Update on Funding Profiles
Mid-Term and Longer-Term Prospects at RHIC

T. Ludlam
A Long Term Strategic View for RHIC

As shown in 2007 LRP meetings

Legend:
- - - - - - R&D
←Construction
- - - - - - Multiple small projects
CD0: DOE Critical Decision, mission need

Detector Upgrades: $35M
EBIS: $20M
RHIC II: $90M [FY07$]
e-cooling of ion beams
eRHIC: ~$700M [FY07$]
e beam + new detector
A Long Term (Evolving) Strategic View for RHIC

Legend:
- - - - - - - - - - R&D
<-> Construction
--- --- --- Multiple small projects

CD0: DOE Critical Decision, mission need
## Mid-Term Plan

### Current funding plan for detector upgrades

Feb. 08 update: 06 as spent; 07 as spent; 08 approp.; 09P

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**RHIC Upgrades Timeline**

- **Forward Detectors**
  - FMS
  - Muon trigger
  - TOF
  - HBD
- **PID detectors**
  - VTX
  - FVTX
  - FGT
  - NCC
  - DAQ 1000
  - PHENIX DAQ upgr.
- **Vertex detectors**
  - HFT
- **Hi Rate upgrades**
  - PHENIX
  - STAR
  - EBIS construction
  - Low-E electron cooling
- **Heavy Ion Luminosity**
  - Full stochastic cooling
Forecasts for RHIC Upgrades
As planned (Feb. 2008 NP budget briefing) / impact of 6 month CR scenario

Machine:
  • Stochastic cooling luminosity upgrade  Run 11
    CR: possible delay to Run 12
  • EBIS [U + U]  Run 11
    No CR impact

Forward detectors: W± decay
  • PHENIX Muon Trigger – full installation  Run 12(?)
    Partial implementation beginning Run 10  No CR impact
  • STAR Forward GEM Tracker  Run 11
    CR: probable delay of 1 year
    Possible speed-up with non-DOE bridge funding

Particle and photon ID:
  • PHENIX Nose Cone Calorimeter  Run 13
    CR: delay to run 14
  • STAR Time of Flight  Run 10
    ~1/2 installed for Run 9  No CR impact

Vertex detectors:
  • PHENIX VTX  Run 11
    Possible partial installation for Run 10  No CR impact
  • PHENIX FVTX  Run 12
    CR: delay to Run 13
  • STAR HFT  Run 13(?)
    CR: delay of 1 year