



University
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News of the Cryostat-Yoke and the Yoke-Platform Interface

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Mechanical Design at PANDA CM, 6 Sept. 2011

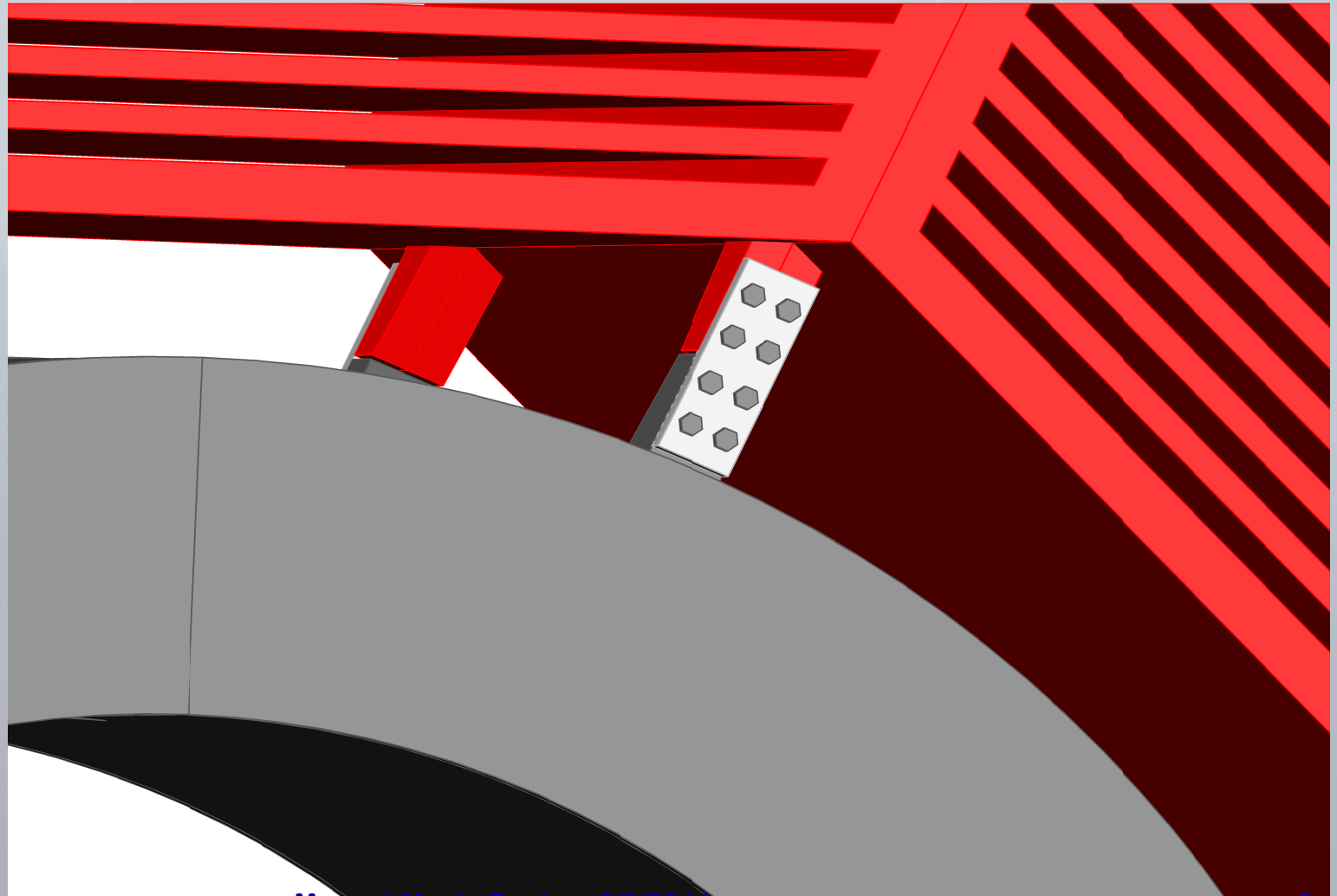


Status of magnet layout

- Magnet design
 - largest fraction in good shape since TDR
- Recent development
 - Cryostat-yoke interface
 - Yoke-platform interface
 - Platform design -> See Edward's talk
 - Interface Document updated

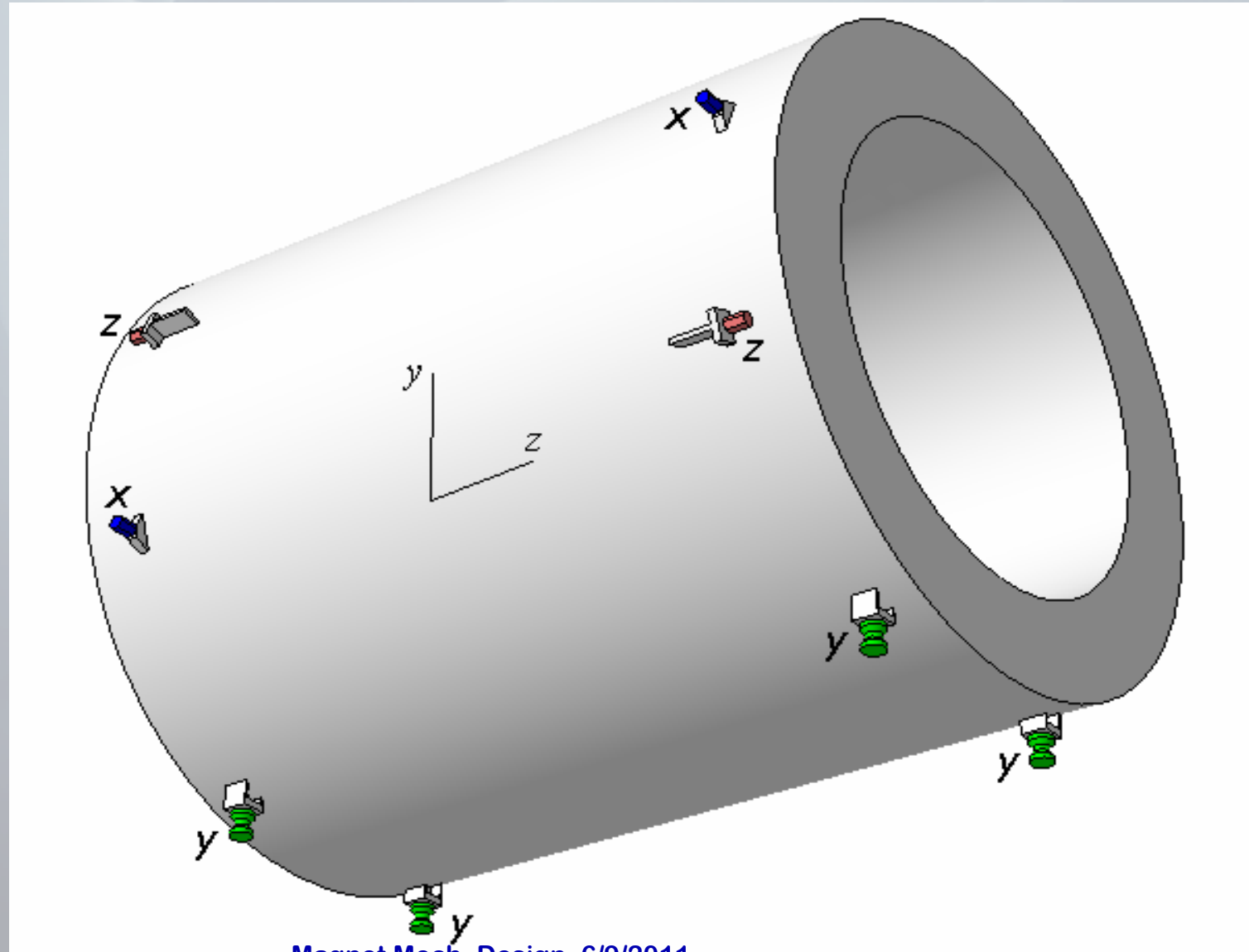
Cryostat-Yoke Interface

- First idea (TDR)
 - 16 supports, over constraint, couples systems



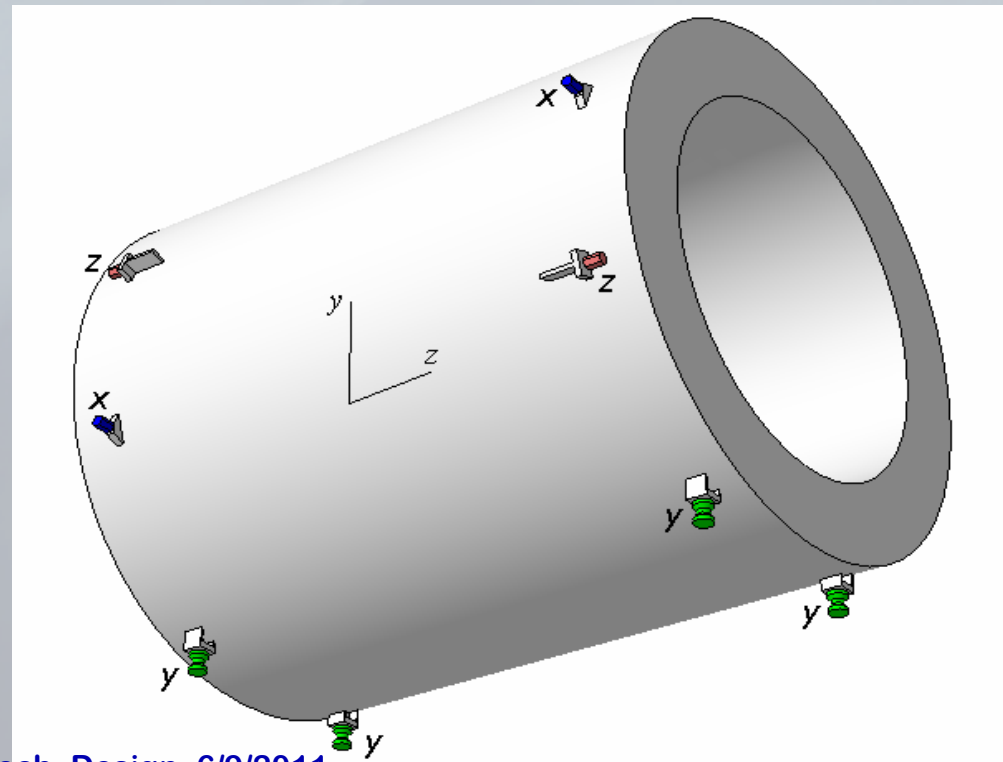
Cryostat-Yoke Interface

- Current proposal (Jost)



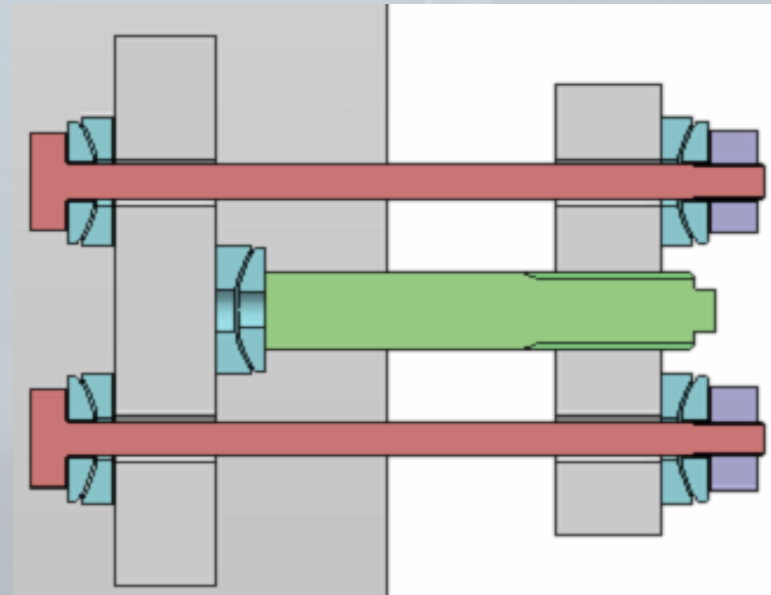
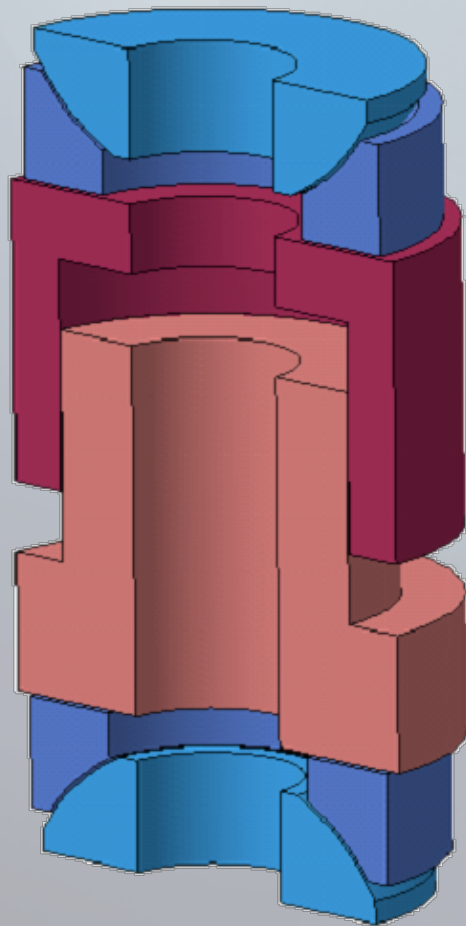
Cryostat-Yoke Interface

- Current proposal (Jost)
 - mechanically decouples yoke and cryostat
 - separate x, y, z supports
 - alignment decouples coordinates
 - forces predictable (little over constraints)



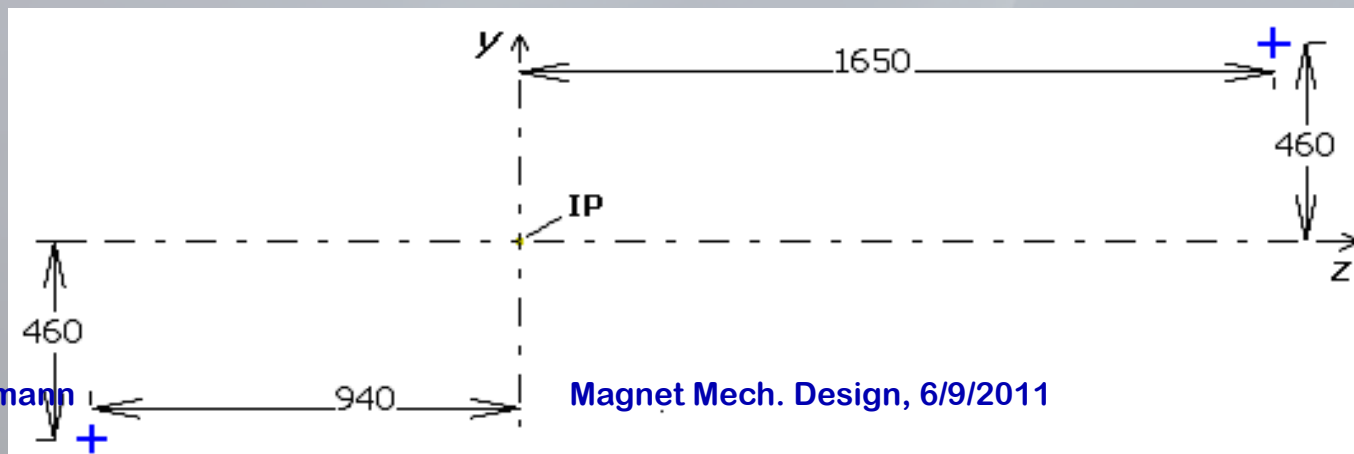
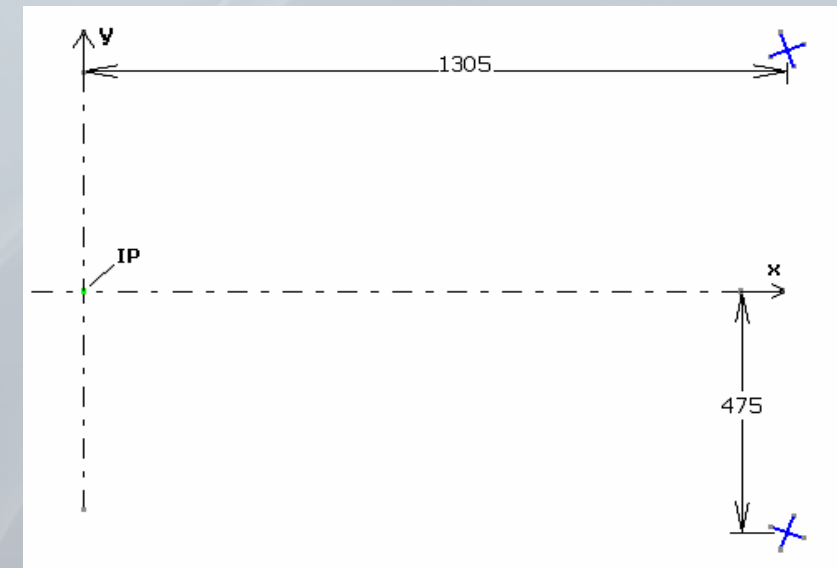
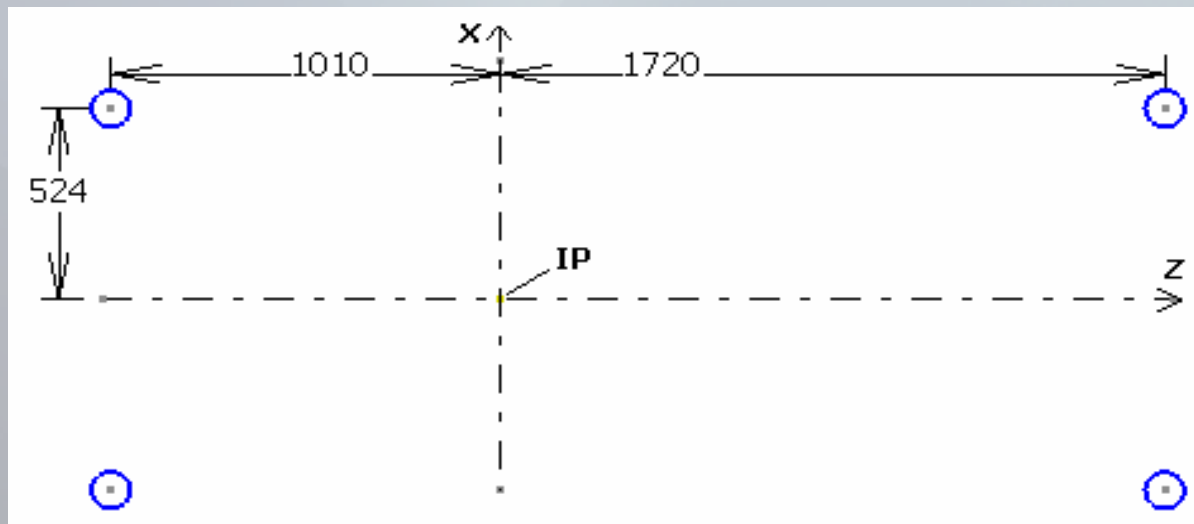
Cryostat-Yoke Interface

- Current proposal (Jost)
 - detailed supports (suggested only)



Cryostat-Yoke Interface

- Current proposal (Jost)
 - detailing interface definition
 - work in progress



Cryostat-Yoke Interface

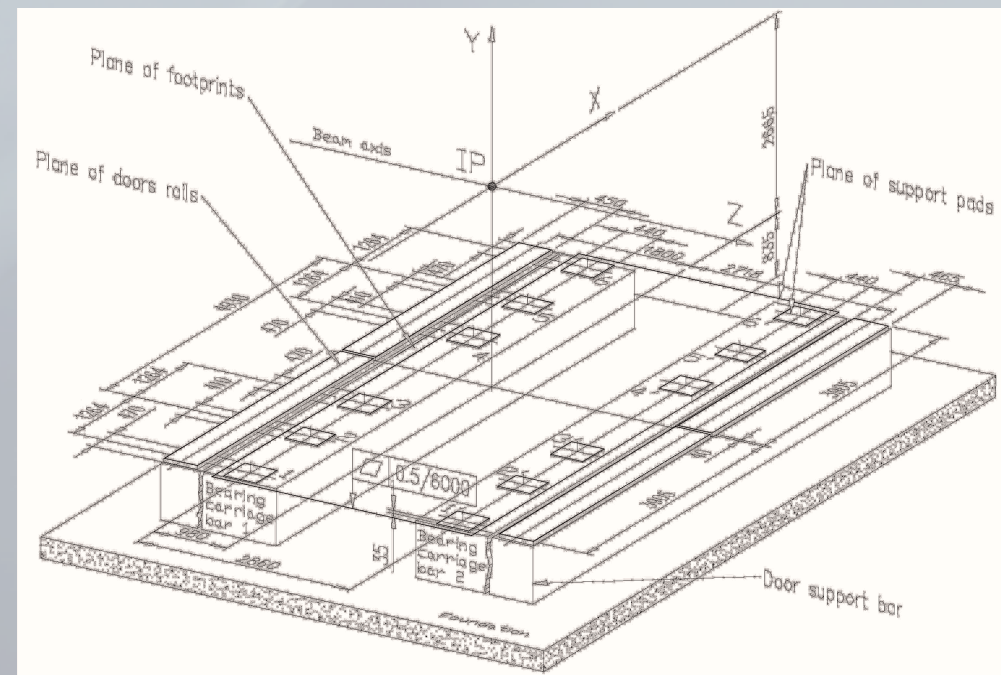
- Current proposal (Jost)
 - detailing interface definition
 - work in progress

		F_x [kN] horiz.	F_y [kN] vertical	F_z [kN] axial	z_g [mm]
Weight	Coil+cryostat	—	-120^{+20}_{-20}	—	355^{+20}_{-20}
	Inner det.	—	-220^{+20}_{-20}	—	220^{+20}_{-20}
	Cryo. chimney	—	??	—	$-1390^{+??}_{-??}$
Force	Magnetic	0 ± 75	0 ± 75	-70^{+100}_{-100}	355^{+20}_{-20}
	Seismic	0 ± 23	—	0 ± 23	264^{+20}_{-20}

Yoke-Platform Interface

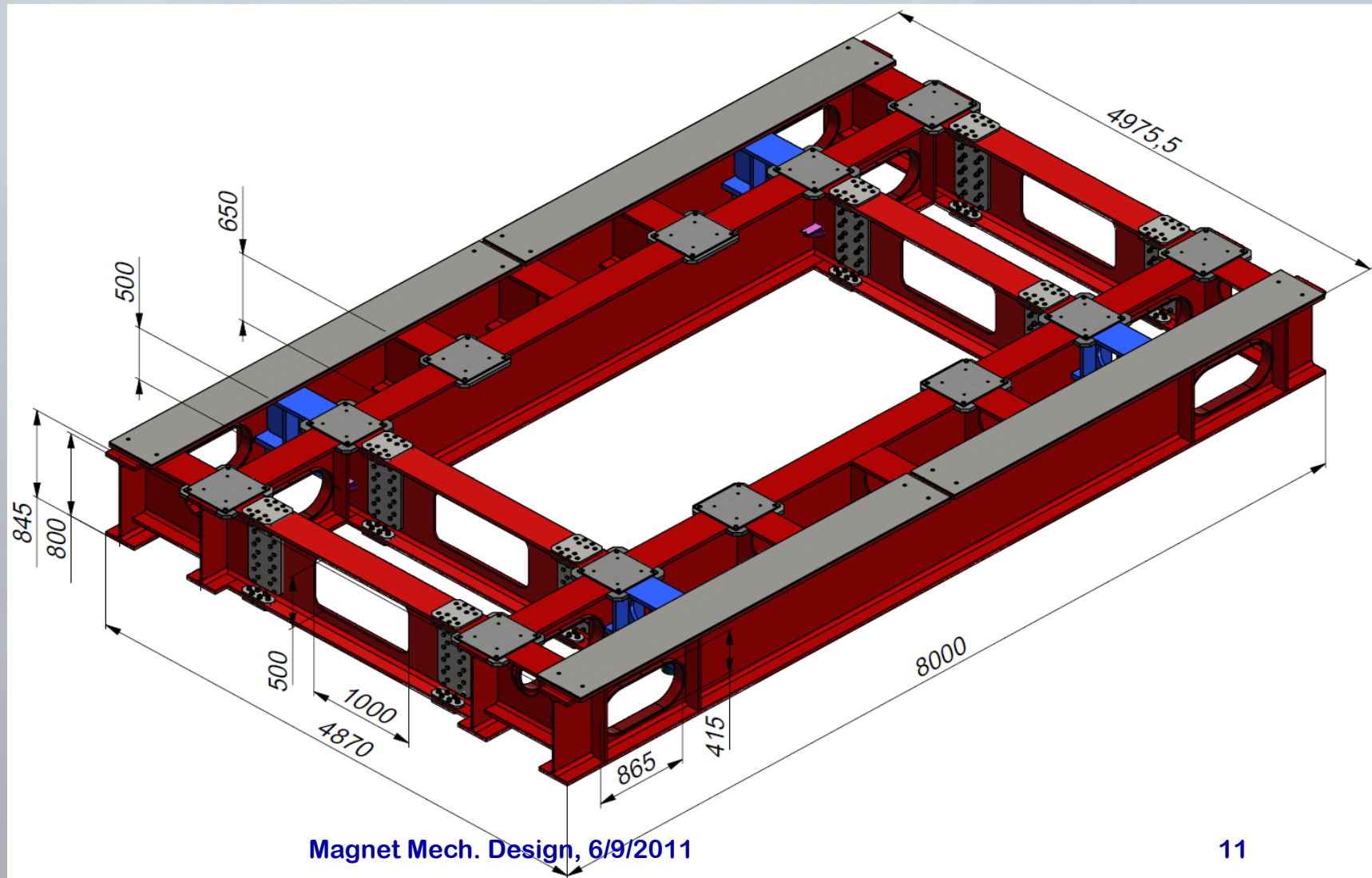
- Detailed proposal by Evgeny
 - 12 support pads + rail supports in one plane
 - loads... defined

Support point	F_y [kN]
1 and 1'	-270^{+130}
2 and 2'	-410_{-110}
3 and 3'	-220^{+160}_{-100}
4 and 4'	-220^{+160}_{-100}
5 and 5'	-410_{-110}
6 and 6'	-270^{+130}
Total	-3600



Yoke-Platform Interface

- Detailed proposal by Evgeny
- Proposed solution by Edward



Yoke-Platform Interface

- Detailed proposal by Evgeny
- Proposed solution by Edward
- Work on interface definition
 - some issues need clarification/agreement
 - a good start is done

Interface Document

- Revision is ongoing
- Mostly done for Coil + Cryostat
- Cryostat-yoke interface
 - well advanced
- Yoke-platform interface
 - requires consensus
- Include platform details?
- Next step
 - magnet session at 16:30