V1-TST-01 - TSDIS/TSS and SDPF/LaTIS Overall Confidence Test

Background:

The Earth Observing System Data and Information System (EOSDIS) the data and information system for the EOS Mission, has the objective of providing a space and ground measurement system to provide the scientific basis for understanding global climate change. The first EOS instruments, Clouds and Earth's Radiant Energy System (CERES) and Lightning Imaging Sensor (LIS), will be launched in 1997 on the Tropical Rainfall Measuring Mission (TRMM) Observatory. LIS will be processed by the LIS SCF and CERES will be processed by the LaRC DAAC using EOSDIS. The EOSDIS provides a user interface and information about EOSDIS data holdings on a 24-hour basis.

Test Objectives:

The objectives of this group of scenarios verifies that the TRMM Support System (TSS) and the Langley TRMM Information System (LaTIS) can support broad, multi-site interactive operations in support of mission planning, scheduling and science data access, and distribution. These scenarios verify the capabilities of TSS and LaTIS to enable the users and operators to perform multi-step processes, including multiple data sets searches and transfers. The overall objective of this end-to-end test is to verify that the TSS and the LaTIS operates properly and can provide the full range of functional capabilities required to support the TRMM Mission Operations. The TSS components of the GSFC DAAC has responsibility for archive and distribution of TMI, PR, and VIRS data products, combined products which include PR and/or TMI data and other data, GV data products, and ancillary data. The LaTIS components of the LaRC DAAC has responsibility for ingest, archive, product generation, and distribution of CERES data from the Sensor Data Processing Facility (SDPF). The requirements to be verified in this test will be the ability of:

- TSS to ingest and archive TRMM science data products from TSDIS.
- TSS to distribute TRMM science data products to TSDIS for reprocessing.
- TSS to distribute ancillary data to TSDIS for processing and reprocessing.
- TSS to distribute TRMM products to TSDIS Science Users (TSUs) for data trending and analysis.
- LaTIS to ingest and archive CERES Level 0 and quick-look data sets from SDPF.
- LaTIS to ingest and archive Definitive and Predictive Orbit data from SDPF.
- LaTIS to generate higher level CERES data products.
- LaTIS to distribute data to TRMM Science Users.
- LaTIS to ingest and archive VIRS 1B data from TSS.

Requirements Verified:

TBD

Test Configuration:

Hardware and software configurations at each DAAC site are managed and tracked by the M&O organization at that site. The most current configuration status report will be obtained prior to the start of testing and be referenced in the test report. (See EXHIBIT TST-01-1)

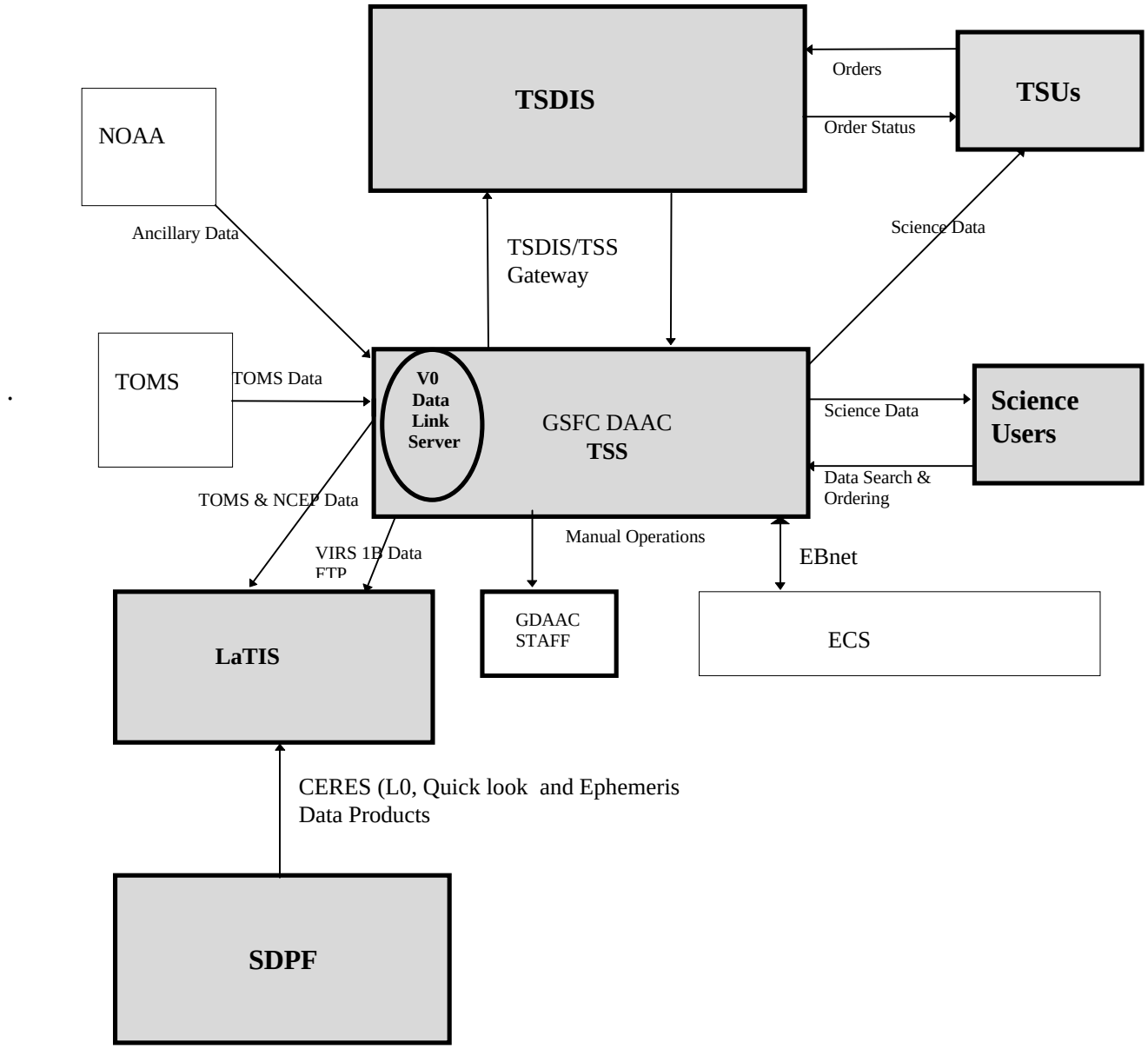

EXHIBIT TST-01 -1: TRMM Production Processing Test

<u>Participants and Support Requirements:</u>

a. Participants

GSFC DAAC TSS M&O personnel

LaRC DAAC LaTIS M&O personnel

EGS I&T Test Team

TSDIS I&T personnel

SDPF I&T personnel

TSDIS Science Users (TSU)

TRMM Science User

b. Communications:

1. Voice -
   Telephone
   NASCOM SCAMA - **TBD**
   CCL Circuits - **TBD**

2. Data -
   EBnet

c. Test Tools: TRMM Simulation.

Test Data:

Description/Characteristics	Source	File/Script Name & Location
VIRS, PR, TMI and GV data - Combined - Browse - Standard - Archived - Metadata - Algorithms and documentation - Directory and Guide Information	TSDIS, GSFC DAAC, GV sites, TSUs	File/Script Name - **TBD** Physical Location - Data Files on TSDIS File Servers
Ancillary data	GSFC DAAC	File/Script Name - **TBD**
L0 Housekeeping and Quick Look Data - Definitive/Predictive Orbit Data - Predicted Sun Position - Moon in Field-of-View (FOV)	SDPF	File/Script Name - **TBD** Physical Location - Data Files spread over 2 or more SDPF DDF File Servers
CERES L0 Data Sets - 24 hour day group	CERES Instrument Team or SDPF	File/Script Name - **TBD** Physical Location - Data Files spread over 2 or more SDPF DDF File Servers
CERES Quick Look Data Sets - Data from one Spacecraft Session	CERES Instrument Team or SDPF	File/Script Name - **TBD** Physical Location - Data Files spread over 2 or more SDPF DDF File Servers

References:

505-41-14/490-152 Interface Requirements Documents between the EOSDIS and the TRMM Ground System, March 1997, Change 4

510-2ITP/0295 TRMM Ground Data System Integration and Test Plan, October 1995

490-275 TRMM Ground Segment Integration and Certification Management Plan, Revision A, May 1997

505-41-42 Interface Control Document between TSS and TSDIS, 1996

510-203.103 ICD between the SDPF and the TRMM Consumers, December 1996

Test Cases:

Prerequisites: V1-TST-02 --- SDPF/LaTIS Interface, Ingest, Archive, Product Generation, and
Distribution Test.
V1-TST-03 --- TSDIS/ TSS Interface, Ingest, Archive and Distribution Test.

Test Case Id: V1-TST-01.001
Modified: 5/23/97
Description: LaTIS Ingest and Archive Data from the SDPF

This test verifies the ability of the LaTIS to ingest and archive CERES Level 0 Housekeeping (H/K) data and 1 Q/L passes data sets and ancillary data received from the SDPF. From the SDPF, transfer to the LaTIS a DAN containing CERES L0 H/K data and 1 Q/L passes data sets along with the associated ancillary data (orbit/attitude files). The LaTIS will ingest the data from the SDPF for the generation of higher level products to be archived for distribution to users. The CERES Level 0 and Q/L data sets shall contain quality and accounting information. The CERES scheduled Q/L data sets will be received from SDPF three times per day. The data files for this test may be spread over multiple disks within a server and or multiple servers.

Objectives: LaTIS will ingest CERESL0 and Q/L data from the SDPF for the generation of higher level products to be archived for distribution to users.

Configuration: SDPF and LaTIS is operational in appropriate mode and configured to support electronic data distribution.

Data Inputs: CERES Level 0 and Q/L data

Methods for Results Analysis: Verify successful transfer of CERESL0 and Q/L between SDPF and LaTIS and transfer of CERES Quick-look Data Product to LaRC.

Assumptions/Constraints: TBD

Verified Requirements:
TRMM1140 TRMM1040 TRMM1050 TRMM1060 TRMM1070 TRMM1080
TRMM1180 TRMM1280 TRMM8100 TRMM1200 TRMM1210 DADS0145

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	LaTIS	Login as operator. Open a UNIX script file to maintain test history.	Login allowed.			5/23/97
1.002	SDPF and LaTIS	Validate IP Address and Password information.	Both system should contain the valid information.			5/23/97
1.003	SDPF and LaTIS	Verify connection capabilities between the two systems.	Each system is able to 'Ping' the other system.			5/23/97
1.004	LaTIS	Resource Planner verifies that resources have been allocated for the ingest of 3 Q/L passes and 1 Day CERES Housekeeping (H/K), Level 0 Data, and Predictive/Definitive Orbit Information from the SDPF.	Resources are allocated. If not, configuration changes are made to the system to ingest data from SDPF.			5/23/97
1.005	LaTIS	Once resources are allocated, the resource planner notifies the Ingest/Distribution Technician that the system is ready to ingest data from the SDPF.	Message is received and the test begins.			5/23/97
2.001	LaTIS	Using the "Planning Workbench" software schedule the jobs for processing.	Jobs scheduled for processing are hi-lighted.			5/23/97
2.002	SDPF	Transfer a DAN for 1 Day of CERES H/K Level 0 product to the LaTIS.	A message or log file should indicate transfer of DAN.			5/23/97
2.003	LaTIS	Verify successful receipt and validation of the DAN. The data files shall be placed in the Ingest queue and a DAA shall be transferred to the SDPF.	A message or log file should indicate the successful receipt and validation of the DAN.			5/23/97
2.004	SDPF	Verify successful receipt of the DAA.	A message or log should indicate successful receipt of the DAA.			5/23/97
2.005	LaTIS	Monitor the ingest process by viewing the Ingest Status Monitor display.	Note the extraction and verification of the metadata (selected Parameters from the extracted metadata are checked), conversion of data into HDF-EOS format, and insertion of data into the Data Server Verify that the appropriate files are ingested and			5/23/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
			archived into the directory.			
2.006	LaTIS	Access the Archive Activity screen and select the Archive Activity Log option to view information concerning the archive activities of the data insert request.	The Archive Activity Log displays each data product being stored and storage status of each storage operation.			5/23/97
2.007	LaTIS	Upon completion of data insertion into the Data Server, and archiving of the data into the LaTIS directory, the LaTIS automatically sends status to the SDPF by means of a DDN.	SDPF receives a DDN from the LaTIS.			5/23/97
2.008	SDPF	Verify successful receipt of the DDN and transmit a Data Delivery Acknowledgment (DDA) to the LaTIS.	A message or log should indicate successful receipt of the DDN and the transfer of the DDA.			5/23/97
2.009	LaTIS and SDPF	Verify the connection between the two systems has been terminated.	No connection should exist following the end of the exchange messages			5/23/97
2.010	LaTIS	Generate and review both copies of the summary reports.	The system generates the summary reports detailing the completed ingest requests, including completion status, data volume ingested, etc.			5/23/97
2.011	LaTIS and SDPF	Repeat steps 2.005 through step 2.010.				5/23/97
2.012	SDPF	Transmit a DAN with Predictive/Definitive Orbit data to LaTIS for Ingest.	A message or log file should indicate transfer of the DAN to LaTIS.			5/23/97
2.013	LaTIS and SDPF	Repeat steps 2.005 through step 2.010.				5/23/97
2.014	LaTIS	The Data Server sends the processing schedule and data (PGE) dependent science software for processing the CERES TRMM Level 0 data.	The processing schedule and data (PGE) dependent science software is received from the Data Server.			5/23/97
2.015	LaTIS	The PGE processes the CERES TRMM Level 0 and the Predictive/Definitve Orbit Data to	The LaTIS generates data products.			5/23/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
		higher data products.				
3.001	LaTIS	Print the Event Log. Print the UNIX script file for the test history.				5/23/97
3.002	SDPF and LaTIS	Return both system to the state 'Operational Mode' it was in prior to the test.				5/23/97

Test Case Id: V1-TST-01.002
Modified: 5/23/97
Description: Search and Access Data Holdings

This test will verify the TRMM Science users can search and access the data holdings of the LaTIS via a network link. The services to be tested in this test includes,; Advertising services, search types (the Directory search which provides the user with information on LaTIS datasets from any point in the system; the Guide search which provides the user with detail descriptions about data products, platforms, and data centers; the Inventory search which provides the user with specific observations that are available for a data archive; and the Browse search which allows the user to view the image at reduced resolutions), file transfer protocol (ftp) orders, data product orders, standing orders, and scheduling capabilities. Once the product of interest is located and selected, the user places a product order and selects a distribution medium.

Objectives: Confirms that the Search and Order Tool user can access the full range of services spanning the whole EOSDIS data holdings. Those services are: the Directory search which provides the user with detail descriptions about data products, platforms, and data centers; the data search which provides the user with specific observations that are available for a data archive; and the Browse search which allows the user to view the image at reduced resolutions.

Configuration: Software and hardware as detailed in the forward section of this plan is available and operational.

Data Inputs: Test input will be data previously available in the database and data ingested and archived during previous testing.

Methods for Results Analysis: All selected Search criteria should generate the correct results.

Assumptions/Constraints:

Verified Requirements:
EOSD0030

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	TRMM Science User	Login to a non-local workstation.	Login allowed.			
1.002	TRMM Science User	Remote Login to the LaTIS where the Desktop resides.	Operating system comes up.			
2.001	TRMM Science User	Initialize the Desktop and bring up the LaTIS Search and Order Tool as a user without a prior approved account.	The LaTIS Search and Order Tool prompts for new users registration, afterward, the system comes up.			
2.002	TRMM Science User	Initialize a search for a specific product unique to the LaTIS.	When search is complete, the system notifies the user product is found.			
2.003	TRMM Science User	Request to receive the data via ftp pull of the data.	Data is retrieved form the archive and placed on the data server staging disk for a set period of time.			
2.004	TRMM Science User	Run through all other authorized services (Directory, Inventory, Guide, Browse) of the LaTIS Search and Order Tool.	Informational status messages describing the availability of LaTIS services are output and all services are accessible and functional for the user.			
2.005	TRMM Science User	Exit the LaTIS Search and Order Tool.	The LaTIS Search and Order Tool is disabled.			
3.001	TRMM User	Logoff of system.				

Test Case Id: V1-TST-01.003
Modified: 5/23/97
Description: LaTIS Data Distribution

This test verifies the capability for the LaTIS to distribute data on-line (i.e., via ftp over a network) and off-line (i.e., via 8mm tape, 4 mm DAT).

Objectives: The requested data is distributed electronically using a variety of networks (FAX and ftp) and/or copied to the class of physical media specified in the product order and received by the user via mail.

Configuration: Software and hardware as detailed in the forward portion of this plan is available and operational.

Data Inputs: EOS-developed CERES instrument data.

Methods for Results Analysis: This test will be successful if the data is transmitted from LaTIS to the user correctly and accurately as specified in the product request.

Assumptions/Constraints: TBD

Verified Requirements:
DADS2490 DADS2510

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	LaTIS	Login to a workstation: Enter user account & password.	Operating system comes up.			5/23/97
2.001	TRMM User	Bring up and initialize the LaTIS Search and Order Tool.	The LaTIS Search and Order Tool screen comes up.			
2.002	TRMM User	Initialize an Inventory search on "Product-TBD in the U.S. from 1990 to the present".	The Search is initiated and the Data Server assigns a session Id and logs the initiation of the session. The Data Server logs and queues the search request to create a working collection and searches the Metadata Database in accordance with the search criteria. The data is retrieved.			
2.003	TRMM User	Request a copy of the list of data and have it sent via FAX.	The list is distributed as requested.			
2.004	TRMM User	After reviewing the list, initialize an inventory search using "Leaf-Area-Index (LAI) and regional Global Change Susceptibility Index" as the search criteria.	The search is initiated and the data is retrieved.			5/23/97
2.005	TRMM User	Request a copy of the data and have it sent via ftp.	The list is distributed as requested.			
2.006	TRMM User	After reviewing this data list, initialize a Guide search using "Integrated Grassland Data for Central U.S." as the search criteria.	The Search is initiated and the Data Server assigns a session Id and logs the initiation of the session. The Data Server logs and queues the search request to create a working collection and searches the Metadata Database in accordance with the search criteria. The data is retrieved.			5/23/97
2.007	TRMM User	Review the data and enter a product order request.	The product order is displayed with description of data, price, media options.			
2.008	TRMM User	Submit order and request data be sent on 8 mm tape via mail.	The data is distributed as requested.			5/23/97
3.001	TRMM User	Logoff of system.				

Test Case Id: V1-TST-01.004
Modified: 5/23/97
Description: TSS Ingest, Archive and Distribution Test

This test will verify the capability of the TSS at the GSFC DAAC to receive and ingest data products, algorithms, and documentation's from TSDIS, and archive and distribute these data products to the users. The physical network interface between TSDIS and TSS is provided by the ESODIS Backbone Network (EBnet). TSDIS receives the VIRS, PR, and TMI data sets from the SDPF and uses them in conjunction with ground validation (GV) data received from various ground validation sites and ancillary products to produce Level 1 higher level products. Once the Level 1 and higher level products are generated, the TSS at the GSFC DAAC is notified via a DAN indicating their availability for transfer. Verification is made to ensure that all of the data is ingested, accounted for, validated, and archived.

Objectives: This sequence of tests verifies that TSDIS sends the TSS a data availability schedule/status indicating that the TRMM VIRS PR, TMI and GV data is available and ready for ingest. The data includes standard data products generated by TSDIS, metadata, browse data, and documentation. This sequence also verifies that the capability of the TSS to perform validation and compliance checks on the data and permanently store the data in its archive.

Configuration: Software and hardware as detailed in the forward portion of this plan is available and operational.

Data Inputs: TRMM data products as listed in the ICD between the EOSDIS TSS and the TSDIS, Table 5-2.

Methods for Results Analysis: This test will be successful if the TSS is able to ingest and archive all of TSDIS data products and send a DDN to TSDIS. TSDIS should respond to the DDN with a DDA. Verify that the data has been placed in the correct location and that the files matches what was sent by TSDIS.

Assumptions/Constraints:

Verified Requirements:

TRMM3050	TRMM4010	TRMM4030	TRMM4050	TRMM4060	TRMM4090
TRMM4100	TRMM4103	TRMM4104	TRMM5010	TRMM5040	DADS0281
DADS0290	DADS0300	DADS0310	DADS0370	DADS1070	DADS1300
DADS1380	DADS1390	DADS1400	DADS2320	EOSD0750	ICD-0320
ICD-0090	DADS1472	DADS1795	DADS1800	DADS1805	

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	TSS	Login as a DAAC TSS operator. Open a UNIX script file to maintain test history.	Login allowed. Script file initiated.			5/1/97
1.002	TSDIS and TSS	Validate IP Address and Password information.	Both system should contain the valid information.			5/1/97
1.003	TSDIS and TSS	Verify connection between TSDIS and TSS.	Each system is able to 'Ping' other system.			5/1/97
1.004	TSS	Log onto the resource planner an verify that resources are configured to ingest data from TSDIS. If not, make the necessary configuration changes to perform this test.	The system is configured to receive data from TSDIS.			5/1/97
2.001	TSDIS	Send an 'Authentication Request' to the TSS.	TSS confirms receipt of 'Authentication Request', and verify 'Authentication Response' message is sent to the TSDIS.			5/1/97
2.002	TSDIS	Verify receipt of 'Authentication Response' message from the TSS.	Socket connection between the TSDIS and the TSS established.			5/1/97
2.003	TSDIS	TSDIS ingests 3 Q/L passes and 1 Day PR, VIRS, TMI, and H/K Level 0 from the SDPF. TSDIS process this data to Level 1A-3B data products and automatically transmit a DAN to the TSS containing the following products: Standard Products:-, GVBrowse Products:- VIRS, PR, TMI, GVCombined Products:- TBS	A message or an Event log file should indicate transfer of the DAN. TSS receives DAN.			5/15/97
2.004	TSS	Verify successful receipt and validation of the DAN and transfer a DAA to TSDIS.	A message or an Event log file should indicate transfer of the DAA. TSDIS receives the DAA.			5/1/97
2.005	TSDIS	Verify successful receipt of the DAA from the LaRC DAAC.				5/1/97
2.006	TSS	Verify that a DDN is transferred to TSDIS.	A message or an Event log file should indicate transfer of the DDN. TSDIS receives the DDN.			5/1/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.007	TSDIS	Verify the successful receipt of the DDN and the transfer of the DDA to TSS after receipt of each DDN.	TSDIS operator distribution queue display shows the delivery was completed. TSS receives the DDA.			5/1/97
2.008	TSS	Query the ingest directory and verify that the data files were successfully ingested, validated, and archived into the Directory.	The queried data files are located in the TSS Directory and displayed on the screen.			5/1/97
2.009	TSS	List the ingest directory and verify that all expected product files were transferred. Compare file sizes on each side of the interface.				5/1/97
2.010	TSS	Access the Search and Order Tool to do a query for the TSDIS VIRS, PR, TMI, and GV data.	The TSDIS VIRS, PR, TMI, and GV data are located in the inventory.			5/1/97
2.011	TSS	Enter a subscription requesting notification upon receipt of specific TRMM VIRS, PR, TMI, and GV data.	The system stores the subscription concerning the TRMM data.			5/1/97
2.012	TSDIS	Send a DR to the TSS for 1 days worth of archived VIRS, PR, TMI, GV stored data.	A message or an Event log file should indicate transfer of the DR.			5/1/97
2.013	TSS	Verifies receipt of a DR and send a DRA to TSDIS.	A DRA is sent to TSDIS indicating the disposition of the submitted DR.			5/1/97
2.014	TSS	Retrieve all of the requested data from the archive and place it on the designated data server.	The requested data is retrieved from the archive and placed on the data server.			5/1/97
2.015	TSS	Verify that a DAN is sent to TSDIS for the requested data.	A message or an Event log file should indicate transfer of the DAN.			5/1/97
2.016	TSDIS	TSDIS sends a DAA to the TSS.	TSS receives the DAA.			5/1/97
2.017	TSDIS	Upon completion of the transfer transmit a DDN to the TSS.	TSS responds with a DDA.			5/1/97
2.018	TSDIS	Verify that successful receipt of the DDA and that 1 days of archived data from the TSS have been ingested and archived.				5/1/97
2.019	TSDIS	Send a Data Availability Schedule to the GSFC DAAC.	GSFC DAAC receives a Data Availability Schedule from TSDIS.			5/1/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.020	TSS	Verify receipt of notification that an e-mail message has been sent to their mailbox.	Read e-mail message concerning the schedule for TSDIS data products.			5/1/97
2.021	TSDIS	Reprocess the data and send a DAN to the TSS.	A message or an Event log file should indicate transfer of the DAN. TSS receives a DAN.			5/1/97
2.022	TSS	Verify successful receipt and validation of the DAN and transfer a DAA to TSDIS.	A message or an Event log file should indicate transfer of the DAA.			5/1/97
2.023	TSDIS	Verify successful receipt of the DAA from the TSS.				5/1/97
2.024	TSDIS	Verify receipt of the DDN and send a DDA to the TSS.	TSS receives a DDA from TSDIS. Upon receipt of the DDA, the system deletes the ongoing ingest request information.			5/1/97
2.025	TSS	List the ingest directory and verify that the 1 days worth of reprocessed products have doubled in size.	Upon successful ingest, the data files shall be placed back in archive directory and appropriate Metadata should be produced.			5/1/97
2.026	TSDIS	Transmit a Data Request to the TSS for a data file (name -virs_anc.dat)	TSS responds with a DRA. Ancillary Products: NMC, GPCC, CAMS, GPI, SSM/I.			5/1/97
2.027	TSS	When the requested file is located, TSS transmits to TSDIS a DAN for the requested data.	TSDIS responds with a DAA.			5/1/97
2.028	TSDIS	Initiate an ftp transfer of the data product.				5/1/97
2.029	TSDIS	Upon completion of the transfer transmit a DDN to the TSS.	TSS responds with a DDA.			5/1/97
2.030	TSDIS	Check the ingest directory to verify completion of the transfer.				5/1/97
3.001	TSS	Print the Event Log for the test period. Print the script file test history.				5/1/97
3.002	TSDIS	Print the TSDIS event log for the test period.				5/1/97

Test Case Id: V1-TST-01.005
Modified: 5/23/97
Description: TSDIS Request Data from TSS for TSUs

This test case verifies the ability of the TSS to process TSUs Data Request received from TSDIS. The TSUs will request products from TSDIS and if the products are not stored at TSDIS, the request will be forwarded to the TSS. Once the TSS receives the request, they will retrieve the requested data from archival and notify the TSUs of the products availability.

Objectives: The incoming gateway validates with a DR , if no errors found, then the delivery gateway sends a DRA, for successfully completed data transfers files. Messages and files are transmitted between the GSFC DAAC and TSDIS and that the messages and file formats agree with the ICD. Also a connection is established with a TSU and a file is transferred to the TSU.

Configuration: Software and hardware as detailed in the forward portion of this plan is available and operational.

Data Inputs: TBD

Methods for Results Analysis: This test will be successful if a successful sends a DR to TSS and TSS and receives a DRA from TSS. An ftp link is established and the TSU successfully receives the requested data as requested in the specified DR.

Assumptions/Constraints: TBD

Verified Requirements:

DADS0760	DADS1030	DADS1806	DADS2315	DADS2450	DADS2490
DADS2510	EOSD0750	ICD-0090	ICD-0150	ICD-0170	ICD-0200
ICD-0250	ICD-0320	TRMM4104			

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	TSS	Login as an DAAC TSS operator. Open a UNIX script file to maintain test history.	Login allowed. Script file initiated.			5/23/97
1.002	TSDIS and TSS.	Validate IP Address and Password information.	Both system should contain the valid information.			5/23/97
1.003	TSDIS and TSS.	Verify network connectivity between TSDIS and TSS.	Each system is able to 'Ping' the other system.			5/23/97
2.001	TSDIS	Send a Data Request (DR) message to TSS to order a standing or special order request on behalf of a TSU.	TSS receives the DR from TSDIS.			5/23/97
2.002	TSS	Reviews the Ingest Log and verifies successful receipt of a DR submitted by TSDIS for archived data.	The TSDIS DR is displayed on the TSS screen indicating the specific TRMM data requested by TSDIS.			5/23/97
2.003	TSS	Verify successful transfer of a DRA message is sent to TSDIS indicating the disposition of the DR.	TSDIS receives the DRA from TSS indicating the disposition of the submitted DR..			5/23/97
2.004	TSS	Retrieves the requested data from archive.	The requested data is retrieved and placed on the file server or copies it to a 8mm tape.			5/23/97
2.005	TSS	Prepare an E-mail to the TSU that the data requested is now available on the TSS file server.	E-mail is transmitted to a TSU with receipt requested to verify that the TSU has received notification of Data Availability.	The notification should indicate the location of the data and the expiration time.	DADS2450,	5/23/97
2.006	TSU	TSU establishes a ftp port, sends a (m)get message to the TSS file server and pulls the data from the file server or via TSS standard 8mm tape media.	TSU transfers all the files listed in the E-mail notification using ftp or mails the tape to the TSU.		DADS2490, DADS2510, DADS2450,	5/23/97
2.007	TSS	Verify the ftp connection and download the data files from the file server to the TSU.				5/23/97
3.001	TSS	Print the Event Log for the test period. Print the script file test history.	Event Log and Test History are printed out.			5/23/97
3.002	TSDIS	Print the TSDIS event log for the test period.	Event Log is printed out.			5/23/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
3.003	TSS and TSDIS	Return both systems to the state "Operational Mode" it was in prior to the test.	Systems are returned to their Operational Mode.			5/23/97

Test Case Id: V1-TST-01.006
Modified: 5/23/97
Description: GSFC DAAC TSS Ingest Updated Metadata Test

This test verifies the ability to update Quality Indicator Metadata parameter values that were not known at the time of initial product archive at the GSFC DAAC TSS. TSDIS, sends an updated Metadata for products already at the DAACs archive by sending a Metadata Update Request (MUR) message to the GSFC DAAC TSS. The GSFC DAAC TSS then sends a Metadata Update Acknowledgment (MUA) message to TSDIS, that states the Metadata have been successfully received/updated or it states the disposition of the MUR message.

Objectives: The TSDIS sends a MUR to TSS. TSS sends a MUA in response to a MUR. The MUA message notifies TSDIS that either the MUR has been received, properly parsed, and the requested Quality Flag metadata parameters have been updated or the request is incorrectly formulated and has been rejected.

Configuration: Software and hardware as detailed in the forward portion of this plan is available and operational.

Data Inputs: Users must change the configuration file to reflect the incoming and delivery gateway executables. A configurable port is set for TSDIS gateway. MUR and MUA message formats.

Methods for Results Analysis: This test will be successful if the external client can connect to a configurable port and verify MUR ->MUA, incoming and delivery gateways. Messages and files are transmitted between the TSS and TSDIS and that the messages and file formats agree with the ICD. Verify at the work stations that the messages are received and that acknowledgments are sent and received correctly.

Assumptions/Constraints: TBD

Verified Requirements:
DADS0760 DADS1030 DADS1806 DADS2160 DADS2180 DADS2340
DADS2430 IMS-0260

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	TSS	Logon to the Ingest Workstation as DAAC TSS operator. Open a UNIX script file to maintain test history.	Login Allowed. Script file initiated.			5/23/97
1.002	TSS	Validate IP Address and Password information.	Both system should contain the valid information.			5/23/97
1.003	TSS	Verify network connectivity between TSDIS and TSS.	Each system is able to 'Ping' the other system.			5/23/97
2.001	TSDIS	Generate and transfer a MUR to the TSS.	Should consist of updated Quality Indicator Metadata.			5/23/97
2.002	TSS	View the Event Log for successful validation of updated Quality Indicator Metadata information.	The Metadata parameters values should be updated.			5/23/97
2.003	TSS	Verify that the Quality Indicator Update was received, in the proper format.				5/23/97
2.004	TSS	Verify that the Granule_Metadata table was updated correctly in the Quality_Indicator field.	Disposition equals 0.			5/23/97
2.005	TSS	Generate and transfer an MUA to TSDIS.	An MUA is received at TSDIS			5/23/97
2.006	TSDIS	Verify that an MUA from TSS was received.				5/23/97
3.001	TSS	Print the Event Log for the test period. Print the script file test history.	Event Log and Test History are printed out.			5/23/97
3.002	TSDIS	Print the TSDIS event log for the test period.	Event Log is printed out.			5/23/97
3.003	TSS and TSDIS	Return both systems to the state "Operational Mode" it was in prior to the test.	Systems are returned to their Operational Mode.			5/23/97

Test Case Id: V1-TST-01.007
Modified: 5/23/97
Description: GSFC DAAC TSS Distribute Data to LaRC DAAC LaTIS

This test will verify that the TSS is able to distribute data to the LaTIS. The TSS will make the data available and stage the data and notify the LaTIS via e-mail that the data is available and the LaTIS will pull the data from the TSS's data distribution disk.

Objectives: Ingest of VIRS 1B data at LaTIS via ftp, and its archival.

Configuration: TSS is operational in appropriate Mode and configuration -i.e. Capable of supporting data transfer to LaTIS by ftp and VIRS 1B data is available
LaTIS is operational in a mode capable of ingesting the VIRS 1B data from TSS by FTP

Data Inputs: VIRS 1 B data at TSS.

Methods for Results Analysis: Successful ingest and archive of VIRS 1B data at LaTIS.

Assumptions/Constraints: TBD.

Verified Requirements:
LATIS0060

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	TSS and LaTIS	Verify systems are operational and in appropriate Mode and configuration for supporting VIRS 1B data transfer to LaTIS.	TSS is operational and is capable of supporting test.			5/23/97
1.002	TSS	Ensure that VIRS 1B data is staged prior to notifying LaTIS.	VIRS 1B data is available.			5/23/97
2.001	TSS	Send an email notification to LaTIS informing about the availability of VIRS 1B data at TSS in HDF format.	Email is sent giving the host name, directory information and file name.			5/23/97
2.002	LaTIS	Verify the receipt of the e-mail message notifying the availability of VIRS 1B data and giving the host name, directory information and file.	E-mail is received as required.			5/23/97
2.003	LaTIS	LaTIS pulls the data via ftp based upon the instructions provided in the email.	LaTIS successfully locates and pulls the data from TSS data distribution disk.		LATIS0060,	5/23/97