Item Description Institutes Core cost Due

#### New small wheels

A pair of new muon small wheels

VMM + TDS

VMM + TDS

GBT to MM trigger

GBT to readout

VMM

# **Detectors**

#### sTGC

sTGC multiplets Cosmic tests

**Radiation tests** 

#### MM

MM multiplets Cosmic tests Radiation tests

Sector assembly

sTGC wedges MM wedges NSW sector

Electronics

#### FE asics

VMMn TDS

# FE boards

sTGC FE strip

sTGC FE pad MM VMM board

MM trigger board

MM RO board

DC-DC converter

NSW rim

sTGC pad logic sTGC router

TTC, configuration

# Trigger

sTGC segments MM segments

Interface to SL

### Readout

ROD DCS

# DCS

Services

sTGC gas

MM gas

sTGC HV

sTGC LV

MM HV MM LV

Cooling

## Alignment

Alignment bar

On detector equipment

# NSW support structure

NSW wheels

Hub

Shielding

Integration and installation

# - Item, cost, institutes' interest:for TDR (to be derived from

- Actual MM WBS for real work
- timetable and milestone
- MM organization for prototyping and production period
- Procedure to decide on the MM chamber structure in July