Release Date	Version	Product Processing Software for L1/L3		Product Processing Software for L2.1	
		Algorithm	Parameter	Algorithm	Parameter
–	000.000				
11-Sep-14	000.001	– Fixed range antenna pattern with updated parameter. – Added log messages for scalloping and inter-scan amplitude correction. – Added log messages for radio frequency interference (RFI) elimination. – Changed the unit of pulse width from micro sec(10^-6sec) to 10^-2 micro sec(10^-8sec) in the CEOS L1.0 product. – Acceralated scene clipping function.	– Updated the dynamic range of the Ultra-Fine mode L1.5 product.		
02-Oct-14	001.001	– Corrected amplitude nonuniformity for full polarimetry. – Changed the unit of window size of median filter for RFI elimination. – Modified inter-scan amplitude correction.	– Updated the threshold of parameters for interference elimination.. – Updated the range antenna pattern. – Updated the dynamic range of the High-Sensitive mode L1.5 product.		
16-Oct-14	001.002				– Changed the Offset value of slant range from "0.0m" to "-59.71m".
24-Oct-14	002.002	– Changed the value of phase correction for imbalance between channels. – Correction due to errors in the product format. – Changed the format of parameter file for azimuth antenna pattern. – Changed the azimuth window function in Ultra-Fine, High-sensitive and Fine mode.	– Updated the offset of the range delay. – Updated the range antenna pattern. – Updated the dynamic range of the Fine mode L1.5 product. – Updated channel-to-channel imbalance phase correction amount. – Changed format of azimuth antenna pattern. – Added the parameters for the azimuth window function.		– Changed the Offset value of slant range from "-59.71m" to "0.0m".
31-Oct-14	002.003		– Updated the range antenna pattern.		
04-Nov-14	002.004	– Fixed range antenna pattern.	– Updated the offset value of the range delay. – Updated the coefficient of absolute calibration .		
07-Nov-14	002.005	– Fixed range antenna pattern.	– Updated the offset value of the range delay. – Updated the coefficient of absolute calibration .		
14-Nov-14	002.006	– Fixed the reading error when the high precision orbit information is missing. – Fixed incidence angle dependency of gamma nought.	– Updated the offset value of the range delay for Spotlight mode and ScanSAR mode. – Updated the azimuth antenna pattern for ScanSAR wide mode(V3).		
19-Nov-14	002.007			Bug fix: [From] The latitude and longitude values of starting point of ellipsoidal height data array were set as single precision value. [To] They should be set as double precision value.	
24-Nov-14	002.008	– Improved azimuth ambiguity and resolution of spotlight mode. – Fixed the coordinate system from J2000 to TOD in the calculation of argument of latitude . – Fixed 2 line offset in the L1 product of ScanSAR mode. – Fixed the process error when missing L0 data.	– Updated the offset value of the range delay(Other than Spotlight mode). – Updated the L3 processing parameter.		
17-Dec-14	002.009	– Added the function for auto switching of redundant system . – Added log messages for issue of noise at all scene processing	– Updated the antenna pattern for scalloping correction		
28-Jan-15	002.010	– Fixed the error that black image is generated at the EICS high load . – Fixed the error that same images were created for different polarizations of L3.1 GeoTiff product. – Fixed the error of attitude data processing when using high precision orbit information. – Fixed the error that the final line of another scan mixed in L1.0 ScanSAR mode. – Corrected the beam center direction at the scene center. – Fixed the error of parallel processing.	– Changed the definition of a start delay of AD gate.		
20-Feb-15	002.011	– Fixed the error of calibration factor in the L1.5 / L3.1 GeoTIFF product – Fixed the loss of observation auxiliary data in the L1.0 product.	– Fixed the L1 processing errors(Error of the image cutout and reconstruction). – Extend the messages output period.		

18-Mar-15	002.012	– Changed the reference point of latitude / longitude conversion coefficient.	– Fixed L3 processing error(GeoTIFF tag acquisition error).
			– Fixed following items in product
			  Facility related data records 5 No24 was wrong.
			  Facility related data records 5 No25 and 26 were 0.		

31-Mar-15	002.013	– Fixed the errors in the following values in the product
		  Sensor platform heading at nadir corresponding to scene center.
		  The angle between projection axis from true north at processed scene center.
		  Platform headings.
		  Number of product files.			

Release Date	Version	Product Processing Software for L1/L3		Product Processing Software for L2.1	
		Algorithm	Parameter	Algorithm	Parameter
15-Apr-15	002.014	- Fixed the method of checking attitude data.			
22-Apr-15	002.015	- FIxed abnormal termination in the InSAR tool.			
19-May-15	002.016	- Fixed scene processing error at near the equator.			
23-Jun-15	002.017		- Updated the parameter of leap second .		
04-Dec-15	002.018	- Fixed the error of the spotlight mode processing.			
24-Dec-15	002.019		- Fixed the error of output range of L1.1 full aperture image. - Updated the range antenna pattern.		
29-Feb-16	002.020	- Fixed the error of GeoTIFF tag when outputting Geo-Reference image. - Fixed the error of latitude and longitude in the GeoTIFF tag of L1.1 product. - Fixed the misregistration of the PS projection image. - Added inter-scan amplitude correction of ScanSAR level 1.1. - Modified inter-scan amplitude correction of ScanSAR level 1.5.	- Modified the parameters due to algorithm correction on the left.		
23-May-16	002.021	- Fixed the error of output range of L1.1 full aperture image.	- Fixed the error of output range of L1.1 full aperture image.		
28-Sep-16 7:00(UT)	002.022	- Changed the pulse replica calculation method from the integrated to the average. - Time correction of Greenwich sidereal time. - Improved the noise occurred in the Antarctic.	- Updated the radiometric accuracy of ScanSAR W2. - Updated the parameter of leap second .		
28-Mar-17 7:00(UT)	002.023		- Updated the range antenna pattern. - Updated the radiometric calibration parameter. - Updated the polarimetric calibration parameter.		
5-Jun-18 7:00(UT)	002.024	- Fixed radiometric correction.(Scan SAR mode 350km Band width 28MHz) - Improved inter-scan amplitude correction of Scan SAR mode.	- Fixed radiometric correction.(Scan SAR mode 350km Band width 28MHz) - Updated radiometric calibration parameter.(Strip map mode 6m Full polarization mode Beam number 3, 7) - Improved inter-scan amplitude correction of Scan SAR mode.		

Release Date	Version	Product Processing Software for L1/L3		Product Processing Software for L2.1	
		Algorithm	Parameter	Algorithm	Parameter
20-Nov-18 7:00(UT)	002.025	- Fixed the error of the range pixel offset of level 1.1.			
23-Jun-20 7:00(UT)	002.026			- Modified L2.1 orthographic process which can use "AW3D30" as input DEM(Digital Elevation Model).	- Changed parameter for applying default DEM. L2.1 order with ""use_dem flag = ON"" : SPT, SM1, SM2, SM3 inside of Japan : GISMAP SPT, SM1, SM2, SM3 outside of Japan : AW3D30 WD1, WD2 with any region : AW3D30
3-Aug-20 7:00(UT)	002.027	- Fixed the error of latitude and longitude at the scene center of the L1.1 product of ScanSAR mode.			
12-Mar-21 7:00(UT)	002.028	- Modified the SPECAN algorithm of Spotlight mode and ScanSAR mode.			
13-Mar-23 6:00(UT)	002.029	- Improved the RFI elimination algorithm.	- Modified the parameters due to algorithm correction on the left.		

The processing of the product is performed by the software of version when user ordered.