

CR # 96-0308b

**his Version (B) differ from the original version of this CCR as follows:**

ne proposed mapping between S-DPS-20010 to EOSD0502#A made in the original CCR is removed from Version A. S-DPS-20010 and EOSD0502#A main unlinked as they currently are in RTM

ne proposed deletion of linkage between S-DPS-20160 and SDPS0010#B is removed from the tables and the current mapping left as it is in RTM

ne proposed mapping between S-DPS-60615 to EOSD1705#A is removed from this version (A) of this CCR. Mapping to link S-DPS-60615 to PGS-440#A and to PGS-0440#B are added to this version of the CCR.

ne text for requirement S-DPS-41360 is changed in this version (A). Original text was inaccurate.

dditional mappings to link S-DPS-41910 to PGS-0440#A (and #B) and link S-DPS-41920 to PGS-0440#A (and #B).

iscellaneous editorial corrections are made. Added mandatory attributes to requirements tables

**he Changes for DPS Level 4 requirements and their parent RbR requirements in RTM BASELINE**

**ABLE 1: Table 1 represent the Reference Table of change proposed by this CCR.**

<b>L4 ID</b>	<b>Rel</b>	<b>RTM Key</b>	<b>L4 Text</b>	<b>Clarification</b>	<b>Req Type</b>	<b>RbR ID</b>	<b>RTM Key</b>	<b>RbR Text</b>	<b>RbR Type</b>	<b>Interpret</b>
<u>5-DPS-20010</u>	A	4358	The PRONG CI shall be developed with configuration-controlled Application Programming Interfaces (APIs) to support the development and integration of DAAC value-added processing.	<u>APIs consist of the class libraries which are available for future development</u>	functional	EOSD5250#B	3946	ECS shall enable access to configuration controlled applications programming interfaces that permit development of DAAC-unique value added services and products where DAAC-unique value added services may consist of one or more of the following types of developments: a. Visualization utilities and products b. Data sets and inter-data set usability utilities and products c. Data analysis utilities d. Special subsetting capabilities (e.g. dynamic) e. On-line analysis functions f. New search and access techniques g. Data acquisition planning and utilities h. Experimental QA techniques i. Non-digital data utilities and products j. System Management Functions	evolvable	

<p><u>DPS-20010</u></p>						<p>EOSD5250#A</p>	<p>5185</p>	<p>ECS shall enable access to configuration controlled applications programming interfaces that permit development of DAAC-unique value added services and products where DAAC-unique value added services may consist of one or more of the following types of developments:</p> <ul style="list-style-type: none"> <li>a. Visualization utilities and products</li> <li>b. Data sets and inter-data set usability utilities and products</li> <li>c. Data analysis utilities</li> <li>d. Special subsetting capabilities (e.g. dynamic)</li> <li>e. On-line analysis functions</li> <li>f. New search and access techniques</li> <li>g. Data acquisition planning and utilities</li> <li>h. Experimental QA techniques</li> <li>i. Non-digital data utilities and products</li> <li>j. System Management Functions</li> </ul>	<p>evolvable</p>	
<p><u>DPS-20040</u></p>	<p>A</p>	<p>4361</p>	<p>The PRONG CI design and implementation shall have the flexibility to accommodate Processing expansion up to a factor of 3 in its capacity with no changes to the design, and up to a factor of 10 without major changes to its design. Such expansion in capacity or capability shall be transparent to existing algorithms or product specifications.</p>	<p>evolvable</p>		<p>EOSD0545#B</p>	<p>3835</p>	<p>ECS shall be able to accommodate growth (e.g., capacity) in all of its functions as well as the addition of new functions.</p>	<p>functional</p>	<p>For compliance refer to Segment Specificatic n 305/DV2, System Design Spe (SDS) 207/SE1.</p>

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<del>i</del> -DPS-20100	A	4362	The PRONG CI shall request information about the health and availability of a Hardware Resource by using a Systems Management Subsystem (MSS) provided Resource Management API (Application Program Interface).	These L4's are mapped here to verify the CM of the processing environment.	interface	SDPS0140#A	4208	The SDPS shall support element, system, and subsystem test activities throughout the development phase.	functional
<del>i</del> -DPS-20160	A	4367	The PRONG CI shall provide Accountability Management data to the MSS using a MSS provided Accountability Management API.		interface	PGS-0310#A	4160	The PGS element shall collect the management data used to support the following system management functions: a. Fault Management b. Configuration Management c. Accounting Management d. Accountability Management e. Performance Management f. Security Management g. Scheduling Management.	functional
<del>i</del> -DPS-20190	A	4370	The PRONG CI shall have the capability to modify the configuration settings of the Data Processing subsystem Hardware resources.		functional	PGS-0310#B	4655	The PGS element shall collect the management data used to support the following system management functions: a. Fault Management b. Configuration Management c. Accounting Management d. Accountability Management e. Performance Management f. Security Management g. Scheduling Management.	functional

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<del>i-DPS-20191</del>	B	8655	The PRONG CI shall have the capability to modify the configuration settings of the Data Processing subsystem Hardware resources.		functional	PGS-0310#B	4655	The PGS element shall collect the management data used to support the following system management functions: a. Fault Management b. Configuration Management c. Accounting Management d. Accountability Management e. Performance Management f. Security Management g. Scheduling Management.	functional	
<del>i-DPS-20200</del>	B	8656	The PRONG CI shall provide Configuration Management data to the MSS using a MSS provided Configuration Management API.		interface	PGS-0310#B	4655	The PGS element shall collect the management data used to support the following system management functions: a. Fault Management b. Configuration Management c. Accounting Management d. Accountability Management e. Performance Management f. Security Management g. Scheduling Management.	functional	
<del>i-DPS-20400</del>	A	4378	The PRONG CI shall accept a Data Processing Request (DPR) that requests the execution of a PGE.		functional	SDPS0031#B	5073	The SDPS shall generate browse data and metadata for routing to the requesting users.	functional	
<del>i-DPS-20460</del>	A	4383	The PRONG CI shall take a pre-determined error recovery action if the resource which maintains the input data is not available for data staging.		functional	PGS-0320#A	4161	The PGS shall display detected faults to the system operators.	functional	Faults = errors such as: data staging/desi aging, PGE execution queue processing, etc.

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;-DPS-20460						PGS-0320#B	4658	The PGS shall display detected faults to the system operators.	functional	Faults = errors such as: data staging/destaging, PGE execution queue processing, etc.
;-DPS-20470	A	4384	The PRONG CI shall take a pre-determined error recovery action if the resource identified as the recipient of the Output Data is not available for data destaging.		functional	PGS-0320#A	4161	The PGS shall display detected faults to the system operators.	functional	Faults = errors such as: data staging/destaging, PGE execution queue processing, etc.
;-DPS-20470						PGS-0320#B	4658	The PGS shall display detected faults to the system operators.	functional	Faults = errors such as: data staging/destaging, PGE execution queue processing, etc.
;-DPS-20480	A	4385	The PRONG CI shall take a pre-determined error recovery action if the computer resource required to execute the PGE is not available.		functional	PGS-0320#A	4161	The PGS shall display detected faults to the system operators.	functional	Faults = errors such as: data staging/destaging, PGE execution queue processing, etc.

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;-DPS-20480						PGS-0320#B	4658	The PGS shall display detected faults to the system operators.	functional	Faults = errors such as: data staging/desting, PGE execution queue processing, etc.
;-DPS-20691	B	8657	The PRONG CI shall <u>base the staging of input data on the predicted PGE execution start time and the estimated staging time</u> ,begin staging data at a time far enough in advance to complete staging of input data prior the predicted start of PGE execution.		functional					
;-DPS-20692	B	8658	The PRONG CI shall not begin staging data too far in advance of PGE execution in such a way that unnecessarily utilizes disk space.		functional					
;-DPS-20693	B	8659	The PRONG CI input data staging shall avoid the creation of deadlock situations.		functional					
;-DPS-20695	B	8661	The PRONG CI shall delete the staged <u>input data for a DPR</u> if the <u>that DPR</u> that initiated the input data staging is cancelled and no other DPR needs it.		functional					
;-DPS-20696	B	8662	The PRONG CI shall complete the <u>process of staging the input data staging</u> and defer suspend the <u>execution of the PGE</u> PGE job if the suspend command is received <u>while the data is being staged</u> at the time of data staging.		functional					
;-DPS-20860	A	4416	The PRONG CI shall destage ECS Data Products to the SDSRV CI.	"ECS Data Products" includes metadata also.	interface	SDPS0031#B	5073	The SDPS shall generate browse data and metadata for routing to the requesting users.	functional	

<p><u>i-DPS-21000</u></p>	<p>A</p>	<p>4419</p>	<p>The PRONG CI shall initiate execution of a PGE when the following is true:  a. When all input data required to execute the PGE is available on local Data Processing subsystem storage resources.  b. When the computer hardware resources are available to support execution of a PGE based on the computer hardware resource information associated with the Data Processing Request.  c. When the Priority Information associated with the Data Processing Request has been fulfilled.  d. When the maximum disk space requirements defined for the PGE are available to support the successful execution of the PGE  e. When the maximum memory resources defined for the PGE are available to support the successful execution of the PGE  f. When the CPU resources defined for the PGE are available to support the successful execution of the PGE</p>		<p>functional</p>	<p>SDPS0031#B</p>	<p>5073</p>	<p>The SDPS shall generate browse data and metadata for routing to the requesting users.</p>	<p>functional</p>	
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i-DPS-21730	B	8665	The operations staff shall have the capability to suspend the processing of a Data Processing Request.		functional	PGS-0270#B	4630	The PGS shall provide the capability to perform the following functions, at a minimum: a. Allocate tasks among processors b. Suspend execution of tasks c. Resume execution of a suspended task d. Cancel execution of tasks e. Request and verify the staging and/or destaging of data stored in the DADS	functional	A Task = PGE; "Allocation of tasks among processors" is supported through resource availability. B: Suspend/Resume execution of task.
i-DPS-21740	B	8666	The operations staff shall have the capability to resume suspended processing of a Data Processing Request.		functional	PGS-0270#B	4630	The PGS shall provide the capability to perform the following functions, at a minimum: a. Allocate tasks among processors b. Suspend execution of tasks c. Resume execution of a suspended task d. Cancel execution of tasks e. Request and verify the staging and/or destaging of data stored in the DADS	functional	A Task = PGE; "Allocation of tasks among processors" is supported through resource availability. B: Suspend/Resume execution of task.
i-DPS-21880	A	4465	The PRONG CI shall provide a User Interface to authorized users.		functional	PGS-0360#A	4167	The PGS shall generate a PGS processing log that accounts for all data processing activities.	functional	Data processing activities = PLANG and PRONG status logs.

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<del>DPS-21880</del>						PGS-0360#B	4694	The PGS shall generate a PGS processing log that accounts for all data processing activities.	functional	Data processing activities = PLANG and PRONG status logs.
<del>DPS-21880</del>						PGS-0410#B	4723	The PGS shall have the capability to track the processing status of all products scheduled to be generated.	functional	
<del>DPS-21880</del>						PGS-0410#A	4175	The PGS shall have the capability to track the processing status of all products scheduled to be generated.	functional	
<del>DPS-22590</del>	B	8671	The PRONG CI shall not perform any further processing on a Data Processing Request which is suspended.		functional	PGS-0270#B	4630	The PGS shall provide the capability to perform the following functions, at a minimum: a. Allocate tasks among processors b. Suspend execution of tasks c. Resume execution of a suspended task d. Cancel execution of tasks e. Request and verify the staging and/or destaging of data stored in the DADS	functional	A Task = PGE; "Allocation of tasks among processors" is supported through resource availability. B: Suspend/Resume execution of task.

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<u>}-DPS-22600</u>	B	8672	The PRONG CI shall reject the Operation Command which specified a resume if the Data Processing Request was not suspended.		functional	PGS-0270#B	4630	The PGS shall provide the capability to perform the following functions, at a minimum: a. Allocate tasks among processors b. Suspend execution of tasks c. Resume execution of a suspended task d. Cancel execution of tasks e. Request and verify the staging and/or destaging of data stored in the DADS	functional	A Task = PGE; "Allocation of tasks among processors" is supported through resource availability. B: Suspend/Resume execution of task.
<u>}-DPS-22611</u>	B	8673	When the resume Operation Command is used to resume processing for a Data Processing Request, the PRONG CI shall update the Processing State to the previous Processing State before the suspension.		functional	PGS-0270#B	4630	The PGS shall provide the capability to perform the following functions, at a minimum: a. Allocate tasks among processors b. Suspend execution of tasks c. Resume execution of a suspended task d. Cancel execution of tasks e. Request and verify the staging and/or destaging of data stored in the DADS	functional	A Task = PGE; "Allocation of tasks among processors" is supported through resource availability. B: Suspend/Resume execution of task.
<u>}-DPS-24000</u>	B	NEW	<u>The PRONG CI shall notify the operations staff when the size of a granule input to a Data Processing Request is not within a pre-assigned range.</u>		functional	PGS-1050#B	4948	The PGS shall provide the capability to perform both automatic and manual QA of generated products.	functional	
<u>}-DPS-24010</u>	B	NEW	<u>The PRONG CI shall notify the operations staff when the size of a granule output by a Data Processing Request is not within a pre-assigned range.</u>		functional	PGS-1050#B	4948	The PGS shall provide the capability to perform both automatic and manual QA of generated products.	functional	

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<u>3-DPS-24020</u>	B	NEW	The PRONG CI shall be capable of checking core metadata values of output data granules against a predefined list of values.		functional	PGS-1050#B	4948	The PGS shall provide the capability to perform both automatic and manual QA of generated products.	functional	
<u>3-DPS-24030</u>	B	NEW	The PRONG CI shall be capable of checking core metadata values of output data granules against a predefined range of values.		functional	PGS-1050#B	4948	The PGS shall provide the capability to perform both automatic and manual QA of generated products.	functional	
<u>3-DPS-24040</u>	B	NEW	The PRONG CI shall be capable of checking product specific metadata values of output data granules against a predefined list of values.		functional	PGS-1050#B	4948	The PGS shall provide the capability to perform both automatic and manual QA of generated products.	functional	
<u>3-DPS-24050</u>	B	NEW	The PRONG CI shall be capable of checking product specific metadata values of output data granules against a predefined range of values.		functional	PGS-1050#B	4948	The PGS shall provide the capability to perform both automatic and manual QA of generated products.	functional	
<u>3-DPS-30320</u>	B	8675	The PRONG CI shall generate reports on the quality of onboard orbit data, noting: a) the number of missing data are more than a specified limit value over a specified time interval b) the number of contiguous missing data are more than a specified value		interface functional					
<u>3-DPS-30610</u>	A	5152	The PRONG CI shall process the TRMM spacecraft ancillary data to assess the quality of onboard attitude data to detect and note in metadata the following conditions: a. missing data b. erroneous data (i.e. invalid Euler angle, invalid Euler angle rate)	RLS A capability includes the verification of INGST interface for O/A QA, and the QA of TRMM onboard attitude data. Orbit data provided by FDF for TRMM, does not require PDPS style QA.	functional	PGS-0455#B	4869	The PGS shall have the capability to assess the quality of spacecraft orbit and attitude (O/A) data contained in the ancillary data. QA shall be in the form of limits checking.	functional	

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i-DPS-31700	A	5158	The PRONG CI shall extract metadata attributes for external Ancillary Data sets, in addition to metadata extraction by the INGST CI.		functional	DADS0145#A	4056	Each DADS shall be capable of receiving from the ADCs, at a minimum, the following for the purpose of product generation: a. L0-L4 equivalent data sets b. Metadata c. Ancillary data d. Calibration data e. Correlative data f. Documents g. Algorithms	functional	A: NOAA only
i-DPS-31700						PGS-0450#A	4179	The PGS shall accept from the DADS ancillary data sets. Received information shall contain at a minimum: a. Product identification b. Ancillary data set c. Metadata required for processing d. Current date and time e. DADS identification	functional	A: CERES LIS processing
i-DPS-31700						PGS-0450#B	4755	The PGS shall accept from the DADS ancillary data sets. Received information shall contain at a minimum: a. Product identification b. Ancillary data set c. Metadata required for processing d. Current date and time e. DADS identification	functional	B: AM-1

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DPS-31700						DADS0145#B	3466	<p>Each DADS shall be capable of receiving from the ADCs, at a minimum, the following for the purpose of product generation:</p> <ul style="list-style-type: none"> <li>a. L0-L4 equivalent data sets</li> <li>b. Metadata</li> <li>c. Ancillary data</li> <li>d. Calibration data</li> <li>e. Correlative data</li> <li>f. Documents</li> <li>g. Algorithms</li> </ul>	functional	
DPS-41180	B	8694	<p>The AITTL CI shall provide to the operations staff, via a GUI, the capability to define new data types for new Products produced by an Science Software Archive Package.</p>		functional	PGS-0630#B	4888	<p>The PGS shall send the DADS new or modified calibration coefficients which shall contain the following information at a minimum:</p> <ul style="list-style-type: none"> <li>a. Identification of coefficient data set</li> <li>b. Calibration coefficients values</li> <li>c. Author and version number</li> <li>d. Identification of related processing algorithm</li> <li>e. Start and stop date/time of applicability</li> <li>f. Documentation</li> </ul>	functional	

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3-DPS-41180						PGS-0960#B	4909	The PGS shall send the DADS new or modified algorithms. This delivery shall contain the following information at a minimum: a. Source code including version number and author b. Benchmark test procedures, test data and results c. Date and time of operational installation d. Final algorithm documentation e. Calibration coefficient values	functional	B: AM-1, COLOR
3-DPS-41200	B	8696	The AITTL CI SSAP GUI for adding an Science-Software Archive Package to the Data Server shall provide the operations staff with the ability (a) to restrict update access to the Data Server to authorized personnel and (b) to maintain a record of updates made.		functional					
3-DPS-41355	B	8697	The AITTL CI SSAP GUI for updating the PGE Database shall provide the operations staff with the ability (a) to restrict update access to the PGE Database to authorized personnel and (b) to maintain a record of updates made.		functional					
3-DPS-41360	B	8698	The AITTL CI SSAP GUI for updating the PGE Database shall have the capability <u>be capable of accepting PGE information updates for the PDPS Database</u> its inputs from a file.		functional					

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DPS-41410	IR1	9140	The AITTL CI shall include access to a problem tracking tool supplied by MSS.		interface	PGS-0950#B	4907	<p>The PGS shall interface to maintain configuration control of all algorithms and calibration coefficients used in operational Standard Product production. Controlled information shall contain at a minimum:</p> <ul style="list-style-type: none"> <li>a. Source code including version number and author</li> <li>b. Benchmark test procedures, test data, and results</li> <li>c. Date and time of operational installation</li> <li>d. Compiler identification and version</li> <li>e. Final algorithm documentation</li> </ul>	functional	
DPS-41410						SMC-4315#A	4324	<p>The LSM shall, at a minimum, isolate, locate, and identify faults, identify subsystem, equipment, and software faults, and identify the nature of the faults within its element.</p>	functional	

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DPS-41910	A	9253	The AITTL CI shall provide to the operations staff the capability to retrieve a copy of a specific Science Software Archive Package.		functional	PGS-0960#B	4909	The PGS shall send the DADS new or modified algorithms. This delivery shall contain the following information at a minimum: a. Source code including version number and author b. Benchmark test procedures, test data and results c. Date and time of operational installation d. Final algorithm documentation e. Calibration coefficient values	functional	B: AM-1, COLOR
DPS-41910						PGS-0270#A	4153	The PGS shall provide the capability to perform the following functions, at a minimum: a. Allocate tasks among processors b. Suspend execution of tasks c. Resume execution of a suspended task d. Cancel execution of tasks e. Request and verify the staging and/or destaging of data stored in the DADS	functional	A Task = PGE; "Allocation of tasks among processors" is supported through resource availability. A: Cancel execution of tasks.

<p><u>DPS-41910</u></p>						<p>PGS-0270#B</p>	<p>4630</p>	<p>The PGS shall provide the capability to perform the following functions, at a minimum:  a. Allocate tasks among processors  b. Suspend execution of tasks  c. Resume execution of a suspended task  d. Cancel execution of tasks  e. Request and verify the staging and/or destaging of data stored in the DADS</p>	<p>functional</p>	<p>A Task = PGE; "Allocation of tasks among processors" is supported through resource availability. B: Suspend/Resume execution of task.</p>
<p><u>DPS-41920</u></p>	<p>A</p>	<p>9252</p>	<p>The AITTL CI shall provide to the operations staff the capability to store a Science Software Archive Package to the Data Server.</p>	<p>functional</p>	<p>PGS-0960#B</p>	<p>4909</p>	<p>The PGS shall send the DADS new or modified algorithms. This delivery shall contain the following information at a minimum:  a. Source code including version number and author  b. Benchmark test procedures, test data and results  c. Date and time of operational installation  d. Final algorithm documentation  e. Calibration coefficient values</p>	<p>functional</p>	<p>B: AM-1, COLOR</p>	

<u>i-DPS-41920</u>						PGS-0270#A	4153	The PGS shall provide the capability to perform the following functions, at a minimum: a. Allocate tasks among processors b. Suspend execution of tasks c. Resume execution of a suspended task d. Cancel execution of tasks e. Request and verify the staging and/or destaging of data stored in the DADS	functional	A Task = PGE; "Allocation of tasks among processors" is supported through resource availability. A: Cancel execution of tasks.
<u>i-DPS-41920</u>						PGS-0270#B	4630	The PGS shall provide the capability to perform the following functions, at a minimum: a. Allocate tasks among processors b. Suspend execution of tasks c. Resume execution of a suspended task d. Cancel execution of tasks e. Request and verify the staging and/or destaging of data stored in the DADS	functional	A Task = PGE; "Allocation of tasks among processors" is supported through resource availability. B: Suspend/Resume execution of task.
<u>i-DPS-42100</u>	IR1	4623	The operations staff shall place a Science Software Delivery Package in a non-public directory accessible to the hardware scheduled to be used for I&T.		procedural	PGS-0940#B	4905	The PGS shall provide storage for all candidate algorithms' software executables and calibration coefficients.	functional	
<u>i-DPS-42640</u>	IR1	4661	The operations staff shall have the capability to send the test results to the SCF for analysis.		functional	SDPS0090#B	5100	The SDPS shall interface with the PIs and the other science users to support the development and testing of data product algorithms and QA of produced data products	interface	

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<u>SDPS-60010</u>	A	4673	The SPRHW CI shall support the capability to manage, queue, and execute processes on the processing resources at each DAAC site.		functional	SDPS0031#B	5073	The SDPS shall generate browse data and metadata for routing to the requesting users.	functional	
<u>SDPS-60135</u>	A	4682	The SPRHW CI design and implementation shall have the flexibility to accommodate Science Processing expansion up to a factor of 3 in its capacity with no changes in its design and up to a factor of 10 without major changes to its design.		evolvable	EOSD0545#B	3835	ECS shall be able to accommodate growth (e.g., capacity) in all of its functions as well as the addition of new functions.	functional	For compliance refer to Segment Specification 305/DV2, System Design Specification (SDS) 207/SE1.
<u>SDPS-60240</u>	A	9208	The SPRHW CI shall support a total processing requirement as derived from Table E-1 of Appendix E of the current version of 304-CD-002 for Release A and Appendix E of the current version of 304-CD-005 for Release B.		performance	SDPS0031#B	5073	The SDPS shall generate browse data and metadata for routing to the requesting users.	functional	
<u>SDPS-60490</u>	A	4698	The SPRHW CI shall be capable of supporting system development without impact to normal operations.		RMA	SDPS0140#B	5131	The SDPS shall support element, system, and subsystem test activities throughout the development phase.	functional	
<u>SDPS-60500</u>	A	4699	The SPRHW CI shall be capable of supporting science software test without impact to normal operations.		RMA	SDPS0140#B	5131	The SDPS shall support element, system, and subsystem test activities throughout the development phase.	functional	
<u>SDPS-60615</u>	A	4707	The SPRHW CI platforms shall have provision for interfacing with Ingest		interface	PGS-0455#B	4869	The PGS shall have the capability to assess the quality of spacecraft orbit and attitude (O/A) data contained in the ancillary data. QA shall be in the form of limits checking.	functional	

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<u>i-DPS-60615</u>	A					PGS-0440#A	4178	The PGS shall accept from the DADS L0-L4 data products. Received information shall contain at a minimum: a. Product identification b. L0-L4 data set c. Metadata required for processing d. Current date and time e. DADS identification	functional	A: TRMM (CERES, LIS)
<u>i-DPS-60615</u>	A					PGS-0440#B	4751	The PGS shall accept from the DADS L0-L4 data products. Received information shall contain at a minimum: a. Product identification b. L0-L4 data set c. Metadata required for processing d. Current date and time e. DADS identification	functional	B: AM-1
<u>i-DPS-61040</u>	A	4723	The SPRHW CI computer platform shall provide a hard media device with a capacity of TBD GB for software and system maintenance and upgrade support.		functional					
<u>i-DPS-70050</u>	A	4740	The Algorithm Integration and Test HWCI design and implementation shall have the flexibility to accommodate Algorithm Integration and Test expansion up to a factor of 3 in its capacity with no changes in its design and up to a factor of 10 without major changes to its design.		functional	EOSD0545#B	3835	ECS shall be able to accommodate growth (e.g., capacity) in all of its functions as well as the addition of new functions.	functional	For compliance refer to Segment Specification 305/DV2, System Design Specification (SDS) 207/SE1.

**ABLE 2: Table 2 shows the LEVEL\_4 requirements that shall be modified by this CCR.**

L4 Rqt_ID	Rel	Rqt Key	L4 Text	Rqt Status	Verific Method	Clarification	Req Type
3-DPS-20010	A	9600	The PRONG CI shall be developed with configuration-controlled Application Programming Interfaces (APIs) to support the development and integration of DAAC value-added processing.	<u>Approved</u>	<u>inspection/</u> <u>test</u>	<u>APIs consist of the class libraries which are available for future development</u>	functional
3-DPS-20100	A	4362	The PRONG CI shall request information about the health and availability of a Hardware Resource by using a Systems Management Subsystem (MSS) provided Resource Management API (Application Program Interface).	Approved	demo	These L4's are mapped here to verify the CM of the processing environment.	interface
3-DPS-20190	A	4370	The PRONG CI shall have the capability to modify the configuration <u>settings</u> of the Data Processing subsystem Hardware resources.	Approved	demo		functional
3-DPS-61040	A	4723	The SPRHW CI computer platform shall provide a hard media device <del>with a capacity of TBD GB</del> for software and system maintenance and upgrade support.	Approved	demo		functional
3-DPS-20691	B	8657	The PRONG CI shall <u>base the staging of input data on the predicted PGE execution start time and the estimated staging time.</u> <del>begin staging data at a time far enough in advance to complete staging of input data prior the predicted start of PGE execution.</del>	Approved	test	<del>NONE</del>	functional
3-DPS-20695	B	8661	The PRONG CI shall delete the staged <u>input</u> data <u>for a DPR</u> if <del>the that DPR that initiated the input data staging is cancelled</del> and no other DPR needs it.	Approved	test	<del>NONE</del>	functional
3-DPS-20696	B	8662	The PRONG CI shall complete the <u>process of staging the input data staging</u> and defer <del>suspend the execution of the PGE PGE job</del> if the suspend command is received <u>while the data is being staged at the time of data staging.</u>	Approved	test	<del>NONE</del>	functional
3-DPS-30320	B	8675	The PRONG CI shall <u>generate</u> reports on the quality of onboard orbit data, noting: a) the number of missing data are more than a specified limit value over a specified time interval b) the number of contiguous missing data are more than a specified value	Approved	test		interface <u>functional</u>

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3-DPS-41200	B	8696	The AITTL CI SSAP GUI for adding an Science Software Archive Package to the Data Server shall provide the operations staff with the ability (a) to restrict update access to the Data Server to authorized personnel and (b) to maintain a record of updates made.	Approved	test		functional
3-DPS-41355	B	8697	The AITTL CI SSAP GUI for updating the PGE Database shall provide the operations staff with the ability (a) to restrict update access to the PGE Database to authorized personnel and (b) to maintain a record of updates made.	Approved	test		functional
3-DPS-41360	B	8698	The AITTL CI SSAP GUI for updating the PGE Database shall <del>have the capability</del> <u>be capable</u> of accepting <u>PGE information updates for the PDPS Database</u> <del>its inputs</del> from a file.	Approved	test		functional

**ABLE 3: Table 3 shows the LEVEL\_4 requirements that shall be deleted from RTM MAIN by this CCR.**

L4 ID	Rel	RTM Key	L4 Text	Clarification	Req Type
S-DPS-31700	A	-5158	The PRONG CI shall extract metadata attributes for external Ancillary Data sets, in addition to metadata extraction by the INGST CI.		functional
S-DPS-20191	B	-8655	The PRONG CI shall have the capability to modify the configuration settings of the Data Processing subsystem Hardware resources.		functional
S-DPS-20200	B	-8656	The PRONG CI shall provide Configuration Management data to the MSS using a MSS provided Configuration Management API.		interface
S-DPS-20692	B	-8658	The PRONG CI shall not begin staging data too far in advance of PGE execution in such a way that unnecessarily utilizes disk space.		functional
S-DPS-20693	B	-8659	The PRONG CI input data staging shall avoid the creation of deadlock situations.		functional
S-DPS-41180	B	-8694	The AITTL CI shall provide to the operations staff, via a GUI, the capability to define new data types for new Products produced by an Science Software Archive Package.		functional

**ABLE 4: Table 4 shows the LEVEL\_4 requirements that shall be added to RTM MAIN by this CCR.**

<b>L4 ID</b>	<b>Rel</b>	<b>RTM Key</b>	<b>L4 Text</b>	<b>Rqt Status</b>	<b>Verific Method</b>	<b>Clarific</b>	<b>Req Type</b>
<u>S-DPS-24000</u>	<u>B</u>	<u>NEW</u>	<u>The PRONG CI shall notify the operations staff when the size of a granule input to a Data Processing Request is not within a pre-assigned range.</u>	<u>Approved</u>	<u>test</u>		<u>functional</u>
<u>S-DPS-24010</u>	<u>B</u>	<u>NEW</u>	<u>The PRONG CI shall notify the operations staff when the size of a granule output by a Data Processing Request is not within a pre-assigned range.</u>	<u>Approved</u>	<u>test</u>		<u>functional</u>
<u>S-DPS-24020</u>	<u>B</u>	<u>NEW</u>	<u>The PRONG CI shall be capable of checking core metadata values of output data granules against a predefined list of values.</u>	<u>Approved</u>	<u>test</u>		<u>functional</u>
<u>S-DPS-24030</u>	<u>B</u>	<u>NEW</u>	<u>The PRONG CI shall be capable of checking core metadata values of output data granules against a predefined range of values.</u>	<u>Approved</u>	<u>test</u>		<u>functional</u>
<u>S-DPS-24040</u>	<u>B</u>	<u>NEW</u>	<u>The PRONG CI shall be capable of checking product specific metadata values of output data granules against a predefined list of values.</u>	<u>Approved</u>	<u>test</u>		<u>functional</u>
<u>S-DPS-24050</u>	<u>B</u>	<u>NEW</u>	<u>The PRONG CI shall be capable of checking product specific metadata values of output data granules against a predefined range of values.</u>	<u>Approved</u>	<u>test</u>		<u>functional</u>

**ABLE 5: Table 5 shows the REQ\_BY\_REL (RBR) requirements and their mandatory attributes that shall be modified by this CCR.**

Req ID	RTM key	Seg Alloc	RbR Text	S_Verific Methods	S_Verific Status	Rqt Category	A_Verific Methods	A_Verific Status	RbR Type	Interpretation
'GS-0160#A	4136	SDPS	The PGS shall receive standing orders, changes to standing orders, and product requests from the IMS.	test	un-verified	mission essential	test	<u>un-verified</u>	functional	<u>Rel A: Under the current architecture PLS(PGS) does not receive any product generation requests from external subsystems. Product requests are entered via PLS(PGS) interface.</u>
'GS-0160#B	4557	SDPS	The PGS shall receive standing orders, changes to standing orders, and product requests from the IMS.	test	un-verified	mission essential	test	<u>un-verified</u>	functional	<u>Rel B: Additional capability of user requests. These requests come to PLS(PGS) indirectly from CLS(IMS) through DSS(DADS).</u>
'GS-0230#A	4148	SDPS	The PGS shall base the PGS reprocessing plan on, at a minimum: a. Requests received from the IMS b. SMC directives c. The Standard Product specifications	test	un-verified	mission essential	test	<u>un-verified</u>	functional	<u>Although capability for reprocessing is not implemented until Release B, Limited (manual) Reprocessing at Rel A.; For Rel A &amp; B, Production plans contain both standard and reprocessing requests - no separate reprocessing plan. It is listed here because requirements required to generically "build a plan" would otherwise be untraceable.</u>
'GS-0230#B	4600	SDPS	The PGS shall base the PGS reprocessing plan on, at a minimum: a. Requests received from the IMS b. SMC directives c. The Standard Product specifications	test	un-verified	mission essential	test	<u>un-verified</u>	functional	<u>Although capability for reprocessing is not implemented until Release B, Limited (manual) Reprocessing at Rel A.; For Rel A &amp; B, Production plans contain both standard and reprocessing requests - no separate reprocessing plan. It is listed here because requirements required to generically "build a plan" would otherwise be untraceable.</u>
'GS-0240#A	4149	SDPS	The PGS shall perform reprocessing according to the PGS reprocessing plan and the availability of resources.	test	un-verified	mission essential	test	<u>un-verified</u>	functional	<u>Reprocessing capabilities for PRONG exist at RLS A but are not implemented until RLS B when PLANG capability for reprocessing becomes effective in RLS B. Limited (manual) Reprocessing at Rel A.; For Rel A &amp; B, Production plans contain both standard and reprocessing requests - no separate reprocessing plan.</u>
'GS-0870#A	4200	SDPS	The PGS shall have the capability to schedule algorithm test resources that do not interfere with the operational production environment.	test	un-verified	mission essential	test	<u>un-verified</u>	functional	<u>A: LaRC, MSFC, not production environments</u>

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**ABLE 6:** Table 6 shows the RbR to L4 links that shall be created in RTM MAIN by this CCR.

<b>RbR ID</b>	<b>L4 ID</b>
EOSD0545#B	<u>S-DPS-20040</u>
EOSD0545#B	<u>S-DPS-60135</u>
EOSD0545#B	<u>S-DPS-70050</u>
EOSD5250#A	<u>S-DPS-20010</u>
EOSD5250#B	<u>S-DPS-20010</u>
PGS-0270#A	<u>S-DPS-41910</u>
PGS-0270#A	<u>S-DPS-41920</u>
PGS-0270#B	<u>S-DPS-21730</u>
PGS-0270#B	<u>S-DPS-21740</u>
PGS-0270#B	<u>S-DPS-22590</u>
PGS-0270#B	<u>S-DPS-22600</u>
PGS-0270#B	<u>S-DPS-22611</u>
PGS-0270#B	<u>S-DPS-41910</u>
PGS-0270#B	<u>S-DPS-41920</u>
PGS-0310#A	<u>S-DPS-20160</u>
PGS-0310#B	<u>S-DPS-20190</u>
PGS-0440#A	<u>S-DPS-60615</u>
PGS-0440#B	<u>S-DPS-60615</u>
PGS-0455#B	<u>S-DPS-30610</u>
PGS-0960#B	<u>S-DPS-41910</u>
PGS-0960#B	<u>S-DPS-41920</u>
PGS-1050#B	<u>S-DPS-24000</u>
PGS-1050#B	<u>S-DPS-24010</u>
PGS-1050#B	<u>S-DPS-24020</u>
PGS-1050#B	<u>S-DPS-24030</u>
PGS-1050#B	<u>S-DPS-24040</u>
PGS-1050#B	<u>S-DPS-24050</u>
SDPS0031#B	<u>S-DPS-20400</u>
SDPS0031#B	<u>S-DPS-20860</u>
SDPS0031#B	<u>S-DPS-21000</u>
SDPS0031#B	<u>S-DPS-60010</u>
SDPS0031#B	<u>S-DPS-60240</u>
SDPS0090#B	<u>S-DPS-42640</u>
SDPS0140#B	<u>S-DPS-60490</u>
SDPS0140#B	<u>S-DPS-60500</u>
SMC-4315#A	<u>S-DPS-41410</u>

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**ABLE 7: Table 7 shows the RbR to L4 links that shall be deleted from RTM MAIN by this CCR.**

<b>RbR ID</b>	<b>L4 ID</b>
DADS0145#A	<del>S-DPS-31700</del>
DADS0145#B	<del>S-DPS-31700</del>
PGS-0310#B	<del>S-DPS-20191</del>
PGS-0310#B	<del>S-DPS-20200</del>
PGS-0320#A	<del>S-DPS-20460</del>
PGS-0320#A	<del>S-DPS-20470</del>
PGS-0320#A	<del>S-DPS-20480</del>
PGS-0320#B	<del>S-DPS-20460</del>
PGS-0320#B	<del>S-DPS-20470</del>
PGS-0320#B	<del>S-DPS-20480</del>
PGS-0320#B	<del>S-DPS-20480</del>
PGS-0360#A	<del>S-DPS-21880</del>
PGS-0360#B	<del>S-DPS-21880</del>
PGS-0410#A	<del>S-DPS-21880</del>
PGS-0410#B	<del>S-DPS-21880</del>
PGS-0450#A	<del>S-DPS-31700</del>
PGS-0450#B	<del>S-DPS-31700</del>
PGS-0455#B	<del>S-DPS-60615</del>
PGS-0630#B	<del>S-DPS-41180</del>
PGS-0940#B	<del>S-DPS-42100</del>
PGS-0950#B	<del>S-DPS-41410</del>
PGS-0960#B	<del>S-DPS-41180</del>
SDPS0140#A	<del>S-DPS-20100</del>