

### **Science Performance Monitor**

#### Sam Finn, Kevin Schlaufman, Patrick Sutton Penn State

LIGO-G020095-00-Z



# Goals/Requirements

- What is the "instantaneous" sensitivity of detector to target science?
  - » Definition: Volume of space within which detector is sensitive to neutron star binary inspiral
    - Expressed as radius of sphere with same volume
- What is integrated performance of detector to target science?
  - » Definition: Volume surveyed integrated over time
- Provide as a DMT monitor for quick feedback

LIGO-G020095-00-Z

3/23/02



# Implementation and Implementation Issues

#### Form calibrated PSD

» Need calibration to produce absolute number

• Form

- » S/N (up to constants) turns into range
- Report
  - » File, database, trend frame, web page, dmtviewer, etc.

LIGO-G020095-00-Z