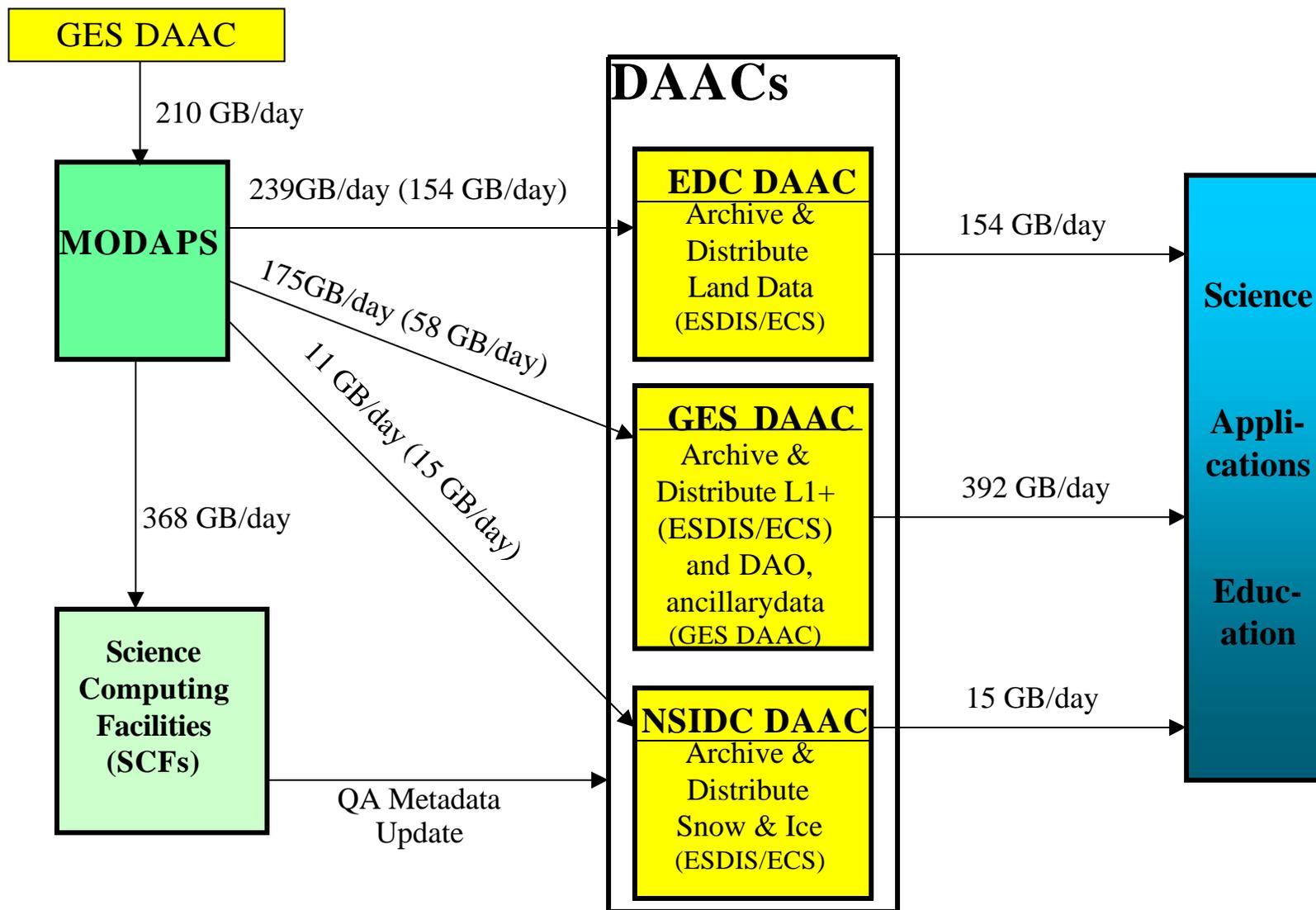# MODAPS Status and Plans

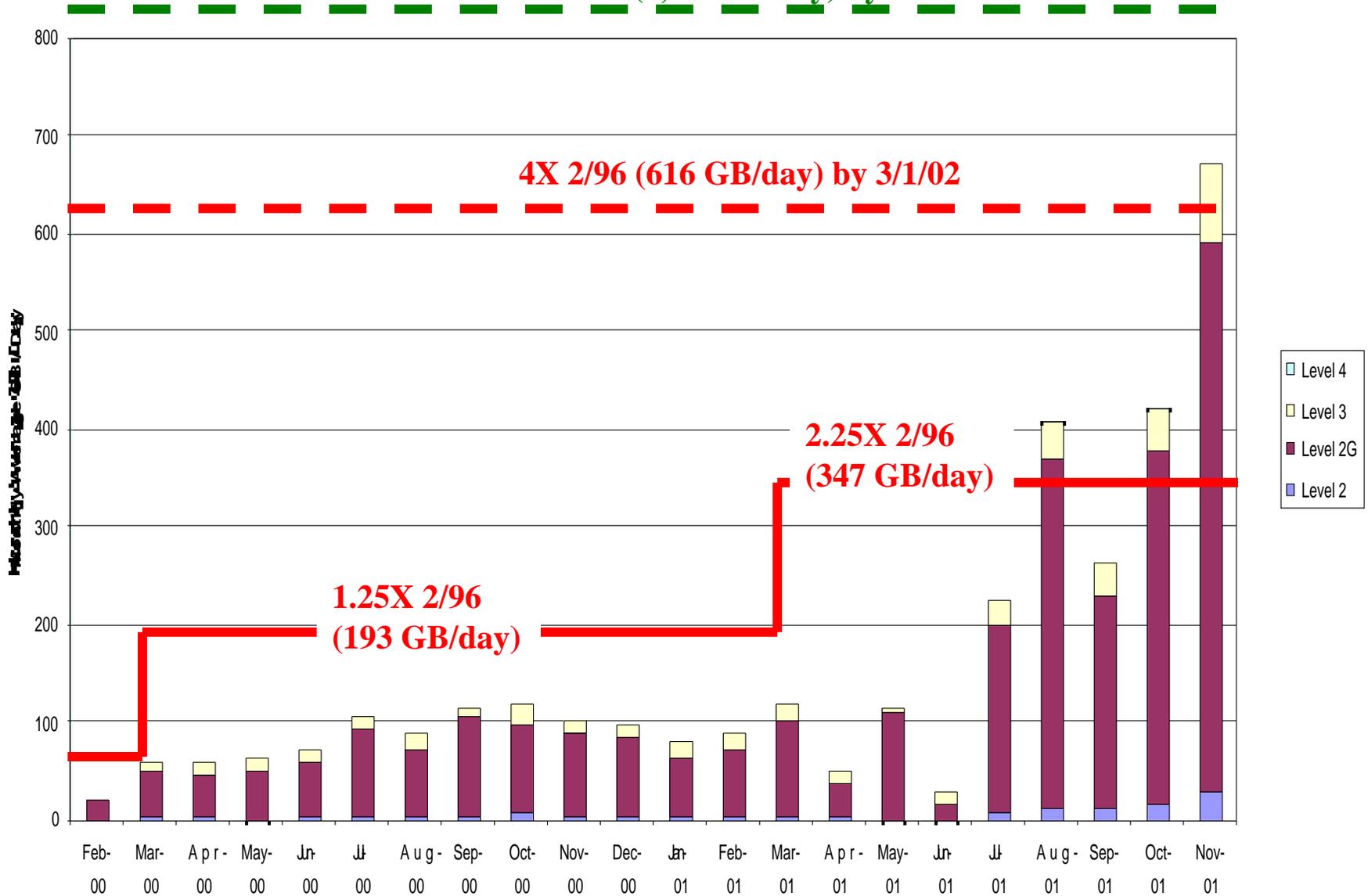Edward Masuoka, Code 922

MODIS Science Data Support Team

NASA's Goddard Space Flight Center

MODIS Level 2+ Average Volume at 1X processing rate with 2/96 baseline volumes in ( ) where different from current production

EDAAC Ingest of MODIS Land Data February 2000 to November 30, 2001

3X 6/00 + .5X 2/96 (1,028GB/day) by 5/15/02

4X 2/96 (616 GB/day) by 3/1/02

2.25X 2/96 (347 GB/day)

1.25X 2/96 (193 GB/day)

Level 4
Level 3
Level 2G
Level 2

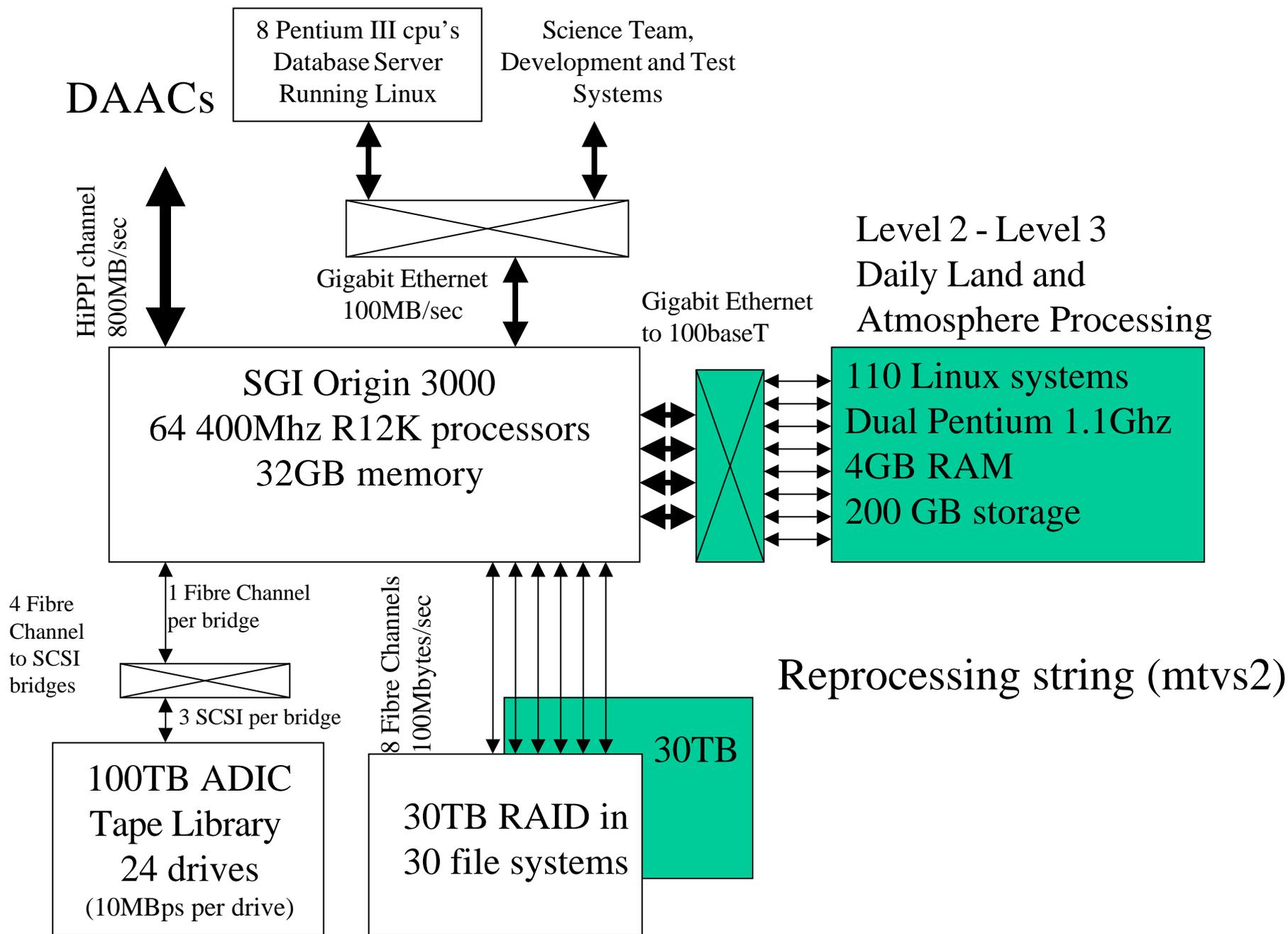12/19/01   MODIS Science Team Meeting   3

MODAPS

- MODAPS produces 2.4TB/day and ships 1.2TB to DAACs for archive and 1.1TB to Science Team when running at 3X
  - 1x forward processing for Terra and 2x reprocessing
- Current processing systems are:
  - 80p SGI Origin 2000 for forward processing and
  - 64p SGI Origin 3000 for reprocessing

MODIS Production Rates

	2001	2002
GDAAC	3X	4X
MODAPS	2.5X	4X

Archived Volume (GB/day)

	2/96 Baseline	7/01 Current	2/02 SWGD Terra	4/03 SWGD Combined
GSFC	58	175	175	229
EDC	154	239	318	328
NSIDC	16	12	16	40
Totals	228	426	509	600

DAACs

8 Pentium III cpu's
Database Server
Running Linux

Science Team,
Development and Test
Systems

HiPPI channel
800MB/sec

Gigabit Ethernet
100MB/sec

Gigabit Ethernet
to 100baseT

Level 2 - Level 3
Daily Land and
Atmosphere Processing

SGI Origin 3000
64 400Mhz R12K processors
32GB memory

110 Linux systems
Dual Pentium 1.1Ghz
4GB RAM
200 GB storage

4 Fibre
Channel
to SCSI
bridges

1 Fibre Channel
per bridge

8 Fibre Channels
100Mbytes/sec

Reprocessing string (mtvs2)

3 SCSI per bridge

30TB

100TB ADIC
Tape Library
24 drives
(10MBps per drive)

30TB RAID in
30 file systems

MODAPS 2002

- 140 dual-processor systems running Linux will be added to the SGI Origins in March 2002
  - Linux processors will run Level 2 through Level 3 Daily products (70% of processing load)
  - PGEs have been ported and products are being verified by Science Team (due date 1/31/02)
  - In testing, 32 Linux systems =1X production
- Disk increased by 60TB to handle extra volume
- Can meet required 4X (3x Terra, 1X Aqua) for 2002, Aqua volume is still at 2/96 baseline

Upgrade Test System

- Adding 32 Linux processors to existing 16 processor SGI Origin 2000

- Adding 9TB of disk to test system (11TB total)

- Allows science testing at 1x

- Test system will be used to test both PGE and MODAPS system changes

- Global test data sets are being defined to allow better science testing of 8, 16, 32-day products

Future

- Finish Linux product verification   1/31
- Install redundant power for production 2/02
- Improve Export error handling   3/31
- Machine-to-Machine Ordering for Reprocessing   7/02