Magnet Project

- Original TDR from 2009
- Manufacturing cost estimate of TDR model higher than budget
- Optimisation of design by ATLAS Magnet group at CERN:
  - New conductor shape more efficient to extrude, higher ΔT safety margin
  - More cost effective outer coil winding with shrink-fit support cylinder
  - More robust 3-coil design
  - More fault tolerant cooling circuit
- More cost effective yoke design: 1 gap less, larger tolerances for lower manufacturing cost
- Scheme for production from 2013:
  - Yoke production: JINR
  - Cryostat production: BINP
  - Coil winding: company
  - Integration and controls: CERN
  - Test of coil at CERN
  - Full assembly at FAIR

New Magnet Work Plan

- Dubna management cannot take the risk for contingency
- BINP can provide all work packages of new design:
  - Cryostat and cryogenics originally foreseen from BINP
  - Yoke can be produced by company in Novosibirsk
  - New coil winding possible at BINP: three coils lower risk, outer winding feasible since more similar to NC magnets
  - Power supplies and conductor can be bought directly
- Additional benefits:
  - No multiple transports of components
  - Full system test and mapping with yoke
- CERN will do control system and QA incl. supervision of integration

Magnet Management

Organisation of magnet project at Budker INP

- Group leader: Yuriy Tikhonov
- Magnet coordinator: Evgeny Pyata
- Technical design: Sergey Pivovarov

- Cooperation with Evgeny Koshurnikov on existing design work and contract specifications

- Dipole: Evgeny Antokhin since 2014