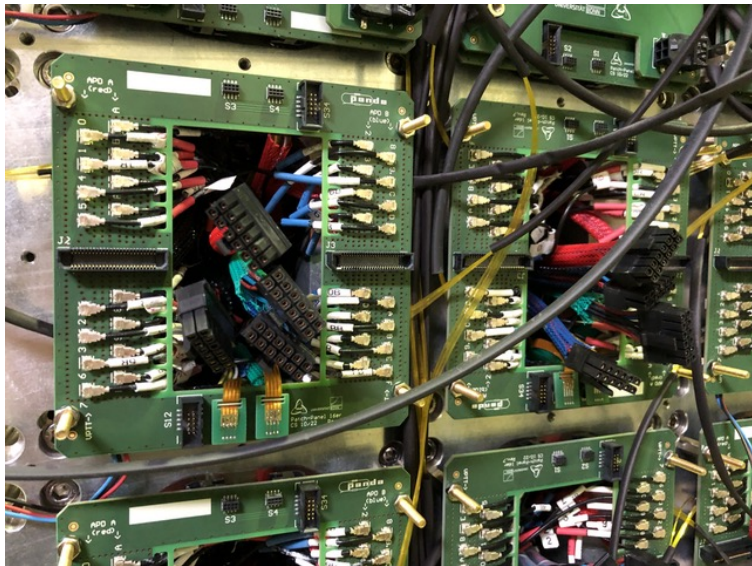


- Cabling: Talk by Celina Frenkel later in this session
- (Wild looking "cabling": Just bundles of light fibres, still to be routed)

Forward Endcap EMC at COSY: Cabling



Forward Endcap EMC at COSY: Cabling



Forward Endcap EMC at COSY: Thermal Insulation



- Prefabrication of insulation parts in Bochum
- Mounting in Jülich starts this week

Summary/Outlook

- We still prepare for COSY beam times with the Forward Endcap in 2023
- Tight schedule - as we build up at beam position occasionally limited access
- Only VPTT-equipped submodules mounted, plus 6 APD-read out submodules
 - ▶ Missing necessary sagging of detector in aluminum frame! (Still 9 mm too high!)
- SADC-Crates installed (aluminum frames installed, cooled), backplane PCBs shipped from Poland this week, power supplies already on their way from Uppsala
- DAQ still in finishing phase
- Keep your fingers crossed!

PANDA – ECAL MEETING # 1

September 30, 2002 @ GIESSEN

Participants:

V.Hejny, H.Koch, H.Orth, K.Peters, A.Potapov, R.Novotny, A.Wilms,
B.Zwieglinski

General remarks:

- all members of the PANDA collaboration interested in the electromagnetic calorimeter should be contacted and asked to sign up the list of interests at the GSI web-page www.gsi.de/groups/panda/
- A specific **homepage** of the electromagnetic calorimeter part will be installed at the homepage of the 2nd Physics Institute at Giessen. The link will be installed within the next two weeks. Everybody will be informed via email.
- The **minutes** will be distributed via email and stored at the homepage later on.
- **Collaboration meetings:** The subgroup concerning the electromagnetic calorimeter (ECAL) will meet in future **every first Monday in even months**. The next meeting will be held on

Monday, December 2nd at the University of Bochum.

Details will be distributed later.

- A **time table** for the project has to be submitted until middle of October and should be modified before within the group until October, 11 via email exchange.
- A **technical proposal** of the PANDA detector has to be submitted until April 1, 2004.