

PXD PP space allocation

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Combined PXD SVD Workshop
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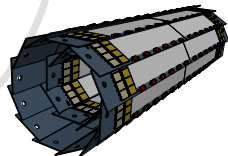


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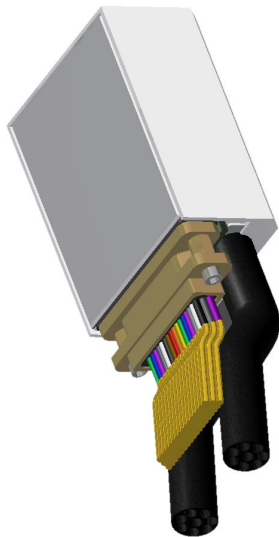
Preliminary PXD Patch Panel
Position Proposal, part 2

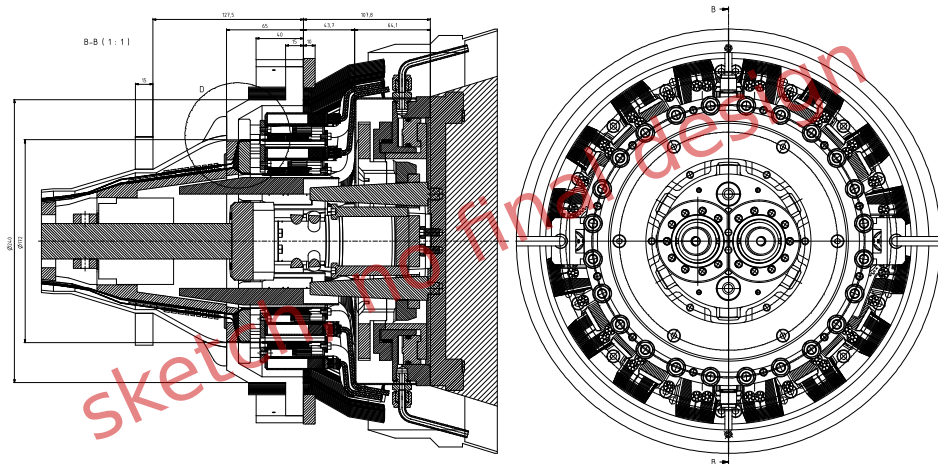


Patch Panel position is a tricky challenge:

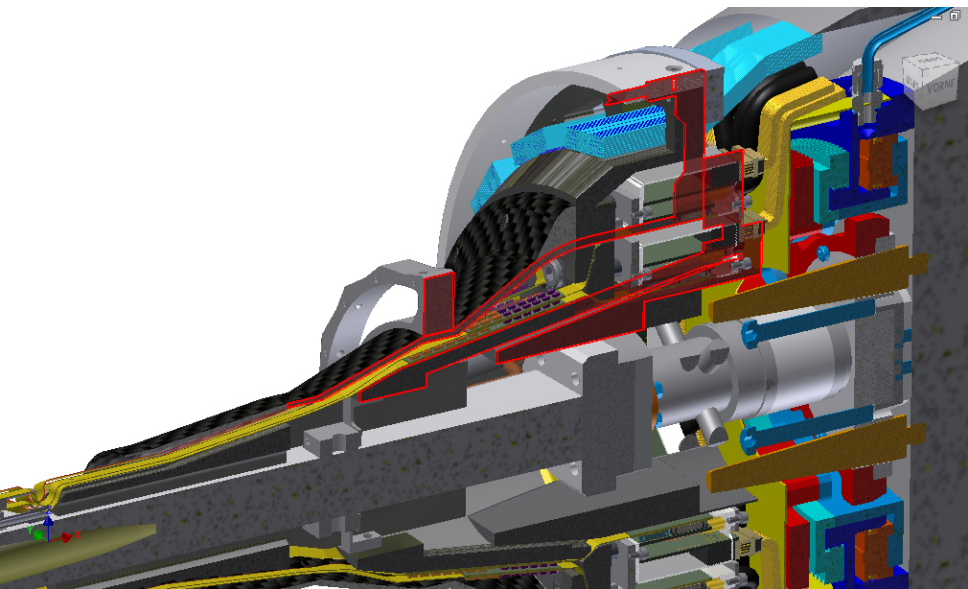
- ▶ current size ($40 \times 51 \times 24$ mm) is dominated by
 - ▶ size for two infiniband cables, their soldering and stress relief
 - ▶ micro sub-D connector for power cable (51 wires), alternatively solder directly which will likely need more space
 - ▶ connectors to capton cable
 - ▶ electric shielding
- ▶ space available is very limited
- ▶ still investigating how and where to place it

➡ No final design yet but promising ideas



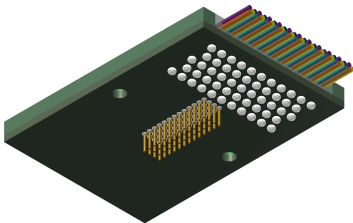
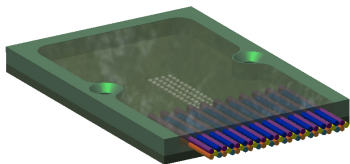


- ▶ move PXD endflange away from QCS
- ▶ put patch panel outside of endflange
- ▶ modify SVD carbon cone to keep total material budget



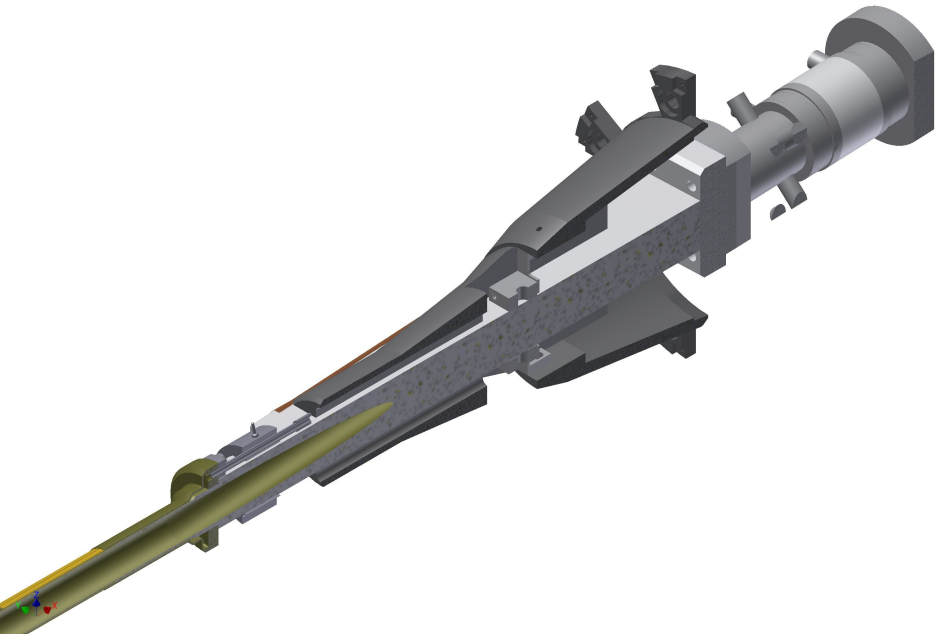
- ▶ red outline shows old endflange/shielding structure changed

- ▶ we are confident that we can decrease the height of the PP by removing the micro sub-D connector and solder directly
- ▶ this has to be verified
- ▶ would significantly decrease height of PP



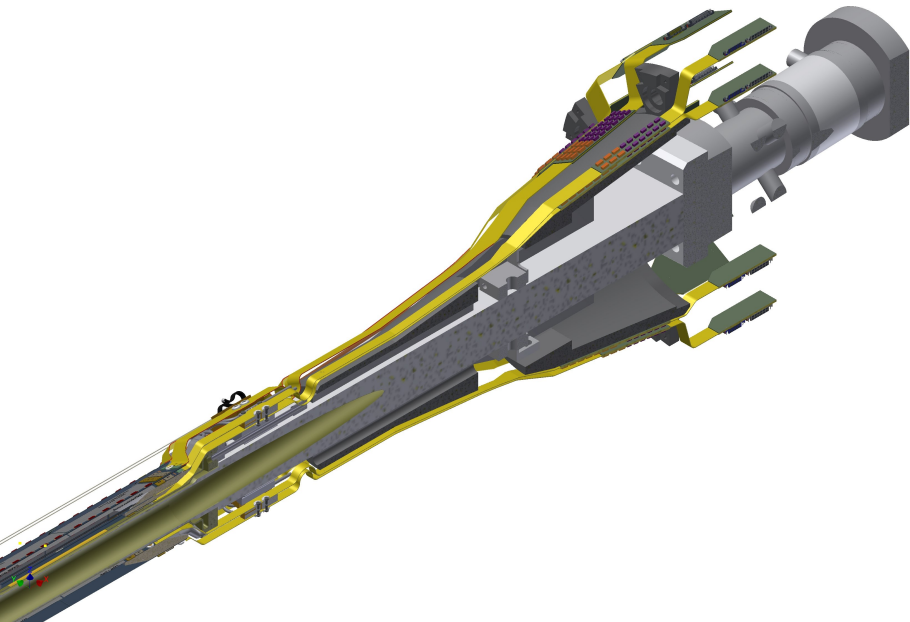
Assembly steps

Beampipe + HM shield



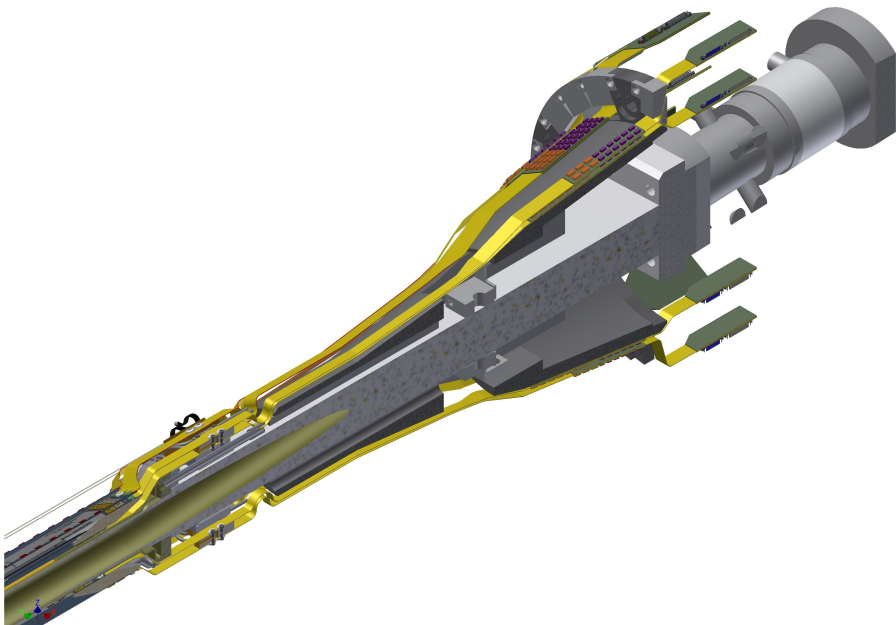
Assembly steps

Attach PXD



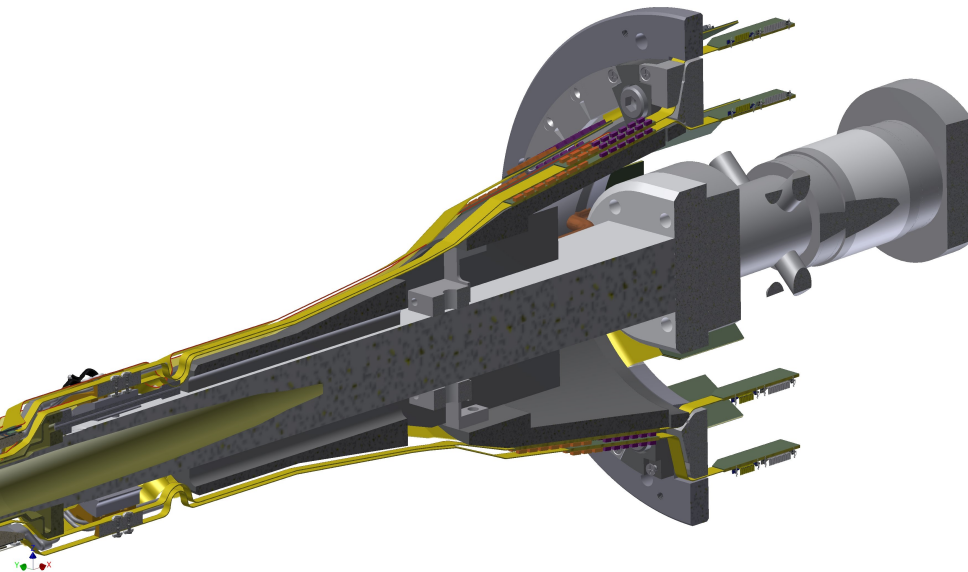
Assembly steps

Fill endflange gaps



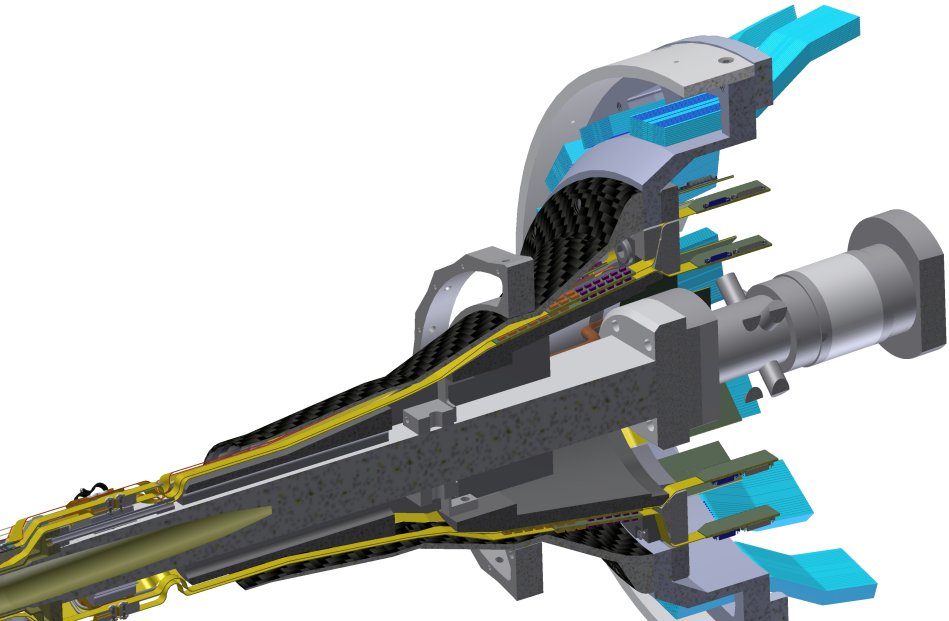
Assembly steps

Add endflange adapter for attachment to SVD



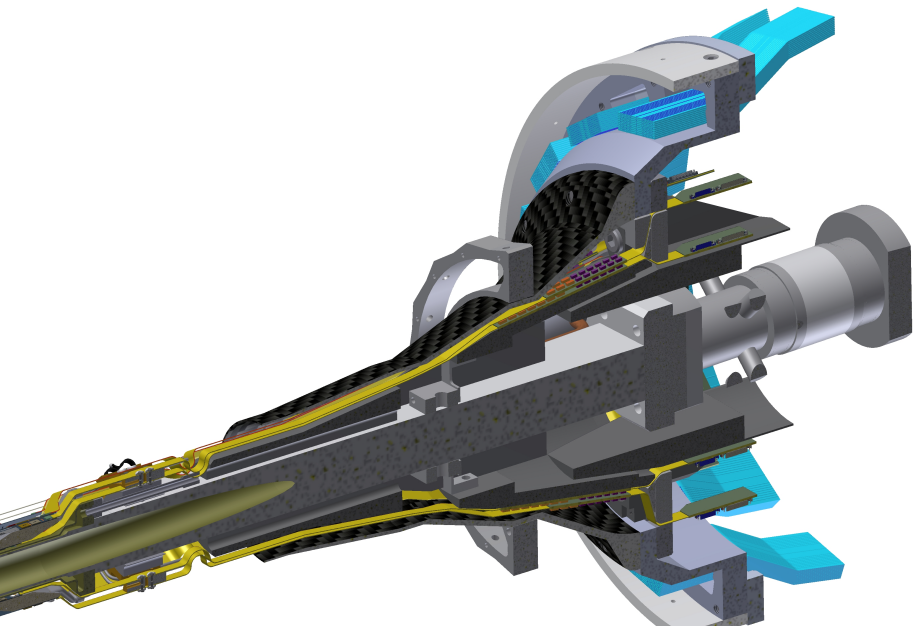
Assembly steps

Assemble with SVD



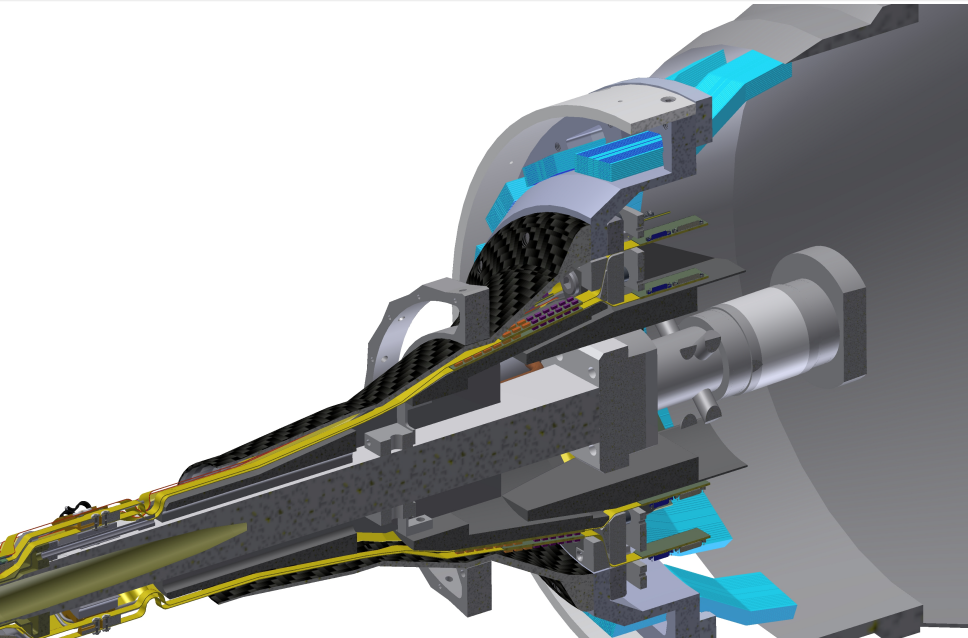
Assembly steps

Add HM close to Beampipe



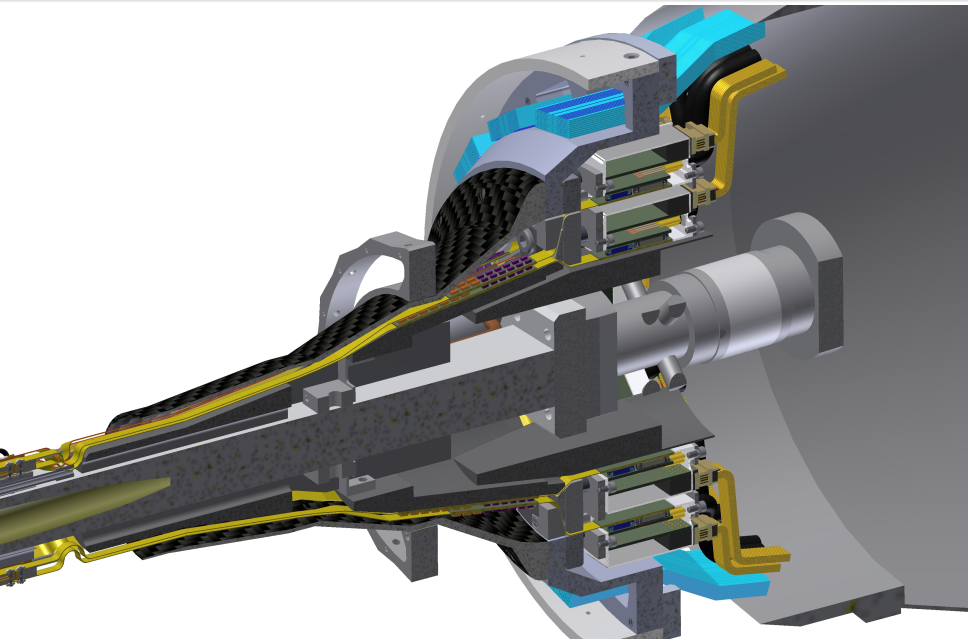
Assembly steps

Install VXD



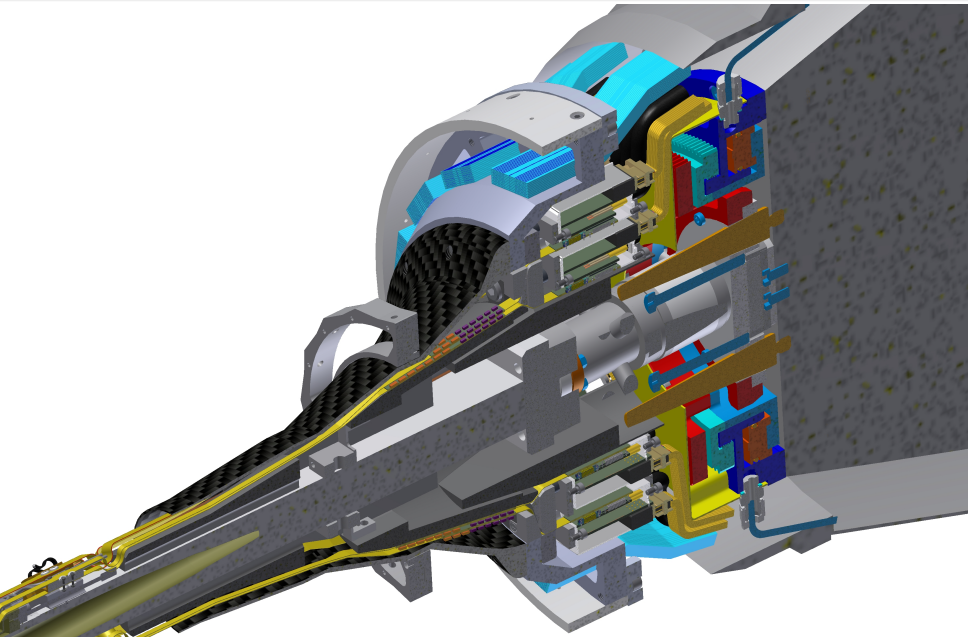
Assembly steps

Add PXD cables



Assembly steps

Attach QCS



PP position not yet fully designed

- ▶ next iteration of ideas in progress
- ▶ we are hopeful to decrease patch panel size
- ▶ need close collaboration with KEK and Vienna to see if we are on track so far

CO₂ transfer lines

- ▶ following discussions at last B2GM, we will try to evaluate the requirements to route Pipes along QCS
- ▶ not trivial due to moving of Belle doors and QCS
- ▶ first ideas should be ready at B2GM in March



Acquired data logger to get better understanding of transportation risks

- ▶ measures acceleration in three directions (± 15 g)
- ▶ internally log acceleration spikes (up to 1600 Hz)
- ▶ will be used to evaluate stress on PXD when shipping to KEK

Dedicated pressure and temperature test bench set up

- ▶ same hardware used for initial pressure/leak test of marco
- ▶ now better organised and set up for easy use
- ▶ ready for pressure tests up to 150 bar

MSR 165 Datenlogger für Schock und Vibration

