

# PHOBOS Integration

Robert Pak

for the  Collaboration

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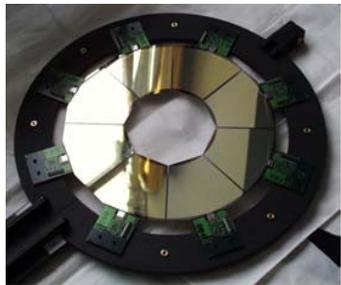
# The full PHOBOS Detector

Cerenkov  
Trigger →  
Counters

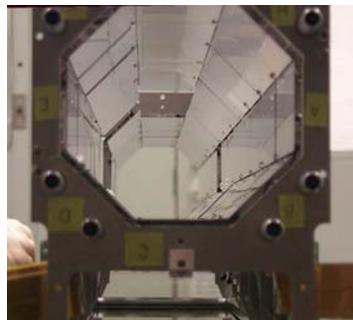
Mid-rapidity Spectrometer

Time of Flight  
Counters

Trigger Paddles



~4π Multiplicity Array



137,000 silicon pad channels:  
spectrometer + multiplicity

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# What was done

- Upgrades during shutdown in 2001 included:
  - 2<sup>nd</sup> Si spectrometer arm installation
  - Dry air system to reduce ambient humidity around Si
  - Reversing switch to flip polarity of PHOBOS magnet
- Data collected during the 2<sup>nd</sup> physics run at RHIC:
  - 10M Au-Au collisions at top energy to meet our goal
  - Exploratory 20 GeV run (Thanks again!)
  - Comparison p-p data set to isolate nuclear effects
- 1<sup>st</sup> publication w/ 200 GeV results, PRL 88 (2002)  
022302



# What's being done

- In conjunction with CAD:
  - Beam pipe bake out
  - Emergency generator tested
  - Service Building 1010A ventilation upgrade
    - Louvers already installed
    - Safe egress required
  - Abort kicker system
    - Must be thoroughly tested and fully operational
- PHOBOS specific:
  - DAQ upgrade in anticipation of higher luminosity
  - Improved triggering capability for p-p and p-A collisions

# Request list

- **Beam use:**
  - Survey the physics landscape:
    - Energy scan: 20, 56, ... > 200 GeV (?)
    - Lighter A-A collisions ( $A \sim 50$ )
    - Au-d and d-Au (both ring configurations)
    - p-p collisions at lower energy
  - For PHOBOS the key word is variety
- **PHOBOS magnet:**
  - 3 states (OFF and ON in polarity A or polarity B)
  - Change state of magnet at least once per week