1. **Status of FMD (w/ emphasis on new developments/open issues)**
   - RO strategy: revised/simplified
   - FEE hybrid: concept settled/negotiations with vendor completed
   - Si-sensors: last stages of negotiations with manufacturers
   - integration/beam support: RB24 settled/ongoing
     RB26 details missing
   - temperature conditions on RB24 side still not defined/solved

2. **Status of joint Forward Detectors TDR**
   - still undecided issues for T0,V0
   - main strategy decided/described for FMD
   - TDR framework (CVS) exists.
   - FMD-TDR text exists. Editorial work ongoing/advanced
   - Timescale for joint TDR? Maintain joint TDR concept?
Integration
Beam and FMD support cone
RB24 side

ALICE FMD, T0, V0
Finite element calculations of beam pipe support

Prototype beam-pipe support structure (crucial for LHC) in construction at NBI.
RB26 Side: FMD2 & FMD3  ALICE FMD,T0,V0

Details of mounting not settled or designed !!

23/02 2004  Jens Jørgen Gaardhøje, NBI, gardhoje@nbi.dk
Specs defined.
Supplier identified.
Final negotiations with (Micron/Hamamatsu) ongoing.
ALICE FMD, T0, VO

FMD RO strategy

FMD Read-Out and Control Electronics

ON DETECTOR

FRONT-END BUS \( \leq 1 \text{ m} \)

RCU

DataType and Memory

DAQ int. (DDL-SIU)

DCS int. (Ethernet)

Trigger int. (TTC-rx)

BOARD controller

Control Network (I^2C-serial link)

Local Monitor and Control

Bus controller (conf. & R/O)

Data Proc. and Memory

IN COUNTING ROOM

DDL

DCS

TTC optical Link
(Clock, L1 and L2)

Trigger L0

BSN, 17 Feb 2004

1 ring: 10/20 modules
Full FMD: 70 modules
2 Digitizers
10 Digitizers
1 RCU per ring system
3 RCU’s

FMD Module

Analog serial link
(10 MHz) \( \leq 0.5 \text{ m} \)

× 16

FMD Digitizer

ALTRO (16 ch)

ALTRO (16 ch)

ALTRO (16 ch)

ALTRO (16 ch)

Read-out CTRL

Control Network
(I^2C-serial link)

VA read-out control

VA

1 ring: 10/20 modules
2 Digitizers
1 RCU per ring system

23/02 2004

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Proposed new RCU location

ALICE FMD, T0, V0

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A serious concern:

Temperature conditions inside cone not defined / unsatisfactory

Recent temp. Simulations indicate > 70 deg. C at FWD dets.
  Location on RB24.

Substantial work on airflow etc. needed.
Si-PA-Dig proto tests

ALICE FMD, TO, VO

Si-strip detector + VA” preamp

VA” read-out controller

ALTRO tester
ALICE FMD, TO, VO

- Custom production of adapted VA1"
- Hybrid design settled with IDEAS.
- Attractive price negotiated
- Bonding settled with CERN
Significant differences in status of design of the different detectors is reflected in TDR preparation/status.

- **P.t:** Common framework in CVS at NBI established/used
  General guidelines defined

- **Current content:** A minimum of common chapters
  3 subdetector chapters: T0
  VO(12 pgs wo/ figs)
  FMD(40 pgs w/ figs)

- Timescale for TDR depends on requirements.
  - **Realistically:** June 2004 is earliest.
    Significant layout/editorial work needed/figs

- Do we wish to enforce common TDR?