JPL D-25496
Version 1.0

Earth Observing System (EOS)
Tropospheric Emission Spectrometer (TES)

TES L2_Products
Release Description Document

Release 15.0

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March 21, 2019

Jet Propulsion Laboratory
California Institute of Technology
Pasadena, California

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Change Log

Revision	Date	Description	Author
1.0	September 16, 2005	Release 8.0	R. Monarrez
1.0	September 27, 2005	Release 8.1	R. Monarrez
1.0	October 5, 2005	Release 8.2	R. Monarrez
1.0	December 14, 2005	Release 9.0	R. Monarrez
1.0		Release 9.0.1	R. Monarrez
1.0		Release 9.0.2	R. Monarrez
1.0	March 20, 2006	Release 9.0.3	R. Monarrez
1.0	April 6, 2006	Release 9.0.4	R. Monarrez
1.0	August 30, 2006	Release 10.0.0	R. Monarrez
1.0	November 13, 2006	Release 10.1.0	R. Monarrez
1.1	November 17, 2006	Release 10.1.0	R. Monarrez
1.0	January, 2008	Release 11.0	R. Monarrez
1.0	September 23, 2010	Release 12.0	M. Madatyan
1.0	March 21, 2019	Release 15.0	J. Wood

Document Change Log

Release	Description
10.0	Update the reference from 9.0 to 10.0 throughout document. Sect. 1.6: Updated the controlling documents: Database Doc. To release 10. Sect. 1.6: Removed reference to Release Definition document. Sect. 2.1: Updated software: Changed Oracle 9i to Oracle 10g Sect. 4: Updated filenames to *_F04_04 Sect. 4: Updated the file sizes Sect. 4: Added the Summary & HDO Sect.: 6.3.1: Environment variables now point to Oracle 10g Sect. 6.3.2: Update the config files to point to R10 of FW & Shared, L2_Products and TES MCF. Also updated L2_Retrieval to 09.03.00-Delivered. Sect 6.4.6: Removed Makefile dependency CQ items going into this build: CR3198 CR3845 AR3844 CR3968 AR3819 CR3864 CR3821 CR3926 CR3198 CR3976 IAR3832 products to the table

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	Sect. 6.2.1: Added the HDO & SUMMARY product files
Release 10.0 Version 1.1	Added a CQ item that was left out of the documentation but work was performed for R10: CR3974 Added two branches to table: babyruth_crossmatrix_br & babyruth_ver3ESDT_br
10.1	Added reference to 10.1 CQ items: IAR4021 – Air density units CR4024 – Vertical Resolution units
11.0	Changed reference to 11.0 where it references R10 CQ: CR 4088 : Adding the Supplemental Product Sect. 2.1 & Sect 6.3: Upgraded from Toolkit 5.2.13 to 5.2.14v1 Sect. 3.2: Added the ClearQuest items included in this release Sect. 6.2.2: Added the script to populate the nonretrieved species data table. Sect 6.3.2: Update the config spec: L2_Products -> 11.00.00; /vobs/MCF -> 11.00.00 File versions: Std: F05_05, Summ & Supp: F02_05
12.0	Update for R12 changes CR4275 CR4416 CR4303 CR4306 CR4307 CR4317 CR4319 CR4328 CR4332 CR4391 CR4437
15.0	Updated for R13-R15 changes CR4341 CR4551 CR4555 CR4578 CR4600 CR4612 CR4634 CR4637 CR4639 CR4728 CR4655 CR4696 CR4860 CR4861 CR4872 CR4881 CR4882 CR4912 CR4929 CR4946 CR4960 CR5032 CR5035 CR5056

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1 INTRODUCTION

1.1 IDENTIFICATION

This document describes the software release for L2_Products, one of the three product generation executives (PGE) comprising the Level 2 subsystem of the TES Science Data Processing System (SDPS). The Level 2 subsystem provides analysis of retrievals of atmospheric constituents using spectra provided by Level 1B subsystem. The L2_Products PGE serves as the "back end" of the Level 2 subsystem.

This document describes Release 15.0 of the L2_Products PGE of the Level 2 subsystem. The acceptance criteria for this document can be found in Appendix A.

1.2 OVERVIEW

The main function of Level 2 subsystem is to derive information about the trace gases in the troposphere from analysis of spectra generated by Level 1B. These spectra are evaluated in Level 2 through intricate iterative process referred to as retrieval. After all retrievals are processed, the L2_Products PGE organizes the derived retrieval information into standard data products for dissemination to the science community. Starting from R15 L2_Product PGE will produce Hydrogen Cyanide products.

1.3 DOCUMENT SCOPE

This document contains the release details for L2_Products PGE of the Level 2 subsystem of the TES Science Data Processing System (SDPS). This document includes the new or changed capabilities of the PGE since Release 12.0, test summaries, deficiencies and liens, delivery contents, and build and runtime instructions.

The primary sources of L2_Products PGE definitions and specifications for this Release are *TES L2_Products PGE Specification* (JPL D-25733) and *Level-2 Functional Requirements Document* (JPL D-23176).

1.4 METHODS

The TES Science Data Processing Software is designed and implemented using object-oriented concepts and the C++ programming language. The software

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design and specification for L2_Products PGE is documented through the use of the Unified Modeling Language (UML).

The software for the L2_Products PGE uses a set of common, reusable functions termed as framework. Frameworks are partially completed applications that may be extended to form the desired piece of software. The framework provides those software application segments that may be reused by several TES subsystems.

1.5 NOTATION AND TERMINOLOGY

Acronyms

ESDT: Earth Science Data Type

HDF: Hierarchical Data Format

MCF: Metadata Control File

PCF: Process Control File

PGE: Product Generation Executive

L2: Level 2

R4: Release 4.0

R5: Release 5.0

R5.2: Release 5.2

R6: Release 6.0

R6.2: Release 6.2

R6.2.2: Release 6.2.2

R8.0: Release 8.0

R7.1: Release 7.1

R8.0: Release 8.0

R8.1: Release 8.1

R8.2: Release 8.2

R9.0: Release 9.0

R9.0.1: Release 9.0.1

R9.0.2: Release 9.0.2

R9.0.3: Release 9.0.3

R9.0.4: Release 9.0.4

R10.0.0: Release 10.0.0

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R10.1.0: Release 10.1.0

R11.0.0: Release 11.0.0

R12.0: Release 12.0

R13.0: Release 13.0

R14.0: Release 14.0

R15.0: Release 15.0

SIPS: Science Investigator-led Processing System

Convention

< > implicates that the user will define the required specification.

1.6 CONTROLLING DOCUMENTS

1. *Level –2 Functional Requirement Document, JPL D-23176, Version 1.0, February 2004*
2. *TES L2_Products PGE Specification: PGE Definition and Production Rules, Release 15, March, 2019, JPL D-25733, Version 1*
3. *TES Ground Data System Database Definition Document Release 15 , JPL D-23034, Version 15.0, March 21, 2019*
4. *TES Science Data Processing Data Product Specification, JPL D-22993, Version 15.0, March 21, 2019*

1.7 REFERENCE DOCUMENTS

1. *TES Software Management Plan, JPL D-13214, Version 2.2, April 2002*
2. *Software Implementation Guidelines, JPL D-10622*
3. *TES Science Data Processing System C++ Coding Standards, JPL D-20315, Version 1.2.1, July 2002.*
4. *TES Science Data Processing System Framework Programmer's Guide, JPL D-20207, Version 4.0, April 2003*
5. *TES Science Data Processing Software Error Policy, TES DFM #236-6.1, Version 1.1, April 2002*

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6. *Interface Control Document Between the EOS Data and Operations System and the EOS Ground System Element, TRW document number 2311 8301.01, GSFC document number 510-ICD-EDOS/E*

7. *An ECS Data Provider's Guide to Metadata, GSFC document number 163-WP-001-001*

8. *ClearCase Cookbook, JPL D-26274, February 2002*

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2 PRODUCT IDENTIFICATION

Release 15.00.00 of L2_Products PGE was built on Linux CentOS 6.6/64

- Compiler: GNU C/C++ 4.5 (/pkg/lang/gcc-4.5-2/bin/g++)
- Language: C++
- Build ID: L2PR-15.00.00-Delivered
- Date: March 2019

2.1 SUPPORT SOFTWARE

Oracle version 10g	/pkg/ora10g/1020client	
SDP TOOKIT version 5.2.18	/pkg/pgs/SDPTK5.2.18	
HDF 5 version 1.8.7	/pkg/pgs/SDPTK5.2.18/hdf5	
HDFEOS 5 version 1.14	/pkg/pgs/SDPTK5.2.18/hdfeos5	
HDF version 4.2.6	/pkg/pgs/SDPTK5.2.18/hdf	
HDFEOS version 2.18	/pkg/pgs/SDPTK5.2.18/hdfeos	
IDL version 8.0	/pkg/rsi/idl80	
Roguewave SourcePro 8	/pkg/roguewave/rw_bs8-64	
LAPACK	/pkg/local/lapack-64	
FFTW	/pkg/local/fftw3.3	
QRD	/pkg/local/rrqr_acm-64	
Framework Libraries	/vobs/Framework (FWXX-14.00.00-Delivered)	
Shared Libraries	/vobs/Shared (ShFW-14.00.00-Delivered)	
ClearCase version 9.0.0	/opt/ibm/RationalSDLC/... Linux, Solaris, and Windows	
ClearQuestClient version 9.0.0	/opt/ibm/RationalSDLC/... Linux, Solaris, and Windows	
Rational Rose (PC) 7.0.0.0	Windows only	

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3 NEW OR CHANGED CAPABILITIES

3.1 CAPABILITIES

For Release 15.0, L2_Products PGE provides the capability to generate HCN products .

3.2 CLEARQUEST TRACKING

ClearQuest items completed for L2_Products PGE in Release 10.0.

ClearQuest Number	Release	Description
CR3198	10.0	Implement the Summary product
AR3819	10.0	Update database schema populating scripts
CR3758	10.0	Use new compiler
CR3821	10.0	Version 2 of the MCF's
CR3758	10.0	Use new compiler
AR3844	10.0	Change database type of the Residuals from float to char
CR3845	10.0	Update PGE to R10 DPS: ratio covariances added
IAR3832	10.0	Change the units of the Constraint Vector to add ln
CR3864	10.0	Add Emissivity Layer QA to products
CR3926	10.0	Move the UTC time field to assoc data area and change datatype to string
CR3968	10.0	Summary Product versioning different from standard products
CR3974	10.0	CloudTopPressureError units change from hPa to ln(hPa)
CR3976	10.0	Add emissivity layer to summary product
IAR4021	10.1	Change the units to data field: Air Density
CR4024	10.1	Change the units to data field: Vertical Resolution
ClearQuest Number	**Release**	**Description**
CR4004	11.0	Ancillary fields
IAR4035	11.0	Casper script fix
AR4064	11.0	Update the L2 Scene script

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CR4088	11.0	Add the Supplemental Product
CR4150	11.0	Add Surface Temperature Initial to Ancillary
IAR4179	11.0	Run the PGE using Solaris 10
CR4184	11.0	Add the O3 CCurve to the products
CR4215	11.0	Add the Average Cloud Effective Optical Depth Error
CR4223	11.0	Update to version 4 of ESDT / MCF
CR4275	11.2	Update content version identifiers for R11.2 delivery
CR4416	11.2	Add calibration scheme designator to L2 standard data products
CR4303	12.0	Add CO2 to L2_Products
CR4306	12.0	Add NH3 (Ammonia) to L2_Products
CR4307	12.0	Update temperature field mnemonic in L2 output products
CR4316	12.0	Add tropopause pressure field to all standard products
CR4317	12.0	Add tropospheric column to the ozone standard product.
CR4319	12.0	Generate CO2 monthly product on reduced grid
CR4328	12.0	Add O3_IRFK_Array to TES L2 Products for Ozone
CR4332	12.0	Update L2 Products for ConstraintVector unit change
CR4391	12.0	Update control files of L2 for new ESDTs
ClearQuest Number	**Release**	**Description**
CR4555	**13.0**	Test L2_Products for new SDPTK5.2.18
CR4578	**13.0**	Test L2 Products PGE for the new SDPTK 5.2.18
CR4600	**13.0**	Updates to the output of the L2_Products PGE
CR4612	**13.0**	Update L2_Products for Methanol
CR4634	**13.0**	Add desert emissivity to documentation - DPS
CR4637	**13.0**	Add desert emissivity to L2_Products
CR4639	**13.0**	Add Formic Acid to L2 Products
CR4655	**13.0**	Add chi2 to L2 Product
CR4696	**13.0**	Update test PCF file for L2 Products testing of new R13 MCF files
CR4728	**13.0**	Remove writing of Run ID in L2 standard product generation
ClearQuest Number	**Release**	**Description**
CR4860	**14.0**	Update the Data Product Specification for the new PAN (Peroxyacyl Nitrate) product description

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CR4861	**14.0**	Update the Data Product Specification for the new OCS (Carbonyl Sulfide) product description
CR4872	**14.0**	Write O3_Retrieval_Quality flag to the L2_Products
CR4881	**14.0**	Update L2 Products to add Peroxyacetyl Nitrate (PAN)
CR4882	**14.0**	Update L2 Products to add Carbonyl Sulfide (OCS)
CR4912	**14.0**	Add Digital Object Identifier values to the TES Level 2 products
CR4929	**14.0**	Update all Release 14 DOI metadata values
CR4946	**14.0**	L2_Products: Fix int_16 fill value in product files
CR5032	**14.0**	Streamline message output for L2 Products PGE
CR5035	**14.0**	L2_Products: Not producing CO products for certain runs in R14.1
CR5056	**14.0**	L2_Products_Lite: Version 2 upgrade. Add PAN, OCS, RH
ClearQuest Number	**Release**	**Description**
CR5076	**15.0**	Add HCN and ACETS products

Development has been done on branches in ClearCase.

[ClearQuest ID] ClearCase Branch	Directory	Description
CR4303 madatyan_CR4303_CR4306_CO2_NH3_addition	/vobs/L2_Products	Add CO2 to L2_Products
CR4306 madatyan_CR4303_CR4306_CO2_NH3_addition	/vobs/L2_Products	Add NH3 (Ammonia) to L2_Products
CR4307 madatyan_CR4307_TATM_name_change	/vobs/L2_Products	Update temperature field mnemonic in L2 output products
CR4316 madatyan_CR4316_CR4317_trop_field_changes	/vobs/L2_Products	Add tropopause pressure field to all standard products
CR4317 madatyan_CR4316_CR4317_trop_field_changes	/vobs/L2_Products	Add tropospheric column to the ozone standard product.
CR4319 madatyan_CR4319_CO2_Lite	/vobs/L2_Products	Generate CO2 monthly product on reduced grid
CR4328	/vobs/L2_Products	Add O3_IRFK_Array to TES L2 Products for Ozone

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madatyan_CR4328_OzoneIRFK		
CR4332 madatyanCR4332_ConstraintVector_fix	/vobs/L2_Products	Update L2 Products for ConstraintVector unit change
CR4391 madatyan_CR4391_MCF_version	/vobs/L2_Products/control_files	Update control files of L2 for new ESDTs
CR4728 wood_CR4728_Remove_RunID	/vobs/L2_Products	Remove writing of Run ID in L2 standard product generation
CR4655 wood_CR4655_Add_ResidualNorm	/vobs/docs	Update the Data Product Specification for the new PAN (Peroxyacyl Nitrate) product description
CR4696 wood_CR4696_Update_MCF_R13	/vobs/docs	Update the Data Product Specification for the new OCS (Carbonyl Sulfide) product description
CR4860 wood_CR4881_L2_Products_Add_PAN	/vobs/L2_Products	Update the Data Product Specification for the new PAN (Peroxyacyl Nitrate) product description
CR4861 wood_CR4881_L2_Products_Add_PAN	/vobs/L2_Products	Update the Data Product Specification for the new OCS (Carbonyl Sulfide) product description
CR4872 wood_CR4872_AddQA	/vobs/L2_Products	Write O3_Retrieval_Quality flag to the L2_Products
CR4881 wood_CR4881_L2_Products_Add_PAN	/vobs/L2_Products	Update L2 Products to add Peroxyacetyl Nitrate (PAN)
CR4882 wood_CR4821_L2_Products_Add_OCS	/vobs/L2_Products	Update L2 Products to add Carbonyl Sulfide (OCS)
CR4912 wood_CR4914_L2_Prod_Update_DOI_R14	/vobs/L2_Products	Add Digital Object Identifier values to the TES Level 2 products
CR4929 wood_CR4929_L2_Prod_Update_DOI_R14	/vobs/L2_Products	Update all Release 14 DOI metadata values
CR4946 wood_CR4946_L2_Prod_Fix_Fill	/vobs/L2_Products	L2_Products: Fix int_16 fill value in product files
CR5032 psaha_CQ5032_RemoveUnnecessaryLogMessage_R14.1	/vobs/L2_Products	Streamline message output for L2 Products PGE
CR5035	/vobs/L2_Products	L2_Products: Not producing CO products for certain runs in R14.1

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CR5076	/vobs/L2_Products	Add HCN and ACET products

3.3 PROBLEMS RESOLVED FROM AN EARLIER RELEASE

ClearQuest Item # Branch	Directory	Description
[CR3198] madatyan_CR3198_summary_prod	/vobs/L2_Products	Implementing summary product
[AR3819] babyruth_AR3819_UpdDatabaseScript_br	/vobs/L2_Products/scripts	Update the database populating scripts for any new fields.
[CR3821] int10 babyruth_ver3ESDT_br	/vobs/L2_Products/test/in & /vobs/MCF /vobs/L2_Products/test/in	Increase the version of the MCF's from 1 to 3.
[CR3758] Babyruth_CR3758_new_compiler	/vobs/L2_Products	Compiled with the new compiler. No changes necessary.
[AR3844] babyruth_ResidDim_br babyruth_ResidDimNadir_br	/vobs/L2_Products	Change the database type from float to char and add the npixels dimensionality to the datafield.
[CR3845] babyruth_CR3845_R10DPS_br	/vobs/L2_Products	Generic branch to make changes according to the the DPS – new fields, removing fields, etc.
[] babyruth_crossmatrix_br babyruth_crossmatrix2_br	/vobs/L2_Products /vobs/L2_Products/scripts /vobs/L2_Products/test/in	Add the TL2SUMS to the list of ESDT's
[IAR3832] babyruth_IAR3832_constvect_br	/vobs/L2_Products	Change the units to the constraint vector: added 'ln'
[CR3864] babyruth_emisslayerqa_br	/vobs/L2_Products	Add emissivity layer qa to the data fields
[CR3926] madatyan_CR_3926_UTCTime_fix	/vobs/L2_Products	Move the UTC time field from geolocation to associated and change the datatype to string
[CR3968] int10	/vobs/L2_Products	Implement summary product version to be different from the standard product versioning

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[CR3976] Madatyan_CR3976_emis_QA_fix	/vobs/L2_Products	Add the emissivity_layer_qa field to the summary product
[CR3974] Babyruth_CR3974_cloud_br	/vobs/L2_Products	Change the units of CloudTopPressureError from hPa to ln(hPa)
[IAR4021] Babyruth_IAR4021_airdensity_br	/vobs/L2_Products	Changed the units from cm to meters
[CR4024] Babyruth_CR4024_vertresounits_br	/vobs/L2_Products	Changed the units from km to meters
[ClearQuest ID] **ClearCase branch**	**Directory**	**Description**
[CR4004] babyruth_CR4004_ancfields_br	/vobs/L2_Products	Remove T_H2OAveragingKernel, H2O_TAveragingKernel & T_H2OCovariance from the Ancillary product.
[IAR4035] babyruth_IAR4035_casperscript_br	/vobs/L2_Products	Update run script to remove only the files necessary.
[AR4064] babyruth_AR4064_l2scenescript_br	/vobs/L2_Products/scripts	Update the database populating script with the changing l2_Strategy_table script.
[CR4088] Babyruth_CR4088_SuppProd_br	/vobs/L2_Products	Adding the supplemental product to the suite of output products.
[CR4150] babyruth_CR4150_SurfTempInitial_br	/vobs/L2_Products	Add the Surface Temperature Initial field to the Ancillary data product
[IAR4179] babyruth_IAR4179_solaris10_br	/vobs/L2_Products	Upgraded the system operating system to Solaris 10. Make sure PGE was compatible.
[CR4184] babyruth_CR4184_o3ccurve_br	/vobs/L2_Products	Add the O3 CCurve to the Nadir products and Summary
[CR4215] babyruth_CR4215_AvgCloudEffOpticalDepthError_br	/vobs/L2_Products	Add the Average Cloud Effective Optical Depth Error to the standard products.
[CR4223] babyruth_CR4223_MCF_br	/vobs/L2_Products	Updated necessary files in the /in/ directory to support version 4 of the MCF's.
[CR4275] madatyan_CR4275_version_update	/vobs/L2_Products	Update content version identifiers for R11.2 delivery
CR4416	/vobs/L2_Products	Add calibration scheme designator to L2 standard

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madatyan_CR4416_calib_scheme_updates		data products
CR4303 madatyan_CR4303_CR4306_CO2_NH3_addition	/vobs/L2_Products	Add CO2 to L2_Products
CR4306 madatyan_CR4303_CR4306_CO2_NH3_addition	/vobs/L2_Products	Add NH3 (Ammonia) to L2_Products
CR4307 madatyan_CR4307_TATM_name_change	/vobs/L2_Products	Update temperature field mnemonic in L2 output products
CR4316 madatyan_CR4316_CR4317_trop_field_changes	/vobs/L2_Products	Add tropopause pressure field to all standard products
CR4317 madatyan_CR4316_CR4317_trop_field_changes	/vobs/L2_Products	Add tropospheric column to the ozone standard product.
CR4319 madatyan_CR4319_CO2_Lite	/vobs/L2_Products	Generate CO2 monthly product on reduced grid
CR4328 madatyan_CR4328_OzoneIRFK	/vobs/L2_Products	Add O3_IRFK_Array to TES L2 Products for Ozone
CR4332 madatyanCR4332_ConstraintVector_fix	/vobs/L2_Products	Update L2 Products for ConstraintVector unit change
CR4391 madatyan_CR4391_MCF_version	/vobs/L2_Products	Update control files of L2 for new ESDTs
CR4437 madatyan_CR4437_H2O_HDO_namefix	/vobs/L2_Products	Update L2 Ancillary Products Reading H2O_HDO Matrix File

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4 TEST SUMMARY

Most of the test cases, scripts and input files are inherited from Release 3 with some cleanup and slight modifications to database access. Please refer to "Unit Test Document for L2_Products PGE for Release 5" (see section 1.7 reference documents [9]) for a complete list of the tests performed, problems, and workarounds.

Software tool used to test the L2_Products PGE is HDFViewer V2.6.1.

4.1 PGE TEST REPORTS

Output products generated are view private and are not delivered.

The executable to generate these files can be found in:
/project/delivery/L2_Products/15.00.00-Delivered/

File Size (bytes)	Filename
-r--r--r-- 1 jwood ccuser 463734063 Feb 19 2008 artifacts/regression/TES-Aura_L2-ANCILLARY_r1999400023_F05_05.he5 -r--r--r-- 1 jwood ccuser 5837 Feb 19 2008 artifacts/regression/TES-Aura_L2-ANCILLARY_r1999400023_F05_05.he5.met -r--r--r-- 1 jwood ccuser 295124887 Feb 19 2008 artifacts/regression/TES-Aura_L2-ATM-TEMP-Limb_r1999400023_F05_05.he5 -r--r--r-- 1 jwood ccuser 5843 Feb 19 2008 artifacts/regression/TES-Aura_L2-ATM-TEMP-Limb_r1999400023_F05_05.he5.met -r--r--r-- 1 jwood ccuser 86588503 Feb 19 2008 artifacts/regression/TES-Aura_L2-ATM-TEMP-Nadir_r1999400023_F05_05.he5 -r--r--r-- 1 jwood ccuser 5844 Feb 19 2008 artifacts/regression/TES-Aura_L2-ATM-TEMP-Nadir_r1999400023_F05_05.he5.met -r--r--r-- 1 jwood ccuser 295124887 Feb 19 2008 artifacts/regression/TES-Aura_L2-CH4-Limb_r1999400023_F05_05.he5 -r--r--r-- 1 jwood ccuser 5837 Feb 19 2008 artifacts/regression/TES-Aura_L2-CH4-Limb_r1999400023_F05_05.he5.met -r--r--r-- 1 jwood ccuser 86588503 Feb 19 2008 artifacts/regression/TES-Aura_L2-CH4-Nadir_r1999400023_F05_05.he5 -r--r--r-- 1 jwood ccuser 5838 Feb 19 2008 artifacts/regression/TES-Aura_L2-CH4-Nadir_r1999400023_F05_05.he5.met -r--r--r-- 1 jwood ccuser 295124887 Feb 19 2008 artifacts/regression/TES-Aura_L2-CO-Limb_r1999400023_F05_05.he5 -r--r--r-- 1 jwood ccuser 5835 Feb 19 2008 artifacts/regression/TES-Aura_L2-CO-Limb_r1999400023_F05_05.he5.met -r--r--r-- 1 jwood ccuser 86588503 Feb 19 2008 artifacts/regression/TES-Aura_L2-CO-Nadir_r1999400023_F05_05.he5	TES-Aura_L2-ANCILLARY_r1999400023_F05_05.he5

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-r--r--r-- 1 jwood ccuser 5836 Feb 19 2008 artifacts/regression/TES-Aura_L2-CO-Nadir_r1999400023_F05_05.he5.met -r--r--r-- 1 jwood ccuser 295124887 Feb 19 2008 artifacts/regression/TES-Aura_L2-H2O-Limb_r1999400023_F05_05.he5 -r--r--r-- 1 jwood ccuser 5837 Feb 19 2008 artifacts/regression/TES-Aura_L2-H2O-Limb_r1999400023_F05_05.he5.met -r--r--r-- 1 jwood ccuser 86588503 Feb 19 2008 artifacts/regression/TES-Aura_L2-H2O-Nadir_r1999400023_F05_05.he5 -r--r--r-- 1 jwood ccuser 5838 Feb 19 2008 artifacts/regression/TES-Aura_L2-H2O-Nadir_r1999400023_F05_05.he5.met -r--r--r-- 1 jwood ccuser 295124887 Feb 19 2008 artifacts/regression/TES-Aura_L2-HDO-Limb_r1999400023_F05_05.he5 -r--r--r-- 1 jwood ccuser 5837 Feb 19 2008 artifacts/regression/TES-Aura_L2-HDO-Limb_r1999400023_F05_05.he5.met -r--r--r-- 1 jwood ccuser 86588503 Feb 19 2008 artifacts/regression/TES-Aura_L2-HDO-Nadir_r1999400023_F05_05.he5 -r--r--r-- 1 jwood ccuser 5838 Feb 19 2008 artifacts/regression/TES-Aura_L2-HDO-Nadir_r1999400023_F05_05.he5.met -r--r--r-- 1 jwood ccuser 295124887 Feb 19 2008 artifacts/regression/TES-Aura_L2-HNO3-Limb_r1999400023_F05_05.he5 -r--r--r-- 1 jwood ccuser 5839 Feb 19 2008 artifacts/regression/TES-Aura_L2-HNO3-Limb_r1999400023_F05_05.he5.met -r--r--r-- 1 jwood ccuser 295124887 Feb 19 2008 artifacts/regression/TES-Aura_L2-NO2-Limb_r1999400023_F05_05.he5 -r--r--r-- 1 jwood ccuser 5837 Feb 19 2008 artifacts/regression/TES-Aura_L2-NO2-Limb_r1999400023_F05_05.he5.met -r--r--r-- 1 jwood ccuser 295124887 Feb 19 2008 artifacts/regression/TES-Aura_L2-O3-Limb_r1999400023_F05_05.he5 -r--r--r-- 1 jwood ccuser 5835 Feb 19 2008 artifacts/regression/TES-Aura_L2-O3-Limb_r1999400023_F05_05.he5.met -r--r--r-- 1 jwood ccuser 86588503 Feb 19 2008 artifacts/regression/TES-Aura_L2-O3-Nadir_r1999400023_F05_05.he5 -r--r--r-- 1 jwood ccuser 5836 Feb 19 2008 artifacts/regression/TES-Aura_L2-O3-Nadir_r1999400023_F05_05.he5.met -r--r--r-- 1 jwood ccuser 22708183 Feb 19 2008 artifacts/regression/TES-Aura_L2-SUMMARY_r1999400023_F02_05.he5 -r--r--r-- 1 jwood ccuser 5835 Feb 19 2008 artifacts/regression/TES-Aura_L2-SUMMARY_r1999400023_F02_05.he5.met -r--r--r-- 1 jwood ccuser 11588855 Feb 19 2008 artifacts/regression/TES-Aura_L2-SUPPLEMENTAL_r1999400023_F02_05.he5 -r--r--r-- 1 jwood ccuser 5840 Feb 19 2008 artifacts/regression/TES-Aura_L2-SUPPLEMENTAL_r1999400023_F02_05.he5.met739901903	
5839	TES-Aura_L2-ANCILLARY_r1999400023_F05_05.he5.met
295129071	TES-Aura_L2-ATM-TEMP-Limb_r1999400023_F05_05.he5
5845	TES-Aura_L2-ATM-TEMP-Limb_r1999400023_F05_05.he5.met

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86727151	TES-Aura_L2-ATM-TEMP-Nadir_r1999400023_F05_05.he5
5846	TES-Aura_L2-ATM-TEMP-Nadir_r1999400023_F05_05.he5.met
295129071	TES-Aura_L2-CH4-Limb_r1999400023_F05_05.he5
5839	TES-Aura_L2-CH4-Limb_r1999400023_F05_05.he5.met
86727151	TES-Aura_L2-CH4-Nadir_r1999400023_F05_05.he5
5840	TES-Aura_L2-CH4-Nadir_r1999400023_F05_05.he5.met
295129071	TES-Aura_L2-CO-Limb_r1999400023_F05_05.he5
5837	TES-Aura_L2-CO-Limb_r1999400023_F05_05.he5.met
86727151	TES-Aura_L2-CO-Nadir_r1999400023_F05_05.he5
5838	TES-Aura_L2-CO-Nadir_r1999400023_F05_05.he5.met
295129071	TES-Aura_L2-H2O-Limb_r1999400023_F05_05.he5
5839	TES-Aura_L2-H2O-Limb_r1999400023_F05_05.he5.met
86727151	TES-Aura_L2-H2O-Nadir_r1999400023_F05_05.he5
5840	TES-Aura_L2-H2O-Nadir_r1999400023_F05_05.he5.met
295129071	TES-Aura_L2-HDO-Limb_r1999400023_F05_05.he5
5839	TES-Aura_L2-HDO-Limb_r1999400023_F05_05.he5.met
86727151	TES-Aura_L2-HDO-Nadir_r1999400023_F05_05.he5
5840	TES-Aura_L2-HDO-Nadir_r1999400023_F05_05.he5.met
295129071	TES-Aura_L2-HNO3-Limb_r1999400023_F05_05.he5
5841	TES-Aura_L2-HNO3-Limb_r1999400023_F05_05.he5.met
295129071	TES-Aura_L2-NO2-Limb_r1999400023_F05_05.he5
5839	TES-Aura_L2-NO2-Limb_r1999400023_F05_05.he5.met
295129071	TES-Aura_L2-O3-Limb_r1999400023_F05_05.he5
5837	TES-Aura_L2-O3-Limb_r1999400023_F05_05.he5.met
86727151	TES-Aura_L2-O3-Nadir_r1999400023_F05_05.he5

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5838	TES-Aura_L2-O3-Nadir_r1999400023_F05_05.he5.met
23823455	TES-Aura_L2-SUMMARY_r1999400023_F02_05.he5
5837	TES-Aura_L2-SUMMARY_r1999400023_F02_05.he5.met
	TES-Aura_L2-SUPPLEMENTAL_r1999400023_F02_05.he5
	TES-Aura_L2-SUPPLEMENTAL_r1999400023_F02_05.he5.met
93711	TES-Aura_L2_r1999400023_v001-01.LogReport
96087	TES-Aura_L2_r1999400023_v001-01.LogStatus
93477	TES-Aura_L2_r1999400023_v001-01.LogUser

Test error files created by L2_Products PGE are available at */vobs/L2_Products/test/out*:

pre_products_testcase6.1.script
run_L2_Products_testcase4.csh
run_L2_Products_testcase1.csh
run_L2_Products_testcase5.csh
run_L2_Products_testcase2.csh
run_L2_Products_testcase6.csh
run_L2_Products_testcase3.csh
_file_testcase2.10.dat
_

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5 DEFICIENCIES AND LIENS

N/A

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6 DETAILED DELIVERY CONTENTS

6.1 CODE

The code listed below resides in ClearCase and thus the directories reflect the ClearCase directory structure.

6.1.1 L2_Products

/vobs/L2_Products
L2_CAncillarySwath.cpp
L2_CAncillarySwath_driver.cpp
L2_CAncillarySwath_sequencer.cpp
L2_CAncillarySwath_tests.cpp
L2_CAncillarySwathData.cpp
L2_CAncillarySwathData.h
L2_FileLevelMetadata.cpp
L2_FileLevelMetadata_driver.cpp
L2_FileLevelMetadata_sequencer.cpp
L2_FileLevelMetadata_tests.cpp
L2_FileLevelMetadata.h
L2_ClimbData.cpp
L2_CLimbData_driver.cpp
L2_CLimbData_sequencer.cpp
L2_CLimbData_tests.cpp
L2_CLimbData.h
L2_CLimbSwath.cpp
L2_CLimbSwath_driver.cpp
L2_CLimbSwath_sequencer.cpp
L2_CLimbSwath_tests.cpp
L2_CLimbSwath.h
L2_CLimbSummarySwath.cpp
L2_CLimbSupplementalData.cpp
L2_CLimbSupplementalSwath.cpp
L2_CNadirData.cpp
L2_CNadirData_driver.cpp
L2_CNadirData_sequencer.cpp
L2_CNadirData_tests.cpp
L2_CNadirData.h
L2_CNadirSwath.cpp
L2_CNadirSwath_driver.cpp
L2_CNadirSwath_sequencer.cpp
L2_CNadirSwath_tests.cpp
L2_CNadirSwath.h
L2_CNadirSummarySwath.cpp
L2_CNadirSupplementalData.cpp
L2_CNadirSupplementalSwath.cpp
L2_Products_AI.cpp
L2_Products_AI_driver.cpp
L2_Products_AI_sequencercpp
L2_Products_AI_tests.cpp
L2_Products_AI.h
L2_Products_Algor.cpp
L2_Products_Algor_driver.cpp
L2_Products_Algor_sequencer.cpp
L2_Products_Algor_tests.cpp
L2_Products_Algor.h
L2_Products_Main.cpp
L2_StdProductFile.cpp
L2_StdProductFile_driver.cpp
L2_StdProductFile_sequencer.cpp
L2_StdProductFile_tests.cpp
L2_StdProductFile.h
Makefile.local.in

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6.2 FILES

All files listed below also reside in ClearCase**.**

6.2.1 Artifacts

Release 15.0:

(Setup Script)
setup_env

/vobs/L2_Products/artifacts/regression
TES-Aura_L2-ANCILLARY_r1999400023_F05_05.he5
TES-Aura_L2-ANCILLARY_r1999400023_F05_05.he5.met
TES-Aura_L2-ATM-TEMP-Limb_r1999400023_F05_05.he5
TES-Aura_L2-ATM-TEMP-Limb_r1999400023_F05_05.he5.met
TES-Aura_L2-ATM-TEMP-Nadir_r1999400023_F05_05.he5
TES-Aura_L2-ATM-TEMP-Nadir_r1999400023_F05_05.he5.met
TES-Aura_L2-CH4-Limb_r1999400023_F05_05.he5
TES-Aura_L2-CH4-Limb_r1999400023_F05_05.he5.met
TES-Aura_L2-CH4-Nadir_r1999400023_F05_05.he5
TES-Aura_L2-CH4-Nadir_r1999400023_F05_05.he5.met
TES-Aura_L2-CO-Limb_r1999400023_F05_05.he5
TES-Aura_L2-CO-Limb_r1999400023_F05_05.he5.met
TES-Aura_L2-CO-Nadir_r1999400023_F05_05.he5
TES-Aura_L2-CO-Nadir_r1999400023_F05_05.he5.met
TES-Aura_L2-H2O-Limb_r1999400023_F05_05.he5
TES-Aura_L2-H2O-Limb_r1999400023_F05_05.he5.met
TES-Aura_L2-H2O-Nadir_r1999400023_F05_05.he5
TES-Aura_L2-H2O-Nadir_r1999400023_F05_05.he5.met
TES-Aura_L2-HDO-Limb_r1999400023_F05_05.he5
TES-Aura_L2-HDO-Limb_r1999400023_F05_05.he5.met
TES-Aura_L2-HDO-Nadir_r1999400023_F05_05.he5
TES-Aura_L2-HDO-Nadir_r1999400023_F05_05.he5.met
TES-Aura_L2-HNO3-Limb_r1999400023_F05_05.he5
TES-Aura_L2-HNO3-Limb_r1999400023_F05_05.he5.met
TES-Aura_L2-NO2-Limb_r1999400023_F05_05.he5
TES-Aura_L2-NO2-Limb_r1999400023_F05_05.he5.met
TES-Aura_L2-O3-Limb_r1999400023_F05_05.he5
TES-Aura_L2-O3-Limb_r1999400023_F05_05.he5.met
TES-Aura_L2-O3-Nadir_r1999400023_F05_05.he5
TES-Aura_L2-O3-Nadir_r1999400023_F05_05.he5.met
TES-Aura_L2-SUMMARY_r1999400023_F02_05.he5
TES-Aura_L2-SUMMARY_r1999400023_F02_05.he5.met
TES-Aura_L2-SUPPLEMENTAL_r1999400023_F02_05.he5
TES-Aura_L2-SUPPLEMENTAL_r1999400023_F02_05.he5.met

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6.2.2 Scripts

/vobs/L2_Products/scripts
(Test Scripts)
diffall.csh
conv
run_all_PGE.csh *(added for R6)*
run_L2_Products_testcase1.csh
run_L2_Products_testcase2.csh
run_L2_Products_testcase3.csh
run_L2_Products_testcase4.csh
run_L2_Products_testcase5.csh
run_L2_Products_testcase6.csh

(Database Table Setup Scripts)
pre_products.script
pre_products_testcase6.1.script
post_products.script

(Regression & Unit Test Scripts)
CASPER_run_script.csh
L2_Products.unit_test

(Oracle SQL Scripts)
delete_emis_parameters
delete_l1a_eng.sql
delete_l1a_geoloc.sql
delete_l2_assoc_scene.sql
delete_l2_assoc_scene_species.sql
delete_l2_emiss.sql
delete_l2_nadir_geoloc.sql
delete_l2_scene.sql
delete_l2_species_data.sql
delete_run_attrib.sql
delete_sa.sql
delete_sa2.sql
delete_src.sql
delete_strategy_table
delete_species_state_information
delete_tables.sql
insert_emis_parameters
insert_l1a_eng.sql
insert_l1a_geoloc.sql
insert_l2_assoc_scene.sql
insert_l2_assoc_scene_species.sql
insert_l2_emiss.sql
insert_l2_nadir_geoloc.sql
insert_l2_nonretr_species_data.sql
insert_l2_scene.sql
insert_l2_species_data.sql
insert_run_attrib.sql
insert_sa.sql
insert_sa2.sql
insert_src.sql
insert_strategy_table
insert_species_state_information
insert_tables.sql
select_l1a_eng.sql
select_l1a_geo.sql
select_l2_associated_scene.sql
select_l2_associated_scene_species.sql
select_l2_emiss.sql
select_l2_nadir_geoloc.sql
select_l2_nadir_geoloc.sql
select_l2_scene.sql
select_l2_species_data.sql
select_run_attrib.sql
select_sa.sql
select_src.sql
truncate_all.sql

(symbolic link)
insert_StrategyTablesData_GMAO

(Regression tests script)
regressTemp

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6.2.3 Test Input Files

/vobs/L2_Products/test/in

(*Parameter Definition Files)*
L2_Products_def_testcase1.1.dat
L2_Products_def_testcase1.2.dat
L2_Products_def_testcase1.3.dat
L2_Products_def_testcase2.1.dat
L2_Products_def_testcase2.2.dat
L2_Products_def_testcase2.3.dat
L2_Products_def_testcase2.4.dat
L2_Products_def_testcase2.5.dat
L2_Products_def_testcase2.6.dat
L2_Products_def_testcase2.7.dat
L2_Products_def_testcase2.8.dat
L2_Products_def_testcase2.9.dat
L2_Products_def_testcase2.10.dat
L2_Products_def_testcase2.11.dat
L2_Products_def_testcase2.12.dat
L2_Products_def_testcase3.1.dat
L2_Products_def_testcase3.2.dat
L2_Products_def_testcase3.3.dat
L2_Products_def_testcase3.4.dat
L2_Products_def_testcase3.5.dat
L2_Products_def_testcase3.6.dat
L2_Products_def_testcase4.1.dat
L2_Products_def_testcase4.2.dat
L2_Products_def_testcase4.3.dat
L2_Products_def_testcase4.4.dat
L2_Products_def_testcase4.5.dat
L2_Products_def_testcase4.6.dat
L2_Products_def_testcase4.7.dat
L2_Products_def_testcase4.8.dat
L2_Products_def_testcase4.9.dat
L2_Products_def_testcase4.10.dat
L2_Products_def_testcase4.11.dat
L2_Products_def_testcase5.1.dat
L2_Products_def_testcase5.2.dat
L2_Products_def_testcase5.3.dat
L2_Products_def_testcase5.4.dat
L2_Products_def_testcase5.5.dat
L2_Products_def_testcase6.1.dat

(*User Parameter Files)*
L2_Products_param_20000.dat
L2_products_param_200000_testcase 2.10.dat

(Autofilename Generator)
L2_FileDef.asc
L2_FileDef_testcase5.3.asc
L2_FileDef_testcase5.4.asc

(Autofilename Generator – cont'd)
L2_FileDef_testcase5.5.asc
L2_FileKeys.asc

(pcf files)
pcf_test.dat
pcf_testcase2.9.dat
pcf_testcase3.1.dat
pcf_testcase3.3.dat
pcf_testcase3.4.dat

MatrixProducts_CH4_Run1999400023_Seq0000001_Scan000002
MatrixProducts_CH4_Run1999400023_Seq0000003_Scan000004
MatrixProducts_CO_Run1999400023_Seq0000887_Scan000002
MatrixProducts_CO_Run1999400023_Seq0000900_Scan000005
MatrixProducts_H2O_Run1999400023_Seq0000887_Scan000002
MatrixProducts_H2O_Run1999400023_Seq0001000_Scan000006
MatrixProducts_O3_Run1999400023_Seq00001152_Scan000005
MatrixProducts_O3_Run1999400023_Seq0000887_Scan000002
MatrixProducts_TATM_H2O_Run1999400023_Seq0000887_Scan000002
MatrixProducts_TATM_Run1999400023_Seq0000887_Scan000002

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6.2.4 Test Output Files

/vobs/L2_Products/test/out:
(see section 4.1 Unit Test Reports)

6.3 BUILD ENVIRONMENT

6.3.1 Environment Variables

Below is a table listing of the environment variables used to build and test for Release 15.0. The environment variables can be defined by sourcing "/vobs/L2_Products/artifacts/setup_env".

VARIABLE	VALUE
ORACLE_HOME	/pkg/ora10g/1020client
ORACLE_SID	tes9i
FFTWHOME	/pkg/local/fftw3.1-32E4
LAPACKHOME	/pkg/local/lapack-64
QRDHOME	/pkg/local/rrqr_acm-64
RWHOME	/pkg/roguewave/rw_bs8-64
PGSHOME	/pkg/pgs/TOOLKIT
PGS_PC_INFO_FILE	/vobs/L2_Retrieval/test/in/pcf_test.dat
FWHOME	/vobs/Framework
ErrorCodeFile	/vobs/Framework/Exception/error_code.h
LD_LIBRARY_PATH	/usr/local/gcc-3.4.5_64/lib:$ORACLE_HOME/lib:$ORACLE_HOME/lib32: ${LD_LIBRARY_PATH}
PATH	/usr/local/gcc-3.4.5_64/bin:$ORACLE_HOME/bin:$ORACLE_HOME/bin32 /pkg/rsi/idl_6.3/bin:${PATH}
L2_OSP_PATH	/vobs/Support/osp/L2
ELANOR_ROOT	$L2_OSP_PATH/ELANOR_Temp
ELANOR_USER_INPUT	./in
ABSCO_PATH	/project/ABSCO/v2.4/Single_MacroWindow_CoarserGrid_Data_FullFilter
DYNAMIC_ABSCO_PATH	/project/TES/microwindow_cache-3.0
GMAO_PATH	/vobs/L2_Retrieval/test/in
GMAO_PARAM_ID	5 (or 6 depending on Meteorology)

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L2_PRODUCT_INPUT_PATH	/vobs/L2_Retrieval/test/out/TargetLevelData

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6.3.2 ClearCase Configuration Specification (Config Spec)

The following is how the configuration specification file should be set in order to view and access the directories and files needed for L2_Products PGE in ClearCase for release 12.0.

Release 15.0.0:

#element * CHECKEDOUT

Documents
element /vobs/doc/… L2PR-15.00.00-Delivered

Framework
element /vobs/Framework/… FWXX-14.00.00-Delivered

Shared libraries
element /vobs/Shared/… ShFW-14.00.00-Delivered

Operational Support
element /vobs/Support/… L1BX-14.01.00-Delivered

MCF files
element /vobs/MCF/… **TESX-15.00.00-Delivered**

L2_Retrieval PGE
element /vobs/L2_Retrieval/… L2RE-15.00.00-Delivered

L2_Products PGE
element /vobs/L2_Products/… L2PR-15.00.00-Delivered

6.4

6.5 BUILD INSTRUCTIONS

A L2_Products PGE "build script" is not available for this delivery.

6.5.1 Instructions for ClearCase (on ponte)

Set ClearCase view: `cleartool setview <user_view>`
(see ClearCase Cookbook)

Assure proper ClearCase configuration setup: `cleartool edcs`

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(see previous section 6.3.2)

6.5.2 Instructions for defining "Build" environment variables

Change directory to edit setup script: `cd /vobs/L2_Products/artifacts`

Checkout setup script: `cleartool checkout setup_env`

Edit setup script for the username and password that access the Oracle Database:
`vi setup_env`

```
DB_USER <username>
DB_PWD  <password>
```

If one does not have an Oracle password, contact the database administrator.

Read and execute commands in setup script by: `source setup_env`
(see section 6.3.1)

6.5.3 Instructions for rebuilding the Shared subsystem

Change directory to "Shared": `cd /vobs/Shared`

Run the top level make script by typing: `buildShared`

6.5.4 Instructions for rebuilding Framework

Change directory to "Framework": `cd /vobs/Framework`

Run the top level make script by typing: `buildFW`

6.5.5 Instructions for rebuilding the Shared L2 library

Note: Rebuilding Shared L2 library separately is no longer needed since Release 5.2. Building Shared automatically traverses to the Shared/L2 subdirectory. Skip to 6.4.6 below.

6.5.6 Instructions for rebuilding L2_Products PGE

Change directory to "L2_Products": `cd /vobs/L2_Products`

If `Makefile` does not exist:

Create soft link to "Shared Makefile": `ln –s /vobs/Shared/Makefile`

Remove existing object files, library and executable:
`clearmake –C gnu –u -F clean`

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Generate the list of file dependencies: `clearmake -C gnu -u -F depend`

Complile source code and build library: `clearmake -C gnu -u -F lib`

Build the executable: `clearmake -C gnu -u -F main`

Another way to build is: `clearmake -C gnu -u -F all`

6.5.7 Instructions for delivering L2_Products PGE to SIPS

Change the working directory to **/vobs/L2_Products/delivery** and clean-up view-private files.

Change the working directory to **/vobs/L2_Products/delivery/scripts**.

Run the recursive archival script by typing: `./archive_target`

Enter Delivery name [L2_Products]: `<delivery_name>`
Example: `L2PR_R15.00.00`

Four new files will be created:

/vobs/L2_Products/delivery/`<delivery_name>`**_receipt.txt** contains the subsystem name, date stamp, clearcase config spec used, source file listing (showing which files were taken out of clearcase via symlinks) and the target file listing (showing all files on the delivery end without symlinks). The subsystem lead is to look through the delivery receipt file to ensure that the delivery contains the expected contents.

/vobs/L2_Products/delivery/unpack_`<delivery_name>` contains the tar package and unpacking script.

/vobs/L2_Products/delivery/docs/PGE_config_records.txt contains the configuration record and build history of the delivered executable.

/vobs/L2_Products/delivery/docs/delivery_config_spec.txt contains the clearcase configuration specification used.

Transfer the first two files to the target machine, ensuring they reside in the same directory. Log into the target machine and change the working directory to that where the delivered files reside.

Ensure the target machine has the 'md5' utility by typing: **which md5**
Contact the system administrator if md5 could not be found.

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7 RUNTIME INSTRUCTIONS

The script files provided set up the environment and any needed variables. The script files follow the filename convention: run L2_Products_testcase#.csh.

7.1 INSTRUCTIONS FOR CLEARCASE

Set ClearCase view: `cleartool setview <user_view>`
(see ClearCase Cookbook)

Assure proper ClearCase configuration setup: `cleartool edcs`
(see previous section 6.3.2)

7.2 INSTRUCTION FOR DEFINING "RUN" ENVIRONMENT VARIABLES

Read and execute commands in setup script by:
`source /vobs/L2_Products/artifacts/setup_env`
(see section 6.3.1)

Additional environment variables needed for the "run" environment are defined in the test scripts:

VARIABLE	VALUE
FW_Environment	SCF
FWErrorFile	./<error_filename>

7.3 INSTRUCTIONS FOR POPULATING DATABASE

Population of the R6 database is done via the run scripts below, it is not a separate step that needs to take place. All the run scripts run the database population scripts.

However, if one does not want to execute the run scripts and desires only to populate the database tables needed by L2_Products:

Source the setup script:
`/vobs/L2_Products/artifacts/setup_env`

Submit the command to populate the database tables:
`/vobs/L2_Products/scripts/pre_products.script`

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7.4 INSTRUCTIONS FOR RUNNING TEST SCRIPTS

There are three kinds of tests performed on L2_Products: PGE, Unit Test, and Regression. Each is run independent of the other.

INSTRUCTIONS FOR RUNNING UNIT TESTS SCRIPT

The unit tests need to be run from the parent directory: **/vobs/L2_Products/**

Change directory to "L2_Products": `cd /vobs/L2_Products`

Run the script: `/vobs/L2_Products/scripts/L2_Products.unit_test`

INSTRUCTIONS FOR RUNNING REGRESSION TESTS SCRIPT

The regression tests need be run from the parent directory: **/vobs/L2_Products/**

Change directory to "L2_Products/test": `cd /vobs/L2_Products`

Run the script: `/vobs/L2_Products/scripts/CASPER_run_script.csh`

INSTRUCTIONS FOR RUNNING PGE TEST SCRIPTS

The test scripts need to be run from the test directory: **/vobs/L2_Products/test**.

Change directory to "L2_Products Test": `cd /vobs/L2_Products/test`

Copy L2_Products test script:
`cp /vobs/L2_Products/scripts/run_all_PGE.csh .`

Run each test case by executing the following script:
`/vobs/L2_Products/test/run_all_PGE.csh`

(Test output files will be generated at current directory, /vobs/L2_Products/test)

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APPENDICES

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APPENDIX A RDD ACCEPTANCE CRITERIA

The following acceptance criteria shall be used in reviewing the RDD:

1. The RDD contains a description of all capabilities originally planned for this version. Any liens to the subsystem release plan are enumerated as well. Operations procedures, constraints, workarounds or other idiosyncrasies relevant to this release are clearly defined in the RDD.
2. All referenced test results and test reports are documented and have been cataloged in the configuration management system.
3. Machine-specific build requirements are specified in the RDD.
4. Runtime environment computer resources are specified in the RDD.
5. All supporting documents (FRD, design documents, …) are current and are consistent with the released program set.
6. Versions of all inputs (their sources).

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APPENDIX B TABLE OF FUNCTIONAL REQUIREMENTS

The table of Functional Requirements lists all requirements satisfied by L2_Products PGE for Release 6.0. The Requirements column contains the requirement number followed by a description. The numbering of the requirement follows the scheme:

FRD2136:

- **2136** is the actual, possibly general, requirement being satisfied in whole

FRD2101.4.1:

- **2101** is the actual general requirement number (may not be listed in its general form if due to be completed in a later release)
- **4** corresponds to the release
- **1** corresponds to the part of the requirement being satisfied in this release

(Note: At the time of this writing, the FRD was not updated to reflect requirements for Release 8.0.)

Requirements	Delivery	PGE

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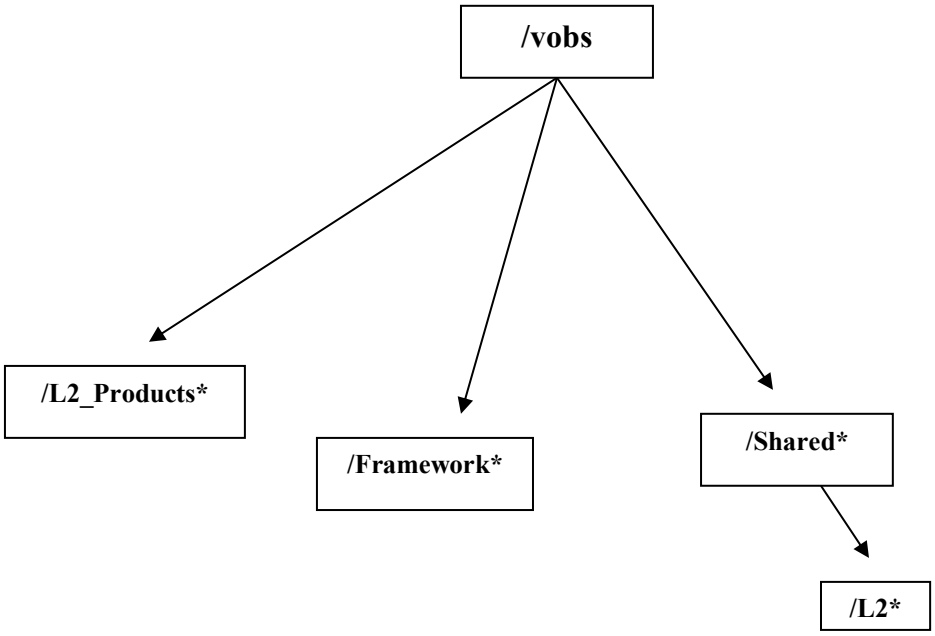
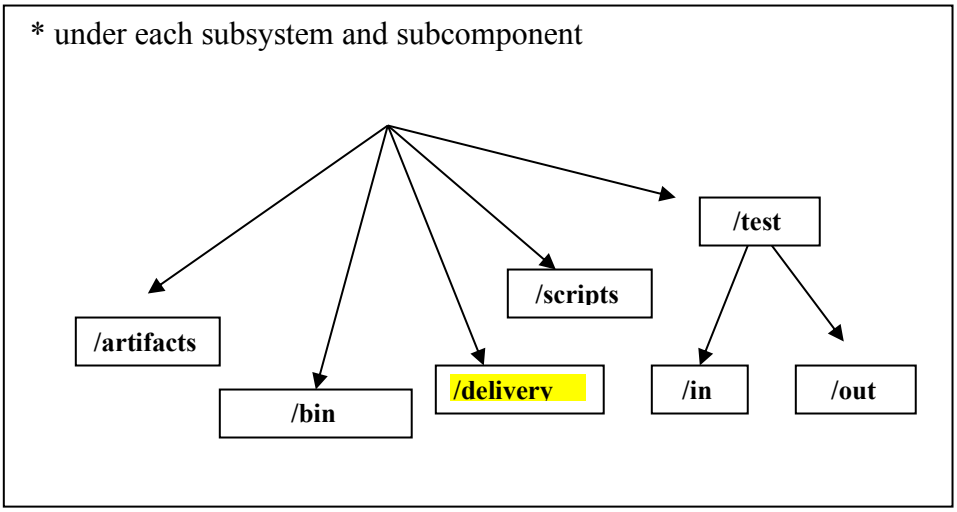
APPENDIX C CLEARCASE DIRECTORY STRUCTURE





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