- 1. Introduction
 - 1.1 The MPD experiment

1.1.1 Perspectives for the research program of the MPD experiment

- 1.2 Tracking in MPD
 - 1.2.1 The TPC
 - 1.2.2 The ITS

ITS Functions

Physics of the ITS

Production of low-momentum heavy hyperons and particles with open charm.

Production Hyper- and super-nuclei.

- 2. Pixel Chips
 - 2.1 The ALPIDE sensor from the ALICE ITS2
 - 2.2 Detector technology
 - 2.3 Principle of operation
 - 2.3.1 Particle detection
 - 2.3.2 Read-out
 - 2.4 Radiation hardness
- 3. Detector layout

The two stages construction scenario

- 3.1 Outer Barrel Stave
- 3.2 Supporting mechanics and cooling
- 3.3 Outer barrel FPC
- 3.4 Pixel Chip to FPC connection
- 3.5 Assembly procedures
 - 3.5.1 Outer Barrel HIC assembly
 - 3.5.1.1 HIC Test and characterization
 - 3.5.2 Outer Barrel Stave assembly
 - 3.5.2.1 Stave test and characterization
- 4. Support structure and system integration
 - 4.1 Services
 - 4.2 Beam pipe
 - 4.3 Installation and Removal
- 5. The DAQ system
 - 5.1 Radiation environment
 - 5.1.1 Beam from the NICA collider
 - 5.1.2 Radiation levels in the detector regions
 - 5.2 The GBTx-emulating boards
 - 5.3 The receiver at the nodes of online farm (Gbtx Emulator Readout Interface)
- 6. The MPD IT finalization (stage2: the Inner Barrel)

- 7. Detector performance
 - 7.1 The MPD TPC in a nutshell
 - 7.2 The ALICE ITS2 first tracker totally based on MAPS Technology
 - 7.3 Simulations of the TPC ITS tracking system
 - MPD beam pipe
 - 7.4 Track reconstruction efficiency
 - 7.5 Momentum resolution
 - 7.6 Phase space coverage for protons and pions
 - 7.7 Conclusions
- 8. Physics performance
 - 8.1 Simulation methods and conditions
 - 8.2 Strange particles reconstruction
 - 8.2.1 Expected yields
 - 8.2.2 (...)
 - 8.3 Charmed particles reconstruction
 - 8.3.1 Expected yields
 - 8.3.2 (...)
- 9. Project organization and time lines