

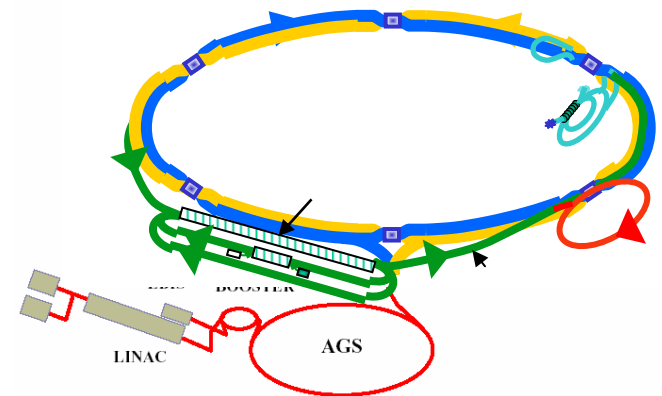
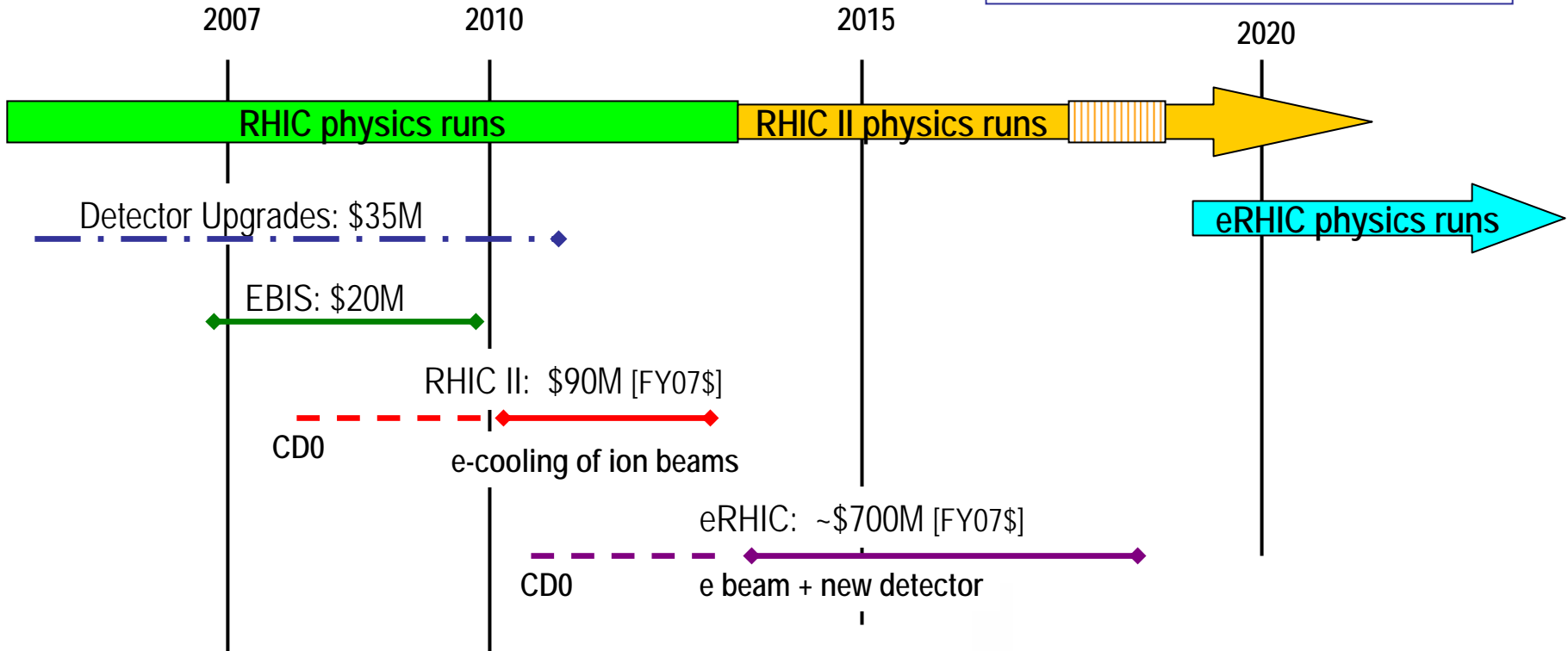
NPP Program Advisory Committee
May 8, 2008

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

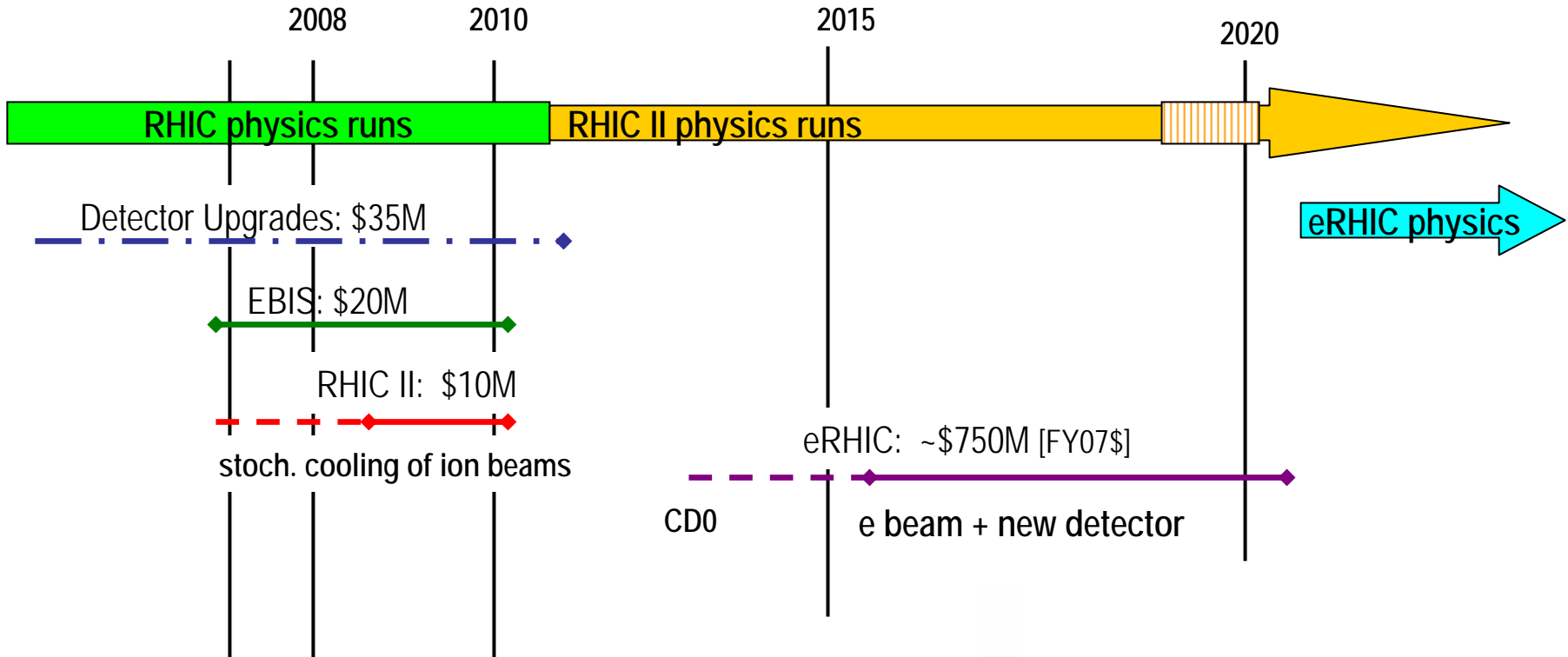


Legend:

- R&D
- ◀-----▶ Construction
- Multiple small projects

CD0: DOE Critical Decision, mission need

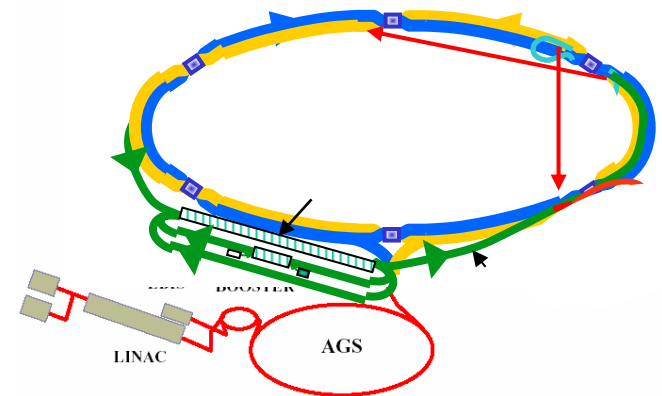
A Long Term (Evolving) Strategic View for RHIC



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

FY 2006A FY 2007A FY 2008A FY 2009P FY 2010 FY 2011 FY 2012 FY 2013

R&D funds

| | | | | | | | | | | |
|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|-------------|
| PHENIX HBD | 0.10 | | | | | | | | | 0.10 |
| PHENIX MIEs | 0.30 | 0.45 | 0.16 | | | | | | | 0.91 |
| PHENIX DAQ | 0.10 | 0.05 | 0.26 | 0.40 | 0.40 | 0.20 | 0.25 | | | 1.66 |
| STAR Tracking | 0.50 | 0.32 | 0.70 | 0.80 | 0.40 | 0.20 | 0.25 | | | 3.17 |
| Generic Det. R&D | 0.00 | | 0.00 | | 0.40 | 0.80 | 1.00 | 1.50 | | 3.70 |
| Total R&D | 1.00 | 0.82 | 1.12 | 1.20 | 1.20 | 1.20 | 1.50 | 1.50 | | 9.54 |

Exp. Capital

| | | | | | | | | | | |
|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|--------------|
| PHENIX HBD/TOFW | 0.40 | 0.10 | | | | | | | | 0.50 |
| STAR FMS | 0.20 | 0.20 | | | | | | | | 0.40 |
| STAR DAQ1000 | 0.90 | 0.35 | 0.65 | 0.00 | | | | | | 1.90 |
| STAR FGT | | | 0.20 | 0.75 | 1.00 | 0.00 | | | | 1.95 |
| Exp. Infrastr. | 0.60 | 0.35 | 0.45 | 0.75 | 1.10 | 1.00 | 0.85 | 0.85 | | 5.95 |
| RCF | 1.30 | 1.70 | 1.70 | 2.00 | 2.50 | 3.00 | 3.00 | 3.00 | | 18.20 |
| Total Capital | 3.40 | 2.70 | 3.00 | 3.50 | 4.60 | 4.00 | 3.85 | 3.85 | | 28.90 |

MIEs

| | | | | | | | | | | |
|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|--|--------------|
| STAR TOF | 2.40 | 2.40 | | | | | | | | 4.80 |
| PHENIX VTX | | 1.60 | 2.00 | 1.10 | | | | | | 4.70 |
| PHENIX FVTX | | | 0.50 | 2.40 | 1.95 | | | | | 4.85 |
| PHENIX NCC | | | 0.20 | 1.20 | 2.10 | 1.00 | | | | 4.50 |
| STAR HFT | | | | | 2.50 | 5.50 | 5.00 | | | 13.00 |
| Total MIE | 2.40 | 4.00 | 2.70 | 4.70 | 6.55 | 6.50 | 5.00 | | | 31.85 |

RHIC Upgrades Timeline

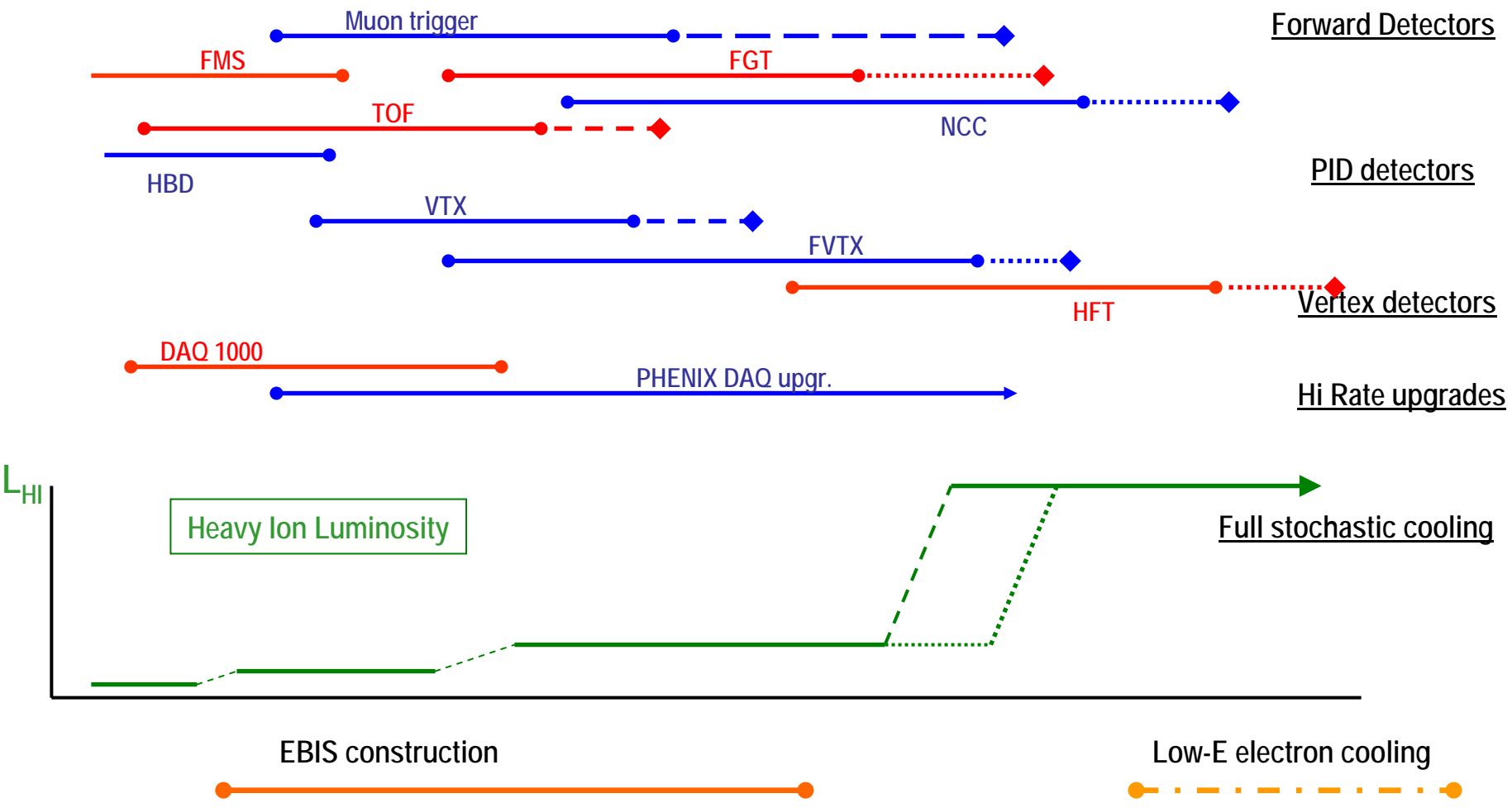
PHENIX

STAR

| | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|
| FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---------|---------|---------|---------|---------|---------|---------|---------|

Au-Au, d-Au, Ion scans
pp 200 GeV; pp 500 GeV development

Critical pt. scan; high statistics Au-Au; U-U
500 GeV spin runs



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