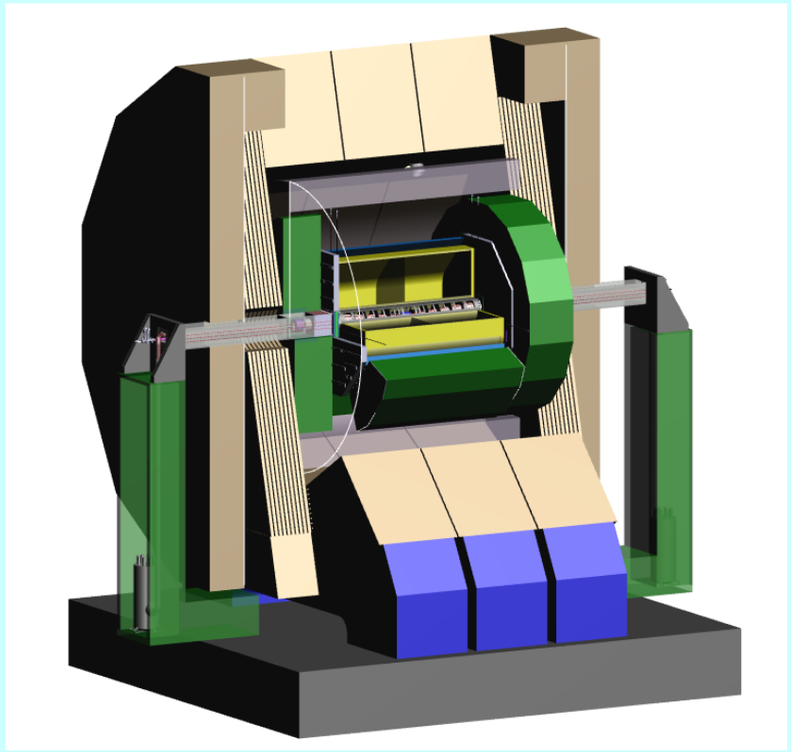
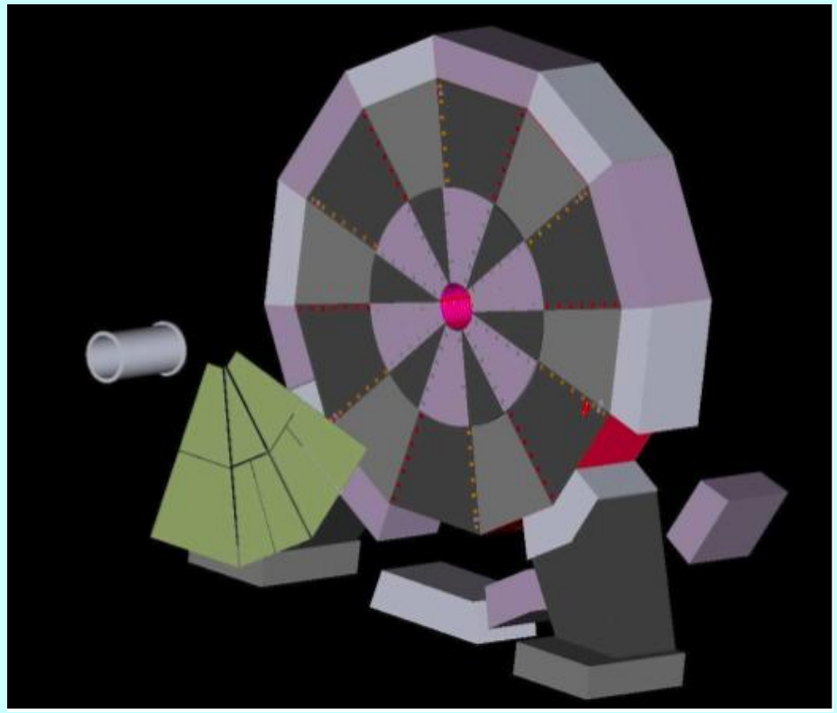
ILD Detector Integration Activities at DESY

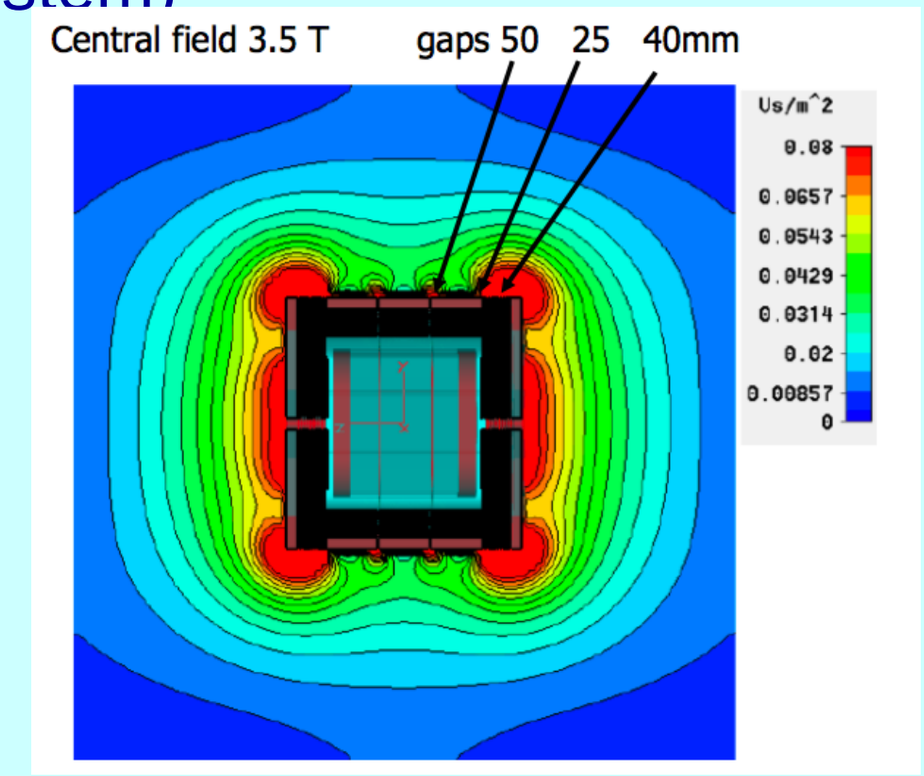
- Coordination of the ILD integration tasks within the MDI/Integration working group
- Engineering design of ILD yoke
- Conceptual design of push-pull arrangements
- Machine-Detector Interface
  - esp. studies of machine induced backgrounds

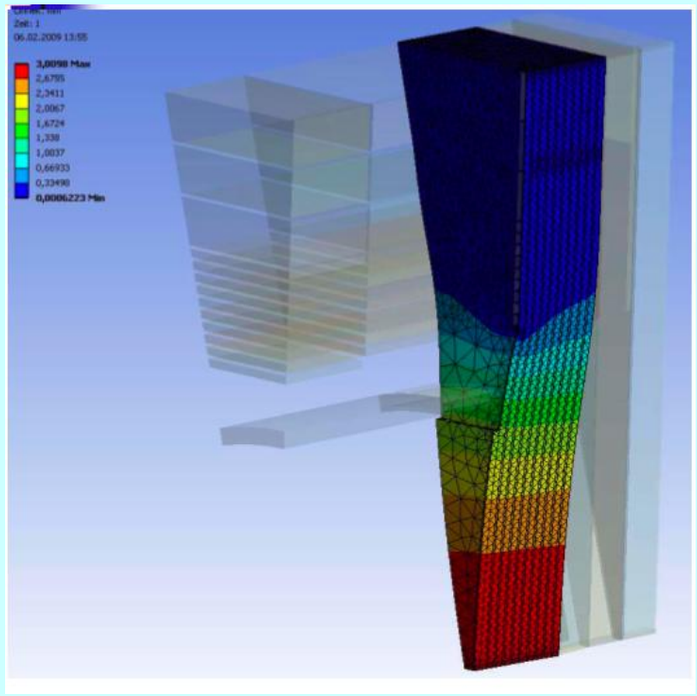


Yoke design

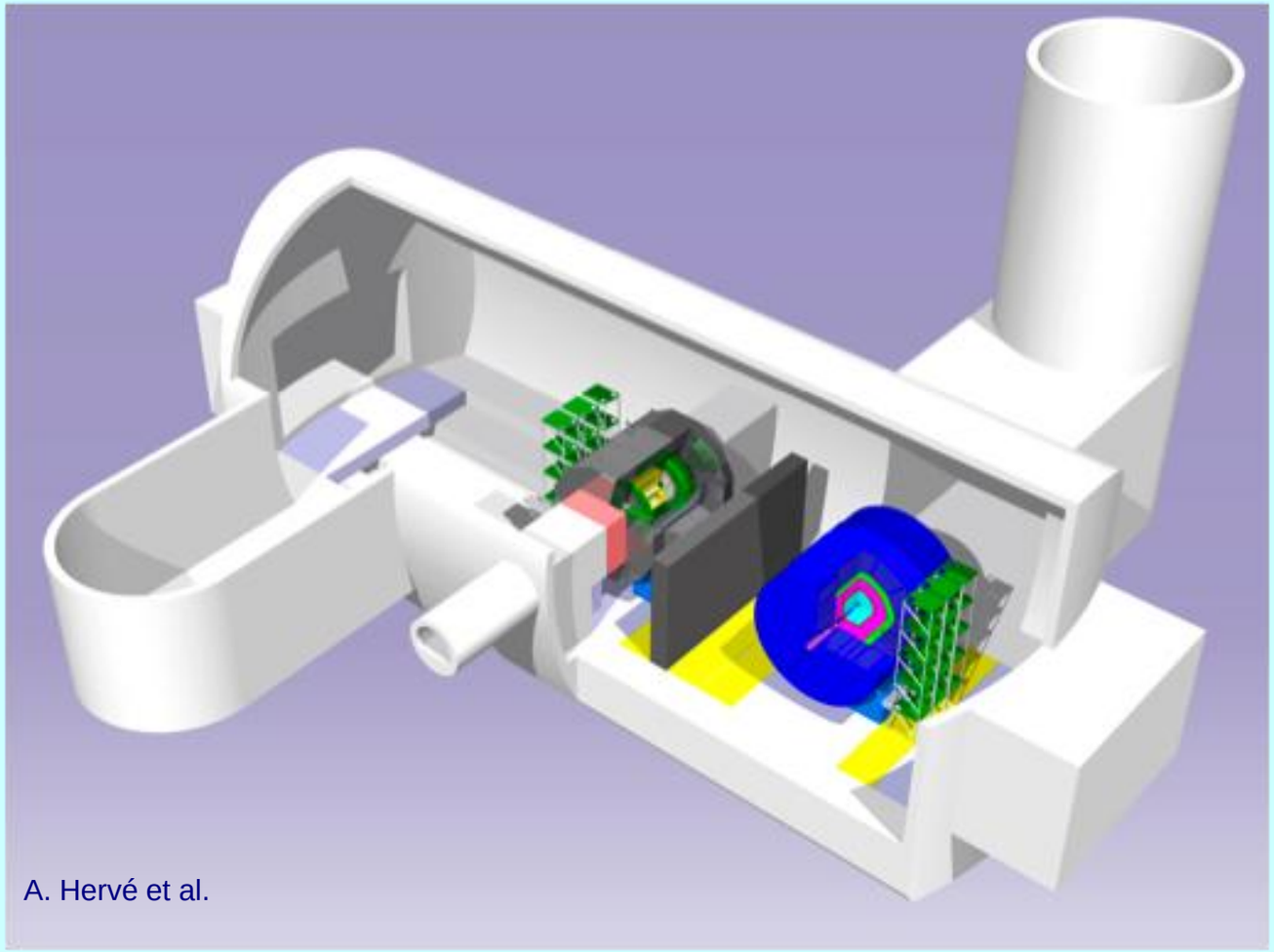
- Magnetic field calculations
  - Stray field estimates for push-pull
  - Magnetic forces on endcaps (~18 kt)
- Engineering design
  - assembly procedures
  - instrumentation (tail-catcher, muon system)







Push-pull



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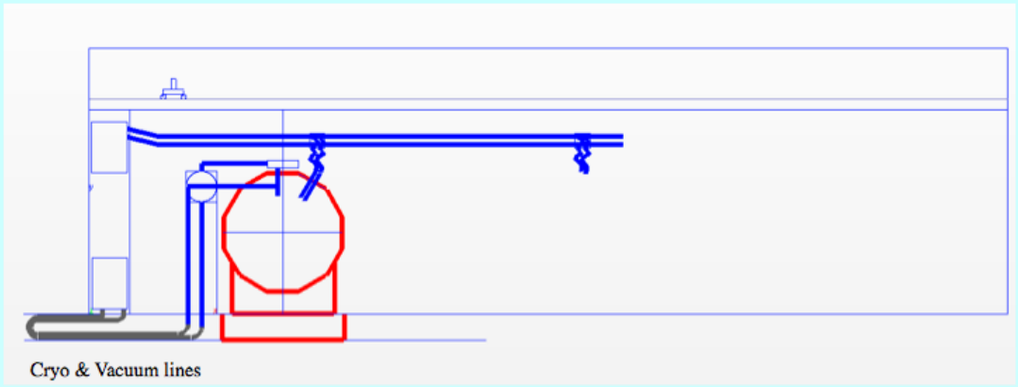
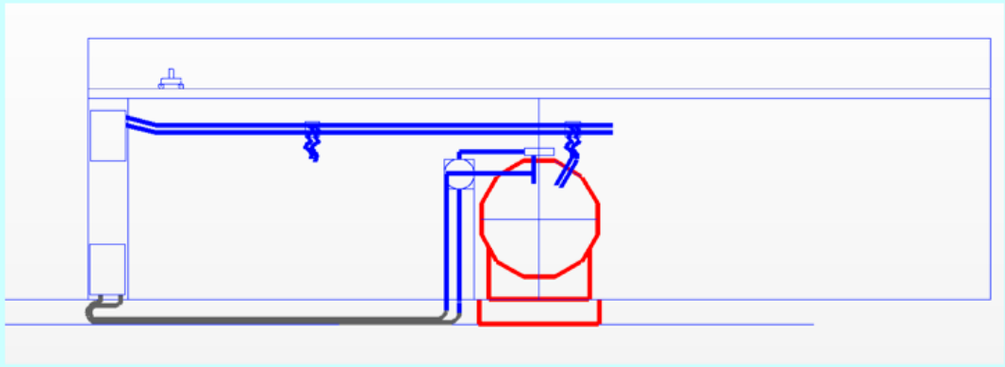


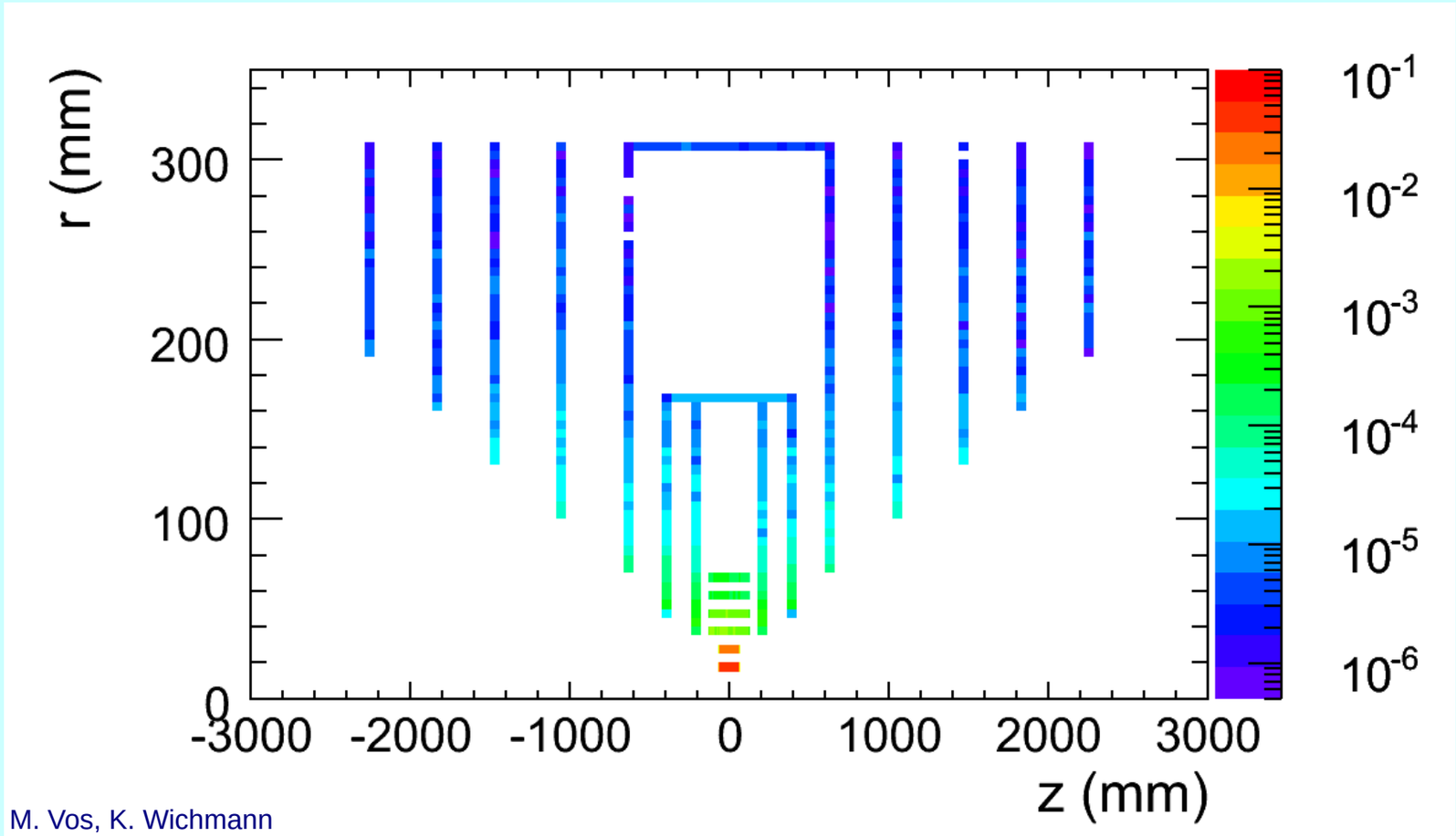
Cryo & Vacuum lines



- How to move ILD on a platform with all necessary services connected
- Push-pull on a timescale of two days demands careful engineering solutions
- Main challenge: alignement and calibration after push-pull
- Collaborative effort between Asia (KEK and others) and Europe (DESY, France, CERN)

Machine induced backgounds

- Pairs from beamstrahlung are the major source of background for the detector
- Full MC studies with realistic ILC parameter sets give estimates of occupancies
- Vertex detector is most affected device
- Hit densities on inner silicon detectors:



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