

LAT Project Update from the Department of Energy

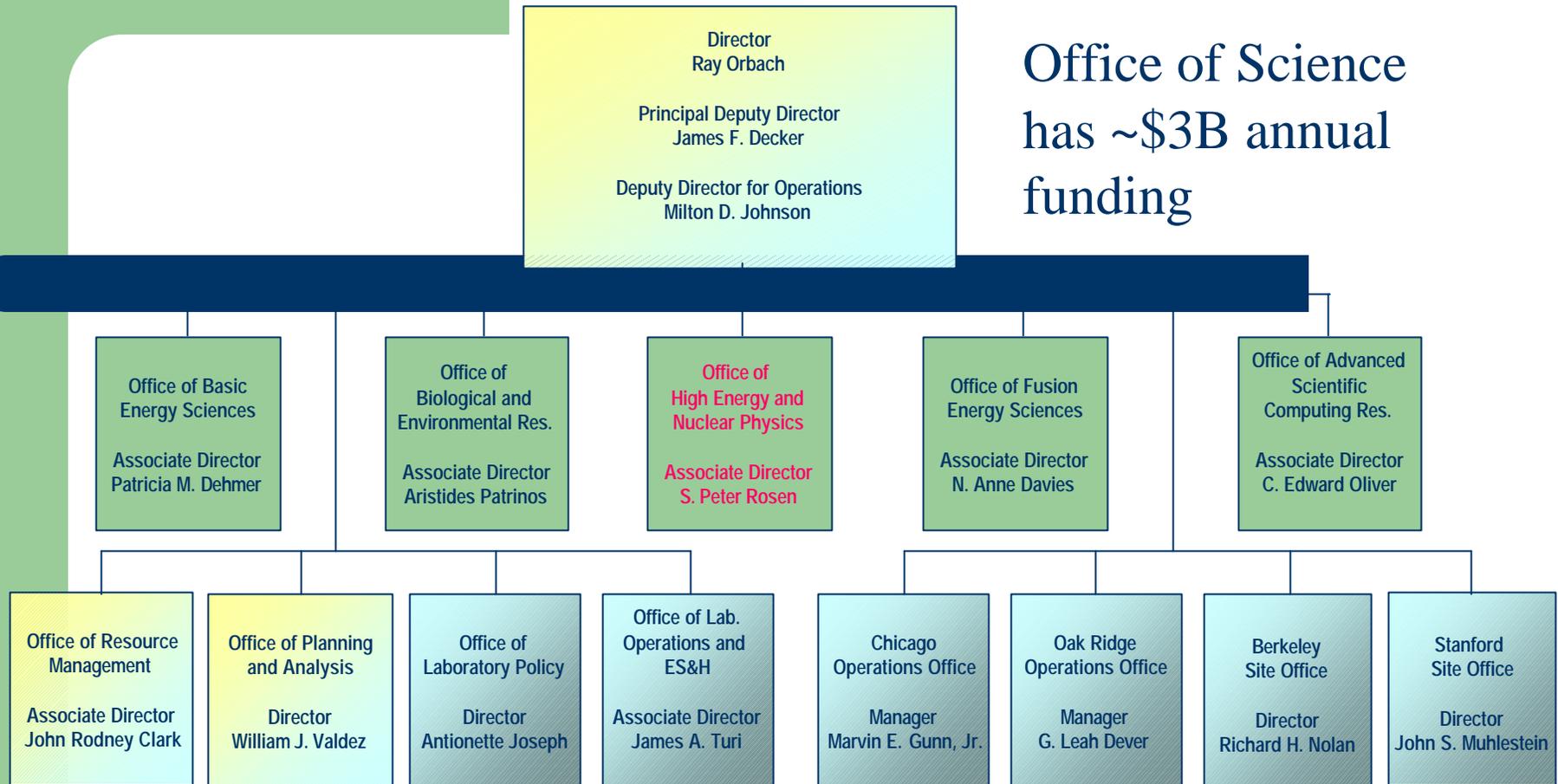
Dr. Kathleen Turner

**Division of High Energy Physics,
Office of Science, DOE**

Talk at the GLAST Science Working
Group Meeting in Huntsville, AL
September 13, 2002

Office of Science

Office of Science
has ~\$3B annual
funding



NOTE: Director of Science equivalent to Assistant Secretary position and filled by Presidential Appointment (Senate confirmed); Principal Deputy Director equivalent to Principal Deputy Assistant Secretary; Associate Directors equivalent to Deputy Assistant Secretaries.



Approved: _____
James F. Decker
Principal Deputy Director
Office of Science

November 2001

Office of High Energy and Nuclear Physics (HENP)

HENP Associate Director: Peter Rosen

-- has ~\$1.1B annual funding

- Director for Nuclear Physics Division:

Dennis Kovar

- Director for High Energy Physics Division:

John O'Fallon

Division of High Energy Physics (HEP) Mission

Our Science:

“science of matter, energy, space and time”

- ? Physics of the fundamental laws of nature - study fundamental forces and matter in the universe
- ? Strong overlaps with astrophysics and cosmology

Program Direction and Reviews

- ✍ High Energy Physics Advisory Panel (**HEPAP**) & its subpanels are our community based advisory committees that provide recommendations on the direction of the field
- ✍ It reports jointly to DOE-HEP & NSF-EPP!
- ✍ Makes recommendations on new projects.

- ✍ We have extensive Technical, Cost, Schedule, Management “Lehman” reviews at each phase through construction of an approved project

Project Phases:

Preconceptual Planning Phase (at end of this have:)

Critical Decision 0 to Approve Mission Need

Conceptual Design Phase

CD-1 to Approve Preliminary Baseline

Preliminary Design Phase

CD-2 to Approve Performance Baseline

Final Design Phase

CD-3 to Approve Start of Construction

Construction Phase

CD-4 to Approve Start of Operations

Mission Operations Phase

How DOE runs Projects:

We **BASELINE** our projects before construction. At this point the technical/cost/schedule/management for whole project needs to be laid out.

The baselined project has set costs/schedule. To change it is a BIG DEAL/Headache.

The projects carry large enough **contingencies** to keep the cost/schedule within the baseline range.

DOE -- GLAST/LAT Project Status

- ✍ 25 Jun 2001 -- CD-0 “Mission Need” Approved
- ✍ 23 Aug 2002 -- Jim Decker (Deputy Head of Office of Science) approved the change of the MIE profile for LAT from \$35M to \$37M
- ✍ 28 Aug 2002 -- CD-1 “Preliminary Baseline Range” Approval finalized
- ✍ Upcoming reviews (tentative)
 - Nov. 4, 2002 – DOE internal ESAAB CD2 approval review
 - Jan. 30, 2003 – Lehman mini-review

DOE -- GLAST/LAT Project Status cont.

CD-2 “Approve Performance Baseline” Approval Requires:

1. Baseline (Lehman) Review held July 30 – Aug. 1 at SLAC
 - Held jointly with NASA “delta” Preliminary Design Review (focuses on technical status)
 - LAT team passed the review with flying colors! – ready for baselining status - Report being finalized
2. National Environmental Policy Act Compliance approved 4/18/00
3. Review of Project Management Control System (requirement)
 - Held July 9-10 at SLAC, successfully completed,
4. External Independent Review (requirement, run by DOE-OECM)
 - Held concurrently with baseline review at SLAC, closeout on 8/5/02
 - Summary: baseline approval okay'd and further EIR is not warranted

Required Documents – in preparation:

Updated Project Execution Plan, Draft Preliminary Safety Analysis Report

GLAST/LAT - future

- ? Continue Partnerships at all Levels!
- ? We think it's working great!
 - ? Joint Oversight Group (JOG)
 - ? Joint Reviews of the LAT project

Astrophysics/Cosmology Projects We're Involved In:

Ongoing

Milagro (w/NSF)
GRANITE/Whipple
SNO (mostly DOE-NP w/NSF)
SDSS (through Fermilab)
SuperK/K2K (w/Japan)
Axion-I (LLNL)

Underway

Pierre Auger (w/NSF)
KamLAND (w/DOE-NP)
CDMS-II (w/NSF)
AMS (w/NASA & foreign)
GLAST/LAT (w/NASA)

Pending Starts

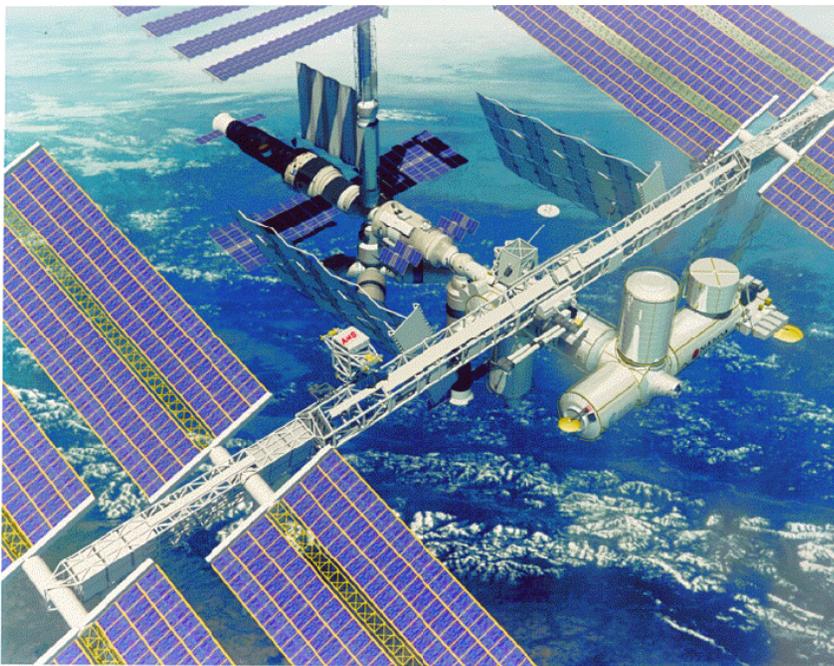
Veritas (w/NSF,SAO)
AXION-II

R&D

EXO (SLAC, Stanford)
SNAP (LBNL)

Other Projects with NASA

? AMS & BAF



Alpha Magnetic Spectrometer
-- An experiment to search in space for dark matter, missing matter & antimatter on the International Space Station (AMS-02 launch in 2004 for 3 yr Mission); AMS- 01 on STS-91

Booster Applications Facility (BAF) at Brookhaven Lab

- NASA funding, DOE (nuclear physics) construction and operations
- Purpose: radiation simulator for human exploration