

## MEGHA TROPIQUES Products: changes identification

September 7<sup>th</sup> 2012 Software Product version V2000

Products	General L1 chain version	SW version	IODD version	Changes
SAPHIR L1_A	V2000	1.03	9_10	Version used for First Reprocessing First reprocessing: Data from October 2011 to August 2012 have been reprocessed in November/December 2012
SAPHIR L1_A2	V2000	1.03	9_10	Version used for First Reprocessing First reprocessing: Data from October 2011 to August 2012 have been reprocessed in November/December 2012
SAPHIR L1_A3	Not yet open to users			
SCARAB L1_A	V2000	1.03	9_10	Version used for First Reprocessing First reprocessing: Data from October 2011 to August 2012 have been reprocessed in November/December 2012
SCARAB L1_A2	V2000	1.03	9_10	Version used for First Reprocessing of data. First reprocessing: Data from October 2011 to August 2012 have been reprocessed in November/December 2012
SCARAB L1_A3	Not yet open to users			

January 2<sup>nd</sup> 2013: Software product version V3000

Products	General L1chain version	SW version	IODD version	Changes
SAPHIR L1_A	V3000	1.04	9_10	Corrections of general attributes Correction of flags Corrections of geolocation degraded cases: erroneous latitudes Validation of orbit wise products
SAPHIR L1_A2	V3000	1.04	9_10	Corrections of general attributes Correction of flags Corrections of geolocation degraded cases: erroneous latitudes Validation of orbit wise products
SAPHIR L1_A3	Not yet open to users			
SCARAB L1_A	V3000	1.04	9_10	Corrections of general attributes Correction of flags Corrections of geolocation degraded cases: erroneous latitudes Validation of orbit wise products
SCARAB L1_A2	V3000	1.04	9_10	Corrections of general attributes Correction of flags Corrections of geolocation degraded cases: erroneous latitudes Validation of orbit wise products
SCARAB L1_A3	Not yet open to users			

January 25<sup>th</sup> 2013: Software product version V4000 from orbit 6646

Products	General L1chain version	SW version	IODD version	Changes
SAPHIR L1_A	V4000	1.05	9_14	Based on calibration results, correction of Sample location Change on some thresholds for count validity File naming convention + in General attribute name of L0 file added
SAPHIR L1_A2	V4000	1.05	9_14	Based on calibration results, correction of Pixel location Change on some thresholds for count validity File naming convention + in General attribute "name of L0 file" added
SAPHIR L1_A3	Not yet open to users			
SCARAB L1_A	V4000	1.05	9_14	File naming convention + in General attribute "name of L0 file" added
SCARAB L1_A2	V4000	1.05	9_14	Corrections of relative azimuth coding File naming convention + in General attribute "name of L0 file" added
SCARAB L1_A3	Not yet open to users			

February 12<sup>th</sup> 2013: Software product version V5000 from orbit 6910

Products	General L1chain version	SW version	IODD version	Changes
MADRAS 1A	V5000	1.05	9_14	Initial version
MADRAS 1A2	V5000	1.05	9_14	Initial version
SAPHIR L1_A	V5000	1.05	9_14	No change
SAPHIR L1_A2	V5000	1.05	9_14	No change
SAPHIR L1_A3	Not yet open to users			
SCARAB L1_A	V5000	1.05	9_14	No change
SCARAB L1_A2	V5000	1.05	9_14	No change
SCARAB L1_A3	Not yet open to users			
Orbit Wise Products	V5000	NA	NA	Correction of "first scan validity"

**AUGUST 10<sup>th</sup> 2013: Software product version V6000 from orbit 9445**

Products	General L1chain version	SW version	IODD version	Changes
MADRAS 1A	V6000	1.06	9_16	Updated Calibration: <ul style="list-style-type: none"> <li>• Corrections for reflector losses added</li> <li>• Corrections for Scan mechanism speed variations added</li> <li>• Corrections on attributes names and content</li> </ul>
MADRAS 1A2	V6000	1.06	9_16	Update Calibration: <ul style="list-style-type: none"> <li>• Corrections for reflector losses added</li> <li>• Correction on Flag for interpolation degraded case</li> <li>• Corrections on attributes names and content</li> </ul>
SAPHIR L1_A	V6000	1.06	9_16	Corrections on attributes names and content
SAPHIR L1_A2	V6000	1.06	9_16	Corrections on attributes names and content
SAPHIR L1_A3	V6000	1.01	9_16	Initial version
SCARAB L1_A	V6000	1.06	9_16	Corrections on attributes names and content <ul style="list-style-type: none"> <li>• Gain; Aprime change from orbit 7500</li> </ul>
SCARAB L1_A2	V6000	1.06	9_16	Corrections on attributes names and co Quality flags correction Gain; Aprime change from orbit 7500
SCARAB L1_A3	V6000	1.01	9_16	Initial version
Orbit Wise Products	V6000	NA	NA	Correction of "first scan validity

**DECEMBER 27th 2013: Software product version V7000 from orbit 11403**

After a validation period December 12, 2013 to February 28, 2014 and minor bug correction to improve the completeness, ISRO and CNES decide jointly to reprocess all the archive from the first orbit.

So all the data are in V7000.

<b>Products</b>	<b>General L1chain version</b>	<b>SW version</b>	<b>IODD version</b>	<b>Changes</b>
MADRAS 1A	V7000	1.06	9_17	Varying MSM speed correction in rotor angle
MADRAS 1A2	V7000	1.06	9_17	Idem 1A
SAPHIR L1_A	V7000	1.06	9_16	No change in the products (minor bug correction for better completeness)
SAPHIR L1_A2	V7000	1.06	9_16	No change in the products (minor bug correction for better completeness)
SAPHIR L1_A3	V7000	1.02	9_16	Implementation of multiple segment synchronization in a dump for MADRAS wrt SAPHIR/SCARAB. Integration of L1A3 multiple segment in a single dump for SAPHIR/SCARAB
SCARAB L1_A	V7000	1.06	9_16	No change in the products (minor bug correction for better completeness)
SCARAB L1_A2	V7000	1.06	9_16	No change in the products (minor bug correction for better completeness)
SCARAB L1_A3	V7000	1.02	9_16	No change in the products (minor bug correction for better completeness)
Orbit Wise Products	V7000	NA	NA	Implementation of new assimilation scheme for orbit products corresponding to all payloads independently.

**JULY 08th 2015: Software product version V8000 from orbit 19284**

Since 07 July 2015, and orbit 19278 we have a mix of product from V7000 (1.06 for L1A L1A2) and V8000 (1.07 for L1A L1A2). Since 08 July 2015 orbit 19284 all products are in version V8000 (see below more information).

Products	General L1chain version	SW version	IODD version	Changes
MADRAS 1A	V8000	1.07	9_17 / 1_17	1-Scan time stamp correction 2- Invalid scan time stamp flagging & correction. 3-partial segment generation.
MADRAS 1A2	V8000	1.07	9_17 / 1_17	Idem MAD1A
SAPHIR L1_A	V8000	1.07	9_17 / 1_17	1-Scan time stamp correction 2- Invalid scan time stamp flagging & correction. 3-partial segment generation. 4-SAP & SCA radiometric process parameter - modification IODD evolution.
SAPHIR L1_A2	V8000	1.07	9_17 / 1_17	Idem SAP1A
SAPHIR L1_A3	V8000	1.03	9_17 / 1_17	Idem SAP1A
SCARAB L1_A	V8000	1.07	9_17 / 1_17	Idem SAP1A
SCARAB L1_A2	V8000	1.07	9_17 / 1_17	Idem SAP1A
SCARAB L1_A3	V8000	1.03	9_17 / 1_17	Idem SAP1A
Orbit Wise Products	V8000	NA	NA	Correction of the orbit wise processing to have the same scan as dump file have

**September 7<sup>th</sup> 2016: update IOD Software product version V8000 from orbit number 25319**

No changes on the software version: all the evolutions are located in IODD

- (increment of the maximum size of the processed segment (increasing the number of available segments)
- correction of an issue in IODD 1\_17 to take in account different gain values in function of the date for SCARAB.

Products	General L1chain version	SW version	IODD version	Changes
MADRAS 1A	V8000	1.07	1_18	Large segment file processing : improvement of the maximum size processed (up to 328min, i.e. 5000 records)
MADRAS 1A2	V8000	1.07	1_18	same as L1A
SAPHIR L1_A	V8000	1.07	1_18	Large segment file processing : improvement of the maximum size processed (up to 328min, i.e. 7500 records)
SAPHIR L1_A2	V8000	1.07	1_18	same as SAP 1A
SAPHIR L1_A3	V8000	1.03	1_18	same as SAP 1A
SCARAB L1_A	V8000	1.07	1_18	1 - Large segment file processing : improvement of the maximum size processed (up to 328min, i.e. 3100 records) 2 - Scarab gain factor : correction of IODD 1_17 anomaly (failure in taking into account last gain evolution since orbit 11469, parameter Gain_startorbit) . A note with all detailed information will be delivered to users.
SCARAB L1_A2	V8000	1.07	1_18	same as SCA1A
SCARAB L1_A3	V8000	1.03	1_18	same as SCA1A
Orbit Wise Products	V8000	NA	1_18	No change



### October, 25<sup>th</sup>, 2017: update IOD Software product version V9000 from orbit number 31152

Modification of IODD version and L1 software version, including following points:

1. Discrepancy in quality flag for partial segment.
2. SCARAB: extrapolation of gain and Aprime values until 2020 January the 1st with the corresponding start orbits. (definition of data type of parameter " Gain\_startorbit" modified to Integer(I32))
3. SAPHIR : reference values of the gain and residual temperature

Products	General L1chain version	SW version	IODD version	Changes
MADRAS 1A	V9000	1.08	1_19	Point 1 : QF corrections
MADRAS 1A2	V9000	1.08	1_19	Same as Madras L1A
SAPHIR L1_A	V9000	1.08	1_19	Point 1 : QF correction Point 3 : update of IODD for reference parameters
SAPHIR L1_A2	V9000	1.08	1_19	Same as SAPHIR L1A
SAPHIR L1_A3	V9000	1.03	1_19	Same as SAPHIR L1A
SCARAB L1_A	V9000	1.08	1_19	Point 1 : QF correction Point 2 : extrapolation up to 2020 of Gains and A' values
SCARAB L1_A2	V9000	1.08	1_19	Same as SCARAB L1A
SCARAB L1_A3	V9000	1.03	1_19	Same as SCARAB L1A
Orbit Wise Products	V9000	1.08	1_19	Point 1 : QF correction

**January, 29<sup>th</sup>, 2020: update V10000 from orbit number 42821**

Modification: Orbit data assimilation process corresponding to large segment dumped. This change is a correction of an issue observed on L1 SAPHIR on orbit wise products, we will have now more orbit wise products.

<b>Products</b>	<b>General L1chain version</b>	<b>SW version</b>	<b>IODD version</b>	<b>Changes</b>
MADRAS 1A	V10000	1.08	1_19	No change
MADRAS 1A2	V10000	1.08	1_19	No change
SAPHIR L1_A	V10000	1.08	1_19	No change
SAPHIR L1_A2	V10000	1.08	1_19	No change
SAPHIR L1_A3	V10000	1.03	1_19	No change
SCARAB L1_A	V10000	1.08	1_19	No change
SCARAB L1_A2	V10000	1.08	1_19	No change
SCARAB L1_A3	V10000	1.03	1_19	No change
Orbit Wise Products	V10000	1.08	1_19	Orbit data assimilation process corresponding to large segment dumped