

## EOS Science Networks Performance Report

This is a summary of EOS QA SCF performance testing for the 2nd quarter of 2005 -- comparing the performance against the requirements from BAH, including Terra, TRMM, and QuikScat, Aqua, ADEOS II, Aura, SAGE III, and ICESat requirements

Up to date graphical results can be found on the EOS network performance web site: [http://ensight.eos.nasa.gov/active\\_net\\_measure.html](http://ensight.eos.nasa.gov/active_net_measure.html). Or click on any of the individual site links below.

### Highlights:

- Mostly stable performance.
- SIPS sites have been moved from this report to the “EOS Production sites” performance report: NCAR, KNMI, RSS. GSFC → JPL. NSSTC → NSIDC.
- The April '05 requirements are now used as the basis for the ratings (had been May '04).
- LaRC outflow to most Abilene sites was switched in April to go via MAX (was Chicago); performance improvements are noted below.

### Ratings:

#### Rating Categories:

**Excellent** : median of daily worst cases > 3 x requirement

**Good** : median of daily worst cases > requirement

**Adequate** : median of daily worst cases < requirement  
and  
median of daily medians > requirement

**Low** : median of daily medians < requirement.

**Bad** : median of daily medians < 1/3 of the requirement.

### Ratings Changes:

#### Upgrades: ↑

LaRC → JRC: Good → **Excellent**

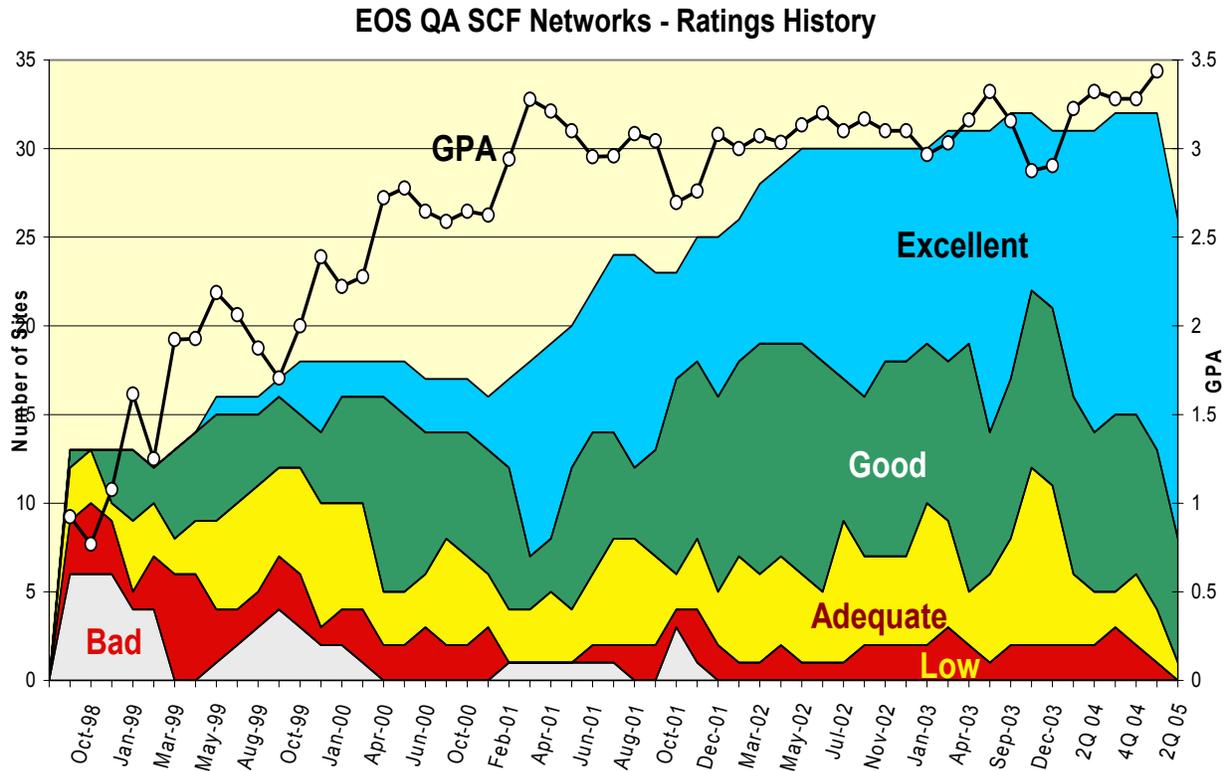
LaRC → UCL: Good → **Excellent**

LaTIS → WISC: Adequate → **Good**

#### Downgrades: ↓

GSFC → Miami: Excellent → **Good**

The chart below shows the number of sites in each classification since the testing started in 1998. Note that these ratings do NOT relate to absolute performance -- they are relative to the EOS requirements. The GPA is calculated based on Excellent: 4, Good: 3, Adequate: 2, Low: 1, Bad: 0



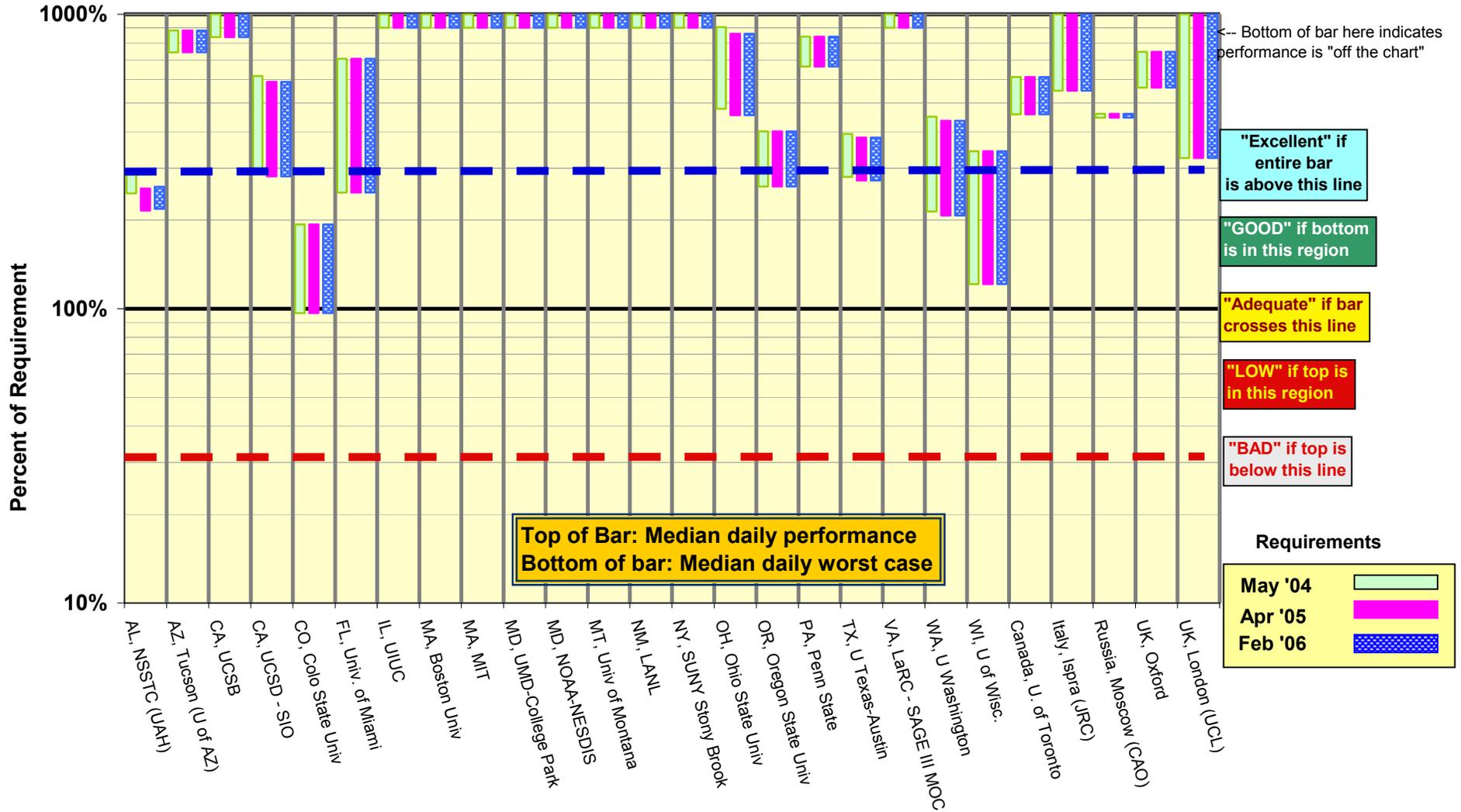
Note that there are fewer sites included in this chart this quarter due to moving the data for SIPS sites to the “EOS Production sites” performance report (NCAR, KNMI, RSS. GSFC → JPL, NSSTC → NSIDC).

### EOS QA SCF Sites: Network Requirements vs. Measured Performance

2 Q 2005		Requirements (kbps)			Testing						
Destination	Team (s)	Previous:	Current:	Future:	Source Node	Median kbps	Median Daily Worst	Rating re Current Requirements		Rating re	Route Tested
		May-04	Apr-05	Feb-06				Apr-05	Prev	Feb-06	
AL, NSSTC (UAH)	CERES, AMSR-E	6236	7127	7034	LaTIS	18257	15368	GOOD	G	GOOD	NISN + FDDI
AZ, Tucson (U of AZ)	MODIS	2811	2811	2811	EROS LPDAAC	24802	20908	Excellent	E	Excellent	Abilene via vBNS+ / DC
CA, UCSB	MODIS	3126	3126	3126	GDAAC	93583	28165	Excellent	E	Excellent	Abilene via MAX
CA, UCSD - SIO	ICESAT, CERES	6792	7107	7107	GSFC-ICESAT	41924	19999	GOOD	G	GOOD	Abilene via NISN / MAX
CO, Colo State Univ	CERES	2147	2147	2147	LaTIS	4145	2074	Adequate	A	Adequate	NISN -> Abilene via Chicago
FL, Univ. of Miami	MODIS, MISR	18823	18823	18823	GDAAC	133031	48657	GOOD	E	GOOD	Abilene via MAX
IL, UIUC	MISR	1133	1133	1133	LaRC DAAC	37627	25307	Excellent	E	Excellent	Abilene via NISN / MAX
MA, Boston Univ	MODIS, MISR	3035	3035	3035	EROS LPDAAC	83486	75269	Excellent	E	Excellent	Abilene via vBNS+ / DC
MA, MIT	ICESAT	6692	7007	7007	GSFC-ICESAT	86720	69777	Excellent	E	Excellent	Abilene via NISN / MAX
MD, UMD-College Park	MODIS	2039	2039	2039	GSFC-MAX	439758	419472	Excellent	E	Excellent	Direct Fiber
MD, NOAA-NESDIS	CERES, AMSR-E	1517	1517	1517	NSIDC	25187	16521	Excellent	E	Excellent	Abilene via FRGP, MAX
MT, Univ of Montana	MODIS	819	819	819	EROS LPDAAC	18064	11771	Excellent	E	Excellent	Abilene via vBNS+ / DC
NM, LANL	MISR	1033	1033	1033	LaRC DAAC	14933	11871	Excellent	E	Excellent	NISN -> ESNet via CA
NY, SUNY Stony Brook	CERES	573	573	573	LaTIS	40102	29005	Excellent	E	Excellent	Abilene via NISN / MAX
OH, Ohio State Univ	ICESAT	5992	6307	6307	GSFC-ICESAT	54209	28625	Excellent	E	Excellent	Abilene via NISN / MAX
OR, Oregon State Univ	CERES, MODIS	7570	7570	7570	LaTIS	30328	19687	GOOD	G	GOOD	Abilene via NISN / MAX
PA, Penn State	MISR	2642	2642	2642	LaRC DAAC	22193	17570	Excellent	E	Excellent	Abilene via NISN / MAX
TX, U Texas-Austin	ICESAT	10745	11060	11060	GSFC-ICESAT	42181	30108	GOOD	G	GOOD	Abilene via NISN / MAX
VA, LaRC - SAGE III MOC	SAGE III	200	200	200	GSFC-CSAFS	7568	2348	Excellent	E	Excellent	NISN SIP
WA, U Washington	ICESAT	11374	11746	11746	GSFC-ICESAT	51109	24344	GOOD	G	GOOD	Abilene via NISN / MAX
WI, U of Wisc.	MODIS, CERES, AIRS	16461	16461	16461	GDAAC	56433	19971	GOOD	G	GOOD	Abilene via MAX
Canada, U. of Toronto	MOPITT	612	612	612	LaRC DAAC	3748	2804	Excellent	E	Excellent	NISN-CA*net4
Italy, Ispra (JRC)	MISR	517	517	517	LaRC DAAC	8548	2841	Excellent	G	Excellent	NISN-UUNET-Milan
Russia, Moscow (CAO)	SAGE III	26	26	26	CAO->LaRC-N	119	116	Excellent	E	Excellent	NISN -> Moscow
UK, Oxford	HIRDLS	512	512	512	GSFC-MAX	3818	2886	Excellent	E	Excellent	Abilene->Geant (NY) -> JAnet
UK, London (UCL)	MISR, MODIS	1033	1033	1033	LaRC DAAC	10822	3360	Excellent	G	Excellent	Abilene via NISN / MAX (?)
<b>*Rating Criteria:</b>								<b>Rating</b>	<b>Current</b>	<b>Last</b>	<b>Future:</b>
									<b>Apr-05</b>	<b>Report</b>	<b>Feb-06</b>
<b>Excellent</b>	Median of Daily worst hours >= 3 * Requirement							<b>Excellent</b>	<b>18</b>	<b>17</b>	<b>18</b>
<b>GOOD</b>	Median of Daily worst hours >= Requirement							<b>GOOD</b>	<b>7</b>	<b>8</b>	<b>7</b>
<b>Adequate</b>	Median of Daily worst hours < Requirement <= Median of Daily Medians							<b>Adequate</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>LOW</b>	Requirement > Median of Daily Medians							<b>LOW</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>BAD</b>	Requirement > 3 * Median of Daily Medians							<b>BAD</b>	<b>0</b>	<b>0</b>	<b>0</b>
								<b>Total</b>	<b>26</b>	<b>26</b>	<b>26</b>
								<b>GPA</b>	<b>3.65</b>	<b>3.62</b>	<b>3.65</b>

# EOS QA SCF Sites

## Daily Median and Worst Performance as a percent of Requirements



## Details on individual sites:

Each site listed below is the DESTINATION for all the results reported in that section. The first test listed is the one on which the rating is based -- it is from the source most relevant to the driving requirement. Other tests are also listed. The three values listed are derived from [nominally] 24 tests per day. For each day, a daily best, worst, and median is obtained. The values shown below are the medians of those values over the test period.

### 1) AL, NSSTC (UAH) (aka GHCC)

Teams: CERES, [AMSR]

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/NSSTC.shtml>

Rating: Continued **Good**

Domain: nsstc.uah.edu

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC LaTIS	18.7	18.3	15.4	NISN SIP
GSFC	25.4	25.0	21.6	NISN SIP

Requirements:

Source Node	Date	Mbps	Rating
LaRC LaTIS	May '04	6.2	<b>Good</b>
LaRC LaTIS	Apr '05	7.1	<b>Good</b>

**Comments:** Thruput from both sites improved to the levels above in March '05 -- was about 16 mbps from LaTIS and 20 mbps from GSFC since October '04.

Note: Results of testing to NSIDC for AMSR flows has been moved to the EOS "Production Sites" report.

### 2) AZ, Tucson (U of AZ):

Teams: MODIS

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/ARIZONA.shtml>

Rating: Continued **Excellent**

Domain: arizona.edu

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
EROS LPDAAC	33.5	24.8	20.9	Abilene via vBNS+ / DC
GSFC	33.5	28.3	23.7	Abilene via MAX

Requirements:

Source Node	FY	Mbps	Rating
EROS LPDAAC	'03 - '06	2.8	<b>Excellent</b>

**Comments:** The ratings are based on the MODIS flow from EROS (There is no longer a requirement from LaRC, as the MISR team has all moved away from Arizona).

Performance was stable from all sources, keeping the rating "Excellent".

Note: Results to JPL and RSS have been moved to the EOS "Production Sites" report.

**3) CA, UCSB :**

Ratings: GSFC: Continued **Excellent**  
 EROS: Continued **Excellent**

Teams: MODIS

Domain: ucsb.edu

Web page: <http://ensight.eos.nasa.gov/Missions/terra/UCSB.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-DAAC	112.7	93.6	26.2	Abilene via NISN / MAX
EROS-LPDAAC	94.3	91.2	68.9	Abilene via vBNS+ / DC

Requirements:

Source Node	FY	mbps	Rating
GSFC-DAAC	'04 - '06	3.1	<b>Excellent</b>
EROS-LPDAAC	'04 - '06	2.2	<b>Excellent</b>

**Comments:** The requirements are split between EROS and GSFC. Performance from both GSFC and EROS improved substantially in late April due to host upgrade at UCSB (Median performance was 19 mbps from GSFC and 18 mbps from EROS before that). The rating remains "Excellent" from both sites.

**4) CA, UCSD (SIO) :**

Ratings: ICESAT: Continued **Good**  
 LaTIS: Continued **Excellent**

Teams: CERES, ICESAT

Domain: ucsd.edu

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/UCSD.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ICESAT	56.6	41.9	20.0	Abilene via NISN / MAX
LaTIS	39.6	37.9	31.1	Abilene via NISN / MAX

Requirements:

Source Node	FY	mbps	Rating
GSFC	'05 - '06	7.0	<b>Good</b>
LaTIS	'02 - '06	0.26	<b>Excellent</b>

**Comments:** The rating is based on testing from the ICESAT SCF at GSFC. The daily worst from ICESAT improved from 14 mbps last quarter, but remained slightly below 3 x the requirement, keeping the rating "Good".

Performance from LaTIS improved in April (from 25 mbps) due to NISN routing to Abilene via MAX (previously via Chicago). Prior to that thruput was stable since April '03. The CERES requirements are much lower than ICESAT, so the LaTIS rating continues as "Excellent".

**5) CO, Colo State Univ.:**Rating: Continued **Adequate**

Teams: CERES

Domain: colostate.edu

Web page: [http://ensight.eos.nasa.gov/Missions/terra/COLO\\_ST.shtml](http://ensight.eos.nasa.gov/Missions/terra/COLO_ST.shtml)

## Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaTIS	4.39	4.15	2.07	Abilene via NISN / Chicago
GSFC	7.13	7.09	6.55	Abilene via MAX

## Requirements:

Source Node	FY	mbps	Rating
LaTIS	'04 - '06	2.15	<b>Adequate</b>

**Comments:** Performance from both LaTIS and GSFC has been stable since December '03. The daily worst from LaTIS remained slightly below the '05 requirement indicating congestion on the NISN-Chicago link. So the rating remains "Adequate". Performance from GSFC would rate as "Excellent".

Note: The Colo State test host was replaced in August – performance improved!

**Note: Results to NCAR have been moved to the EOS "Production Sites" report.**

**6) FL, Univ. of Miami:**Rating: GSFC: ↓ Excellent → **Good**

Teams: MODIS, MISR

LaRC: Continued **Excellent**

Domain: rsmas.miami.edu

Web page: <http://ensight.eos.nasa.gov/Missions/terra/MIAMI.shtml>

## Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-DAAC	179.0	133.0	46.7	Abilene via MAX
GSFC-MAX	208.6	133.6	34.4	Abilene via MAX
LaRC DAAC	40.4	38.1	23.0	Abilene via NISN / MAX

## Requirements:

Source Node	FY	mbps	Rating
GSFC	'04 - '06	18.8	<b>Good</b>
LaRC DAAC	'04 - '06	1.1	<b>Excellent</b>

**Comments:** Thruput from both GSFC sites has gotten a bit noisier this period. The lower daily worst values are no longer above 3 x the requirement, so the rating drops to "Good".

Performance from LaRC DAAC improved with the NISN change in April to peer with Abilene at MAX (had been Chicago, with 25 mbps median thruput), the rating remains "Excellent".

**7) IL, UIUC:**Rating: **Excellent**

Domain: uiuc.edu

Teams: MISR

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/UIUC.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC	40.1	37.6	25.3	Abilene via NISN / Chicago
GSFC-MAX	199.7	199.1	145.1	Abilene via MAX

Requirements:

Source Node	FY	mbps	Rating
LaRC DAAC	'04 - '06	1.13	<b>Excellent</b>

**Comments:** After some tuning, performance increased dramatically – still well above the modest requirement, rating "Excellent".

**8) MA, Boston Univ:**Ratings: EROS: Continued **Excellent**LaRC: Continued **Excellent**

Domain: bu.edu

Teams: MODIS, MISR

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/BU.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
EROS DAAC	87.7	83.5	75.3	Abilene via vBNS+ / DC
GSFC	93.8	93.8	86.7	Abilene via MAX
LaRC DAAC	40.8	39.1	31.9	<a href="#">Abilene via NISN / MAX</a>

Requirements:

Source Node	FY	mbps	Rating
EROS DAAC	'04 - '06	3.0	<b>Excellent</b>
LaRC DAAC	'04 - '06	1.2	<b>Excellent</b>

**Comments:** Performance from GSFC and EROS improved a bit – mostly the daily worst -- a bit less noisy. Performance from LaRC improved with the NISN – Abilene routing via MAX – median was 26 mbps last quarter. The rating remains Excellent".

**9) MA, MIT:**

Teams: ICESAT

Web Page: <http://ensight.eos.nasa.gov/Missions/icesat/MIT.shtml>Rating: Continued **Excellent**

Domain: mit.edu

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ICESAT	73.4	60.0	38.2	Abilene via NISN / MAX
GSFC-MAX	90.8	86.7	69.8	Abilene via MAX

Requirements:

Source Node	FY	mbps	Rating
GSFC	'04, '05 – '06	6.7, 7.0	<b>Excellent</b>

**Comments:** Performance from GSFC ICESAT to MIT is still subject to congestion inside GSFC, but not as much as previously. The daily worst remains above 3 x the requirement, the rating remains "Excellent". From GSFC-MAX there is less congestion apparent.

**10) MD, NOAA-NESDIS (Camp Springs)**

Teams: CERES, AMSR-E

Web Pages: [http://ensight.eos.nasa.gov/Missions/terra/NOAA\\_Camp\\_Springs.shtml](http://ensight.eos.nasa.gov/Missions/terra/NOAA_Camp_Springs.shtml)Rating: Continued **Excellent**

Domain: nesdis.noaa.gov

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
NSIDC	26.1	25.2	16.5	FRGP / Abilene / MAX
LaTIS	31.1	29.6	10.1	<a href="#">NISN / MAX</a>
GSFC-MODIS	32.5	31.2	28.8	Peering at MAX

Requirements (QA only):

Source Node	FY	mbps	Rating
NSIDC	'02 – '06	1.52	<b>Excellent</b>
LaTIS	'02 – '06	0.21	<b>Excellent</b>

**Comments:** Performance from LaTIS improved in April with the NISN – Abilene routing via MAX – median was previously only 13 mbps. The performance from other sources has been stable since it improved around mid August '04, due to upgrades at NOAA. The rating remains "Excellent" from both NSIDC and LaTIS.

**11) MD, Univ. of Maryland:**Rating: Continued **Excellent**

Teams: MODIS

Domain: umd.edu

Web Pages: [http://ensight.eos.nasa.gov/Missions/terra/UMD\\_SCF.shtml](http://ensight.eos.nasa.gov/Missions/terra/UMD_SCF.shtml)

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-MAX	445.6	439.8	419.5	Direct Fiber OC-12 / MAX / SCF
EROS LPDAAC	89.0	83.0	67.4	VBNS+ / Abilene / MAX / SCF
NSIDC	46.0	45.9	39.6	Abilene / MAX / SCF

Requirements (QA only):

Source Node	FY	mbps	Rating
GSFC DAAC	'02 – '06	2.0	<b>Excellent</b>

**Comments:** Note: the UMD test node was restored with a replacement node in mid May – performance improved at that time.

The performance above was very stable. Due to the modest requirement, all of these performance levels rate as “Excellent”

**12) MT, Univ of Montana:**Rating: Continued **Excellent**

Teams: MODIS

Domain: ntsg.umt.edu

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/MONT.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
EROS LPDAAC	18.9	18.1	11.8	VBNS+ / DC / Abilene
GSFC	38.3	30.7	19.7	MAX / Abilene
NSIDC	40.5	34.2	22.1	CU / FRG / Abilene

Requirements:

Source Node	FY	mbps	Rating
EROS LPDAAC	'04 - '06	0.82	<b>Excellent</b>

**Comments:** Stable performance, with small improvements from all sources. However, there is a noticeable diurnal cycle from all sources. With the low requirements, however, the rating continues as “Excellent”.

**13) NM, LANL:**Rating: Continued **Excellent**

Teams: MISR

Domain: lanl.gov

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/LANL.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC	16.1	14.9	11.9	NISN SIP / MAE-W (Ames) / ESnet
GSFC	16.1	14.9	14.2	MAX / ESnet

Requirements:

Source Node	FY	mbps	Rating
LaRC DAAC	'03-'06	1.03	<b>Excellent</b>

**Comments:** Performance from both LDAAC and GDAAC was stable since the ESnet upgrade in early July '04. The rating remains "Excellent"

**14) NY, SUNY-SB:**Rating: Continued **Excellent**

Teams: CERES, MODIS

Domain: sunysb.edu

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/SUNYSB.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaTIS	41.6	40.1	29.0	NISN / MAX / Abilene / NYSERnet
GSFC	74.9	65.5	47.8	MAX / Abilene / NYSERnet

Requirements:

Source Node	FY	mbps	Rating
LaTIS	'02-'06	0.57	<b>Excellent</b>

**Comments:** Performance from both sites increased to the above values in April after the routing from LaRC was via MAX, the SUNY test host was replaced, and test parameters adjusted (Medians had been 26 mbps from LaTIS and 50 from GSFC). With the low requirement, the rating remains "Excellent".

**15) OH, Ohio State Univ:**Rating: Continued **Excellent**

Teams: ICESAT

Domain: ohio-state.edu

Web Page: [http://ensight.eos.nasa.gov/Missions/icesat/OHIO\\_STATE.shtml](http://ensight.eos.nasa.gov/Missions/icesat/OHIO_STATE.shtml)

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ICESAT	68.8	54.2	28.6	Abilene via NISN / MAX
GSFC-MAX	60.3	53.5	42.2	Abilene via MAX

Requirements:

Source Node	FY	mbps	Rating
GSFC	'04, '05-'06	6.0, 6.3	<b>Excellent</b>

**Comments:** The congestion at ICESAT is still somewhat apparent. The daily worst from ICESAT remains more than 3 x the requirement, so the rating remains "Excellent". Without this congestion, the daily worst from GSFC-MAX is higher – although the daily median and maximum are similar..

**16) OR, Oregon State Univ:**Ratings: LaTIS: Continued **Good**  
GSFC: Continued **Excellent**

Domain: oce.orst.edu

Teams: CERES, MODIS

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/ORST.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaTIS	35.0	30.3	19.7	Abilene via NISN / Chicago
JPL	74.5	67.4	19.1	Abilene via CalRen
GSFC	53.3	36.7	14.4	Abilene via MAX

Requirements:

Source Node	FY	mbps	Rating
LaTIS	'04 - '06	7.5	<b>Good</b>
GDAAC	'02 - '06	0.25	<b>Excellent</b>

**Comments:** Performance from all sources increased a bit (especially the daily worst – due to reduced noisiness); the rating from LaTIS remains "Good" (close to "Excellent").

**17) PA: Penn State Univ:**Rating: Continued **Excellent**

Teams: MISR

Domain: psu.edu

Web Page: [http://ensight.eos.nasa.gov/Missions/terra/PENN\\_STATE.shtml](http://ensight.eos.nasa.gov/Missions/terra/PENN_STATE.shtml)

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC	30.9	22.2	17.6	Abilene via NISN / <b>MAX</b>
GSFC	162.6	161.3	147.0	Abilene via MAX

Requirements:

Source Node	FY	mbps	Rating
LaRC DAAC	'03-'06	2.6	<b>Excellent</b>

**Comments:** Peak performance from LDAAC improved in April with the NISN – Abilene routing via MAX (was 26 mbps), daily median and worst dropped slightly; the rating remains "Excellent". Performance from GSFC improved to the above levels in September '04 (Median was 70 mbps previously)

**18) TX: Univ. Texas - Austin**Rating: Continued **Good**

Teams: ICESAT

Domain: utexas.edu

Web Page: <http://ensight.eos.nasa.gov/Missions/icesat/TEXAS.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ICESAT	43.5	42.2	30.1	Abilene via NISN / MAX
GSFC-MAX	44.6	44.4	43.3	Abilene via MAX

Requirements:

Source Node	FY	mbps	Rating
GSFC	'03, 05-'06	10.7, 11.1	<b>Good</b>

**Comments:** Performance from GSFC-MAX and ICESAT-SCF at GSFC via Abilene has been very stable since July '03; with somewhat less congestion at ICESAT. The rating remains "Good" (now just a bit below "Excellent", would be "Excellent" from GSFC-MAX).

**19) VA, LaRC: SAGE III MOC:**Rating: Continued **Excellent**

Teams: SAGE III

Domain: larc.nasa.gov

Web Page: [http://ensight.eos.nasa.gov/Missions/sage/SAGE\\_MOC.shtml](http://ensight.eos.nasa.gov/Missions/sage/SAGE_MOC.shtml)

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-SAFS	8.0	7.6	2.3	NISN PIP

Requirements:

Source Node	FY	mbps	Rating
GSFC SAFS	'02 – '06	0.20	<b>Excellent</b>

**Comments:** Stable thruput since upgrade of LaRC MOC machine in Feb '03. Rating continues "Excellent"

**Note:** Results to PNNL have been removed from this report due to the test node being down since November '04.

**20) WA, Univ Washington:**Rating: Continued **Good**

Teams: ICESAT

Domain: washington.edu

Web Page: <http://ensight.eos.nasa.gov/Missions/icesat/UW.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ICESAT	64.4	51.1	24.3	Abilene via NISN/MAX
GSFC-MAX	59.9	52.6	38.7	Abilene via MAX

Requirements:

Source Node	FY	mbps	Rating
GSFC	'04, '05-'06	11.3, 11.7	<b>Good</b>

**Comments:** Like other ICESAT sites, congestion from the ICESAT test node was still present, but at a reduced level. All measurements above were stable except for the daily worst from ICESAT, which was only about 16 mbps last report. The median daily worst from ICESAT is now above the requirement; increasing the rating to "Good" – but would be "Excellent" from GSFC-MAX.

**21) WI, Univ. of Wisconsin:**Ratings: GSFC: Continued **Good**LARC: **↑ Adequate → Good**

Domain: ssec.wisc.edu

Teams: MODIS, CERES, AIRS

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/WISC.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
G-DAAC	74.6	56.4	20.0	MAX / Abilene / Chi / MREN
LaTIS	26.2	24.1	12.5	NISN / Chicago / MREN

Requirements:

Source Node	FY	mbps	Rating
GSFC	'04 - '06	16.5	<b>Good</b>
LaRC Combined	'03, '04, '05-'06	6.8, 7.5, 7.9	<b>Good</b>

**Comments:** Performance from GSFC was a bit less noisy but long term stable; the rating from GSFC remains "Good". Performance from LaTIS improved in April with the NISN – Abilene routing via MAX (Median had been 11 mbps, daily worst was 5 mbps); the rating from LaTIS improves to "Good".

**22) Canada, Univ of Toronto:**Rating: Continued **Excellent**

Domain: physics.utoronto.ca

Team: MOPITT

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/TORONTO.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC → IST	4.3	3.7	2.8	NISN / Chicago / CA*net4
LaRC DAAC → Test Node	24.8	21.8	14.5	NISN / Chicago / CA*net4
GSFC → IST	6.9	6.7	6.3	NISN / Chicago / CA*net4
GSFC → Test Node	69.8	63.6	41.6	MAX / Abilene / Chicago / CA*net4

Requirements:

Source Node	FY	kbps	Rating
LaRC DAAC	'02 - '06	100	<b>Excellent</b>
GSFC EOC	'02 - '06	512	<b>Excellent</b>

**Comments:** Flows to the Toronto IST node were switched from the dedicated NISN T1 to CA\*net4 in late October '04. Performance from both LDAAC (Source of QA data) and GSFC (Source for IST) to the IST at Toronto improved (was about 1.4 mbps via the private T1), but is considerably lower than to the test node, also on campus. The rating remains "Excellent".

**23) Italy, EC - JRC:**

Teams: MISR

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/JRC.shtml>Rating: ↑ Good → **Excellent**

Domain: ceo.sai.jrc.it

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC	10.0	8.5	2.8	NISN / UUnet / Milan
GSFC-NISN	11.0	8.9	3.5	NISN / UUnet / Milan

Requirements:

Source Node	FY	mbps	Rating
LaRC DAAC	'02 – '06	0.52	<b>Excellent</b>

**Comments:** Performance improved from both sources in May, due to an apparent UUNet upgrade, but is still noisy (medians from both sites were about 3 mbps last quarter, and daily worst was about 1 mbps.). The rating improves to “Excellent”.

**Note:** Results to KNMI have been moved to the EOS “Production Sites” report.

**24) Russia, CAO (Moscow):**

Teams: SAGE III

Web Pages: <http://ensight.eos.nasa.gov/Missions/sage/CAO.shtml>  
[http://ensight.eos.nasa.gov/Missions/sage/LARC\\_SAGE.shtml](http://ensight.eos.nasa.gov/Missions/sage/LARC_SAGE.shtml)Rating: Continued **Excellent**

Domain: mipt.ru

Test Results:

Source → Dest	Medians of daily tests (kbps)			Route
	Best	Median	Worst	
CAO → LaRC	120	119	116	MIPT / TCnet / NISN SIP
CAO → LaRC	550	455	305	Commodity Internet
LaRC → CAO	149	148	125	NISN SIP / TCnet / MIPT
LaRC → CAO	1562	1515	649	Commodity Internet

Requirements:

Source → Dest	FY	kbps	Rating
CAO → LaRC	'02 – '06	26	<b>Excellent</b>
LaRC → CAO	'02 – '06	26	<b>Excellent</b>

**Comments:** Performance testing has been running since November '02, with dual routes. Performance on the NISN dedicated circuit to Moscow, then TCnet (NASA Russian ISP) tunnel to CAO ISP (MIPT) is extremely steady in both directions, with a rating (based on the modest requirement) of "Excellent".

The dual route configuration also allows testing via the commodity internet route. Performance via the internet route is much better, but is also more variable, and also would rate "Excellent". Note: The routing between LaRC and CAO via the internet route changes occasionally, with corresponding performance changes. From LaRC to CAO, median thruput was about 1.4 mbps until June '04, then 2.8 mbps until Feb '05, then 0.6 mbps until the above values in April.

**25) UK, London: (UCL SCF)**Rating: ↑ Good → **Excellent**

Teams: MODIS, MISR

Domain: ucl.ac.uk

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/UCLSCF.shtml>

## Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC	17.8	10.8	3.4	NISN / MAX / Abilene / NY / GEANT / Janet ??
GSFC MAX	48.9	45.7	43.5	MAX / Abilene / NY / GEANT / JAnet

## Requirements

Source Node	FY	mbps	Rating
LaRC DAAC	'02 – '06	1.03	<b>Excellent</b>

**Comments:** The route from LDAAC may have changed to go via NISN to MAX and Abilene in April, based on the general LaRC routing change at that time, and the corresponding performance improvement (Traceroutes are blocked, however). Thruput had been 3 mbps median, 1 mbps daily worst via NISN / Level3 peering in San Jose since approx January '04. Performance is less noisy on this route, and the daily worst is now above 3 x the requirement, so the rating improves to "Excellent". This was a good opportunity to benefit from the recent Abilene policy change, allowing our NISN data to transit Abilene to international destinations.

Performance from GSFC remains very stable and much higher than from LaRC.

**26) UK, Oxford:**Rating: Continued **Excellent**

Teams: HIRDLS

Domain: ox.ac.uk

Web Page: <http://ensight.eos.nasa.gov/Missions/aura/OXFORD.shtml>

## Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC	4.09	3.82	2.89	MAX / Abilene / NY / GEANT / JAnet

## Requirements: (IST Only)

Source Node	FY	kbps	Rating
GSFC	'03 – '06	512	<b>Excellent</b>

**Comments:** Very steady performance continues since May '03, rating "Excellent" compared to the IST requirement.

**Test Results to other EOS HIRDLS UK Sites** (Requirements TBD):Web Page: [http://ensight.eos.nasa.gov/Missions/aura/UK\\_RAL.shtml](http://ensight.eos.nasa.gov/Missions/aura/UK_RAL.shtml)

Source → Dest	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC → RAL	32.5	24.2	14.0	MAX / Abilene / NY / GEANT / JAnet

**Comments:** Thruput to RAL remains noisy, but quite good, and about the same as the last report. .