Clouds and the Earth's Radiant Energy System (CERES)

Data Management System

Grid Geostationary Narrowband Radiances (GGEO) Subsystem (Subsystem 11.0)

Release 3 Test Plan
TRMM Launch
Version 9

Primary Authors

P. Kay Costulis[2], Rajalekshmy Raju[1], and Joe Stassi[1]

[1]Science Applications International Corporation (SAIC)
One Enterprise Parkway, Suite 300
Hampton, VA 23666

[2]NASA Langley Research Center
Mail Stop 423
Hampton, VA 23681-2199

NASA Langley Research Center
Climate Science Branch
Science Directorate
21 Langley Boulevard
Hampton, VA 23681-2199

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Document Revision Record

The Document Revision Record contains information pertaining to approved document changes. The table lists the date the Software Configuration Change Request (SCCR) was approved, the Release and Version Number, the SCCR number, a short description of the revision, and the revised sections. The document authors are listed on the cover. The Head of the CERES Data Management Team approves or disapproves the requested changes based on recommendations of the Configuration Control Board.

Document Revision Record (1 of 3)

SCCR Approval Date	Release/ Version Number	SCCR Number	Description of Revision	Section(s) Affected
11/27/01	R3V2	311	• Updated document to reflect two pass processing scheme. Sections 4.1 through 4.5 were modified to show first pass processing test. Sections 4.7 through 4.11 were added to show second pass processing test.	4.1-4.5, 4.7-4.11
			• Added test for new PGE CER11.3P1, Recalibrate GGEO Input Radiance Data.	4.6
			• Added test for new PGE CER11.4P1, Create Correlation Plots of GGEO vs. VIRS Cloud Data.	4.12
			• Added test for new PGE CER11.5P1, Create Geostationary Regression Coefficients.	4.13
			• Modified Subsystem Overview to include summary of two pass processing scheme and new PGEs.	1.2
			• Modified Installation instructions to show that delivered data has been split between two tar files, one for data_IN and one for data_OUT.	2.1
			• Added information for staging or checking input data prior to testing.	3.1, 4.0.2, 4.1.1, 4.2.1, 4.3.1, 4.4.1, 4.5.1, 4.6.1, 4.7.1, 4.8.1, 4.9.1, 4.10.1, 4.11.1, 4.12.1, 4.13.1
			• Removed prompt signs from command lines in order to ease cut and paste testing from document.	All sections
			• Use automated procedures for evaluating test results during manual testing.	4.1.3, 4.2.3, 4.3.3, 4.4.3, 4.5.3, 4.6.3, 4.7.3, 4.8.3, 4.9.3, 4.10.3, 4.11.3, 4.12.3, 4.13.4
			• Updated format to comply with standards.	All

Document Revision Record (2 of 3)

SCCR Approval Date	Release/ Version Number	SCCR Number	Description of Revision	Section(s) Affected
03/25/02	R3V3	329	• Updated test runtimes. • Directory Structure Diagrams • File Description Tables • "makeall" -> "makeall 0" • "runtest" -> "runtest 0" • "ggeo-test_2-env.csh" -> "ggeo-test-env.csh" • Updated format to comply with standards.	4.1.2.4, 4.2.2.4, 4.3.2.4, 4.4.2.4, 4.5.2.4, 4.6.2.4, 4.7.2.4, 4.8.2.4, 4.9.2.4, 4.10.2.4, 4.11.2.4, 4.12.2.4 Appendix A Appendix C 2.1 3.1, 3.6 4.0.1 All
06/07/02	R3V4	366	• Added desert output files for PGE CER11.3P1 test suites; removed zero-length output files. • Removed zero-length output files from PGE CER11.4P1 test suites. • Modified 2nd pass main processor PCFs to use default cal_coeffs file. • Removed zero-length output files after job completion for PGEs CER11.3P1 and CER11.4P1. • Added a list of the test environment variable values found in the document. This list was added to make updates to the document easier if the values are changed. • Updated format to comply with standards.	3.3, 4.6.2.2 3.3, 4.12.2.2 4.7.2.1, 4.8.2.1, 4.9.2.1, 4.10.2.1 4.6.2.2, 4.12.2.2 2.0 All
09/03/02	R3V5	379	• Changed the structure naming scheme for the cal_coeffs files. There is now one for each satellite, instead of one for the month. • Updated format to comply with standards.	3.3, 4.6.2.2 All
03/31/03	R3V6	426	• Removed obsolete commands. • Added output files. • Updated format to comply with standards.	4.6.2.2 & 4.12.2.2 4.11.2.2 All
11/24/03	R3V7	486	• Modified and added filenames in the CERESHOME/ggeo/web/ps directory. • Added ColdCLDp and NoonDATAp file names to the test output list in the ggeo/data/qa_reports directory for first-pass processing. • Updated format to comply with standards.	4.12.2.2 3.3, 4.1.2.2, 4.2.2.2, 4.3.2.2, 4.4.2.2 All

Document Revision Record (3 of 3)

SCCR Approval Date	Release/ Version Number	SCCR Number	Description of Revision	Section(s) Affected
04/12/04	R3V8	518	• PGE11.5P1 is no longer an active PGE. Sections associated with PGE11.5P1 have been removed. • References to PGE11.5P1 in other sections have been removed. • The new tests require testing on five input satellites instead of four. Instead of {GOES-8, GOES-9, METEO-6, and GMS-5}, the satellites are now {GOES-8, GOES-10, METEO-5, METEO-7, and GMS-5}. New whole sections have been added to the Main processor testing to account for the extra satellite. • Changes to the satellite names, data dates, and the CC, SS, and PS codes impact test parameters and file names throughout the document. • Updated format to comply with standards.	3.1, 4.13 1.2, 2.0, 3.1(new), 3.2, 4.4, 4.11 All sections All
03/07/05	R3V9	553	• Tests added for five satellites running the new GGEO Main processor PGE, CER11.1P10, which uses McIdas format GEO inputs. • Test added for GGEO Post Processor, CER11.2P2, using outputs from CER11.1P10. • Test added for new GGEO Weeder PGE, CER11.6P1. • The new tests use data from different months. This requires specific environment variable definition scripts for each test, rather than using a single ggeo-test-env.csh script for all tests. • New environment variables added to the list at the beginning of the document. • Updated format to comply with standards.	4.15 - 4.19 4.20 4.21 4.0.1, 4.1.1, 4.2.1, 4.3.1, 4.4.1, 4.5.1, 4.6.1, 4.7.1, 4.8.1, 4.9.1, 4.10.1, 4.11.1, 4.12.1, 4.13.1, 4.14.1 2.0 All

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1.0 Introduction

The Clouds and the Earth's Radiant Energy System (CERES) is a key component of the Earth Observing System (EOS). The CERES instrument provides radiometric measurements of the Earth's atmosphere from three broadband channels: a shortwave channel (0.3 - 5 ∝m), a total channel (0.3 - 200 ∝m), and an infrared window channel (8 - 12 ∝m). The CERES instruments are improved models of the Earth Radiation Budget Experiment (ERBE) scanner instruments, which operated from 1984 through 1990 on the National Aeronautics and Space Administration's (NASA) Earth Radiation Budget Satellite (ERBS) and on the National Oceanic and Atmospheric Administration's (NOAA) operational weather satellites NOAA-9 and NOAA-10. The strategy of flying instruments on Sun-synchronous, polar orbiting satellites, such as NOAA-9 and NOAA-10, simultaneously with instruments on satellites that have precessing orbits in lower inclinations, such as ERBS, was successfully developed in ERBE to reduce time sampling errors. CERES continues that strategy by flying instruments on the polar orbiting Earth Observing System (EOS) platforms simultaneously with an instrument on the Tropical Rainfall Measuring Mission (TRMM) spacecraft, which has an orbital inclination of 35 degrees. In addition, to reduce the uncertainty in data interpretation and to improve the consistency between the cloud parameters and the radiation fields, CERES includes cloud imager data and other atmospheric parameters. The CERES instruments fly on the TRMM spacecraft, on the EOS-AM platforms and on the EOS-PM platforms. The TRMM satellite carries one CERES instrument while the EOS satellites carry two CERES instruments, one operating in a fixed azimuth scanning mode and the other operating in a rotating azimuth scanning mode.

1.1 Document Overview

This document, the Grid Geostationary Narrowband Radiances (GGEO) Subsystem (Subsystem 11), CERES Release 3 Delivery Test Plan, provides a brief description of the GGEO Subsystem of CERES, along with procedures for installing and testing the Subsystem. Acronyms and abbreviations, a directory structure diagram, and file descriptions are contained in the appendices.

The document is organized as follows:

1.2 GGEO Subsystem Overview

The CERES project uses satellite-mounted scanner instruments to collect broadband radiative flux measurements around the globe. The purpose of collecting these data is to help atmospheric scientists better understand the Earth's radiant energy budget and to provide them with data for building better global climate models.

One shortcoming of the CERES data is that the number of satellites collecting the data is limited to a few orbiting platforms. Because of the orbital characteristics of these platforms, the CERES instruments can view any region on the Earth at most only two or three times during a 24-hour period. Therefore, every region will have large time gaps for which no observational broadband data will be available.

To help interpolate the data through the gaps, the CERES Project uses narrowband measurements collected by the International Satellite Cloud Climatology Project (ISCCP). The ISCCP data are collected primarily from instruments aboard geostationary satellites which view large areas of the Earth continuously and thus can provide a pattern for the diurnal variations of the regions within those areas. The geostationary satellites are at high altitudes, and near-global coverage can be achieved with as little as four or five strategically located satellites. The ISCCP project also collects data from polar orbiting satellites which provide some, but not continuous, coverage at the high latitude regions which are not visible from the geostationary platforms.

GGEO is the Subsystem which grids the ISCCP narrowband data within regions defined by the CERES one-degree nested grid and averages the data over each hour. The CERES Project will only use ISCCP data from every third hour. Currently, only data from geostationary satellites is being used.

The GGEO subsystem is designed to run as a two-pass processing system. During the first pass, input data is processed with default count conversion coefficients. Cloud processing is turned off to speed up processing. The resultant first-pass GGEO product is used to intercalibrate the input data from the various sources using VIRS data from the SFC product as a baseline. After this is accomplished, a second pass through the system is made, this time recalibrating the input data with coefficients generated during the first pass. Clouds processing is done during this pass. Plots are made comparing the GGEO cloud properties to the cloud properties on the SFC product.

2.0 Software and Data File Installation Procedures

The following environment variables are referenced in this document by value rather than by the variable name. The environment variables do not need to be set manually. They are assigned values when the appropriate GGEO environment variable script is sourced prior to each test.

The values shown below are samples only and do not apply to all tests in this document. To see the specific values used for each test, check the contents of the environment variable script used for that test.

Note: Prior to job set-up, the **SS11_1P10** environment variable is set equal to the satellite name for the data being processed. However, the PCF generator scripts change to Sampling Strategy to "**MCIDAS-$satname**" in the PCF.

SS11_1P1	**GOES-8**
SS11_1P2	**GOES-10**
SS11_1P3	**METEO-6**
SS11_1P4	**GMS-5**
SS11_1P10	**GOES-8**
SS11	**Composite**
SS11_3	**Composite-MODIS**
SS11_4	**Composite-MODIS**
SS11_6	**Composite**
PS11_M	**SCFTest**
PS11	**SCFTest**
PS11_3	**SCFTest**
PS11_4	**SCFTest**
PS11_6	**SCFTest**
CC11	**000003**
CC11_3	**000003**
CC11_4	**000003**
CC11_6	**000003**
SW11	**003**
SW11_3	**000**
SW11_4	**000**
SW11_6	**000**
DATA11	**003**
DATA11_3	**000**
DATA11_4	**000**
DATA11_6	**000**
SS4_0	**CERES**
PS4_0	**NSIDC-NESDIS**
CC4_0P1	**021021**

SS9	**Terra-FM1-MODIA**
PS9	**Edition2A**
CC9	**020024**
CC9_1	**016018**
SS12	**CERES**
PS12	**DAO-GEOS4**
CC12	**016025**

To change the values used for any test, modify the values in the appropriate environment variable script. The corresponding changes would have to be made throughout this document.

2.1 Installation

In the installation instructions, use the following definition for the TAG variable, which is included in the file name of the delivery files.

TAG = **R{R#}-{SCCR#}**

where R# = CERES Software Release Number
SCCR# = SCCR Number for GGEO Delivery

Ex: **TAG = R2-050**
for CERES Software Release 2 and GGEO SCCR #050

Follow the steps below to uncompress and untar the GGEO software.

source $CERESENV (SGI Fortran 64-bit compiler version)
mv (or cp) ggeo_src_{TAG}.tar.Z $CERESHOME
mv (or cp) ggeo_data_{TAG}.tar.Z $CERESHOME
cd $CERESHOME
uncompress ggeo_src_{TAG}.tar.Z
uncompress ggeo_data_IN_{TAG}.tar.Z
uncompress ggeo_data_OUT_TAG}.tar.Z
tar xf ggeo_src_{TAG}.tar
tar xf ggeo_data_IN_{TAG}.tar
tar xf ggeo_data_OUT_{TAG}.tar

In the above statements, CERESHOME, is a pre-defined environment variable pointing the CERES home directory on the system where the software is being installed.

2.2 Compilation

Complete the following steps to compile the GGEO source code.

1. Create the message files and message include files:

   source $CERESENV (SGI Fortran 64-bit compiler version)
   cd $CERESHOME/ggeo/smf
   $CERESLIB/bin/smfcompile_all.csh

2. Compile the GGEO Subsystem code

   cd $CERESHOME/ggeo/src
   makeall 0

Notes:

- The smfcompile_all.csh script and the makefile script will send a message to the screen at completion to indicate whether or not all operations performed were successful. If problems are encountered, contact one of the GGEO analysts before proceeding further.
- ASDC personnel may have an alternate procedure for compiling the message files. Any alternate procedure should copy all message include files to the $PGSINC directory and all message files to the $PGSMSG directory.

3.0 Automated Test and Evaluation Procedures

This section gives instructions on how to run a script that automates the GGEO test and evaluation procedures. Anyone who wishes to manually execute these procedures should skip to Section 4.0.

3.1 Stand-alone Test Procedures

Complete the following steps to run the automated test and evaluation procedures:

source $CERESENV (SGI Fortran 64-bit compiler version)
cd $CERESHOME/ggeo/test_suites
runtest 0

The runtest script will execute twelve tests. The order of testing is as follows:

- Four (4) Main Processor first pass PGEs (CER11.1P1-4)
- Post Processor first pass PGE (CER11.2P1)
- Recalibrate GGEO Input Radiance Data PGE (CER11.3P1)
- Four (4) Main Processor second pass PGEs (CER11.1P5-8)
- Post Processor second pass PGE (CER11.2P2)
- Create Correlation Plots of GGEO vs. CERES Cloud Data PGE (CER11.4P1).
- McIDAS data test (CER11.1P10/CER11.2P2)
- GGEO Weeder test (CER11.6P1)

If all the jobs execute successfully, the script evaluates the outputs to determine whether or not the test was successful. This entire process should complete in about four to five hours. See the Test Summaries in Section 4.0 for the UNIX time output for each PGE.

3.2 Test Output

In the $CERESHOME/ggeo/rcf directory:

- **CER11.1P1_PCFin_GOES-8_SCFTest_000003.20010700**
- **CER11.1P2_PCFin_GOES-10_SCFTest_000003.20010700**
- **CER11.1P3_PCFin_METEO-5_SCFTest_000003.20010700**
- **CER11.1P3_PCFin_METEO-7_SCFTest_000003.20010700**
- **CER11.1P4_PCFin_GMS-5_SCFTest_000003.20010700**
- **CER11.1P5_PCFin_GOES-8_SCFTest_000003.20010700**
- **CER11.1P6_PCFin_GOES-10_SCFTest_000003.20010700**
- **CER11.1P7_PCFin_METEO-5_SCFTest_000003.20010700**
- **CER11.1P7_PCFin_METEO-7_SCFTest_000003.20010700**
- **CER11.1P8_PCFin_GMS-5_SCFTest_000003.20010700**
- **CER11.2P1_PCFin_Composite_SCFTest_000003.200107**
- **CER11.2P2_PCFin_Composite_SCFTest_000003.200107**
- **CER11.3P1_PCFin_Composite-MODIS_SCFTest_000003.200107**

- **CER11.4P1_PCFin_Composite-MODIS_SCFTest_000003.200107**
- **CER11.6P1_PCFin_Composite_Edition2A_019025.200110**
- **CER11.1P10_PCFin_MCIDAS-GOES-12_SCFTest_000003.20040700**
- **CER11.1P10_PCFin_MCIDAS-GOES-10_SCFTest_000003.20040700**
- **CER11.1P10_PCFin_MCIDAS-METEO-5_SCFTest_000003.20040700**
- **CER11.1P10_PCFin_MCIDAS-METEO-8_SCFTest_000003.20040700**
- **CER11.1P10_PCFin_MCIDAS-GOES-9_SCFTest_000003.20040700**

- **CER11.1P1_PCF_GOES-8_SCFTest_000003.20010700**
- **CER11.1P2_PCF_GOES-10_SCFTest_000003.20010700**
- **CER11.1P3_PCF_METEO-5_SCFTest_000003.20010700**
- **CER11.1P3_PCF_METEO-7_SCFTest_000003.20010700**
- **CER11.1P4_PCF_GMS-5_SCFTest_000003.20010700**
- **CER11.1P5_PCF_GOES-8_SCFTest_000003.20010700**
- **CER11.1P6_PCF_GOES-10_SCFTest_000003.20010700**
- **CER11.1P7_PCF_METEO-5_SCFTest_000003.20010700**
- **CER11.1P7_PCF_METEO-7_SCFTest_000003.20010700**
- **CER11.1P8_PCF_GMS-5_SCFTest_000003.20010700**
- **CER11.2P1_PCF_Composite_SCFTest_000003.200107**
- **CER11.2P2_PCF_Composite_SCFTest_000003.200107**
- **CER11.3P1_PCF_Composite-MODIS_SCFTest_000003.200107**
- **CER11.4P1_PCF_Composite-MODIS_SCFTest_000003.200107**
- **CER11.6P1_PCF_Composite_Edition2A_019025.200110**
- **CER11.1P10_PCF_MCIDAS-GOES-12_SCFTest_000003.20040700**
- **CER11.1P10_PCF_MCIDAS-GOES-10_SCFTest_000003.20040700**
- **CER11.1P10_PCF_MCIDAS-METEO-5_SCFTest_000003.20040700**
- **CER11.1P10_PCF_MCIDAS-METEO-8_SCFTest_000003.20040700**
- **CER11.1P10_PCF_MCIDAS-GOES-9_SCFTest_000003.20040700**

In the $CERESHOME/ggeo/data/int_prod directory:

- **CER_GRANp_GMS-5_SCFTest_000003.20010700**
- **CER_GRANp_GOES-10_SCFTest_000003.20010700**
- **CER_GRANp_GOES-8_SCFTest_000003.20010700**
- **CER_GRANp_METEO-5_SCFTest_000003.20010700**
- **CER_GRANp_METEO-7_SCFTest_000003.20010700**
- **CER_GRAN_GMS-5_SCFTest_000003.20010700**
- **CER_GRAN_GOES-10_SCFTest_000003.20010700**
- **CER_GRAN_GOES-8_SCFTest_000003.20010700**
- **CER_GRAN_METEO-5_SCFTest_000003.20010700**
- **CER_GRAN_METEO-7_SCFTest_000003.20010700**
- **CER_GRAN_MCIDAS-GOES-12_SCFTest_000003.20040700**
- **CER_GRAN_MCIDAS-GOES-10_SCFTest_000003.20040700**
- **CER_GRAN_MCIDAS-METEO-5_SCFTest_000003.20040700**
- **CER_GRAN_MCIDAS-METEO-8_SCFTest_000003.20040700**
- **CER_GRAN_MCIDAS-GOES-9_SCFTest_000003.20040700**

- **CER_GRANp_GMS-5_SCFTest_000003.20010700.met**
- **CER_GRANp_GOES-10_SCFTest_000003.20010700.met**
- **CER_GRANp_GOES-8_SCFTest_000003.20010700.met**
- **CER_GRANp_METEO-5_SCFTest_000003.20010700.met**
- **CER_GRANp_METEO-7_SCFTest_000003.20010700.met**
- **CER_GRAN_GMS-5_SCFTest_000003.20010700.met**
- **CER_GRAN_GOES-10_SCFTest_000003.20010700.met**
- **CER_GRAN_GOES-8_SCFTest_000003.20010700.met**
- **CER_GRAN_METEO-5_SCFTest_000003.20010700.met**
- **CER_GRAN_METEO-7_SCFTest_000003.20010700.met**
- **CER_GRAN_MCIDAS-GOES-12_SCFTest_000003.20040700.met**
- **CER_GRAN_MCIDAS-GOES-10_SCFTest_000003.20040700.met**
- **CER_GRAN_MCIDAS-METEO-5_SCFTest_000003.20040700.met**
- **CER_GRAN_MCIDAS-METEO-8_SCFTest_000003.20040700.met**
- **CER_GRAN_MCIDAS-GOES-9_SCFTest_000003.20040700.met**

In the $CERESHOME/ggeo/data/out_comp/data directory:

- **CER_GGEOp_Composite_SCFTest_000003.200107**
- **CER_GGEO_Composite_SCFTest_000003.200107**
- **CER_GGEOW_Composite_Edition2A_019025.200110**
- **CER_GGEOp_Composite_SCFTest_000003.200107.met**
- **CER_GGEO_Composite_SCFTest_000003.200107.met**
- **CER_GGEOW_Composite_Edition2A_019025.200110.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:

- **CER_OQCRPp_GMS-5_SCFTest_000003.20010700**
- **CER_OQCRPp_GOES-10_SCFTest_000003.20010700**
- **CER_OQCRPp_GOES-8_SCFTest_000003.20010700**
- **CER_OQCRPp_METEO-5_SCFTest_000003.20010700**
- **CER_OQCRPp_METEO-7_SCFTest_000003.20010700**
- **CER_OQCPPp_Composite_SCFTest_000003.200107**
- **CER_OQCRP_GMS-5_SCFTest_000003.20010700**
- **CER_OQCRP_GOES-10_SCFTest_000003.20010700**
- **CER_OQCRP_GOES-8_SCFTest_000003.20010700**
- **CER_OQCRP_METEO-5_SCFTest_000003.20010700**
- **CER_OQCRP_METEO-7_SCFTest_000003.20010700**
- **CER_OQCPP_Composite_SCFTest_000003.200107**
- **CER_QCRPT_Composite-MODIS_SCFTest_000003.200107**
- **CER_OQCRP_MCIDAS-GOES-12_SCFTest_000003.20040700**
- **CER_OQCRP_MCIDAS-GOES-10_SCFTest_000003.20040700**
- **CER_OQCRP_MCIDAS-METEO-5_SCFTest_000003.20040700**
- **CER_OQCRP_MCIDAS-METEO-8_SCFTest_000003.20040700**
- **CER_OQCRP_MCIDAS-GOES-9_SCFTest_000003.20040700**

- **CER_OQCRPp_GMS-5_SCFTest_000003.20010700.met**
- **CER_OQCRPp_GOES-10_SCFTest_000003.20010700.met**

- **CER_OQCRPp_GOES-8_SCFTest_000003.20010700.met**
- **CER_OQCRPp_METEO-5_SCFTest_000003.20010700.met**
- **CER_OQCRPp_METEO-7_SCFTest_000003.20010700.met**
- **CER_OQCPPp_Composite_SCFTest_000003.200107.met**
- **CER_OQCRP_GMS-5_SCFTest_000003.20010700.met**
- **CER_OQCRP_GOES-10_SCFTest_000003.20010700.met**
- **CER_OQCRP_GOES-8_SCFTest_000003.20010700.met**
- **CER_OQCRP_METEO-5_SCFTest_000003.20010700.met**
- **CER_OQCRP_METEO-7_SCFTest_000003.20010700.met**
- **CER_OQCPP_Composite_SCFTest_000003.200107.met**
- **CER_QCRPT_Composite-MODIS_SCFTest_000003.200107.met**
- **CER_OQCRP_MCIDAS-GOES-12_SCFTest_000003.20040700.met**
- **CER_OQCRP_MCIDAS-GOES-10_SCFTest_000003.20040700.met**
- **CER_OQCRP_MCIDAS-METEO-5_SCFTest_000003.20040700.met**
- **CER_OQCRP_MCIDAS-METEO-8_SCFTest_000003.20040700.met**
- **CER_OQCRP_MCIDAS-GOES-9_SCFTest_000003.20040700.met**

- **CER_ColdCLDp_GMS-5_SCFTest_000003.20010700**
- **CER_ColdCLDp_GOES-10_SCFTest_000003.20010700**
- **CER_ColdCLDp_GOES-8_SCFTest_000003.20010700**
- **CER_ColdCLDp_METEO-5_SCFTest_000003.20010700**
- **CER_ColdCLDp_METEO-7_SCFTest_000003.20010700**
- **CER_NoonDATAp_GMS-5_SCFTest_000003.20010700**
- **CER_NoonDATAp_GOES-10_SCFTest_000003.20010700**
- **CER_NoonDATAp_GOES-8_SCFTest_000003.20010700**
- **CER_NoonDATAp_METEO-5_SCFTest_000003.20010700**
- **CER_NoonDATAp_METEO-7_SCFTest_000003.20010700**

- **CER_ColdCLDp_GMS-5_SCFTest_000003.20010700.met**
- **CER_ColdCLDp_GOES-10_SCFTest_000003.20010700.met**
- **CER_ColdCLDp_GOES-8_SCFTest_000003.20010700.met**
- **CER_ColdCLDp_METEO-5_SCFTest_000003.20010700.met**
- **CER_ColdCLDp_METEO-7_SCFTest_000003.20010700.met**
- **CER_NoonDATAp_GMS-5_SCFTest_000003.20010700.met**
- **CER_NoonDATAp_GOES-10_SCFTest_000003.20010700.met**
- **CER_NoonDATAp_GOES-8_SCFTest_000003.20010700.met**
- **CER_NoonDATAp_METEO-5_SCFTest_000003.20010700.met**
- **CER_NoonDATAp_METEO-7_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/out_comp/coeffs directory:

- **cal_coeffs.GMS-5.200107.nml**
- **cal_coeffs.GOES-10.200107.nml**
- **cal_coeffs.GOES-8.200107.nml**
- **cal_coeffs.METEO-5.200107.nml**
- **cal_coeffs.METEO-7.200107.nml**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P1_LogReport_GOES-8_SCFTest_000003.20010700**
- **CER11.1P2_LogReport_GOES-10_SCFTest_000003.20010700**
- **CER11.1P3_LogReport_METEO-5_SCFTest_000003.20010700**
- **CER11.1P3_LogReport_METEO-7_SCFTest_000003.20010700**
- **CER11.1P4_LogReport_GMS-5_SCFTest_000003.20010700**
- **CER11.1P5_LogReport_GOES-8_SCFTest_000003.20010700**
- **CER11.1P6_LogReport_GOES-10_SCFTest_000003.20010700**
- **CER11.1P7_LogReport_METEO-5_SCFTest_000003.20010700**
- **CER11.1P7_LogReport_METEO-7_SCFTest_000003.20010700**
- **CER11.1P8_LogReport_GMS-5_SCFTest_000003.20010700**
- **CER11.2P1_LogReport_Composite_SCFTest_000003.200107**
- **CER11.2P2_LogReport_Composite_SCFTest_000003.200107**
- **CER11.3P1_LogReport_Composite-MODIS_SCFTest_000003.200107**
- **CER11.4P1_LogReport_Composite-MODIS_SCFTest_000003.200107**
- **CER11.6P1_LogReport_Composite_Edition2A_019025.200110**
- **CER11.1P10_LogReport_MCIDAS-GOES-12_SCFTest_000003.20040700**
- **CER11.1P10_LogReport_MCIDAS-GOES-10_SCFTest_000003.20040700**
- **CER11.1P10_LogReport_MCIDAS-METEO-5_SCFTest_000003.20040700**
- **CER11.1P10_LogReport_MCIDAS-METEO-8_SCFTest_000003.20040700**
- **CER11.1P10_LogReport_MCIDAS-GOES-9_SCFTest_000003.20040700**

- **CER11.1P1_LogStatus_GOES-8_SCFTest_000003.20010700**
- **CER11.1P2_LogStatus_GOES-10_SCFTest_000003.20010700**
- **CER11.1P3_LogStatus_METEO-5_SCFTest_000003.20010700**
- **CER11.1P3_LogStatus_METEO-7_SCFTest_000003.20010700**
- **CER11.1P4_LogStatus_GMS-5_SCFTest_000003.20010700**
- **CER11.1P5_LogStatus_GOES-8_SCFTest_000003.20010700**
- **CER11.1P6_LogStatus_GOES-10_SCFTest_000003.20010700**
- **CER11.1P7_LogStatus_METEO-5_SCFTest_000003.20010700**
- **CER11.1P7_LogStatus_METEO-7_SCFTest_000003.20010700**
- **CER11.1P8_LogStatus_GMS-5_SCFTest_000003.20010700**
- **CER11.2P1_LogStatus_Composite_SCFTest_000003.200107**
- **CER11.2P2_LogStatus_Composite_SCFTest_000003.200107**
- **CER11.3P1_LogStatus_Composite-MODIS_SCFTest_000003.200107**
- **CER11.4P1_LogStatus_Composite-MODIS_SCFTest_000003.200107**
- **CER11.6P1_LogStatus_Composite_Edition2A_019025.200110**
- **CER11.1P10_LogStatus_MCIDAS-GOES-12_SCFTest_000003.20040700**
- **CER11.1P10_LogStatus_MCIDAS-GOES-10_SCFTest_000003.20040700**
- **CER11.1P10_LogStatus_MCIDAS-METEO-5_SCFTest_000003.20040700**
- **CER11.1P10_LogStatus_MCIDAS-METEO-8_SCFTest_000003.20040700**
- **CER11.1P10_LogStatus_MCIDAS-GOES-9_SCFTest_000003.20040700**

- **CER11.1P2_LogUser_GOES-10_SCFTest_000003.20010700**
- **CER11.1P1_LogUser_GOES-8_SCFTest_000003.20010700**
- **CER11.1P3_LogUser_METEO-5_SCFTest_000003.20010700**
- **CER11.1P3_LogUser_METEO-7_SCFTest_000003.20010700**

- **CER11.1P4_LogUser_GMS-5_SCFTest_000003.20010700**
- **CER11.1P5_LogUser_GOES-8_SCFTest_000003.20010700**
- **CER11.1P6_LogUser_GOES-10_SCFTest_000003.20010700**
- **CER11.1P7_LogUser_METEO-5_SCFTest_000003.20010700**
- **CER11.1P7_LogUser_METEO-7_SCFTest_000003.20010700**
- **CER11.1P8_LogUser_GMS-5_SCFTest_000003.20010700**
- **CER11.3P1_LogUser_Composite-MODIS_SCFTest_000003.200107**
- **CER11.4P1_LogUser_Composite-MODIS_SCFTest_000003.200107**
- **CER11.6P1_LogUser_Composite_Edition2A_019025.200110**
- **CER11.2P1_LogUser_Composite_SCFTest_000003.200107**
- **CER11.2P2_LogUser_Composite_SCFTest_000003.200107**
- **CER11.1P10_LogUser_MCIDAS-GOES-12_SCFTest_000003.20040700**
- **CER11.1P10_LogUser_MCIDAS-GOES-10_SCFTest_000003.20040700**
- **CER11.1P10_LogUser_MCIDAS-METEO-5_SCFTest_000003.20040700**
- **CER11.1P10_LogUser_MCIDAS-METEO-8_SCFTest_000003.20040700**
- **CER11.1P10_LogUser_MCIDAS-GOES-9_SCFTest_000003.20040700**

In the $CERESHOME/ggeo/web/ps/scr directory:

- **CER_GMS-5_desert_ir.200107**
- **CER_GMS-5_land_ir.200107**
- **CER_GMS-5_land_vis.200107**
- **CER_GOES-10_ocean_ir.200107**
- **CER_GOES-8_land_ir.200107**
- **CER_GOES-8_ocean_ir.200107**
- **CER_METEO-5_land_ir.200107**
- **CER_METEO-5_ocean_ir.200107**
- **CER_METEO-5_ocean_vis.200107**
- **CER_METEO-7_desert_ir.200107**
- **CER_METEO-7_desert_vis.200107**
- **CER_METEO-7_land_ir.200107**
- **CER_METEO-7_land_vis.200107**
- **CER_METEO-7_ocean_ir.200107**
- **CER_METEO-7_ocean_vis.200107**

- **CER_CERES_GOES-10_REGAVG.200107**
- **CER_CERES_GOES-8_REGAVG.200107**
- **CER_CERES_METEO-7_REGAVG.200107**

- **CER_CERES_GMS-5_ZONAVG_cldamt.200107**
- **CER_CERES_GMS-5_ZONAVG_optdepth.200107**
- **CER_CERES_GMS-5_ZONAVG_temp.200107**
- **CER_CERES_GOES-10_ZONAVG_cldamt.200107**
- **CER_CERES_GOES-10_ZONAVG_optdepth.200107**
- **CER_CERES_GOES-10_ZONAVG_temp.200107**
- **CER_CERES_GOES-8_ZONAVG_cldamt.200107**
- **CER_CERES_GOES-8_ZONAVG_optdepth.200107**

- **CER_CERES_GOES-8_ZONAVG_temp.200107**
- **CER_CERES_METEO-5_ZONAVG_cldamt.200107**
- **CER_CERES_METEO-5_ZONAVG_optdepth.200107**
- **CER_CERES_METEO-5_ZONAVG_temp.200107**
- **CER_CERES_METEO-7_ZONAVG_cldamt.200107**
- **CER_CERES_METEO-7_ZONAVG_optdepth.200107**
- **CER_CERES_METEO-7_ZONAVG_temp.200107**

In the $CERESHOME/ggeo/web/ps directory:

- **CER_cloudplot_Composite-MODIS_SCFTest_000003.200107.ps**
- **CER_cloudplot_Composite-MODIS_SCFTest_000003.200107.stats**
- **CER_intercalib_200107.ps**

In the $CERESHOME/ggeo/web/plot/gif directory (these directories get created during testing):

- **GGEO_200107/**
- **GGEO_200110/**
- **GGEO_200407/**

In the $CERESHOME/ggeo/web/plot/gif/GGEO_200107 directory:

- **AZMTH_29.gif**
- **CLDPRCNT_29.gif**
- **CLDTEMP_29.gif**
- **IRNUM_29.gif**
- **IRSD_29.gif**
- **IR_29.gif**
- **OPTDPTH_29.gif**
- **SATZEN_29.gif**
- **SOLZEN_29.gif**
- **VISNUM_29.gif**
- **VISSD_29.gif**
- **VIS_29.gif**

In the $CERESHOME/ggeo/web/plot/gif/GGEO_200110 directory:

- **AZMTH_27.gif**
- **AZMTH_59.gif**
- **AZMTH_137.gif**
- **AZMTH_186.gif**
- **CLDPRCNT_27.gif**
- **CLDPRCNT_59.gif**
- **CLDPRCNT_137.gif**
- **CLDPRCNT_186.gif**
- **CLDTEMP_27.gif**
- **CLDTEMP_59.gif**
- **CLDTEMP_137.gif**
- **CLDTEMP_186.gif**

- **IRNUM_27.gif**
- **IRNUM_59.gif**
- **IRNUM_137.gif**
- **IRNUM_186.gif**
- **IRSD_27.gif**
- **IRSD_59.gif**
- **IRSD_137.gif**
- **IRSD_186.gif**
- **IR_27.gif**
- **IR_59.gif**
- **IR_137.gif**
- **IR_186.gif**
- **OPTDPTH_27.gif**
- **OPTDPTH_59.gif**
- **OPTDPTH_137.gif**
- **OPTDPTH_186.gif**
- **SATZEN_27.gif**
- **SATZEN_59.gif**
- **SATZEN_137.gif**
- **SATZEN_186.gif**
- **SOLZEN_27.gif**
- **SOLZEN_59.gif**
- **SOLZEN_137.gif**
- **SOLZEN_186.gif**
- **VISNUM_27.gif**
- **VISNUM_59.gif**
- **VISNUM_137.gif**
- **VISNUM_186.gif**
- **VISSD_27.gif**
- **VISSD_59.gif**
- **VISSD_137.gif**
- **VISSD_186.gif**
- **VIS_27.gif**
- **VIS_59.gif**
- **VIS_137.gif**
- **VIS_186.gif**

In the $CERESHOME/ggeo/web/plot/gif/GGEO_200407 directory:

- **AZMTH_142.gif**
- **CLDPRCNT_142.gif**
- **CLDTEMP_142.gif**
- **IRNUM_142.gif**
- **IRSD_142.gif**
- **IR_142.gif**
- **OPTDPTH_142.gif**
- **SATZEN_142.gif**

- **SOLZEN_142.gif**
- **VISNUM_142.gif**
- **VISSD_142.gif**
- **VIS_142.gif**

3.3 Evaluation Procedures

The runtest script checks for successful completion of each job and evaluates the output files to determine whether they agree with expected output. The script progress, along with any problems encountered, is reported with echo messages to the terminal. At the conclusion of the test procedures, the script makes an overall evaluation and declares the test to be successful or announces that problems were found.

3.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.0 Manual Test and Evaluation Procedures

This section gives instructions on how to manually run and evaluate the GGEO test suites. All the procedures in this section are duplicated in a script that automates the test and evaluation procedures. The automated procedures are described in Section 3.0.

4.0.1 Setting Test Environment Variables

The following environment variables apply to all tests and only need to be set one time.

cd $CERESHOME/ggeo/test_suites
set RCFDIR = $CERESHOME/ggeo/rcf
set TESTDIR = $CERESHOME/ggeo/test_suites
set BINDIR = $CERESHOME/ggeo/bin

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers are set within the procedures of each test.

4.0.2 Checking Inputs for all Tests

The following commands will check the inputs for all the tests which follow. If the check is done now, then it will not be necessary to do the individual checks for each test.

cd $CERESHOME/ggeo/test_suites
check_inputs.csh

4.1 CER11.1P1 Main Processor for GOES-8 (First Pass)

4.1.1 Stand-alone Test Procedures

The CER11.1P1 test procedures can be run independently of the other GGEO PGE test procedures. The procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set sat = GOES-8
set year = 2001
set month = 07
set dayid = 00
set start = 0
set end = 0
set ctlflg = 1

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh

4.1.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

The only input data required for PGE CER11.1P1 are the GEO input data. If the GEO data files are not in the input directory, then the check_inputs script will copy them there from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set main1Test = 1
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $main1Test

4.1.2.1 PCF Generator

The Main Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

cd $CERESHOME/ggeo/bin
set params = ($sat $year $month $start $end $ctlflg)
set imageFiles = (ISCCP.B1.0.GOES-8.2001.07.{03.2345,04.0{2,5,8}45}.MSC)
set orbitFiles = (ISCCP.OA.0.GOES-8.2001.07.{03.2345,04.0{2,5,8}45}.MSC)
gen_input_ggeomain.csh $params "$imageFiles" "$orbitFiles"

This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:

- **CER11.1P1_PCFin_GOES-8_SCFTest_000003.20010700**

2. Generate the PCF:

   set PCFin = $RCFDIR/CER11.1P1_PCFin_GOES-8_SCFTest_000003.20010700
   gen_pcf_ggeomain.csh $PCFin

   This creates the following PCF in the $CERESHOME/ggeo/rcf directory:

   - **CER11.1P1_PCF_GOES-8_SCFTest_000003.20010700**

4.1.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeomain.csh $sat $year $month $dayid $ctlflg
set PCF = $RCFDIR/CER11.1P1_PCF_GOES-8_SCFTest_000003.20010700
run_ggeomain.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.1P1-4
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/int_prod directory:

- **CER_GRANp_GOES-8_SCFTest_000003.20010700**
- **CER_GRANp_GOES-8_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:

- **CER_OQCRPp_GOES-8_SCFTest_000003.20010700**
- **CER_OQCRPp_GOES-8_SCFTest_000003.20010700.met**
- **CER_ColdCLDp_GOES-8_SCFTest_000003.20010700**
- **CER_ColdCLDp_GOES-8_SCFTest_000003.20010700.met**
- **CER_NoonDATAp_GOES-8_SCFTest_000003.20010700**
- **CER_NoonDATAp_GOES-8_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P1_LogReport_GOES-8_SCFTest_000003.20010700**
- **CER11.1P1_LogStatus_GOES-8_SCFTest_000003.20010700**
- **CER11.1P1_LogUser_GOES-8_SCFTest_000003.20010700**

4.1.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.1.2.4 Main Processor CER11.1P1 Test Summary

Here is the time function output from running the test:

409.061u 0.871s 6:50.93 0+0k 15448k 492+1io 20pf+0w

4.1.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

```
setenv RUNTEST3_CONTROL_FLAG 1
set GOESEast = 1
set GRANFILETest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5
```

The following test evaluations should be done one at a time. They can be performed in any order:

```
cd $CERESHOME/ggeo/test_suites
eval_runtest_main.csh $PCFTest $GOESEast
eval_runtest_main.csh $QATest $GOESEast
eval_runtest_main.csh $LOGTest $GOESEast
eval_runtest_main.csh $METATest $GOESEast
eval_runtest_main.csh $GRANFILETest $GOESEast
```

Each test evaluation should give a message indicating SUCCESS.

4.1.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.2 CER11.1P2 Main Processor for GOES-9 (First Pass)

4.2.1 Stand-alone Test Procedures

The CER11.1P2 test procedures can be run independently of the other GGEO PGE test procedures. The procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set sat = GOES-10
set year = 2001
set month = 07
set dayid = 00
set start = 0
set end = 0
set ctlflg = 1

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh

4.2.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

The only input data required for PGE CER11.1P2 are the GEO input data. If the GEO data files are not in the input directory, then the check_inputs script will copy them there from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set main1Test = 1
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $main1Test

4.2.2.1 PCF Generator

The Main Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($sat $year $month $start $end $ctlflg)
   set imageFiles = (20011850{00015,{3,6,9}0014}i10.B1D)
   gen_input_ggeomain.csh $params "$imageFiles"

This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:

- **CER11.1P2_PCFin_GOES-10_SCFTest_000003.20010700**

2. Generate the PCF:

set PCFin = $RCFDIR/CER11.1P2_PCFin_GOES-10_SCFTest_000003.20010700
gen_pcf_ggeomain.csh $PCFin

This creates the following PCF in the $CERESHOME/ggeo/rcf directory:

- **CER11.1P2_PCF_GOES-10_SCFTest_000003.20010700**

4.2.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeomain.csh $sat $year $month $dayid $ctlflg
set PCF = $RCFDIR/CER11.1P2_PCF_GOES-10_SCFTest_000003.20010700
run_ggeomain.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.1P1-4
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/int_prod directory:

- **CER_GRANp_GOES-10_SCFTest_000003.20010700**
- **CER_GRANp_GOES-10_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:

- **CER_OQCRPp_GOES-10_SCFTest_000003.20010700**
- **CER_OQCRPp_GOES-10_SCFTest_000003.20010700.met**
- **CER_ColdCLDp_GOES-10_SCFTest_000003.20010700**
- **CER_ColdCLDp_GOES-10_SCFTest_000003.20010700.met**
- **CER_NoonDATAp_GOES-10_SCFTest_000003.20010700**
- **CER_NoonDATAp_GOES-10_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P2_LogReport_GOES-10_SCFTest_000003.20010700**
- **CER11.1P2_LogStatus_GOES-10_SCFTest_000003.20010700**
- **CER11.1P2_LogUser_GOES-10_SCFTest_000003.20010700**

4.2.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.2.2.4 Main Processor CER11.1P2 Test Summary

Here is the time function output from running the test:

460.766u 0.710s 7:42.42 0+0k 16736k 749+1io 24pf+0w

4.2.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

```
setenv RUNTEST3_CONTROL_FLAG 1
set GOESWest = 2
set GRANFILETest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5
```

The following test evaluations should be done one at a time. They can be performed in any order:

```
cd $CERESHOME/ggeo/test_suites
eval_runtest_main.csh $PCFTest $GOESWest
eval_runtest_main.csh $QATest $GOESWest
eval_runtest_main.csh $LOGTest $GOESWest
eval_runtest_main.csh $METATest $GOESWest
eval_runtest_main.csh $GRANFILETest $GOESWest
```

Each test evaluation should give a message indicating SUCCESS.

4.2.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.3 CER11.1P3 Main Processor for METEO-5 (First Pass)

4.3.1 Stand-alone Test Procedures

The CER11.1P3 test procedures can be run independently of the other GGEO PGE test procedures. The procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set sat = METEO-5
set year = 2001
set month = 07
set dayid = 00
set start = 0
set end = 0
set ctlflg = 1

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-200107-env.csh
setenv SS11_1P3 METEO-5

4.3.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

The only input data required for PGE CER11.1P3 are the GEO input data. If the GEO data files are not in the input directory, then the check_inputs script will copy them there from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set main1Test = 1
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $main1Test

4.3.2.1 PCF Generator

The Main Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

cd $CERESHOME/ggeo/bin
set params = ($sat $year $month $start $end $ctlflg)
set imageFiles = (ISCCP.B1.0.MET-5.2001.07.0{3.2330,4.0{2,5,8}30}.EUM)
gen_input_ggeomain.csh $params "$imageFiles"

This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:

- **CER11.1P3_PCFin_METEO-5_SCFTest_000003.20010700**

2. Generate the PCF:

set PCFin = $RCFDIR/CER11.1P3_PCFin_METEO-5_SCFTest_000003.20010700
gen_pcf_ggeomain.csh $PCFin

This creates the following PCF in the $CERESHOME/ggeo/rcf directory:

- **CER11.1P3_PCF_METEO-5_SCFTest_000003.20010700**

4.3.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeomain.csh $sat $year $month $dayid $ctlflg
set PCF = $RCFDIR/CER11.1P3_PCF_METEO-5_SCFTest_000003.20010700
run_ggeomain.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.1P1-4
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/int_prod directory:

- **CER_GRANp_METEO-5_SCFTest_000003.20010700**
- **CER_GRANp_METEO-5_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:

- **CER_OQCRPp_METEO-5_SCFTest_000003.20010700**
- **CER_OQCRPp_METEO-5_SCFTest_000003.20010700.met**
- **CER_ColdCLDp_METEO-5_SCFTest_000003.20010700**
- **CER_ColdCLDp_METEO-5_SCFTest_000003.20010700.met**
- **CER_NoonDATAp_METEO-5_SCFTest_000003.20010700**
- **CER_NoonDATAp_METEO-5_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P3_LogReport_METEO-5_SCFTest_000003.20010700**
- **CER11.1P3_LogStatus_METEO-5_SCFTest_000003.20010700**
- **CER11.1P3_LogUser_METEO-5_SCFTest_000003.20010700**

4.3.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.3.2.4 Main Processor CER11.1P3 Test Summary

Here is the time function output from running the test:

407.514u 0.608s 6:49.02 0+0k 15832k 331+2io 11pf+0w

4.3.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

```
setenv RUNTEST3_CONTROL_FLAG 1
set METEO5 = 3
set GRANFILETest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5
```

The following test evaluations are done from the test_suites directory. They should be done one at a time. They can be performed in any order:

```
cd $CERESHOME/ggeo/test_suites
eval_runtest_main.csh $PCFTest $METEO5
eval_runtest_main.csh $QATest $METEO5
eval_runtest_main.csh $LOGTest $METEO5
eval_runtest_main.csh $METATest $METEO5
eval_runtest_main.csh $GRANFILETest $METEO5
```

Each test evaluation should give a message indicating SUCCESS.

4.3.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.4 CER11.1P3 Main Processor for METEO-7 (First Pass)

4.4.1 Stand-alone Test Procedures

The CER11.1P3 test procedures can be run independently of the other GGEO PGE test procedures. The procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set sat = METEO-7
set year = 2001
set month = 07
set dayid = 00
set start = 0
set end = 0
set ctlflg = 1

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh
setenv SS11_1P3 METEO-7

4.4.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

The only input data required for PGE CER11.1P3 are the GEO input data. If the GEO data files are not in the input directory, then the check_inputs script will copy them there from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set main1Test = 1
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $main1Test

4.4.2.1 PCF Generator

The Main Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($sat $year $month $start $end $ctlflg)
   set imageFiles = (ISCCP.B1.0.MET-7.2001.07.0{3.2330,4.0{2,5,8}30}.EUM)
   gen_input_ggeomain.csh $params "$imageFiles"

This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:

- **CER11.1P3_PCFin_METEO-7_SCFTest_000003.20010700**

2. Generate the PCF:

set PCFin = $RCFDIR/CER11.1P3_PCFin_METEO-7_SCFTest_000003.20010700
gen_pcf_ggeomain.csh $PCFin

This creates the following PCF in the $CERESHOME/ggeo/rcf directory:

- **CER11.1P3_PCF_METEO-7_SCFTest_000003.20010700**

4.4.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeomain.csh $sat $year $month $dayid $ctlflg
set PCF = $RCFDIR/CER11.1P3_PCF_METEO-7_SCFTest_000003.20010700
run_ggeomain.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.1P1-4
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/int_prod directory:

- **CER_GRANp_METEO-7_SCFTest_000003.20010700**
- **CER_GRANp_METEO-7_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:

- **CER_OQCRPp_METEO-7_SCFTest_000003.20010700**
- **CER_OQCRPp_METEO-7_SCFTest_000003.20010700.met**
- **CER_ColdCLDp_METEO-7_SCFTest_000003.20010700**
- **CER_ColdCLDp_METEO-7_SCFTest_000003.20010700.met**
- **CER_NoonDATAp_METEO-7_SCFTest_000003.20010700**
- **CER_NoonDATAp_METEO-7_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P3_LogReport_METEO-7_SCFTest_000003.20010700**
- **CER11.1P3_LogStatus_METEO-7_SCFTest_000003.20010700**
- **CER11.1P3_LogUser_METEO-7_SCFTest_000003.20010700**

4.4.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.4.2.4 Main Processor CER11.1P3 Test Summary

Here is the time function output from running the test:

407.306u 0.639s 6:48.79 0+0k 17680k 323+1io 13pf+0w

4.4.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

setenv RUNTEST3_CONTROL_FLAG 1
set METEO7 = 4
set GRANFILETest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5

The following test evaluations are done from the test_suites directory. They should be done one at a time. They can be performed in any order:

cd $CERESHOME/ggeo/test_suites
eval_runtest_main.csh $PCFTest $METEO7
eval_runtest_main.csh $QATest $METEO7
eval_runtest_main.csh $LOGTest $METEO7
eval_runtest_main.csh $METATest $METEO7
eval_runtest_main.csh $GRANFILETest $METEO7

Each test evaluation should give a message indicating SUCCESS.

4.4.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.5 CER11.1P4 Main Processor for GMS-5 (First Pass)

4.5.1 Stand-alone Test Procedures

The CER11.1P4 test procedures can be run independently of the other GGEO PGE test procedures. The procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set sat = GMS-5
set year = 2001
set month = 07
set dayid = 00
set start = 0
set end = 0
set ctlflg = 1

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh

4.5.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

The only input data required for PGE CER11.1P4 are the GEO input data. If the GEO data files are not in the input directory, then the check_inputs script will copy them there from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set main1Test = 1
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $main1Test

4.5.2.1 PCF Generator

The Main Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($sat $year $month $start $end $ctlflg)
   set imageFiles = (B1GMS05.D0107.F002{6,7,8,9})
   gen_input_ggeomain.csh $params "$imageFiles"

This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:

- **CER11.1P4_PCFin_GMS-5_SCFTest_000003.20010700**

2. Generate the PCF:

set PCFin = $RCFDIR/CER11.1P4_PCFin_GMS-5_SCFTest_000003.20010700
gen_pcf_ggeomain.csh $PCFin

This creates the following PCF in the $CERESHOME/ggeo/rcf directory:

- **CER11.1P4_PCF_GMS-5_SCFTest_000003.20010700**

4.5.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeomain.csh $sat $year $month $dayid $ctlflg
set PCF = $RCFDIR/CER11.1P4_PCF_GMS-5_SCFTest_000003.20010700
run_ggeomain.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.1P1-4
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/int_prod directory:

- **CER_GRANp_GMS-5_SCFTest_000003.20010700**
- **CER_GRANp_GMS-5_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:

- **CER_OQCRPp_GMS-5_SCFTest_000003.20010700**
- **CER_OQCRPp_GMS-5_SCFTest_000003.20010700.met**
- **CER_ColdCLDp_GMS-5_SCFTest_000003.20010700**
- **CER_ColdCLDp_GMS-5_SCFTest_000003.20010700.met**
- **CER_NoonDATAp_GMS-5_SCFTest_000003.20010700**
- **CER_NoonDATAp_GMS-5_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P4_LogReport_GMS-5_SCFTest_000003.20010700**
- **CER11.1P4_LogStatus_GMS-5_SCFTest_000003.20010700**
- **CER11.1P4_LogUser_GMS-5_SCFTest_000003.20010700**

4.5.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.5.2.4 Main Processor CER11.1P4 Test Summary

Here is the time function output from running the test:

540.289u 0.794s 9:03.50 0+0k 18432k 383+0io 23pf+0w

4.5.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

```
setenv RUNTEST3_CONTROL_FLAG 1
set GMS = 5
set GRANFILETest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5
```

The following test evaluations are done from the test_suites directory. They should be done one at a time. They can be performed in any order:

```
cd $CERESHOME/ggeo/test_suites
eval_runtest_main.csh $PCFTest $GMS
eval_runtest_main.csh $QATest $GMS
eval_runtest_main.csh $LOGTest $GMS
eval_runtest_main.csh $METATest $GMS
eval_runtest_main.csh $GRANFILETest $GMS
```

Each test evaluation should give a message indicating SUCCESS.

4.5.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.6 CER11.2P1 Postprocessor (First Pass)

4.6.1 Stand-alone Test Procedures

The CER11.2P1 test procedures cannot be run unless outputs are available from the successfully run test procedures for PGEs CER11.1P1 through CER11.1P4. The following procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set year = 2001
set month = 07
set ctlflg = 1

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh

4.6.2 Check Inputs

The only inputs required for PGE CER11.2P1 are the granfile outputs created by the first pass Main Processor. These inputs will be available if the testing in Section 4.1 through Section 4.5 was successful.

4.6.2.1 PCF Generator

The Postprocessor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($year $month $ctlflg)
   gen_input_ggeopost.csh $params

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.2P1_PCFin_Composite_SCFTest_000003.200107**

2. Generate the PCF:

   set PCFin = $RCFDIR/CER11.2P1_PCFin_Composite_SCFTest_000003.200107
   gen_pcf_ggeopost.csh $PCFin

   This creates the following PCF in the $CERESHOME/ggeo/rcf directory:
   - **CER11.2P1_PCF_Composite_SCFTest_000003.200107**

4.6.2.2 Execution

The Postprocessor PGE is run by executing the run_ggeopost.csh script. The clean_ggeopost.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeopost.csh $year $month $ctlflg
set PCF = $RCFDIR/CER11.2P1_PCF_Composite_SCFTest_000003.200107
run_ggeopost.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.2P1
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/out_comp/data directory:
- **CER_GGEOp_Composite_SCFTest_000003.200107**
- **CER_GGEOp_Composite_SCFTest_000003.200107.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:
- **CER_OQCPPp_Composite_SCFTest_000003.200107**
- **CER_OQCPPp_Composite_SCFTest_000003.200107.met**

In the $CERESHOME/ggeo/data/runlogs directory:
- **CER11.2P1_LogReport_Composite_SCFTest_000003.200107**
- **CER11.2P1_LogUser_Composite_SCFTest_000003.200107**
- **CER11.2P1_LogStatus_Composite_SCFTest_000003.200107**

4.6.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.6.2.4 Postprocessor CER11.2P1 Test Summary

Here is the time function output from running the test:

207.556u 31.682s 5:40.80 0+0k 4104k 29550+2io 36pf+0w

4.6.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

```
setenv RUNTEST3_CONTROL_FLAG 1
set GGEOTest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5
```

The following test evaluations are done from the test_suites directory. They should be done one at a time. They can be performed in any order:

```
cd $CERESHOME/ggeo/test_suites
eval_runtest_post.csh $PCFTest
eval_runtest_post.csh $QATest
eval_runtest_post.csh $LOGTest
eval_runtest_post.csh $METATest
eval_runtest_post.csh $GGEOTest
```

Each test evaluation should give a message indicating SUCCESS.

4.6.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.7 CER11.3P1 Recalibrate GGEO Input Radiance Data

4.7.1 Stand-alone Test Procedures

The CER11.3P1 test procedures cannot be run unless output is available from the successfully run test procedures for PGE CER11.2P1. The following procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set year = 2001
set month = 07

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh

4.7.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

PGE CER11.3P1 requires the first pass GGEO output file created in Section 4.6. It also needs SFC binary files. If the SFC files are not in the proper input directory, then the check_inputs script will copy them there from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set recalTest = 5
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $recalTest

4.7.2.1 PCF Generator

This PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($year $month)
   gen_input_nb_intercalib.csh $params

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.3P1_PCFin_Composite-MODIS_SCFTest_000003.200107**

2. Generate the PCF:

   set PCFin = $RCFDIR/CER11.3P1_PCFin_Composite-MODIS_SCFTest_000003.200107
   gen_pcf_nb_intercalib.csh $PCFin

   This creates the following PCF in the $CERESHOME/ggeo/rcf directory:
   - **CER11.3P1_PCF_Composite-MODIS_SCFTest_000003.200107**

4.7.2.2 Execution

The Postprocessor PGE is run by executing the run_ggeopost.csh script. The clean_ggeopost.csh script is run prior to job execution to clean up files created during previous test runs.

clean_nb_intercalib.csh $year $month
set PCF = $RCFDIR/CER11.3P1_PCF_Composite-MODIS_SCFTest_000003.200107
run_nb_intercalib.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.3
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/out_comp/coeffs directory:
- **cal_coeffs.GOES-8.200107.nml**
- **cal_coeffs.GOES-10.200107.nml**
- **cal_coeffs.GMS-5.200107.nml**
- **cal_coeffs.METEO-5.200107.nml**

In the $CERESHOME/ggeo/web/ps/scr directory:
- **CER_GMS-5_desert_ir.200107**
- **CER_GMS-5_land_ir.200107**
- **CER_GMS-5_land_vis.200107**
- **CER_GOES-10_ocean_ir.200107**
- **CER_GOES-8_land_ir.200107**
- **CER_GOES-8_ocean_ir.200107**
- **CER_METEO-5_land_ir.200107**
- **CER_METEO-5_ocean_ir.200107**
- **CER_METEO-5_ocean_vis.200107**
- **CER_METEO-7_desert_ir.200107**
- **CER_METEO-7_desert_vis.200107**
- **CER_METEO-7_land_ir.200107**
- **CER_METEO-7_land_vis.200107**

- **CER_METEO-7_ocean_ir.200107**
- **CER_METEO-7_ocean_vis.200107**

In the $CERESHOME/ggeo/web/ps directory:

- **CER_intercalib_200107.ps**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.3P1_LogStatus_Composite-MODIS_SCFTest_000003.200107**
- **CER11.3P1_LogReport_Composite-MODIS_SCFTest_000003.200107**
- **CER11.3P1_LogUser_Composite-MODIS_SCFTest_000003.200107**

4.7.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.7.2.4 PGE CER11.3P1 Test Summary

Here is the time function output from running the test:

6830.248u 81.323s 1:55:59.81 0+0k 20776k 225607+9io 70pf+0w

4.7.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

set COEFFSTest = 1
set PCFTest = 2
set SCRATCHFILETest = 3
set LOGTest = 4

The following test evaluations are done from the test_suites directory. They should be done one at a time. They can be performed in any order:

cd $CERESHOME/ggeo/test_suites
eval_runtest_intercalib.csh $PCFTest
eval_runtest_intercalib.csh $SCRATCHFILETest
eval_runtest_intercalib.csh $LOGTest
eval_runtest_intercalib.csh $COEFFSTest

Each test evaluation should give a message indicating SUCCESS.

4.7.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.8 CER11.1P5 Main Processor for GOES-8 (Second Pass)

4.8.1 Stand-alone Test Procedures

The CER11.1P5 test procedures can be run independently of the other GGEO PGE test procedures. The procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set sat = GOES-8
set year = 2001
set month = 07
set dayid = 00
set start = 0
set end = 0
set ctlflg = 2

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh

4.8.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

PGE CER11.1P5 requires GEO data, plus snow and ice maps, and MOA data for cloud processing. If these data files are not in the proper input directories, then the check_inputs script will copy them to the proper locations from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set main2Test = 2
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $main2Test

WARNING: If there are MOA files for the test data month in the input directory which are not needed for the test, then the check_inputs script will offer you the option to remove them. Please check that the files are not being used by others before exercising this option. Note that if you do not remove the files but proceed with the test, then differences will show up in the PCFTest and the METATest in Section 4.8.3.

4.8.2.1 PCF Generator

The Main Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($sat $year $month $start $end $ctlflg)
   set imageFiles = ISCCP.B1.0.GOES-8.2001.07.03.2345.MSC
   set orbitFiles = ISCCP.OA.0.GOES-8.2001.07.03.2345.MSC
   gen_input_ggeomain.csh $params "$imageFiles" "$orbitFiles"

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P5_PCFin_GOES-8_SCFTest_000003.20010700**

2. Generate the PCF:

   set PCFin = CER11.1P5_PCFin_GOES-8_SCFTest_000003.20010700
   set PCF = 'gen_pcf_ggeomain.csh $RCFDIR/$PCFin'

   This creates the following PCF in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P5_PCF_GOES-8_SCFTest_000003.20010700**

3. Modify PCF to use default cal_coeffs file:

   $TESTDIR/set_default_calcof.csh $PCF

4.8.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeomain.csh $sat $year $month $dayid $ctlflg
run_ggeomain.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.1P5-8
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/int_prod directory:
- **CER_GRAN_GOES-8_SCFTest_000003.20010700**
- **CER_GRAN_GOES-8_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:
- **CER_OQCRP_GOES-8_SCFTest_000003.20010700**
- **CER_OQCRP_GOES-8_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P5_LogReport_GOES-8_SCFTest_000003.20010700**
- **CER11.1P5_LogStatus_GOES-8_SCFTest_000003.20010700**
- **CER11.1P5_LogUser_GOES-8_SCFTest_000003.20010700**

4.8.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.8.2.4 Main Processor CER11.1P5 Test Summary

Here is the time function output from running the test:

399.040u 4.361s 6:48.70 0+0k 257968k 3074+3io 23pf+0w

4.8.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

```
setenv RUNTEST3_CONTROL_FLAG 2
set GOESEast = 1
set GRANFILETest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5
```

The following test evaluations should be done one at a time. They can be performed in any order:

```
cd $CERESHOME/ggeo/test_suites
eval_runtest_main.csh $PCFTest $GOESEast
eval_runtest_main.csh $QATest $GOESEast
eval_runtest_main.csh $LOGTest $GOESEast
eval_runtest_main.csh $METATest $GOESEast
eval_runtest_main.csh $GRANFILETest $GOESEast
```

Each test evaluation should give a message indicating SUCCESS.

4.8.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.9 CER11.1P6 Main Processor for GOES-9 (Second Pass)

4.9.1 Stand-alone Test Procedures

The CER11.1P6 test procedures can be run independently of the other GGEO PGE test procedures. The procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set sat = GOES-10
set year = 2001
set month = 07
set dayid = 00
set start = 0
set end = 0
set ctlflg = 2

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh

4.9.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

PGE CER11.1P6 requires GEO data, plus snow and ice maps, and MOA data for cloud processing. If these data files are not in the proper input directories, then the check_inputs script will copy them to the proper locations from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set main2Test = 2
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $main2Test

WARNING: If there are MOA files for the test data month in the input directory which are not needed for the test, then the check_inputs script will offer you the option to remove them. Please check that the files are not being used by others before exercising this option. Note that if you do not remove the files but proceed with the test, then differences will show up in the PCFTest and the METATest in Section 4.9.3.

4.9.2.1 PCF Generator

The Main Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($sat $year $month $start $end $ctlflg)
   set imageFiles = 2001185000015i10.B1D
   gen_input_ggeomain.csh $params "$imageFiles"

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P6_PCFin_GOES-10_SCFTest_000003.20010700**

2. Generate the PCF:

   set PCFin = CER11.1P6_PCFin_GOES-10_SCFTest_000003.20010700
   set PCF = 'gen_pcf_ggeomain.csh $RCFDIR/$PCFin'

   This creates the following PCF in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P6_PCF_GOES-10_SCFTest_000003.20010700**

3. Modify PCF to use default cal_coeffs file:

   $TESTDIR/set_default_calcof.csh $PCF

4.9.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeomain.csh $sat $year $month $dayid $ctlflg
set PCF = CER11.1P6_PCF_GOES-10_SCFTest_000003.20010700
run_ggeomain.csh $RCFDIR/$PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.1P5-8
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/int_prod directory:
- **CER_GRAN_GOES-10_SCFTest_000003.20010700**
- **CER_GRAN_GOES-10_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:
- **CER_OQCRP_GOES-10_SCFTest_000003.20010700**
- **CER_OQCRP_GOES-10_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P6_LogReport_GOES-10_SCFTest_000003.20010700**
- **CER11.1P6_LogStatus_GOES-10_SCFTest_000003.20010700**
- **CER11.1P6_LogUser_GOES-10_SCFTest_000003.20010700**

4.9.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.9.2.4 Main Processor CER11.1P6 Test Summary

Here is the time function output from running the test:

604.385u 5.696s 10:18.19 0+0k 255232k 3380+1io 4pf+0w

4.9.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

```
setenv RUNTEST3_CONTROL_FLAG 2
set GOESWest = 2
set GRANFILETest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5
```

The following test evaluations should be done one at a time. They can be performed in any order:

```
cd $CERESHOME/ggeo/test_suites
eval_runtest_main.csh $PCFTest $GOESWest
eval_runtest_main.csh $QATest $GOESWest
eval_runtest_main.csh $LOGTest $GOESWest
eval_runtest_main.csh $METATest $GOESWest
eval_runtest_main.csh $GRANFILETest $GOESWest
```

Each test evaluation should give a message indicating SUCCESS.

4.9.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.10 CER11.1P7 Main Processor for METEO-5 (Second Pass)

4.10.1 Stand-alone Test Procedures

The CER11.1P7 test procedures can be run independently of the other GGEO PGE test procedures. The procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set sat = METEO-5
set year = 2001
set month = 07
set dayid = 00
set start = 0
set end = 0
set ctlflg = 2

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh
setenv SS11_1P3 METEO-5

4.10.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

PGE CER11.1P7 requires GEO data, plus snow and ice maps, and MOA data for cloud processing. If these data files are not in the proper input directories, then the check_inputs script will copy them to the proper locations from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set main2Test = 2
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $main2Test

WARNING: If there are MOA files for the test data month in the input directory which are not needed for the test, then the check_inputs script will offer you the option to remove them. Please check that the files are not being used by others before exercising this option. Note that if you do not remove the files but proceed with the test, then differences will show up in the PCFTest and the METATest in Section 4.10.3.

4.10.2.1 PCF Generator

The Main Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($sat $year $month $start $end $ctlflg)
   set imageFiles = ISCCP.B1.0.MET-5.2001.07.03.2330.EUM
   gen_input_ggeomain.csh $params "$imageFiles"

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P7_PCFin_METEO-5_SCFTest_000003.20010700**

2. Generate the PCF:

   set PCFin = CER11.1P7_PCFin_METEO-5_SCFTest_000003.20010700
   set PCF = 'gen_pcf_ggeomain.csh $RCFDIR/$PCFin'

   This creates the following PCF in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P7_PCF_METEO-5_SCFTest_000003.20010700**

3. Modify PCF to use default cal_coeffs file:

   $TESTDIR/set_default_calcof.csh $PCF

4.10.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeomain.csh $sat $year $month $dayid $ctlflg
set PCF = CER11.1P7_PCF_METEO-5_SCFTest_000003.20010700
run_ggeomain.csh $RCFDIR/$PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.1P5-8
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/int_prod directory:
- **CER_GRAN_METEO-5_SCFTest_000003.20010700**
- **CER_GRAN_METEO-5_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:
- **CER_OQCRP_METEO-5_SCFTest_000003.20010700**
- **CER_OQCRP_METEO-5_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P7_LogReport_METEO-5_SCFTest_000003.20010700**
- **CER11.1P7_LogStatus_METEO-5_SCFTest_000003.20010700**
- **CER11.1P7_LogUser_METEO-5_SCFTest_000003.20010700**

4.10.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.10.2.4 Main Processor CER11.1P7 Test Summary

Here is the time function output from running the test:

450.803u 7.292s 7:50.91 0+0k 259576k 4427+1io 17pf+0w

4.10.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

setenv RUNTEST3_CONTROL_FLAG 2
set METEO5 = 3
set GRANFILETest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5

The following test evaluations are done from the test_suites directory. They should be done one at a time. They can be performed in any order:

cd $CERESHOME/ggeo/test_suites
eval_runtest_main.csh $PCFTest $METEO5
eval_runtest_main.csh $QATest $METEO5
eval_runtest_main.csh $LOGTest $METEO5
eval_runtest_main.csh $METATest $METEO5
eval_runtest_main.csh $GRANFILETest $METEO5

Each test evaluation should give a message indicating SUCCESS.

4.10.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.11 CER11.1P7 Main Processor for METEO-7 (Second Pass)

4.11.1 Stand-alone Test Procedures

The CER11.1P7 test procedures can be run independently of the other GGEO PGE test procedures. The procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set sat = METEO-7
set year = 2001
set month = 07
set dayid = 00
set start = 0
set end = 0
set ctlflg = 2

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh
setenv SS11_1P3 METEO-7

4.11.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

PGE CER11.1P7 requires GEO data, plus snow and ice maps, and MOA data for cloud processing. If these data files are not in the proper input directories, then the check_inputs script will copy them to the proper locations from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set main2Test = 2
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $main2Test

WARNING: If there are MOA files for the test data month in the input directory which are not needed for the test, then the check_inputs script will offer you the option to remove them. Please check that the files are not being used by others before exercising this option. Note that if you do not remove the files but proceed with the test, then differences will show up in the PCFTest and the METATest in Section 4.10.3.

4.11.2.1 PCF Generator

The Main Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($sat $year $month $start $end $ctlflg)
   set imageFiles = ISCCP.B1.0.MET-7.2001.07.03.2330.EUM
   gen_input_ggeomain.csh $params "$imageFiles"

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P7_PCFin_METEO-7_SCFTest_000003.20010700**

2. Generate the PCF:

   set PCFin = CER11.1P7_PCFin_METEO-7_SCFTest_000003.20010700
   set PCF = 'gen_pcf_ggeomain.csh $RCFDIR/$PCFin'

   This creates the following PCF in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P7_PCF_METEO-7_SCFTest_000003.20010700**

3. Modify PCF to use default cal_coeffs file:

   $TESTDIR/set_default_calcof.csh $PCF

4.11.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeomain.csh $sat $year $month $dayid $ctlflg
set PCF = CER11.1P7_PCF_METEO-7_SCFTest_000003.20010700
run_ggeomain.csh $RCFDIR/$PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.1P5-8
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/int_prod directory:
- **CER_GRAN_METEO-7_SCFTest_000003.20010700**
- **CER_GRAN_METEO-7_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:
- **CER_OQCRP_METEO-7_SCFTest_000003.20010700**
- **CER_OQCRP_METEO-7_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P7_LogReport_METEO-7_SCFTest_000003.20010700**
- **CER11.1P7_LogStatus_METEO-7_SCFTest_000003.20010700**
- **CER11.1P7_LogUser_METEO-7_SCFTest_000003.20010700**

4.11.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.11.2.4 Main Processor CER11.1P7 Test Summary

Here is the time function output from running the test:

399.919u 6.688s 6:52.48 0+0k 259504k 3422+2io 23pf+0w

4.11.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

setenv RUNTEST3_CONTROL_FLAG 2
set METEO7 = 4
set GRANFILETest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5

The following test evaluations are done from the test_suites directory. They should be done one at a time. They can be performed in any order:

cd $CERESHOME/ggeo/test_suites
eval_runtest_main.csh $PCFTest $METEO7
eval_runtest_main.csh $QATest $METEO7
eval_runtest_main.csh $LOGTest $METEO7
eval_runtest_main.csh $METATest $METEO7
eval_runtest_main.csh $GRANFILETest $METEO7

Each test evaluation should give a message indicating SUCCESS.

4.11.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.12 CER11.1P8 Main Processor for GMS-5 (Second Pass)

4.12.1 Stand-alone Test Procedures

The CER11.1P8 test procedures can be run independently of the other GGEO PGE test procedures. The procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set sat = GMS-5
set year = 2001
set month = 07
set dayid = 00
set start = 0
set end = 0
set ctlflg = 2

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh

4.12.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

PGE CER11.1P8 requires GEO data, plus snow and ice maps, and MOA data for cloud processing. If these data files are not in the proper input directories, then the check_inputs script will copy them to the proper locations from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set main2Test = 2
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $main2Test

WARNING: If there are MOA files for the test data month in the input directory which are not needed for the test, then the check_inputs script will offer you the option to remove them. Please check that the files are not being used by others before exercising this option. Note that if you do not remove the files but proceed with the test, then differences will show up in the PCFTest and the METATest in Section 4.12.3.

4.12.2.1 PCF Generator

The Main Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($sat $year $month $start $end $ctlflg)
   set imageFiles = B1GMS05.D0107.F0026
   gen_input_ggeomain.csh $params "$imageFiles"

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P8_PCFin_GMS-5_SCFTest_000003.20010700**

2. Generate the PCF:

   set PCFin = CER11.1P8_PCFin_GMS-5_SCFTest_000003.20010700
   set PCF = 'gen_pcf_ggeomain.csh $RCFDIR/$PCFin'

   This creates the following PCF in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P8_PCF_GMS-5_SCFTest_000003.20010700**

3. Modify PCF to use default cal_coeffs file:

   $TESTDIR/set_default_calcof.csh $PCF

4.12.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeomain.csh $sat $year $month $dayid $ctlflg
set PCF = CER11.1P8_PCF_GMS-5_SCFTest_000003.20010700
run_ggeomain.csh $RCFDIR/$PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.1P5-8
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/int_prod directory:
- **CER_GRAN_GMS-5_SCFTest_000003.20010700**
- **CER_GRAN_GMS-5_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:
- **CER_OQCRP_GMS-5_SCFTest_000003.20010700**
- **CER_OQCRP_GMS-5_SCFTest_000003.20010700.met**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P8_LogReport_GMS-5_SCFTest_000003.20010700**
- **CER11.1P8_LogStatus_GMS-5_SCFTest_000003.20010700**
- **CER11.1P8_LogUser_GMS-5_SCFTest_000003.20010700**

4.12.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.12.2.4 Main Processor CER11.1P8 Test Summary

Here is the time function output from running the test:

581.867u 6.198s 9:52.94 0+0k 251496k 4320+2io 9pf+0w

4.12.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

```
setenv RUNTEST3_CONTROL_FLAG 2
set GMS = 5
set GRANFILETest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5
```

The following test evaluations are done from the test_suites directory. They should be done one at a time. They can be performed in any order:

```
cd $CERESHOME/ggeo/test_suites
eval_runtest_main.csh $PCFTest $GMS
eval_runtest_main.csh $QATest $GMS
eval_runtest_main.csh $LOGTest $GMS
eval_runtest_main.csh $METATest $GMS
eval_runtest_main.csh $GRANFILETest $GMS
```

Each test evaluation should give a message indicating SUCCESS.

4.12.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.13 CER11.2P2 Postprocessor (Second Pass)

4.13.1 Stand-alone Test Procedures

The CER11.2P2 test procedures cannot be run unless outputs are available from the successfully run test procedures for PGEs CER11.1P5 through CER11.1P8. The following procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set year = 2001
set month = 07
set ctlflg = 2
set plotflg = y
set firstplot = 73
set lastplot = 73

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh

4.13.2 Check Inputs

The only inputs required for PGE CER11.2P2 are the granfile outputs created by the second pass Main Processor. These inputs will be available if the testing in Section 4.8 through Section 4.12 was successful.

4.13.2.1 PCF Generator

The Postprocessor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($year $month $ctlflg $plotflg $firstplot $lastplot)
   gen_input_ggeopost.csh $params

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.2P2_PCFin_Composite_SCFTest_000003.200107**

2. Generate the PCF:

   set PCFin = $RCFDIR/CER11.2P2_PCFin_Composite_SCFTest_000003.200107
   gen_pcf_ggeopost.csh $PCFin

This creates the following PCF in the $CERESHOME/ggeo/rcf directory:

- **CER11.2P2_PCF_Composite_SCFTest_000003.200107**

4.13.2.2 Execution

The Postprocessor PGE is run by executing the run_ggeopost.csh script. The clean_ggeopost.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeopost.csh $year $month $ctlflg
set PCF = $RCFDIR/CER11.2P2_PCF_Composite_SCFTest_000003.200107
run_ggeopost.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.2P2
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/out_comp/data directory:

- **CER_GGEO_Composite_SCFTest_000003.200107**
- **CER_GGEO_Composite_SCFTest_000003.200107.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:

- **CER_OQCPP_Composite_SCFTest_000003.200107**
- **CER_OQCPP_Composite_SCFTest_000003.200107.met**

In the $CERESHOME/ggeo/web/plot/gif directory:

- **GGEO_200107/ (this is a directory that gets created)**

In the $CERESHOME/ggeo/web/plot/gif/GGEO_200107 directory:

- **AZMTH_29.gif**
- **CLDPRCNT_29.gif**
- **CLDTEMP_29.gif**
- **IRNUM_29.gif**
- **IRSD_29.gif**
- **IR_29.gif**
- **OPTDPTH_29.gif**
- **SATZEN_29.gif**
- **SOLZEN_29.gif**
- **VISNUM_29.gif**
- **VISSD_29.gif**
- **VIS_29.gif**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.2P2_LogReport_Composite_SCFTest_000003.200107**
- **CER11.2P2_LogUser_Composite_SCFTest_000003.200107**
- **CER11.2P2_LogStatus_Composite_SCFTest_000003.200107**

4.13.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.13.2.4 Postprocessor CER11.2P2 Test Summary

Here is the time function output from running the test:

206.147u 26.995s 5:04.83 0+0k 9264k 28840+7io 63pf+0w

4.13.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

```
setenv RUNTEST3_CONTROL_FLAG 2
set GGEOTest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5
```

The following test evaluations are done from the test_suites directory. They should be done one at a time. They can be performed in any order:

```
cd $CERESHOME/ggeo/test_suites
eval_runtest_post.csh $PCFTest
eval_runtest_post.csh $QATest
eval_runtest_post.csh $LOGTest
eval_runtest_post.csh $METATest
eval_runtest_post.csh $GGEOTest
```

Each test evaluation should give a message indicating SUCCESS.

4.13.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.14 CER11.4P1 Create Correlation Plots of GGEO vs. CERES Cloud Data

4.14.1 Stand-alone Test Procedures

The CER11.4P1 test procedures cannot be run unless output is available from the successfully run test procedures for PGE CER11.2P2. The following procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set year = 2001
set month = 07

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh

4.14.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

PGE CER11.4P1 requires the second pass GGEO output file created in Section 4.13. It also needs SFC binary files. If the SFC files are not in the proper input directory, then the check_inputs script will copy them there from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set cldpltTest = 6
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $cldpltTest

4.14.2.1 PCF Generator

This PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($year $month)
   gen_input_nb_cloudplot.csh $params

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.4P1_PCFin_Composite-MODIS_SCFTest_000003.200107**

2. Generate the PCF:

   set PCFin = $RCFDIR/CER11.4P1_PCFin_Composite-MODIS_SCFTest_000003.200107
   gen_pcf_nb_cloudplot.csh $PCFin

   This creates the following PCF in the $CERESHOME/ggeo/rcf directory:
   - **CER11.4P1_PCF_Composite-MODIS_SCFTest_000003.200107**

4.14.2.2 Execution

The Postprocessor PGE is run by executing the run_ggeopost.csh script. The clean_ggeopost.csh script is run prior to job execution to clean up files created during previous test runs.

clean_nb_cloudplot.csh $year $month
set PCF = $RCFDIR/CER11.4P1_PCF_Composite-MODIS_SCFTest_000003.200107
run_nb_cloudplot.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.4
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/web/ps directory:
- **CER_cloudplot_Composite-MODIS_SCFTest_000003.200107.ps**
- **CER_cloudplot_Composite-MODIS_SCFTest_000003.200107.stats**

In the $CERESHOME/ggeo/web/ps/scr directory:
- **CER_CERES_GOES-10_REGAVG.200107**
- **CER_CERES_GOES-8_REGAVG.200107**
- **CER_CERES_METEO-7_REGAVG.200107**
- **CER_CERES_GMS-5_ZONAVG_cldamt.200107**
- **CER_CERES_GMS-5_ZONAVG_optdepth.200107**
- **CER_CERES_GMS-5_ZONAVG_temp.200107**
- **CER_CERES_GOES-10_ZONAVG_cldamt.200107**
- **CER_CERES_GOES-10_ZONAVG_optdepth.200107**
- **CER_CERES_GOES-10_ZONAVG_temp.200107**
- **CER_CERES_GOES-8_ZONAVG_cldamt.200107**
- **CER_CERES_GOES-8_ZONAVG_optdepth.200107**
- **CER_CERES_GOES-8_ZONAVG_temp.200107**
- **CER_CERES_METEO-5_ZONAVG_cldamt.200107**
- **CER_CERES_METEO-5_ZONAVG_optdepth.200107**
- **CER_CERES_METEO-5_ZONAVG_temp.200107**
- **CER_CERES_METEO-7_ZONAVG_cldamt.200107**

- **CER_CERES_METEO-7_ZONAVG_optdepth.200107**
- **CER_CERES_METEO-7_ZONAVG_temp.200107**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:

- **CER_QCRPT_Composite-MODIS_SCFTest_000003.200107**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.4P1_LogStatus_Composite-MODIS_SCFTest_000003.200107**
- **CER11.4P1_LogReport_Composite-MODIS_SCFTest_000003.200107**
- **CER11.4P1_LogUser_Composite-MODIS_SCFTest_000003.200107**

4.14.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.14.2.4 PGE CER11.4P1 Test Summary

Here is the time function output from running the test:

6883.210u 83.514s 1:56:35.20 0+0k 20968k 211930+4io 66pf+0w

4.14.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

```
set QCRPTest = 1
set PCFTest = 2
set SCRATCHFILETest = 3
set LOGTest = 4
```

The following test evaluations are done from the test_suites directory. They should be done one at a time. They can be performed in any order:

```
cd $CERESHOME/ggeo/test_suites
eval_runtest_cloudplot.csh $PCFTest
eval_runtest_cloudplot.csh $LOGTest
eval_runtest_cloudplot.csh $SCRATCHFILETest
eval_runtest_cloudplot.csh $QCRPTest
```

Each test evaluation should give a message indicating SUCCESS.

4.14.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.15 CER11.1P10 Main Processor for METEO-8 McIDAS Data

4.15.1 Stand-alone Test Procedures

The CER11.1P10 test procedures can be run independently of the other GGEO PGE test procedures. The procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set sat = METEO-8
set year = 2004
set month = 07
set dayid = 00
set start = 0
set end = 0
set ctlflg = 2

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh
setenv SS11_1P10 $sat

4.15.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

PGE CER11.1P10 requires GEO data, plus snow and ice maps, and MOA data for cloud processing. If these data files are not in the proper input directories, then the check_inputs script will copy them to the proper locations from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set mcidasTest = 3
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $mcidasTest

WARNING: If there are MOA files for the test data month in the input directory which are not needed for the test, then the check_inputs script will offer you the option to remove them. Please check that the files are not being used by others before exercising this option. Note that if you do not remove the files but proceed with the test, then differences will show up in the PCFTest and the METATest in Section 4.8.3.

4.15.2.1 PCF Generator

The Main Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($sat $year $month $start $end $ctlflg)
   set imageFiles = MCIDAS.MET8.2004.07.18.0300.09K.bin
   gen_input_ggeomain_mcidas.csh $params "$imageFiles"

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P10_PCFin_MCIDAS-METEO-8_SCFTest_000003.20040700**

2. Generate the PCF:

   set PCFin = CER11.1P10_PCFin_MCIDAS-METEO-8_SCFTest_000003.20040700
   set PCF = 'gen_pcf_ggeomain_mcidas.csh $RCFDIR/$PCFin'

   This creates the following PCF in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P10_PCF_MCIDAS-METEO-8_SCFTest_000003.20040700**

3. Modify PCF to use default cal_coeffs file:

   $TESTDIR/set_default_calcof.csh $PCF

4.15.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeomain_mcidas.csh $sat $year $month $dayid $ctlflg
run_ggeomain.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.1P10
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/int_prod directory:
- **CER_GRAN_MCIDAS-METEO-8_SCFTest_000003.20040700**
- **CER_GRAN_MCIDAS-METEO-8_SCFTest_000003.20040700.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:

- **CER_OQCRP_MCIDAS-METEO-8_SCFTest_000003.20040700**
- **CER_OQCRP_MCIDAS-METEO-8_SCFTest_000003.20040700.met**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P10_LogReport_MCIDAS-METEO-8_SCFTest_000003.20040700**
- **CER11.1P10_LogStatus_MCIDAS-METEO-8_SCFTest_000003.20040700**
- **CER11.1P10_LogUser_MCIDAS-METEO-8_SCFTest_000003.20040700**

4.15.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.15.2.4 Main Processor CER11.1P10 Test Summary

Here is the time function output from running the test:

409.272u 7.791s 7:03.53 0+0k 287776k 3440+1io 27pf+0w

4.15.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

```
setenv RUNTEST_MCIDAS_CONTROL_FLAG 2
set MET8 = 1
set GRANFILETest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5
```

The following test evaluations should be done one at a time. They can be performed in any order:

```
cd $CERESHOME/ggeo/test_suites
eval_runtest_main_mcidas.csh $PCFTest $MET8
eval_runtest_main_mcidas.csh $QATest $MET8
eval_runtest_main_mcidas.csh $LOGTest $MET8
eval_runtest_main_mcidas.csh $METATest $MET8
eval_runtest_main_mcidas.csh $GRANFILETest $MET8
```

Each test evaluation should give a message indicating SUCCESS.

4.15.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.16 CER11.1P10 Main Processor for METEO-5 McIDAS Data

4.16.1 Stand-alone Test Procedures

The CER11.1P10 test procedures can be run independently of the other GGEO PGE test procedures. The procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set sat = METEO-5
set year = 2004
set month = 07
set dayid = 00
set start = 0
set end = 0
set ctlflg = 2

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh
setenv SS11_1P10 $sat

4.16.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

PGE CER11.1P10 requires GEO data, plus snow and ice maps, and MOA data for cloud processing. If these data files are not in the proper input directories, then the check_inputs script will copy them to the proper locations from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set mcidasTest = 3
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $mcidasTest

WARNING: If there are MOA files for the test data month in the input directory which are not needed for the test, then the check_inputs script will offer you the option to remove them. Please check that the files are not being used by others before exercising this option. Note that if you do not remove the files but proceed with the test, then differences will show up in the PCFTest and the METATest in Section 4.8.3.

4.16.2.1 PCF Generator

The Main Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($sat $year $month $start $end $ctlflg)
   set imageFiles = MCIDAS.MET5.2004.07.18.0300.04K.bin
   gen_input_ggeomain_mcidas.csh $params "$imageFiles"

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P10_PCFin_MCIDAS-METEO-5_SCFTest_000003.20040700**

2. Generate the PCF:

   set PCFin = CER11.1P10_PCFin_MCIDAS-METEO-5_SCFTest_000003.20040700
   set PCF = 'gen_pcf_ggeomain_mcidas.csh $RCFDIR/$PCFin'

   This creates the following PCF in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P10_PCF_MCIDAS-METEO-5_SCFTest_000003.20040700**

3. Modify PCF to use default cal_coeffs file:

   $TESTDIR/set_default_calcof.csh $PCF

4.16.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeomain_mcidas.csh $sat $year $month $dayid $ctlflg
run_ggeomain.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.1P10
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/int_prod directory:
- **CER_GRAN_MCIDAS-METEO-5_SCFTest_000003.20040700**
- **CER_GRAN_MCIDAS-METEO-5_SCFTest_000003.20040700.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:

- **CER_OQCRP_MCIDAS-METEO-5_SCFTest_000003.20040700**
- **CER_OQCRP_MCIDAS-METEO-5_SCFTest_000003.20040700.met**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P10_LogReport_MCIDAS-METEO-5_SCFTest_000003.20040700**
- **CER11.1P10_LogStatus_MCIDAS-METEO-5_SCFTest_000003.20040700**
- **CER11.1P10_LogUser_MCIDAS-METEO-5_SCFTest_000003.20040700**

4.16.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.16.2.4 Main Processor CER11.1P10 Test Summary

Here is the time function output from running the test:

546.603u 8.097s 9:22.68 0+0k 285424k 4259+1io 17pf+0w

4.16.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

setenv RUNTEST_MCIDAS_CONTROL_FLAG 2
set MET5 = 1
set GRANFILETest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5

The following test evaluations should be done one at a time. They can be performed in any order:

cd $CERESHOME/ggeo/test_suites
eval_runtest_main_mcidas.csh $PCFTest $MET5
eval_runtest_main_mcidas.csh $QATest $MET5
eval_runtest_main_mcidas.csh $LOGTest $MET5
eval_runtest_main_mcidas.csh $METATest $MET5
eval_runtest_main_mcidas.csh $GRANFILETest $MET5

Each test evaluation should give a message indicating SUCCESS.

4.16.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.17 CER11.1P10 Main Processor for GOES-9 McIDAS Data

4.17.1 Stand-alone Test Procedures

The CER11.1P10 test procedures can be run independently of the other GGEO PGE test procedures. The procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set sat = GOES-9
set year = 2004
set month = 07
set dayid = 00
set start = 0
set end = 0
set ctlflg = 2

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh
setenv SS11_1P10 $sat

4.17.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

PGE CER11.1P10 requires GEO data, plus snow and ice maps, and MOA data for cloud processing. If these data files are not in the proper input directories, then the check_inputs script will copy them to the proper locations from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set mcidasTest = 3
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $mcidasTest

WARNING: If there are MOA files for the test data month in the input directory which are not needed for the test, then the check_inputs script will offer you the option to remove them. Please check that the files are not being used by others before exercising this option. Note that if you do not remove the files but proceed with the test, then differences will show up in the PCFTest and the METATest in Section 4.8.3.

4.17.2.1 PCF Generator

The Main Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($sat $year $month $start $end $ctlflg)
   set imageFiles = MCIDAS.G-09.2004.07.18.0325.08K.bin
   gen_input_ggeomain_mcidas.csh $params "$imageFiles"

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P10_PCFin_MCIDAS-GOES-9_SCFTest_000003.20040700**

2. Generate the PCF:

   set PCFin = CER11.1P10_PCFin_MCIDAS-GOES-9_SCFTest_000003.20040700
   set PCF = 'gen_pcf_ggeomain_mcidas.csh $RCFDIR/$PCFin'

   This creates the following PCF in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P10_PCF_MCIDAS-GOES-9_SCFTest_000003.20040700**

3. Modify PCF to use default cal_coeffs file:

   $TESTDIR/set_default_calcof.csh $PCF

4.17.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeomain_mcidas.csh $sat $year $month $dayid $ctlflg
run_ggeomain.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.1P10
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/int_prod directory:
- **CER_GRAN_MCIDAS-GOES-9_SCFTest_000003.20040700**
- **CER_GRAN_MCIDAS-GOES-9_SCFTest_000003.20040700.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:

- **CER_OQCRP_MCIDAS-GOES-9_SCFTest_000003.20040700**
- **CER_OQCRP_MCIDAS-GOES-9_SCFTest_000003.20040700.met**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P10_LogReport_MCIDAS-GOES-9_SCFTest_000003.20040700**
- **CER11.1P10_LogStatus_MCIDAS-GOES-9_SCFTest_000003.20040700**
- **CER11.1P10_LogUser_MCIDAS-GOES-9_SCFTest_000003.20040700**

4.17.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.17.2.4 Main Processor CER11.1P10 Test Summary

Here is the time function output from running the test:

1244.828u 9.572s 21:04.49 0+0k 336752k 3318+1io 19pf+0w

4.17.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

setenv RUNTEST_MCIDAS_CONTROL_FLAG 2
set GOES9 = 1
set GRANFILETest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5

The following test evaluations should be done one at a time. They can be performed in any order:

cd $CERESHOME/ggeo/test_suites
eval_runtest_main_mcidas.csh $PCFTest $GOES9
eval_runtest_main_mcidas.csh $QATest $GOES9
eval_runtest_main_mcidas.csh $LOGTest $GOES9
eval_runtest_main_mcidas.csh $METATest $GOES9
eval_runtest_main_mcidas.csh $GRANFILETest $GOES9

Each test evaluation should give a message indicating SUCCESS.

4.17.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.18 CER11.1P10 Main Processor for GOES-10 McIDAS Data

4.18.1 Stand-alone Test Procedures

The CER11.1P10 test procedures can be run independently of the other GGEO PGE test procedures. The procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set sat = GOES-10
set year = 2004
set month = 07
set dayid = 00
set start = 0
set end = 0
set ctlflg = 2

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh
setenv SS11_1P10 $sat

4.18.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

PGE CER11.1P10 requires GEO data, plus snow and ice maps, and MOA data for cloud processing. If these data files are not in the proper input directories, then the check_inputs script will copy them to the proper locations from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set mcidasTest = 3
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $mcidasTest

WARNING: If there are MOA files for the test data month in the input directory which are not needed for the test, then the check_inputs script will offer you the option to remove them. Please check that the files are not being used by others before exercising this option. Note that if you do not remove the files but proceed with the test, then differences will show up in the PCFTest and the METATest in Section 4.8.3.

4.18.2.1 PCF Generator

The Main Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($sat $year $month $start $end $ctlflg)
   set imageFiles = MCIDAS.G-10.2004.07.18.0300.08K.bin
   gen_input_ggeomain_mcidas.csh $params "$imageFiles"

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P10_PCFin_MCIDAS-GOES-10_SCFTest_000003.20040700**

2. Generate the PCF:

   set PCFin = CER11.1P10_PCFin_MCIDAS-GOES-10_SCFTest_000003.20040700
   set PCF = 'gen_pcf_ggeomain_mcidas.csh $RCFDIR/$PCFin'

   This creates the following PCF in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P10_PCF_MCIDAS-GOES-10_SCFTest_000003.20040700**

3. Modify PCF to use default cal_coeffs file:

   $TESTDIR/set_default_calcof.csh $PCF

4.18.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeomain_mcidas.csh $sat $year $month $dayid $ctlflg
run_ggeomain.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.1P10
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/int_prod directory:
- **CER_GRAN_MCIDAS-GOES-10_SCFTest_000003.20040700**
- **CER_GRAN_MCIDAS-GOES-10_SCFTest_000003.20040700.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:

- **CER_OQCRP_MCIDAS-GOES-10_SCFTest_000003.20040700**
- **CER_OQCRP_MCIDAS-GOES-10_SCFTest_000003.20040700.met**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P10_LogReport_MCIDAS-GOES-10_SCFTest_000003.20040700**
- **CER11.1P10_LogStatus_MCIDAS-GOES-10_SCFTest_000003.20040700**
- **CER11.1P10_LogUser_MCIDAS-GOES-10_SCFTest_000003.20040700**

4.18.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.18.2.4 Main Processor CER11.1P10 Test Summary

Here is the time function output from running the test:

929.923u 8.385s 15:50.90 0+0k 336752k 4477+2io 44pf+0w

4.18.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

```
setenv RUNTEST_MCIDAS_CONTROL_FLAG 2
set GOES10 = 1
set GRANFILETest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5
```

The following test evaluations should be done one at a time. They can be performed in any order:

```
cd $CERESHOME/ggeo/test_suites
eval_runtest_main_mcidas.csh $PCFTest $GOES10
eval_runtest_main_mcidas.csh $QATest $GOES10
eval_runtest_main_mcidas.csh $LOGTest $GOES10
eval_runtest_main_mcidas.csh $METATest $GOES10
eval_runtest_main_mcidas.csh $GRANFILETest $GOES10
```

Each test evaluation should give a message indicating SUCCESS.

4.18.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.19 CER11.1P10 Main Processor for GOES-12 McIDAS Data

4.19.1 Stand-alone Test Procedures

The CER11.1P10 test procedures can be run independently of the other GGEO PGE test procedures. The procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set sat = GOES-12
set year = 2004
set month = 07
set dayid = 00
set start = 0
set end = 0
set ctlflg = 2

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh
setenv SS11_1P10 $sat

4.19.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

PGE CER11.1P10 requires GEO data, plus snow and ice maps, and MOA data for cloud processing. If these data files are not in the proper input directories, then the check_inputs script will copy them to the proper locations from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set mcidasTest = 3
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $mcidasTest

WARNING: If there are MOA files for the test data month in the input directory which are not needed for the test, then the check_inputs script will offer you the option to remove them. Please check that the files are not being used by others before exercising this option. Note that if you do not remove the files but proceed with the test, then differences will show up in the PCFTest and the METATest in Section 4.8.3.

4.19.2.1 PCF Generator

The Main Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($sat $year $month $start $end $ctlflg)
   set imageFiles = MCIDAS.G-12.2004.07.18.0245.08K.bin
   gen_input_ggeomain_mcidas.csh $params "$imageFiles"

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P10_PCFin_MCIDAS-GOES-12_SCFTest_000003.20040700**

2. Generate the PCF:

   set PCFin = CER11.1P10_PCFin_MCIDAS-GOES-12_SCFTest_000003.20040700
   set PCF = 'gen_pcf_ggeomain_mcidas.csh $RCFDIR/$PCFin'

   This creates the following PCF in the $CERESHOME/ggeo/rcf directory:
   - **CER11.1P10_PCF_MCIDAS-GOES-12_SCFTest_000003.20040700**

3. Modify PCF to use default cal_coeffs file:

   $TESTDIR/set_default_calcof.csh $PCF

4.19.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeomain_mcidas.csh $sat $year $month $dayid $ctlflg
run_ggeomain.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.1P10
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/int_prod directory:
- **CER_GRAN_MCIDAS-GOES-12_SCFTest_000003.20040700**
- **CER_GRAN_MCIDAS-GOES-12_SCFTest_000003.20040700.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:

- **CER_OQCRP_MCIDAS-GOES-12_SCFTest_000003.20040700**
- **CER_OQCRP_MCIDAS-GOES-12_SCFTest_000003.20040700.met**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.1P10_LogReport_MCIDAS-GOES-12_SCFTest_000003.20040700**
- **CER11.1P10_LogStatus_MCIDAS-GOES-12_SCFTest_000003.20040700**
- **CER11.1P10_LogUser_MCIDAS-GOES-12_SCFTest_000003.20040700**

4.19.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.19.2.4 Main Processor CER11.1P10 Test Summary

Here is the time function output from running the test:

787.531u 14.835s 13:29.87 0+0k 336752k 4459+1io 37pf+0w

4.19.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

```
setenv RUNTEST_MCIDAS_CONTROL_FLAG 2
set GOES12 = 1
set GRANFILETest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5
```

The following test evaluations should be done one at a time. They can be performed in any order:

```
cd $CERESHOME/ggeo/test_suites
eval_runtest_main_mcidas.csh $PCFTest $GOES12
eval_runtest_main_mcidas.csh $QATest $GOES12
eval_runtest_main_mcidas.csh $LOGTest $GOES12
eval_runtest_main_mcidas.csh $METATest $GOES12
eval_runtest_main_mcidas.csh $GRANFILETest $GOES12
```

Each test evaluation should give a message indicating SUCCESS.

4.19.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.20 CER11.2P2 Postprocessor with McIDAS Data (Second Pass)

4.20.1 Stand-alone Test Procedures

These CER11.2P2 test procedures cannot be run unless outputs are available from the successfully run test procedures for PGE CER11.1P10 from Section 4.15 through Section 4.19. The following procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set year = 2004
set month = 07
set ctlflg = 2
set plotflg = y
set firstplot = 412
set lastplot = 412

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh

4.20.2 Check Inputs

The only inputs required for PGE CER11.2P2 are the granfile outputs created by Main Processor tests on the McIDAS format data. These inputs will be available if the testing in Section 4.15 through Section 4.19 was successful.

4.20.2.1 PCF Generator

The Postprocessor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($year $month $ctlflg $plotflg $firstplot $lastplot)
   gen_input_ggeopost.csh $params

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.2P2_PCFin_Composite_SCFTest_000003.200407**

2. Generate the PCF:

   set PCFin = $RCFDIR/CER11.2P2_PCFin_Composite_SCFTest_000003.200407
   gen_pcf_ggeopost.csh $PCFin

This creates the following PCF in the $CERESHOME/ggeo/rcf directory:

- **CER11.2P2_PCF_Composite_SCFTest_000003.200407**

4.20.2.2 Execution

The Postprocessor PGE is run by executing the run_ggeopost.csh script. The clean_ggeopost.csh script is run prior to job execution to clean up files created during previous test runs.

```
clean_ggeopost.csh $year $month $ctlflg
set PCF = $RCFDIR/CER11.2P2_PCF_Composite_SCFTest_000003.200407
run_ggeopost.csh $PCF
```

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

```
cd $CERESHOME/ggeo/test_suites/11.2P2
$CERESLIB/bin/setVariables.csh test
```

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/out_comp/data directory:

- **CER_GGEO_Composite_SCFTest_000003.200407**
- **CER_GGEO_Composite_SCFTest_000003.200407.met**

In the $CERESHOME/ggeo/data/out_comp/qa_reports directory:

- **CER_OQCPP_Composite_SCFTest_000003.200407**
- **CER_OQCPP_Composite_SCFTest_000003.200407.met**

In the $CERESHOME/ggeo/web/plot/gif directory:

- **GGEO_200407/ (this is a directory that gets created)**

In the $CERESHOME/ggeo/web/plot/gif/GGEO_200407 directory:

- **AZMTH_142.gif**
- **CLDPRCNT_142.gif**
- **CLDTEMP_142.gif**
- **IRNUM_142.gif**
- **IRSD_142.gif**
- **IR_142.gif**
- **OPTDPTH_142.gif**
- **SATZEN_142.gif**
- **SOLZEN_142.gif**
- **VISNUM_142.gif**
- **VISSD_142.gif**
- **VIS_142.gif**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.2P2_LogReport_Composite_SCFTest_000003.200407**
- **CER11.2P2_LogUser_Composite_SCFTest_000003.200407**
- **CER11.2P2_LogStatus_Composite_SCFTest_000003.200407**

4.20.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.20.2.4 Postprocessor CER11.2P2 Test Summary

Here is the time function output from running the test:

206.147u 26.995s 5:04.83 0+0k 9264k 28840+7io 63pf+0w

4.20.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

```
setenv RUNTEST3_CONTROL_FLAG 2
setenv YEAR    2004
setenv MONTH   07
set GGEOTest = 1
set PCFTest = 2
set QATest = 3
set LOGTest = 4
set METATest = 5
```

The following test evaluations are done from the test_suites directory. They should be done one at a time. They can be performed in any order:

```
cd $CERESHOME/ggeo/test_suites
eval_runtest_post.csh $PCFTest
eval_runtest_post.csh $QATest
eval_runtest_post.csh $LOGTest
eval_runtest_post.csh $METATest
eval_runtest_post.csh $GGEOTest
```

Each test evaluation should give a message indicating SUCCESS.

4.20.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

4.21 CER11.6P1 GGEO Weeder Processor

4.21.1 Stand-alone Test Procedures

The CER11.6P1 test procedures cannot be run unless output is available from the successfully run test procedures for PGE CER11.2P2. The following procedures use the common environment variable definitions defined in Section 4.0.1.

Here are the parameters used in this test:

set year = 2001
set month = 10

Test-specific environment variables such as Sampling Strategy, Production Strategy, Configuration Code, and Software and Data SCCR Numbers, can be set by sourcing the GGEO environment variable script for the data month of the test data.

source $TESTDIR/ggeo-${year}${month}-env.csh

4.21.2 Check Inputs

This section is not necessary if the commands in Section 4.0.2 were executed.

PGE CER11.6P1 requires the second pass GGEO output file created in Section 4.13. It also an ancillary data file which identifies the bad records which are to be weeded from the file. If the badrec file is not n the $CERESHOME/ggeo/data/ancillary/dynamic/ directory, then the check_inputs script will copy it there from a subdirectory under the test suites directory.

The following commands will check for the needed inputs.

set weederTest = 1
cd $CERESHOME/ggeo/test_suites
check_inputs.csh $weederTest

4.21.2.1 PCF Generator

The Weeder Processor PGE references a Process Control File (PCF) for file names, paths, and runtime parameters. The test PCF is created by executing an ASCII file generator and then using its output as input to the PCF generator.

1. Generate the ASCII input file.

   cd $CERESHOME/ggeo/bin
   set params = ($year $month)
   gen_input_ggeoweeder.csh $params

   This creates the following ASCII file in the $CERESHOME/ggeo/rcf directory:
   - **CER11.6P1_PCFin_Composite_Edition2A_019025.200110**

2. Generate the PCF:

   set PCFin = $RCFDIR/CER11.6P1_PCFin_Composite_Edition2A_019025.200110
   gen_pcf_ggeoweeder.csh $PCFin

   This creates the following PCF in the $CERESHOME/ggeo/rcf directory:
   - **CER11.6P1_PCF_Composite_Edition2A_019025.200110**

4.21.2.2 Execution

Run the Main Processor PGE by executing the run_ggeomain.csh script. The clean_ggeomain.csh script is run prior to job execution to clean up files created during previous test runs.

clean_ggeoweeder.csh $year $month
set PCF = $RCFDIR/CER11.6P1_PCF_Composite_Edition2A_019025.200110
run_ggeoweeder.csh $PCF

The following should be executed once, immediately after testing is complete and prior to running the evaluation procedures.

WARNING: If this is not run on the same day the test is executed, then the evaluation procedures will not be correct.

cd $CERESHOME/ggeo/test_suites/11.6
$CERESLIB/bin/setVariables.csh test

After job completion, the following files will have been created:

In the $CERESHOME/ggeo/data/out_comp/data
- **CER_GGEOW_Composite_Edition2A_019025.200110**
- **CER_GGEOW_Composite_Edition2A_019025.200110.met**

In the $CERESHOME/ggeo/web/plot/gif/GGEO_200110
- **AZMTH_27.gif**
- **AZMTH_59.gif**
- **AZMTH_137.gif**
- **AZMTH_186.gif**

- **CLDPRCNT_27.gif**
- **CLDPRCNT_59.gif**
- **CLDPRCNT_137.gif**
- **CLDPRCNT_186.gif**

- **CLDTEMP_27.gif**
- **CLDTEMP_59.gif**
- **CLDTEMP_137.gif**
- **CLDTEMP_186.gif**

- **IRNUM_27.gif**
- **IRNUM_59.gif**

- **IRNUM_137.gif**
- **IRNUM_186.gif**

- **IRSD_27.gif**
- **IRSD_59.gif**
- **IRSD_137.gif**
- **IRSD_186.gif**

- **IR_27.gif**
- **IR_59.gif**
- **IR_137.gif**
- **IR_186.gif**

- **OPTDPTH_27.gif**
- **OPTDPTH_59.gif**
- **OPTDPTH_137.gif**
- **OPTDPTH_186.gif**

- **SATZEN_27.gif**
- **SATZEN_59.gif**
- **SATZEN_137.gif**
- **SATZEN_186.gif**

- **SOLZEN_27.gif**
- **SOLZEN_59.gif**
- **SOLZEN_137.gif**
- **SOLZEN_186.gif**

- **VISNUM_27.gif**
- **VISNUM_59.gif**
- **VISNUM_137.gif**
- **VISNUM_186.gif**

- **VISSD_27.gif**
- **VISSD_59.gif**
- **VISSD_137.gif**
- **VISSD_186.gif**

- **VIS_27.gif**
- **VIS_59.gif**
- **VIS_137.gif**
- **VIS_186.gif**

In the $CERESHOME/ggeo/data/runlogs directory:

- **CER11.6P1_LogReport_Composite_Edition2A_019025.200110**
- **CER11.6P1_LogStatus_Composite_Edition2A_019025.200110**
- **CER11.6P1_LogUser_Composite_Edition2A_019025.200110**

4.21.2.3 Exit Codes

All GGEO software terminates using the CERES-defined EXIT CODES for the Langley TRMM Information System (LaTIS). Successful completion is indicated by an exit code of 0.

4.21.2.4 Main Processor CER11.6P1 Test Summary

Here is the time function output from running the test:

124.464u 55.853s 4:00.04 0+0k 8416k 58341+31io 101pf+0w

4.21.3 Evaluation Procedures

Set the following environment variables prior to evaluating the test results.

set GGEOWTest = 1
set PCFTest = 2
set LOGTest = 4
set METATest = 5

The following test evaluations should be done one at a time. They can be performed in any order:

cd $CERESHOME/ggeo/test_suites
eval_runtest_weeder.csh $PCFTest
eval_runtest_weeder.csh $LOGTest
eval_runtest_weeder.csh $METATest
eval_runtest_weeder.csh $GGEOWTest

Each test evaluation should give a message indicating SUCCESS.

4.21.4 Solutions to Possible Problems

In the event of problems, contact one of the GGEO analysts.

Appendix A
Acronyms and Abbreviations

ASDC	Atmospheric Sciences Data Center
CERES	Clouds and the Earth's Radiant Energy System
DAAC	Distributed Active Archive Center
EOS	Earth Observing System
EOS-AM	EOS Morning Crossing Mission
EOS-PM	EOS Afternoon Crossing Mission
ERBE	Earth Radiation Budget Experiment
ERBS	Earth Radiation Budget Satellite
GGEO	Grid GEOstationary data subsystem
GMT	Greenwich Mean Time
ISCCP	International Satellite Cloud Climatology Project
K	Kilobytes
LaTIS	Langley TRMM Information System
MBytes	Megabytes
NASA	National Aeronautics and Space Administration
NOAA	National Oceanic and Atmospheric Administration
PCF	Process Control File
PGE	Product Generation Executive (formerly Generation Executable)
SMF	Status Message File
TISA	Time Interpolation and Spatial Averaging
TRMM	Tropical Rainfall Measuring Mission

Appendix B
Directory Structure Diagram

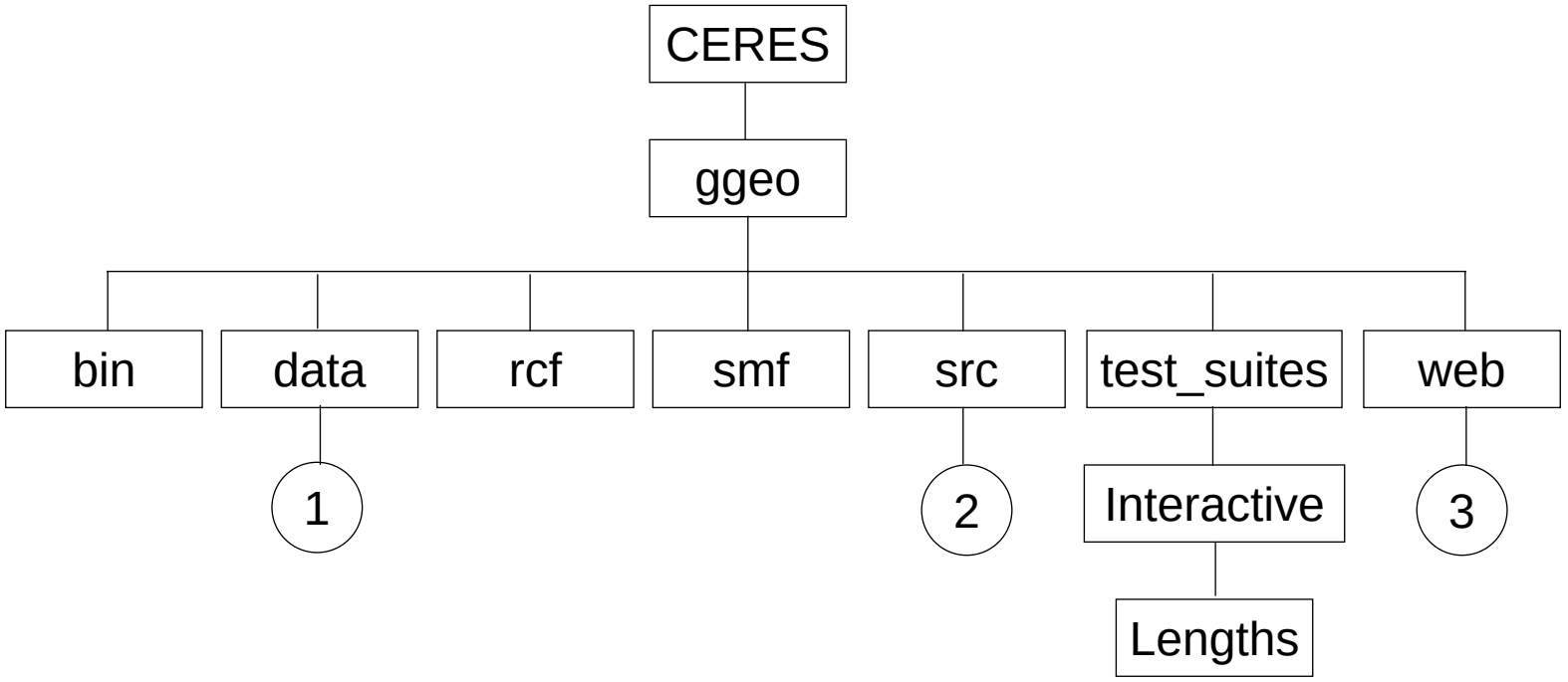

Figure B-1. Directory Structure for GGEO Subsystem (1 of 4)

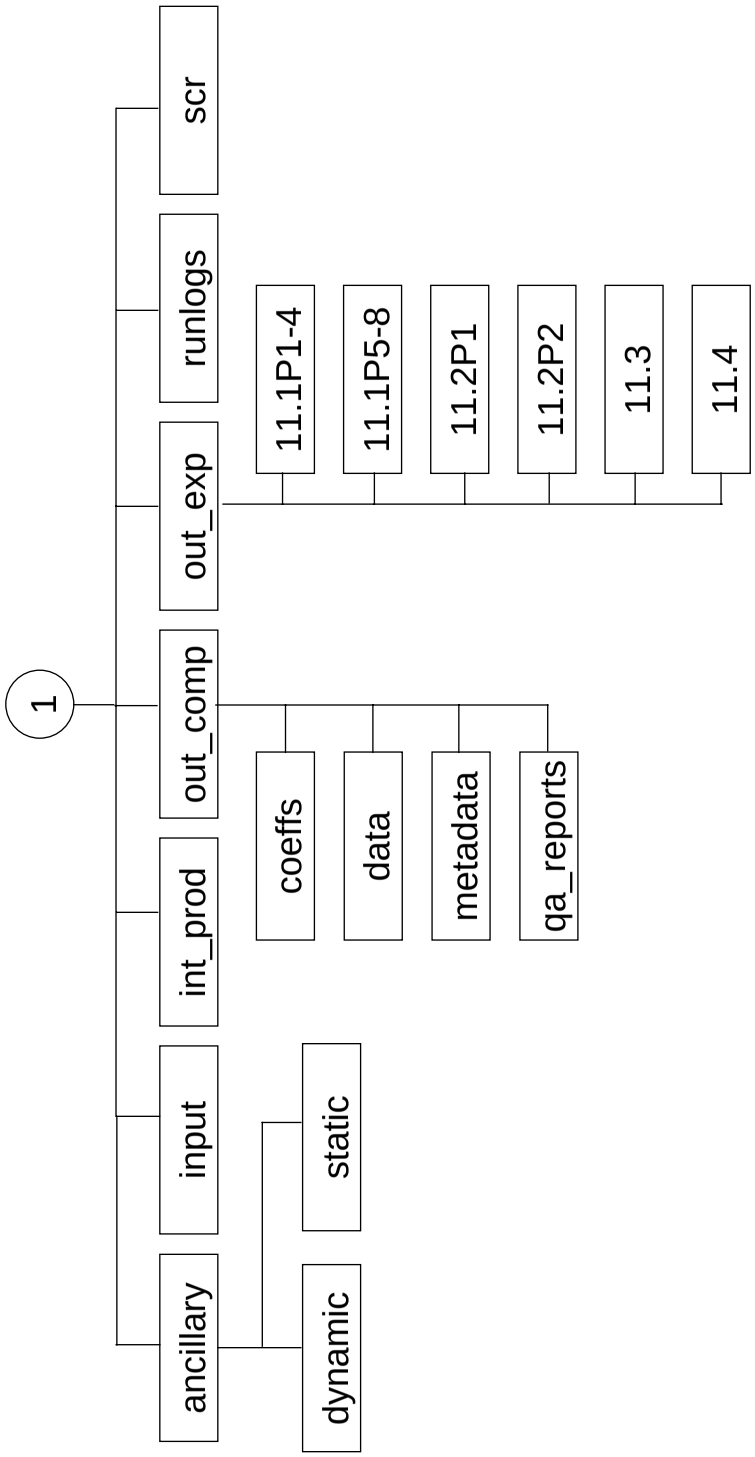

Figure B-1. Directory Structure for GGEO Subsystem (2 of 4)

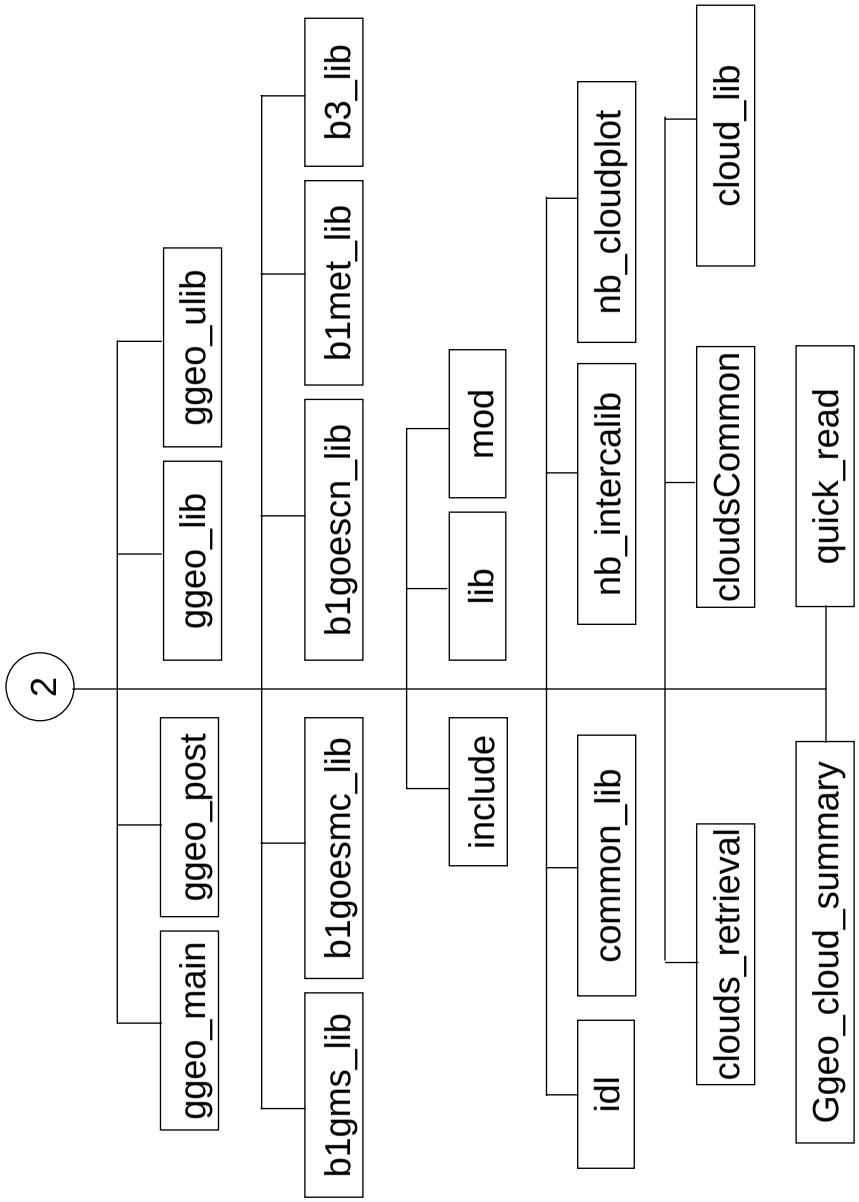

Figure B-1. Directory Structure for GGEO Subsystem (3 of 4)

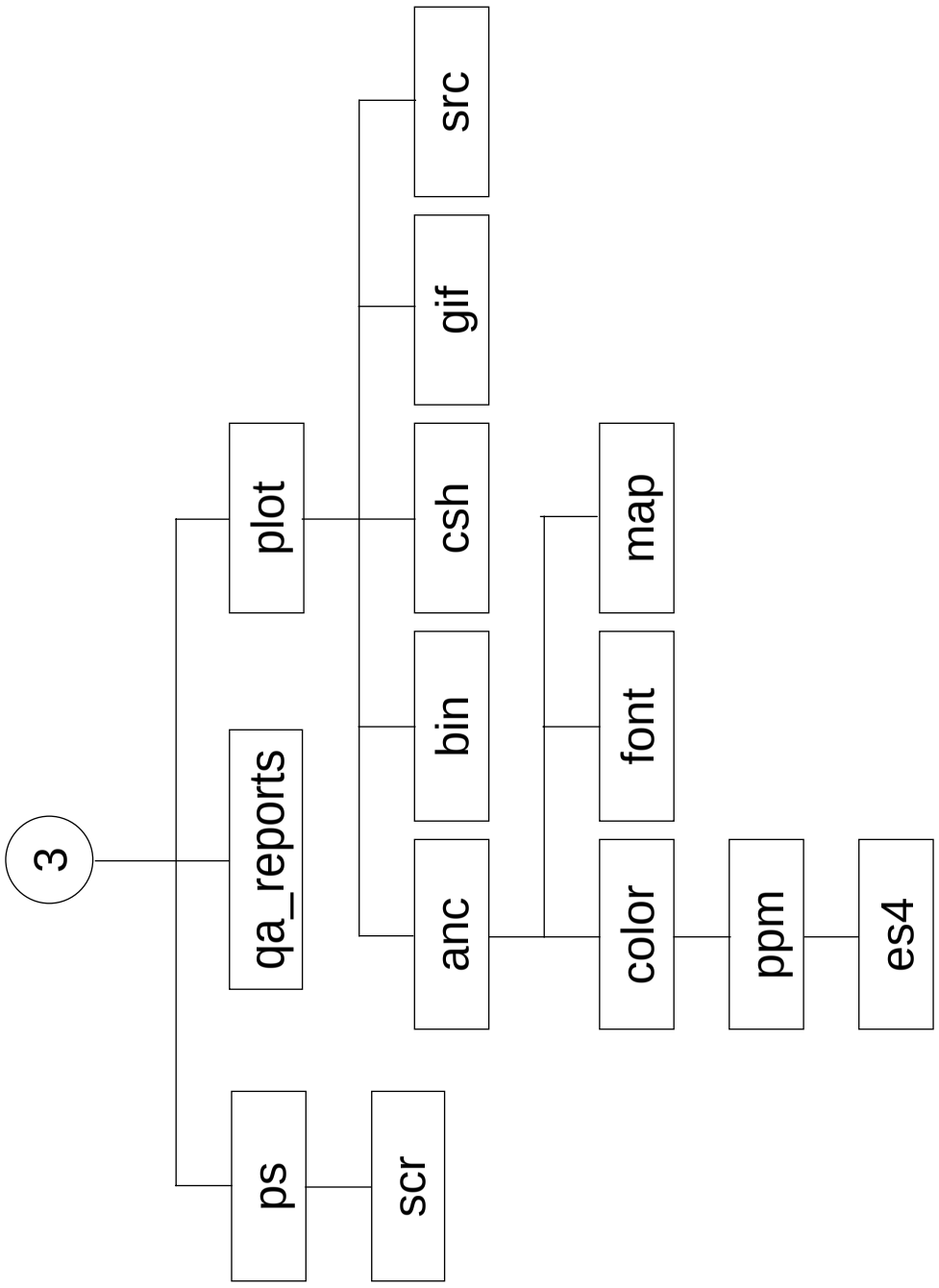

Figure B-1. Directory Structure for GGEO Subsystem (4 of 4)

Appendix C
File Description Tables

C.1 Production Scripts

Table C.1-1. Production Scripts, $CERESHOME/ggeo/bin directory (1 of 2)

File Name	Format	Description
GOES_east.csh	ASCII	Finds GOES-East input B1 and OA file names
GOES_west.csh	ASCII	Finds GOES-West input B1 file names
MOA.csh	ASCII	Finds MOA input file names.
SATFILES.csh	ASCII	Finds GMS and METEOSAT input B1 file names
check_moafiles.csh	ASCII	Checks the number of MOA input files
clean_bb_georc.csh	ASCII	Removes outputs from Georc job
clean_ggeomain.csh	ASCII	Removes outputs from Main Processor job
clean_ggeopost.csh	ASCII	Removes outputs from Post processor job
clean_nb_cloudplot.csh	ASCII	Removes outputs from Cloud plot job
clean_nb_intercalib.csh	ASCII	Removes outputs from intercalibration job
gen_b3input_ggeomain.csh	ASCII	Generator for Main Processor PCF input-text file (B3)
gen_input_bb_georc.csh	ASCII	Generator for Georc PGE PCF input-text file
gen_input_ggeoclouds.csh	ASCII	Generator for cloud portion of Main Processor PCF input-text file
gen_input_ggeomain.csh	ASCII	Generator for Main Processor PCF input-text file (B1)
gen_input_ggeopost.csh	ASCII	Generator for Postprocessor PCF input-text file
gen_inut_nb_cloudplot.csh	ASCII	Generator for Cloud plot PGE PCF input-text file
gen_input_nb_intercalib.csh	ASCII	Generator for Intercalibration PGE PCF input-text file
gen_pcf_bb_georc.csh	ASCII	Generator for Georc PGE PCF
gen_pcf_ggeoclouds	ASCII	Generator for cloud portion of Main Processor PCF
gen_pcf_ggeomain.csh	ASCII	Generator for Main Processor PCF
gen_pcf_ggeopost.csh	ASCII	Generator for Postprocessor PCF
gen_pcf_nb_cloudplot.csh	ASCII	Generator for Cloud plot PGE PCF

Table C.1-1. Production Scripts, $CERESHOME/ggeo/bin directory (2 of 2)

File Name	Format	Description
gen_pcf_nb_intercalib.csh	ASCII	Generator for Intercalibration PCF
getParamLID.csh	ASCII	Gets Cloud parameter logic IDs
get_GGEO_addresses.csh	ASCII	Echoes GGEO analyst mail addresses
ggeo-env.csh	ASCII	Sets environment variables for validation jobs
imagefilenumbers.csh	ASCII	Used in validation jobs for splitting month into multiple jobs
latest_version.csh	ASCII	Selects the latest version of certain ancillary files
run_bb_georc.csh	ASCII	Driver script for Georc PGE
run_ggeomain.csh	ASCII	Driver script for Main Processor
run_ggeoplots.csh	ASCII	Driver script for running plot only portion of Post processor
run_ggeopost.csh	ASCII	Driver script for Postprocessor
run_month_ggeomain.csh	ASCII	Automated script for Main Processor set-up and execution
run_month_ggeopost.csh	ASCII	Automated script for Post processor set-up and execution
run_nb_cloudplot.csh	ASCII	Driver script for Cloud Plot PGE
run_nb_intercalib.csh	ASCII	Driver script for Intercalibration PGE
rundb_bb_georc.csh	ASCII	Debug version of run_georc.csh
rundb_ggeomain.csh	ASCII	Debug version of run_ggeomain.csh
rundb_ggeopost.csh	ASCII	Debug version of run_ggeopost.csh
rundb_month_ggeopost.csh	ASCII	Debug version of run_month_ggeopost.csh
rundb_nb_cloudplot.csh	ASCII	Debug version of run_nb_cloudplot.csh
rundb_nb_intercalib.csh	ASCII	Debug version of run_nb_intercalib.csh
sarb_home.env	ASCII	Sets the environment variable SARB_HOME
sedcmd_insert.csh	ASCII	Utility script used by gen_pcf_ggeoclouds.csh

Table C.1-2. Production Scripts, $CERESHOME/ggeo/web/plot/csh directory

File Name	Format	Description
ggeoGif	ASCII	Script to run GenTisaGgeo and ppmtogif programs.

C.2 Executables

Table C.2-1. Executables[a], $CERESHOME/ggeo/bin directory

File Name	Format	Description
ggeo_main.exe	Binary	Main Processor executable
ggeo_post.exe	Binary	Postprocessor executable
echo2.exe	Binary	Command for echoing to standard error; Used in scripts

a. The executable files are generated during compilation and are not included in the delivery tarfile.

Table C.2-2. Executables[a], $CERESHOME/ggeo/web/plot/src directory

File Name	Format	Description
GenTisaGgeo	Binary	Reads GGEO data and generates ppm images.

a. The executable files are generated during compilation and are not included in the delivery tarfile.

Table C.2-3. Executables, $CERESHOME/ggeo/web/plot/src directory

File Name	Format	Description
ppmtogif	Binary	Converts ppm images to GIF images.

C.3 IDL Files

Table C.3-1. IDL Executables, $CERESHOME/ggeo/web/plot/src directory

File Name	Format	Description
BB_georc.pro	ASCII	IDL code for the Narrowband to Broadband PGE
NB_cloudplot.pro	ASCII	IDL code for the cloud plot PGE
NB_intercalib.pro	ASCII	IDL code for the intercalibration PGS

C.4 GOES-10 Status Message Files (SMF)

Table C.4-1. Status Message Files; $CERESHOME/ggeo/smf directory

File Name	Format	Description
bgranule_26420.t	ASCII	Message file for b3granule module
bitmodule_26409.t	ASCII	Message file for bit_module module
ggeomain_26406.t	ASCII	Message file for ggeo main processor program
ggeomem_26414.t	ASCII	Message file for ggeo_mem module
ggeooutput_26405.t	ASCII	Message file for ggeo_output module
ggeoplots_26416.t	ASCII	Message file for ggeo_plots module
ggeopost_26404.t	ASCII	Message file for ggeo postprocessor program
granfile_26403.t	ASCII	Message file for ggeo_granfile module
hourbox_26402.t	ASCII	Message file for hourbox module
intercal_26430.t	ASCII	Message file for NB_intercal program
isccpinput_26407.t	ASCII	Message file for isccp_input module
mcnavigate_26413.t	ASCII	Message file for mc_navigate module
pcfile_26408.t	ASCII	Message file for pc_file module.
qafile_26411.t	ASCII	Message file for QA modules
recalibration_26417.t	ASCII	Message file for recalibration_coeffs module
satinfo_26412.t	ASCII	Message file for satellite_file module
soldec_26401.t	ASCII	Message file for solar declination module

C.5 Processing Control Files (PCF) and Metadata Control Files (MCF)

Table C.5-1. Processing Control Files[a] (PCF); $CERESHOME/ggeo/rcf directory

File Name	Format	Description
CER11.1P1_PCF_GOES-8_SCFTest_000003.20010700	ASCII	Main Processor PCF; GOES-8
CER11.1P1_PCF_GOES-10_SCFTest_000003.20010700	ASCII	Main Processor PCF; GOES-10
CER11.1P1_PCF_METEO-5_SCFTest_000003.20010700	ASCII	Main Processor PCF; METEO-5
CER11.1P1_PCF_GMS-5_SCFTest_000003.20010700	ASCII	Main Processor PCF; GMS-5
CER11.2P1_PCF_Composite_SCFTest_000003.200107	ASCII	Postprocessor PCF

a. These files are generated during testing and are not included in the delivery tarfile.

Table C.5-2. Metadata Control Files (MCF); $CERESHOME/ggeo/rcf directory

File Name	Format	Description
MCF_GGEO	ODL	MCF for Postprocessor Output GGEO file
MCF_GRAN	ODL	MCF for Main Processor Output Granfile
MCF_POSTQC	ODL	MCF for Postprocessor ASCII QC Report
MCF_QC	ODL	MCF for Main Processor ASCII QC Report

C.6 HDF Read Software

Not Applicable

C.7 Ancillary Input Files

Not Applicable

C.8 Temporary Data Files (Production Results)

Table C.8-1. Temporary Data Files[a] (PCF); $CERESHOME/ggeo/rcf directory

File Name	Format	Description
CER11.1P1_PCFin_GOES-8_SCFTest_000003.20010700	ASCII	Main Processor ASCII input file to PCF Generator; GOES-8
CER11.1P1_PCFin_GOES-10_SCFTest_000003.20010700	ASCII	Main Processor ASCII input file to PCF Generator; GOES-10
CER11.1P1_PCFin_METEO-5_SCFTest_000003.20010700	ASCII	Main Processor ASCII input file to PCF Generator; METEO-5
CER11.1P1_PCFin_METEO-7_SCFTest_000003.20010700	ASCII	Main Processor ASCII input file to PCF Generator; METEO-7
CER11.1P1_PCFin_GMS-5_SCFTest_000003.20010700	ASCII	Main Processor ASCII input file to PCF Generator; GMS-5
CER11.2P1_PCFin_Composite_SCFTest_000003.200107	ASCII	Postprocessor ASCII input file to PCF Generator

a. These files are generated during testing and are not included in the delivery tarfile.