MODIS Aqua Processing Readiness and Terra Reprocessing

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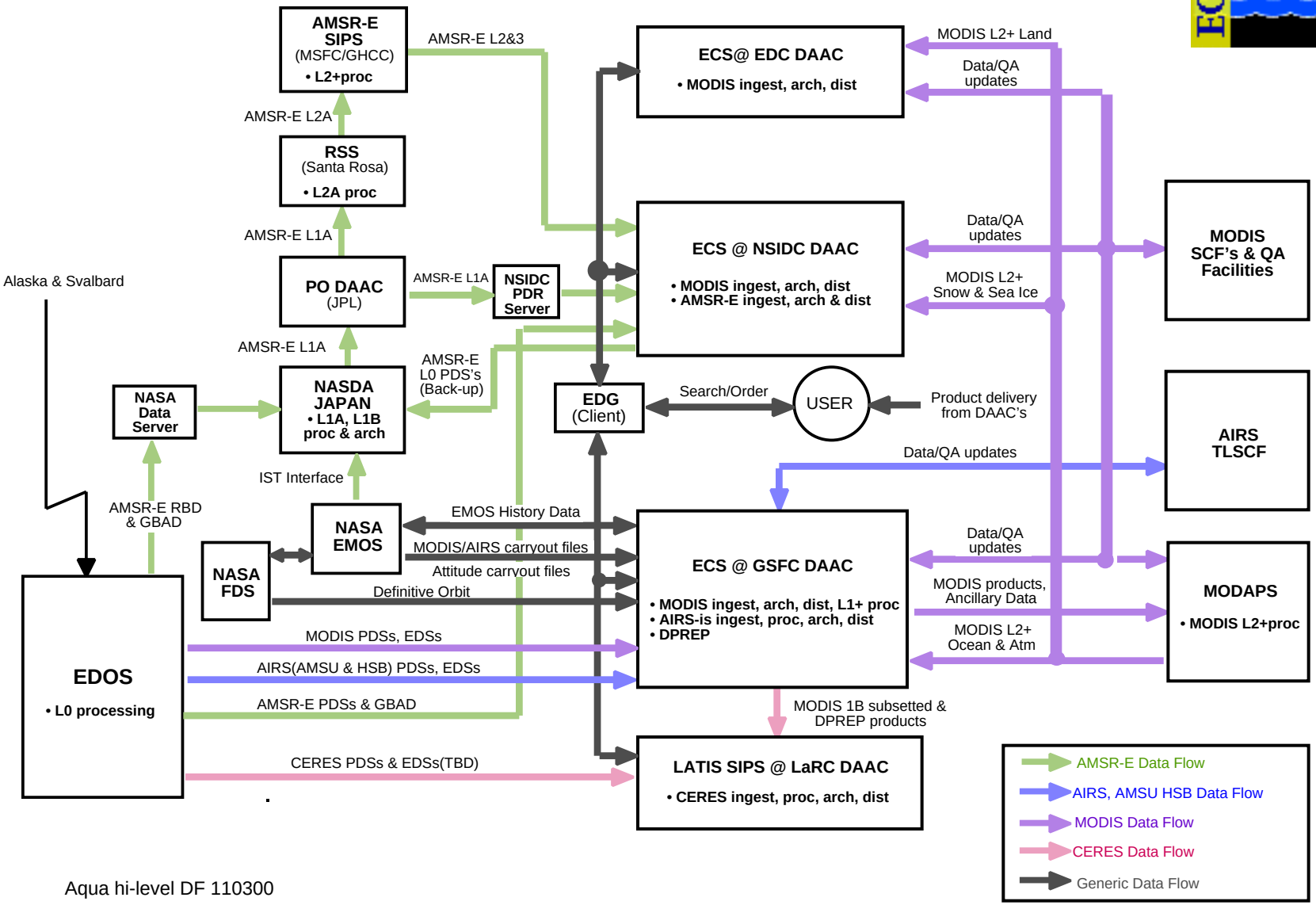
Aqua High Level Science Data Flow Diagram

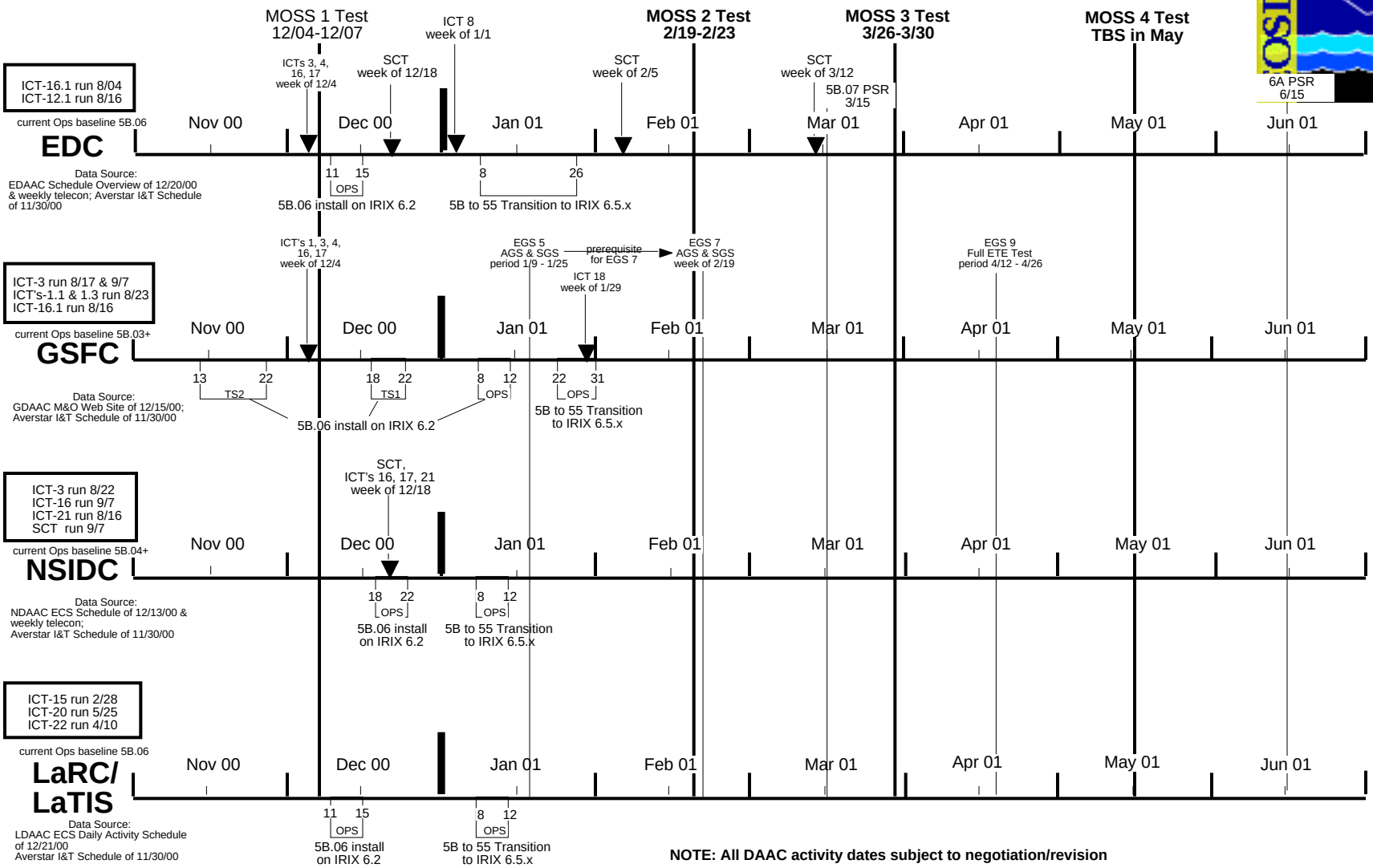


Aqua hi-level DF 110300

Recent End-to-end Test Results

- Demonstrated L0 and RBD processing on EDOS new C4 delivery
- Ingested and archived L0 data from EDOS for all Aqua Instruments at the DAAC's, and LaTIS; ingested AMSR-E RBD data at NASDA
- Processed L0/RBD data into higher products
  - AMSR-E; Processed to L1A at NASDA, L2A at RSS, L2& L3 products were staged by GHCC
  - AIRSis; Processed to L1 at GSFC DAAC (AMSU only), L1 at AIRS TLSCF for AMSU,AIRS,HSB
  - MODIS; Processed to L1A at GSFC DAAC (limited); L1B, Cloudmask and L2 at MODAPS
  - CERES; Processed to L1 at LaTIS SCF
- Pre-processed simulated orbit and attitude data using DPREP
- Demonstrated data product distribution via subscriptions
- EDOS demonstrated reprocessing capability
- Demonstrated EDS delivery to AIRS TLSCF
- Verified g-Polygon issue has been resolved by NASDA

Aqua/5B Transition and I&T Schedule



NOTE: All DAAC activity dates subject to negotiation/revision

Key to ICT's

1 = SCF	17 = MODAPS
3 = EDOS	18 = EMOS/FDS
4 = NOAA	19 = LaTIS
8 = Landsat 7	20 = ACRIM
12 = ASTER GDS	21 = AMSR-E SIPS
15 = SAGE MOC	22 = SAGE SIPS
16 = EDG	

ICT= Interface Confidence Test (Averstar Test): Test Mode
Single DAAC/Single Interface/<1 day Ex:Protocol Test
SCT= System Confidence Test (Averstar Test): OPS mode
Single DAAC/All Interfaces/1 day Ex: Terra EGS10
MT2= Mission Test 2 (Spacecraft test): Test/OPS mode
Real time Spacecraft Test/3 day Ex: Terra Alpha test
MOSS= Mission Ops and Science Systems (ESDIS test): OPS mode
Multi-DAAC/All Interfaces Ex: Terra TESS & MOSS
EGS= EOS Ground System (MRTT test):Test/OPS mode
Mission System Interface & Performance Tests

NOTE: Aqua Launch Readiness
Date is No Earlier Than 07/12/01

Aqua Trans and I&T Sched 122100

Upcoming ECS Aqua Support

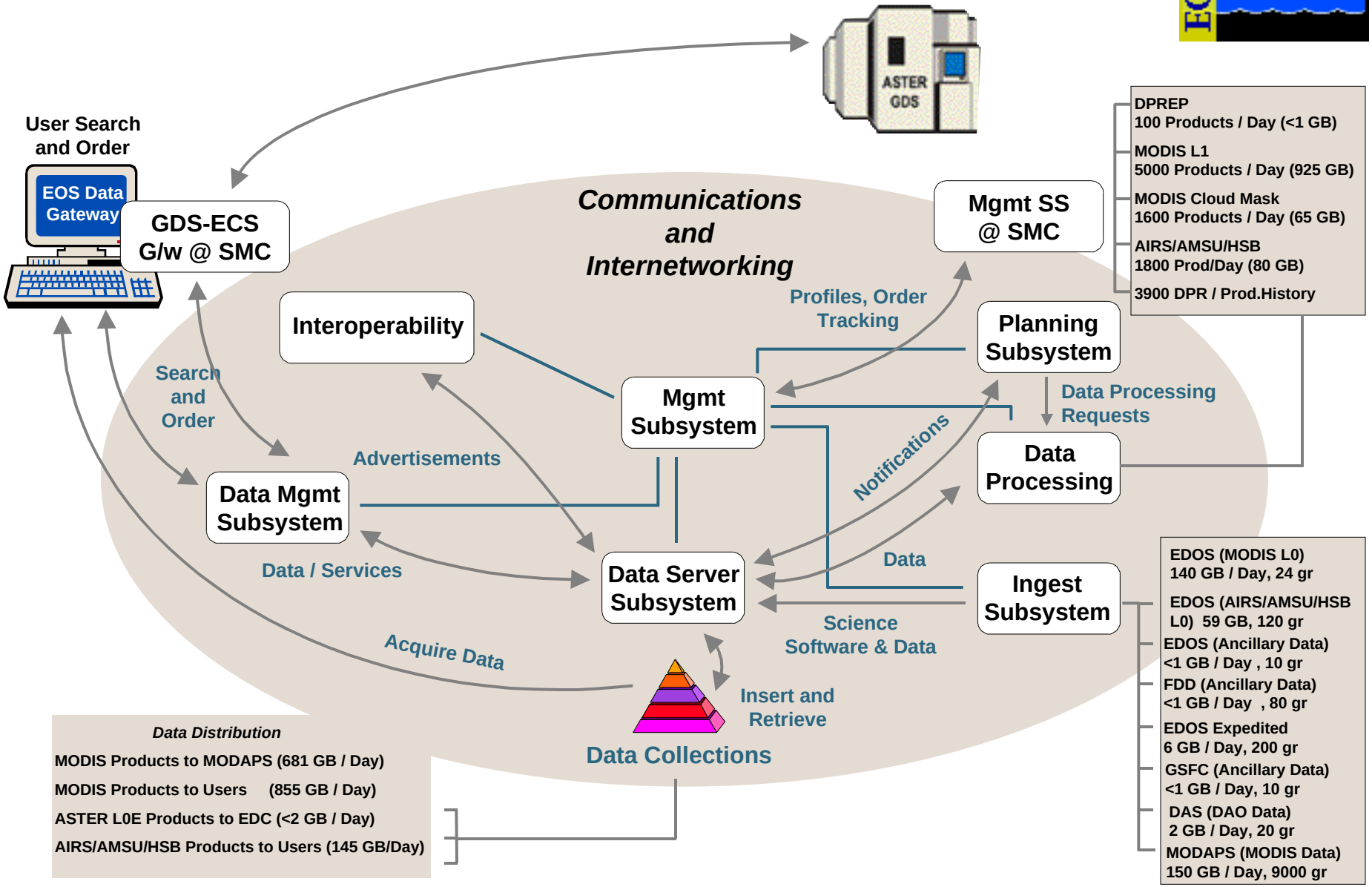
All ECS Aqua elements are in place at the DAACs except for the new items listed below. ESDT and system problems will be worked as they are identified.

- New Items
  - DAAC Upgrades to Release 55; mid February
  - Additional AIRS Hardware at GSFC; late February
  - PREPQC ancillary data for AIRS; early February
  - AIRS Summary Browse; February
  - AMSR-E Advanced Spatial Search; early February
- Current Problems Being Worked
  - Toolkit support for multi-value PSAs for AIRS and AMSR-E
  - AMSR-E browse association
  - ESDT changes as needed
- Potential Impacts to DAAC Aqua Activities
  - Archive Migration; starting in late February
  - Firewall Installation; starting in late February
  - Release 5B.07 and Product Distribution System installation; mid March
  - Transition to S4P Operations at GSFC for MODIS Terra Reprocessing; April
  - Release 6A installation; early May to late June

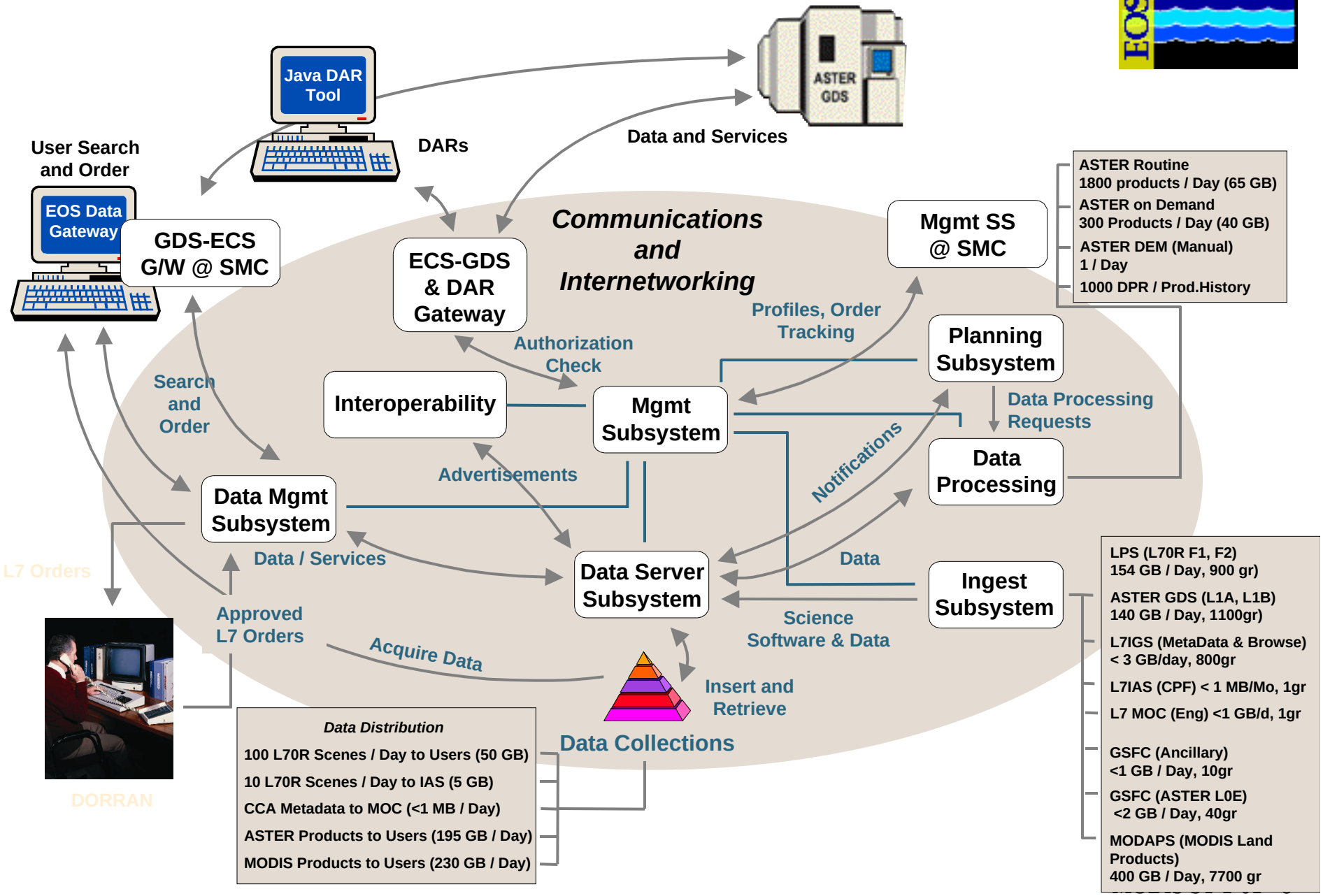
CY01 Driving Capacity Requirements

- Terra L1 Production: 2X
- Aqua L1 Production: 1X
- Terra L2+ Ingest: 2X × (0.75 ramp-up) = 1.5X
- Aqua L2+ Ingest: 1X _ (0.50 ramp-up) = 0.5X
- GSFC 1X L2+ Ingest for Aqua/Terra: 59 GB/day; 1500 science granules/day
- NSIDC 1X L2+ Ingest for Aqua/Terra: 16 GB/day; 850 science granules/day
- EDC 1X L2+ Ingest for Aqua/Terra: 155 GB/day; 3098 science granules/day

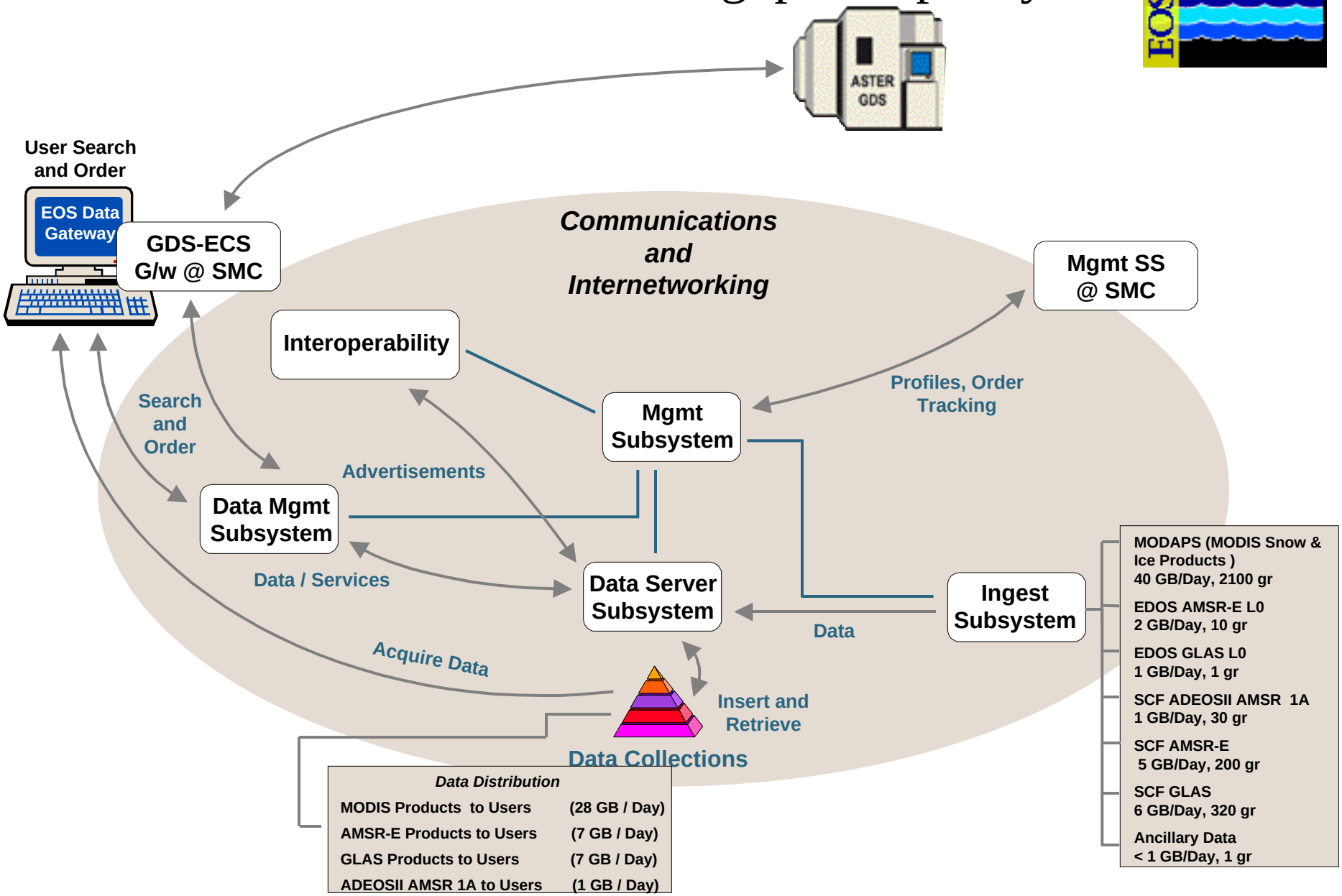
CY01 GSFC Throughput Capacity



CY01 EDC Throughput Capacity



CY01 NSIDC Throughput Capacity



MODIS Archive Capacity

	End of CY 2001		End of CY 2002	
DAAC	**Cumulative Volume (TB)**	**Cumulative Granules**	**Cumulative Volume (TB)**	**Cumulative Granules**
GSFC	454.31	1,063,038	832.60	3,777,675
EDC	216.43	440,030	366.50	2,194,170
NSIDC	13.51	166,065	28.67	999,450
Total	684.25	1,669,133	1,227.77	6,971,295

Assumptions:

1. **Archive compression factor is 1.5:1**
2. **L0 data is retained indefinitely**
3. **L1A data is deleted six months after processed to L1B**
4. **L1B data is deleted six months after reprocessed**
5. **L2 data is deleted six months after processed to L3**
6. **L3+ data is deleted six months after reprocessed**