

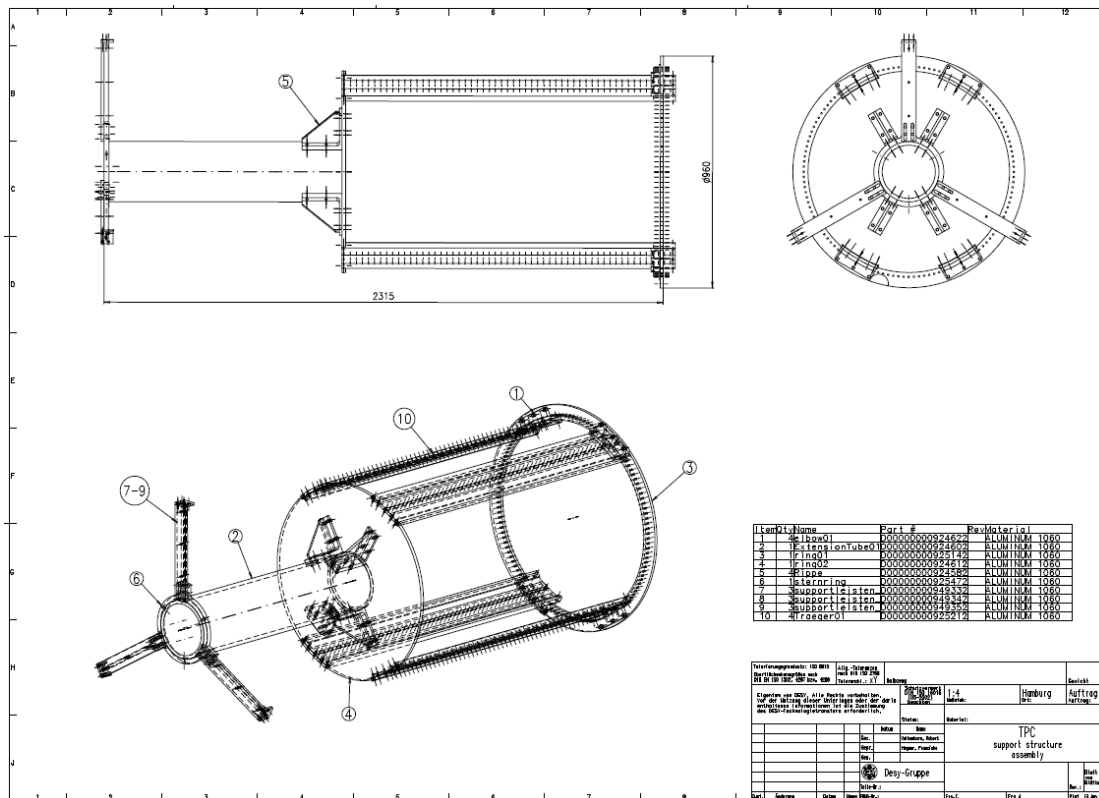
# TPC Support Structure

LC-TPC status report

**Hamburg, 24.06.2008**

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# Overview technical drawing of TPC support structure



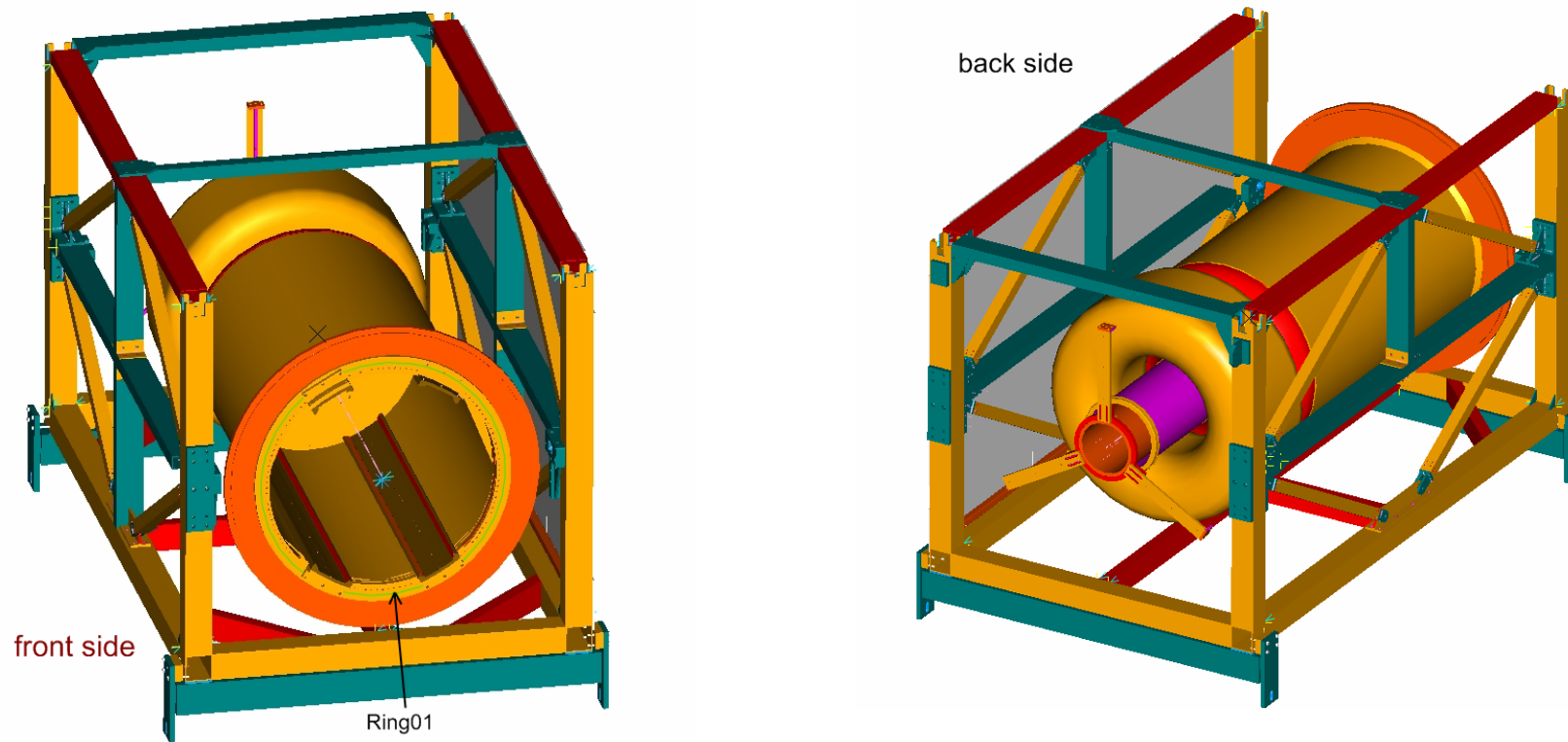
- construction / technical drawings finalized

- time for manufacturing approx. 2 months (completion by 1st Sep.08 should be realizable)

- manufacturing costs approx. € 8.000,-

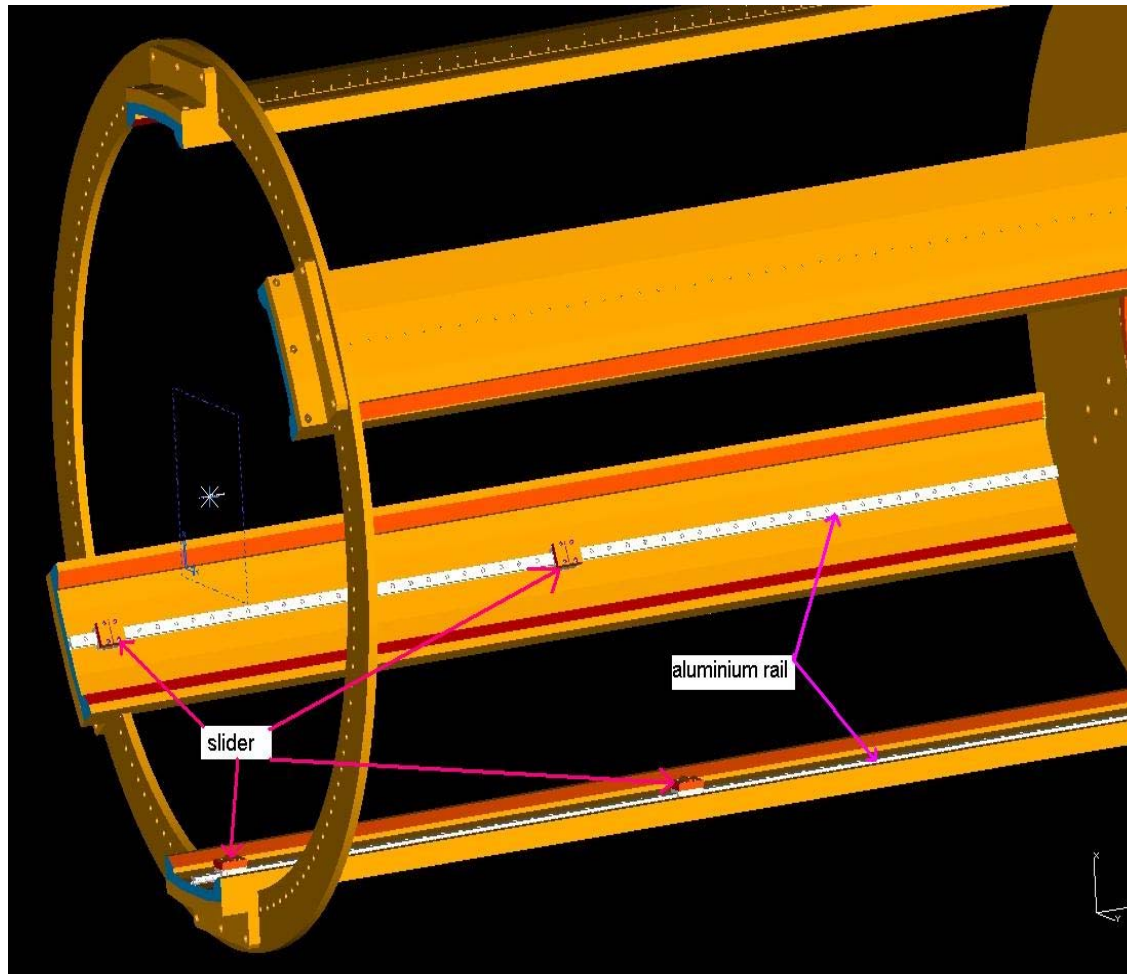
- idea of mounting the support structure on both ends of the magnet coil planned and worked out in detail

## Magnet including the TPC support structure



It is shown the magnet support frame with the magnet including the TPC support structure. The latter is mounted via Ring01 (part of the support structure assembly) to the front of the magnet. On the back side the support structure will be screwed to an intermediate flange (not shown in the pictures) via three support fillets.

## 3D view of the support structure excluding the TPC

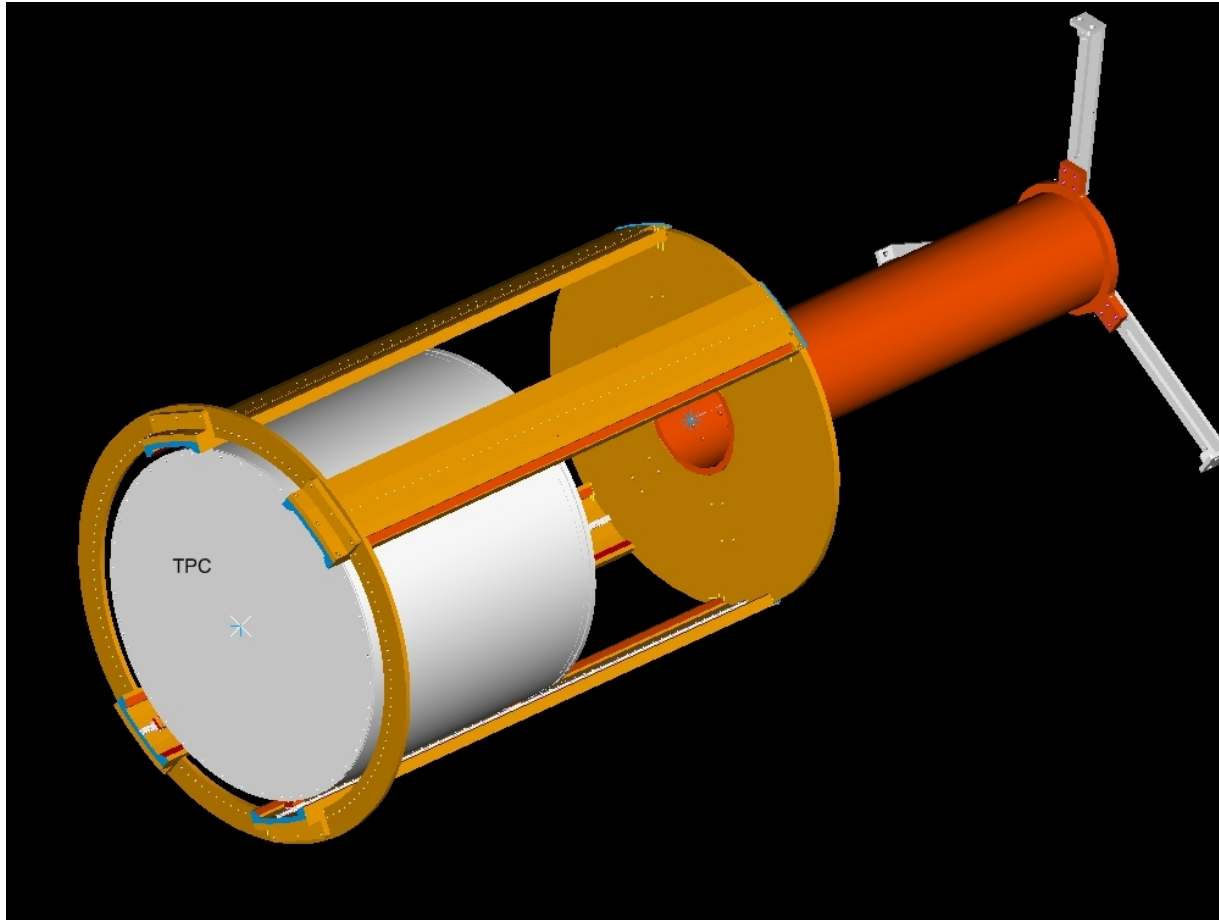


support structure with the sliding system on both bottom carriers.

After adjusting it will be possible to:

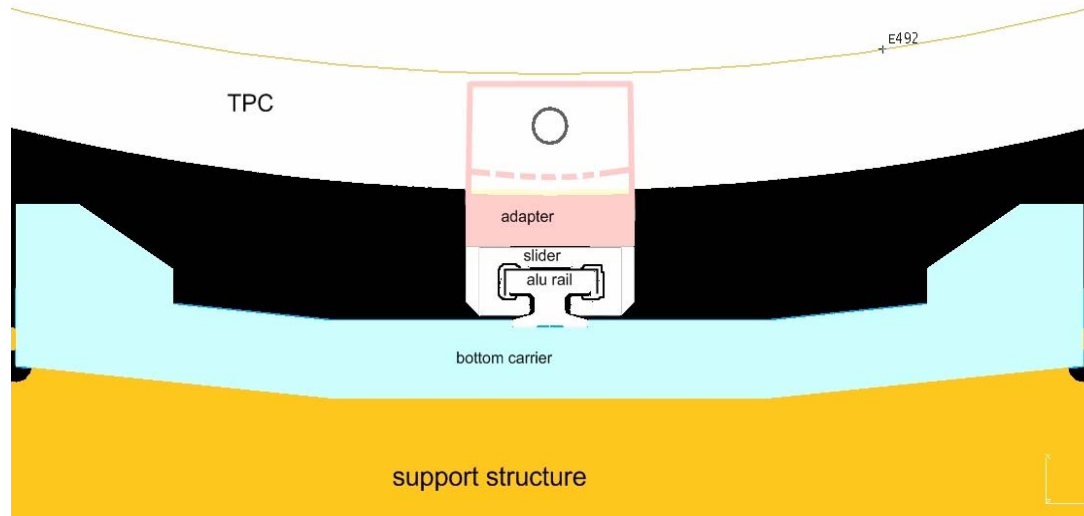
- move the TPC along the support structure
- rotate the TPC on the slider (and adapter respectively)

support structure including the TPC



## Detailed view of the TPC fixed on the slider

- at the anode side the TPC will be screwed to an adapter, which itself is permanent fixed to the slider
- at the cathode side the TPC will be bear on the adapter without being screwed
- material of the slider: iglidur® J (combination of aluminium and synthetic material, low friction,  $\mu=0,2$ )
- the slider runs on a 1365 mm long aluminium rail



## Slider system

- Maintenance-free dry operation
- Carriage body made of zinc
- Wear-resistant and replaceable gliding elements made of iglidur® J
- Hard-anodized aluminum rail
- Corrosion resistant

more information on [www.igus.de](http://www.igus.de)



# Next steps...

- Preparation of the magnet for mounting the TPC support structure
- Construction and manufacturing of a transfer support to move the TPC in-  
and outside the magnet → kind of simple carrier system with aluminium rails  
and slider
- Planing of a rotatable lifting table for the magnet
- Construction and manufacturing of the electronic support (in collaboration  
with Sweden)