CAD-Status of PANDA Model

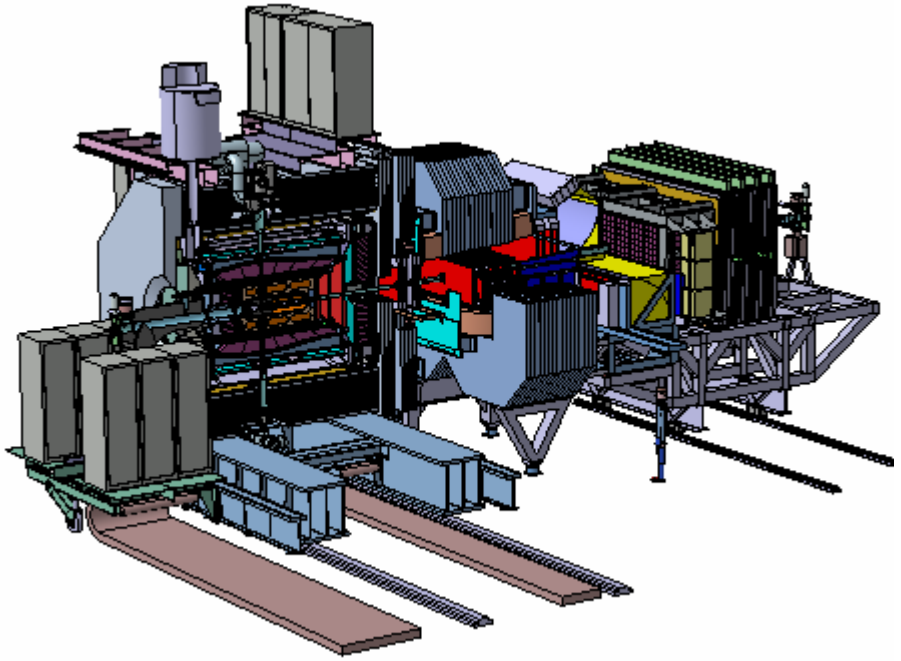
J. Luehning

The binding dimensions of the boundaries of all components were at first defined in a 2D-model. However, for integration of all components a 3D-model is needed.

Since many years there is a 3D-overview model of the whole PANDA set-up. It was updated once in a while. Initially it was intended to be used for presentation figures.

Now work is going on to convert this 3D-overview model into a 3D-integration model. For all components, the latest 3D-models available in EDMS have already been checked.

Purpose of the new model is a binding definition of boundaries and a possibility to check for collisions among neighboring components.



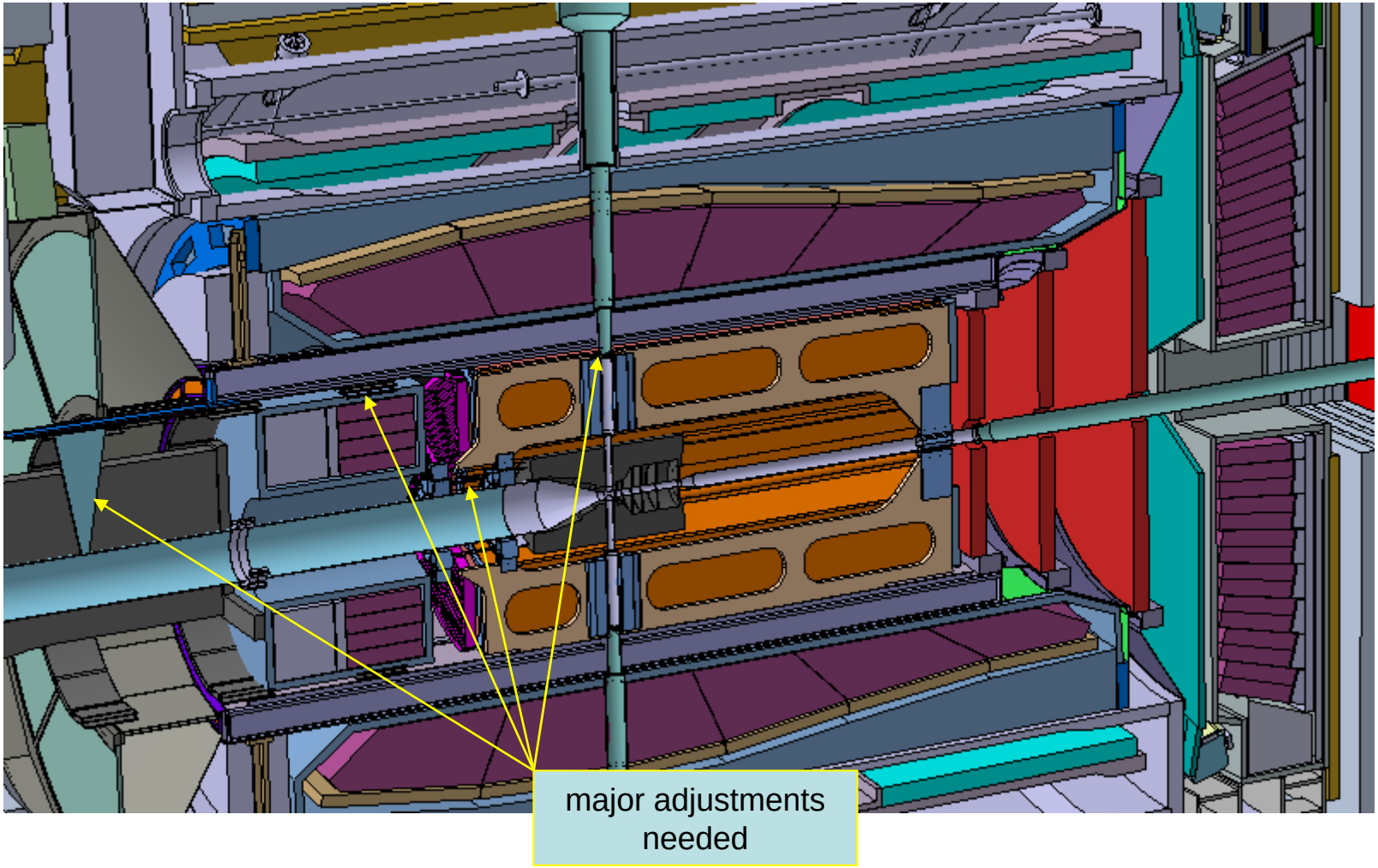
Some Considerations about 3D-Integration Model

- In order to avoid long loading times and clumsy displays the file size of all components has be small.
- The responsible CAD designers are asked to post such a small model in EDMS, apart from the detailed model. Only the boundaries of the components are needed. However, a simple indication of the inner set-up of a component is welcome. It does not blow up the file size and it improves the understandability. Assistance for downsizing big models is offered by the integration group.
- The size of the 3D-integration model should be less than 50 MB in uncompressed STEP-format.
- For a better insight in the overview model, one half of the Target Spectrometer was omitted. For the integration model both halves are needed. Question: how should the components be organized in the model?
- Cable ducts and supply line ducts should be included.

Status of Target Spectrometer I

component	Last update	reference / comment
Vacuum set-up	**2010-12-02**	https://edms.cern.ch/document/1107872/1 some minor updates, still in work
Micro-Vertex Detector	**2010-03-24**	https://edms.cern.ch/document/1064096/1 cables and supply lines not shown
Straw-Tube Tracker	**2010-03-05**	https://edms.cern.ch/document/1064592/1.1 , ?
Barrel-DIRC	**2012-11-08**	https://edms.cern.ch/document/1251310/1 some minor updates
SciTil	**2012-09-06**	no EDMS files
Barrel-EMC	**2012-11-16**	https://edms.cern.ch/document/1251209/1

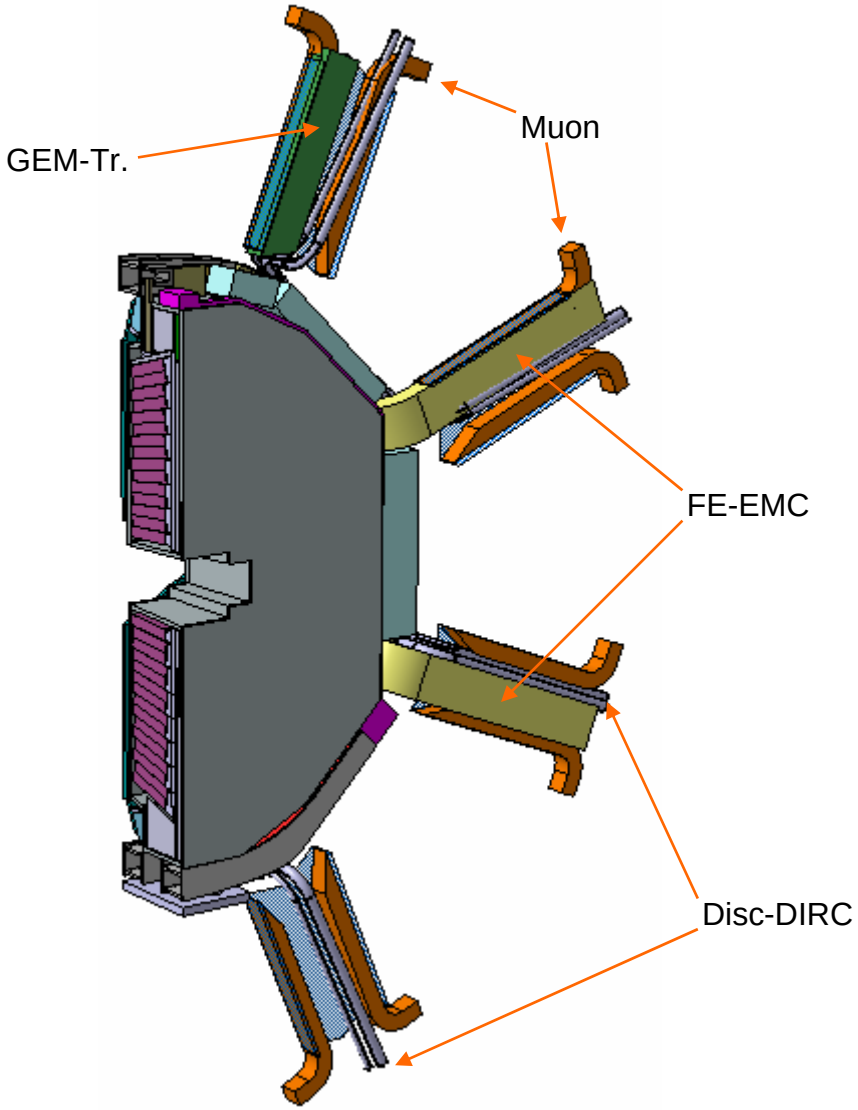
Status of Target Spectrometer I



Status of Target Spectrometer II

component	Last update	reference / comment
GEM-trackers	**2011-08-22**	https://edms.cern.ch/document/1158333/1 design modified, not yet in EDMS
Disc-DIRC	**2013-10-21**	https://edms.cern.ch/document/1321806/1
Forward-Endcap EMC	**2013-10-18**	https://edms.cern.ch/document/1064283/1
Backward-Endcap EMC	**2013-02-05**	outer dimensions: https://edms.cern.ch/document/1265837/1 details: https://edms.cern.ch/document/1064188/1

Status of Target Spectrometer II



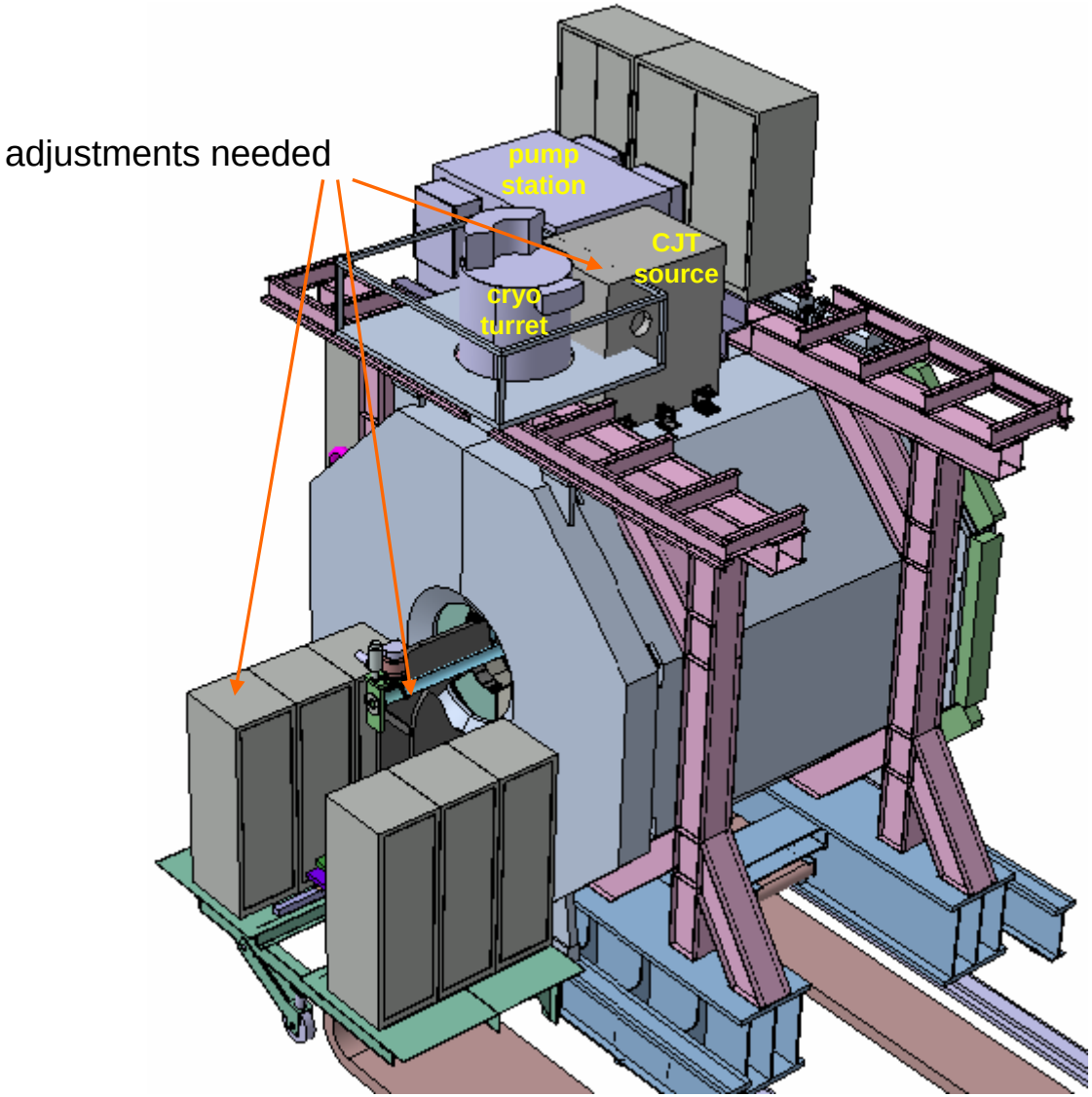
Status of Target Spectrometer III

component	Last update	reference / comment
Solenoid coil & cryostat	**2010-05-11**	https://edms.cern.ch/document/1064584/1.02 height of cryogenic turret modified
Iron yoke, barrel & endcaps	**2010**	https://edms.cern.ch/document/1064509/1. Latest 3D model from 2010, some changes since then, Bw-endcap simplified (symmetry), barrel recesses page 9 of https://indico.gsi.de/getFile.py/access?contribId=0&resId=0&materialId=slides&confId=2033
Muon counters	**2012-03**	https://edms.cern.ch/document/1204494/1 https://edms.cern.ch/document/1207555/1
Platform beams	**2012**	in work, 3D model not yet available
Auxiliary platform	**2013**	only conceptual design
Supply racks, FEE racks	**2013**	only conceptual design
Platform on top	**2013-12-04**	https://edms.cern.ch/document/1333069/1

Muon Filter

Component	date	reference / comment
Muon counters & iron	**2012-03-12**	https://edms.cern.ch/document/1204492/1

Status of Target Spectrometer III



Forward Spectrometer

Component	date	reference / comment
Vacuum-setup	**2010-12-02**	as in Target Spectrometer, but radius in front of Lumi-Mon enhanced to 90mm
Dipole magnet	**2013-11-25**	https://edms.cern.ch/document/1064100/1
Fw trackers FT1&FT2	**2012-01-12**	https://edms.cern.ch/document/1179540/1 modified, extension in beam direction now 52 cm
Fw trackers FT3&FT4	**2012-01-12**	https://edms.cern.ch/document/1179546/1
Fw trackers FT5&FT6	**2013**	FT6 now moved in front of Fw-RICH, no up-to-date model in EDMS
TOF-dipole	**2007**	https://edms.cern.ch/document/1179549/1 (support frame), obsolete, no 3D model
Forward RICH	**2007**	No model in EDMS
Forward TOF	**2007**	No model in EDMS
Forward Shashlyk EMC	**2013-07-05**	https://edms.cern.ch/document/1298081/2
Fw Muon Range System	**2012-03-15**	https://edms.cern.ch/document/1205282/1
Luminosity monitor	**2012-09-03**	https://edms.cern.ch/document/1240050/5

Forward Spectrometer