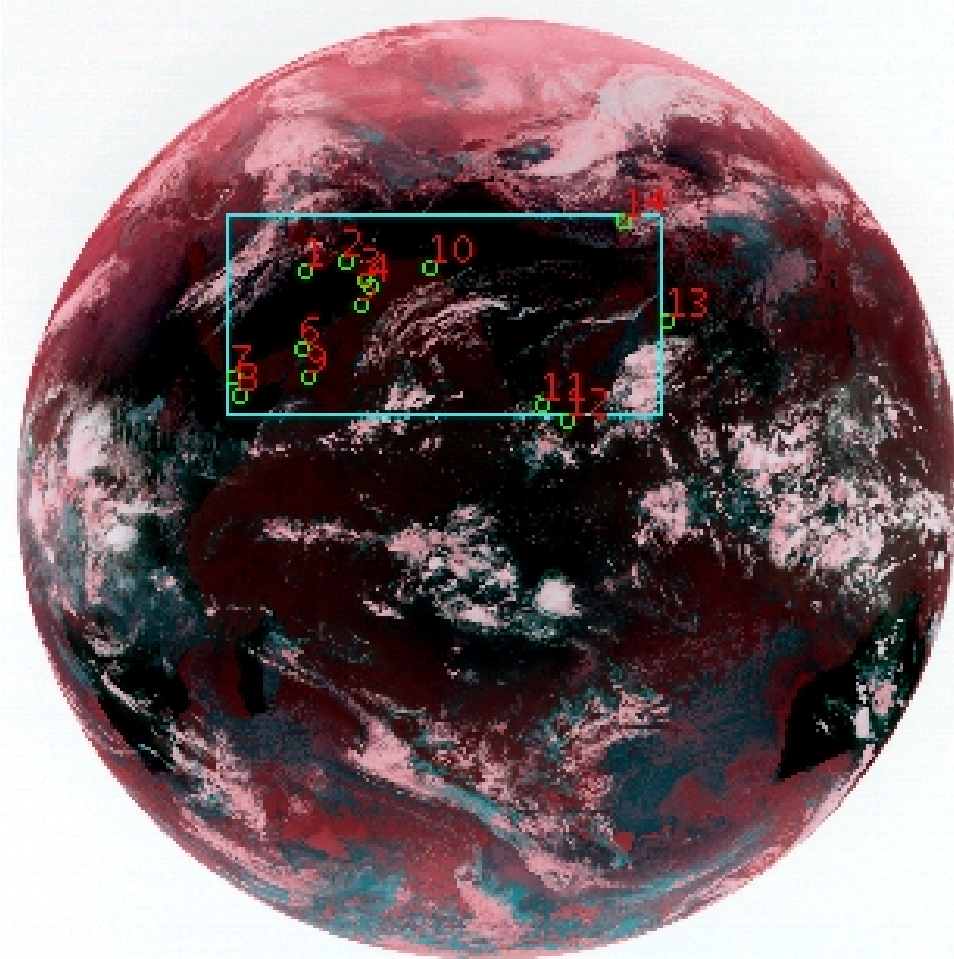


DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG_01DEC2018_0615

Satellite INSAT-3DR **No Of Bands** 6 **Product Type** STANDARD
Sensor IMG **LvlOfProcess** L1B **Selected Band** 2-TIR1
DOP/Time 01-12-18/06:15 **Station ID** BES **Field View(deg)** 17.99
Res(Y,X) [Km] (4.0,4.0) **Res(Y,X) [uRad]** (112.0,112.0)

(81.136N,-7.362W)

(81.136N,155.095E)



(-81.144S,-7.362W)

(-81.144S,155.095E)

GCP Distribution overview for 3RIMG01DEC20180615L1BDQE

Image Width: 2805 **Image Height:** 2816 **No Of GCPs:** 14

GCP Coverage(%) 20.44 **(N-S)** 44.74 **(E-W)**

Location Error(E)

Legend — 0Km < E <= 50Km — 50Km < E <= 100Km — E >100Km

Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	-4.337	S	0.973	4.444
Across	9.288	E	1.638	9.431

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.347	0.256	8.668
Along	5.000	7.143	25.001
Across	4.727	3.829	18.177

Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	2.174	0.845	0.75	1.133
Across	4.265	0.344	1.08	1.131

Attitude Residuals (Deg)

Pitch	Roll	Yaw
0.05501	0.02878	-0.03844

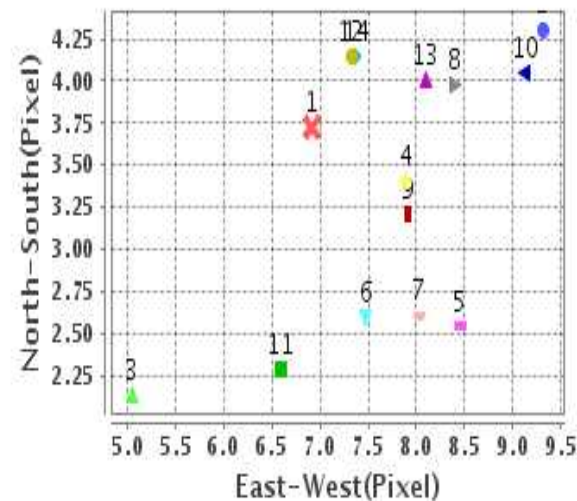
Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

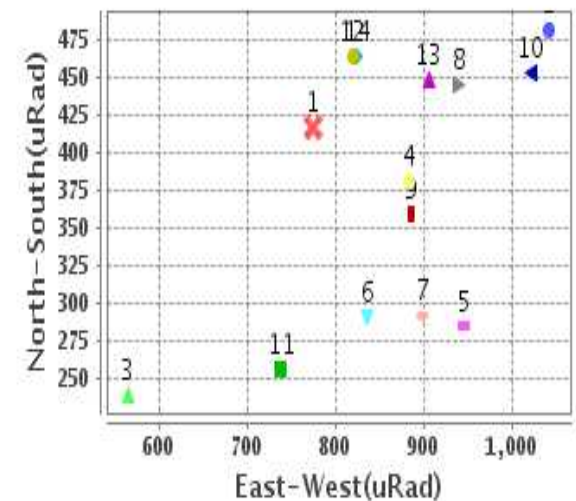
Radial Error (in IR Pixels)

Mean	10.288
Min	7.112
Max	13.473
CE90	11.610

Location Error For GCPs(Pixel)



Location Error For GCPs(uRad)



Detailed Product Information

Ancillary Info

Satellite	INSAT-3DR	Generation Date	01-12-18
Sensor	IMG	DQE Date	03-12-2018
PassType	NONE	Aquisition Date	01-12-18
Imaging Mode	FULL_FRAME	Aquisition Time(GMT)	06:15
Sat Altitude(m)	3.6E7	Nominal Altitude(Km)	3.6E7
Station	BES	Predicted Altitude(Km)	-999.99
Sat Location(deg)	-999.99 E	Nominal Center Lat(deg)	0.0
Format	hdf5-1.8.8	Nominal Center Lon(deg)	74.0
LvlOfProcessing	STANDARD	Predicted Center Lat(deg)	-999.99
DP JobId	3RIMG_01DEC20	Predicted Center Lon(deg)	-999.99
ProductCode	NONE		
Field View(deg)	17.99		

Projection Parameters

Projection	None
Ellipsoid	WGS_84
Datum	WGS_84
Zone	NotAvail
Semi_Major_Axis(Km)	6378.14
Semi_Minor_Axis(Km)	6356.75
Standard_Parallel1(deg)	-999.99
Standard_Parallel2(deg)	-999.99
Projection_Origin_Lon(deg)	-999.99
Projection_Origin_Lat(deg)	-999.99
Projection_False_Easting(Km)	-999.99
Projection_False_Northing(Km)	-999.99

Scene Center Desc

Centre Lat(deg)	-0.0040
Center Lon(deg)	73.867
Centre Roll(deg)	-999.0
Centre Pitch(deg)	-999.0
Center Yaw(deg)	-999.0
SunElevation(deg)	-999.99
SunAzimuth(deg)	-999.99
SatElevation(deg)	-999.99
SatAzimuth(deg)	-999.99

Scene Corner Desc

NW_Lat(deg)	81.136
NW_Lon(deg)	-7.362
SW_Lat(deg)	-81.144
SW_Lon(deg)	-7.362
NE_Lat(deg)	81.136
NE_Lon(deg)	155.095
SE_Lat(deg)	-81.144
SE_Lon(deg)	155.095

Band Wise Details

	Res_AL(Km)	Res_AX(Km)	Image Height	Image Width
MIR	4.0	4.0	2816	2805
SWIR	1.0	1.0	11264	11220
TIR1	4.0	4.0	2816	2805
TIR2	4.0	4.0	2816	2805
VIS	1.0	1.0	11264	11220
WV	8.0	8.0	1408	1402

GDQE Computation Base

Projection	MER	Wildpoint Rejection Threshold	2.60	SemiMajorAxis(m)	6378137.00	Mode Of Computation	grid
Ellipsoid	WGS_84		-sigma	SemiMinorAxis(m)	6356752.31	Used Reference Type	REFINSREF
Datum	WGS_84	Unit	meters	Standardparallel1(deg)	17.0		
Zone	Not Applicable			Standardparallel2(deg)	17.0		

* -999.99 : Not Applicable/Not Available

References

JobId : 3RIMG01DEC20180615L1BDQE

(-999.99 - Not Available/Not Computed)

Ref.No	Source	File Name	Resolution (m)	Projection
1	ETM	world_Band1.img	500.0	GGP

Location Accuracy

GCP Distribution Statistics

Image Width (pixels) : 2805 Image Height (pixels) : 2816 No of GCPs : 14

	Mean	StdDev	Min	Max	Coverage(in %)
GCP Scan	931.6	174.6	633.0	1208.50	20.44 (N-S)
GCP Pix	1146.4	391.4	649.2	1904.25	44.74 (E-W)

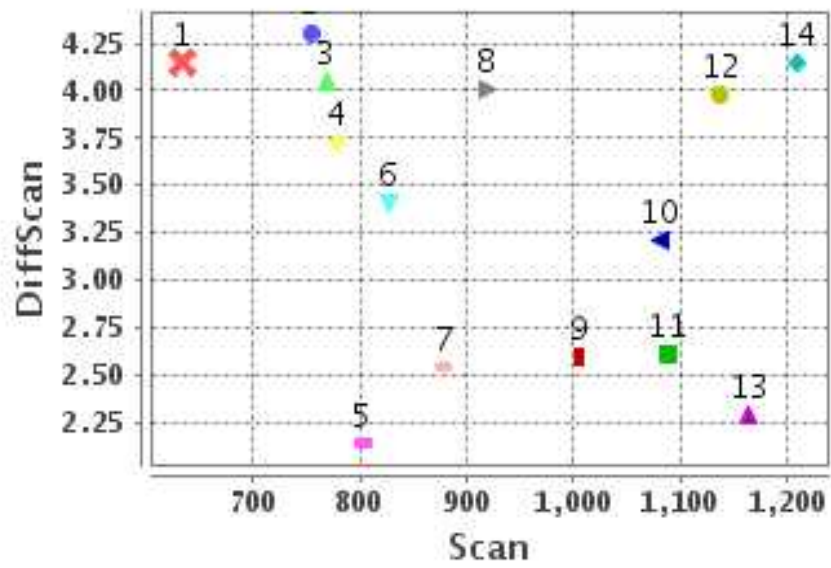
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	778.2	855.5	3.7	6.91	20.871	S	40.816	E	Accepted
2	754.0	980.2	4.3	9.31	23.367	S	48.564	E	Accepted
3	802.2	1029.2	2.1	5.05	11.820	S	25.876	E	Accepted
4	826.8	1052.2	3.4	7.89	20.861	S	38.488	E	Accepted
5	878.5	1024.8	2.5	8.45	14.873	S	41.440	E	Accepted
6	1004.8	848.2	2.6	7.47	15.357	S	36.120	E	Accepted
7	1088.2	649.2	2.6	8.03	12.769	S	42.779	E	Accepted
8	1137.0	673.5	4.0	8.39	16.279	S	44.205	E	Accepted
9	1080.2	870.5	3.2	7.90	14.447	S	38.171	E	Accepted
10	768.2	1223.0	4.1	9.12	20.496	S	41.674	E	Accepted
11	1164.5	1541.5	2.3	6.59	11.529	S	27.499	E	Accepted
12	1208.5	1617.0	4.1	7.32	17.359	S	28.356	E	Accepted
13	918.8	1904.2	4.0	8.09	20.188	S	34.063	E	Accepted

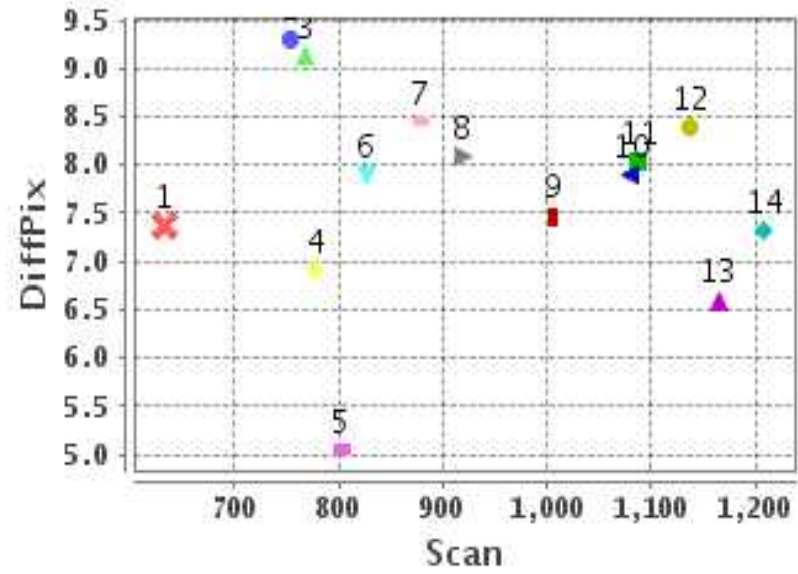
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
14	633.0	1780.2	4.2	7.36	22.636	S	32.066	E	Accepted

Error(Pixels) Vs. GCPScan



Error(Pixels) Vs. GCPScan



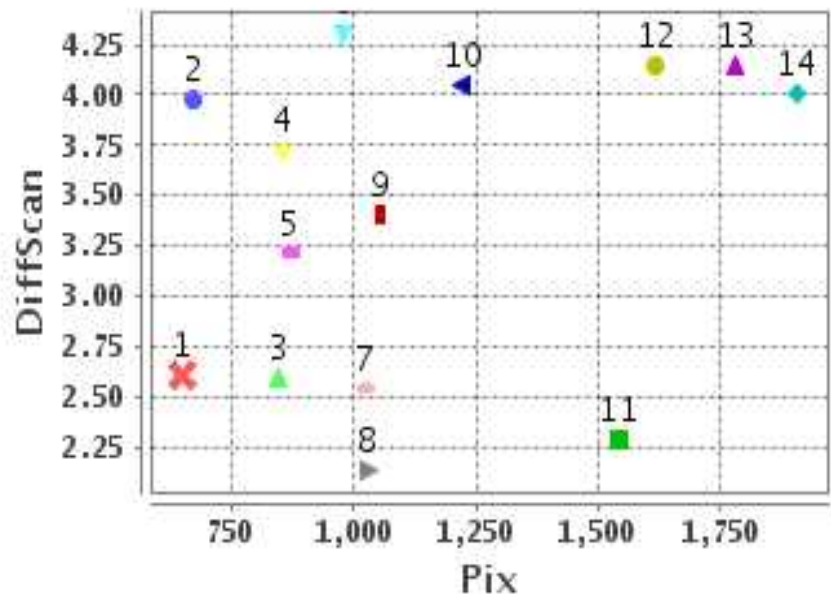
Number Of Points

North	0
South	14
East	14
West	0

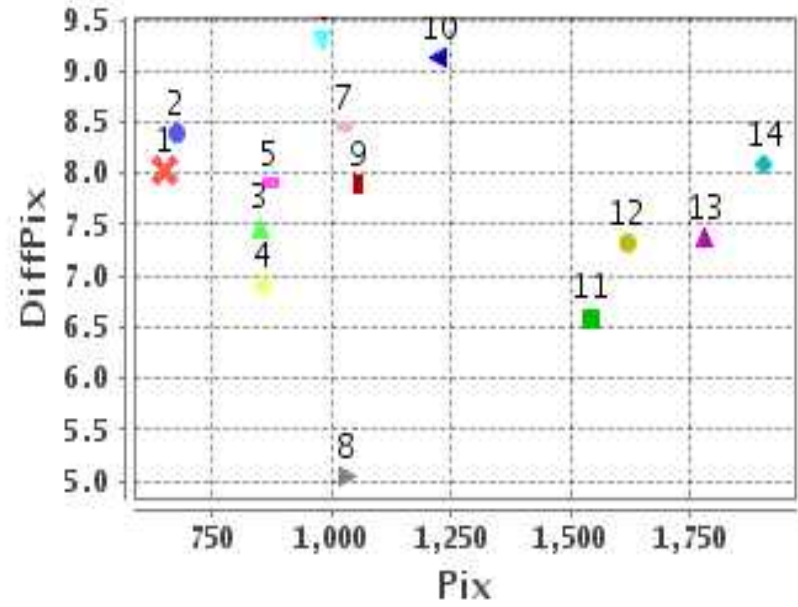
Radial Error (Km)

Mean	10.288
Min	7.112
Max	13.473
CE90	11.610

Error(Pixels) Vs. GCPPix



Error(Pixels) Vs. GCPPix



Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	-4.337	0.973	4.444	S	4.318	4.542
Across (Km)	9.288	1.638	9.431	E	9.190	9.621

Block-Wise Geo location Error Statistics

Location Accuracy,Scale,ID

Scan Range-0-937; Pix Range-0-934		
Number of GCPs	1	
Location Error(Km)		
Along(Mean,Dir)	-20.87	S
Across(Mean,Dir)	40.82	E
Scale(Km)		
Average Scale (Mean,%Variation)	-999.99	-999.9
Internal Distortion(Pixel)		
Along(Mean,Stddev)	-999.99	-999.99
Across(Mean,Stddev)	-999.99	-999.99

Scan Range-0-937; Pix Range-934-1869		
Number of GCPs	6	
Location Error(Km)		
Along(Mean,Dir)	-19.01	S
Across(Mean,Dir)	38.02	E
Scale(Km)		
Average Scale (Mean,%Variation)	4.62	15.46
Internal Distortion(Pixel)		
Along(Mean,Stddev)	0.86	0.84
Across(Mean,Stddev)	1.74	1.39

Scan Range-0-937; Pix Range-1869-2805		
Number of GCPs	1	
Location Error(Km)		
Along(Mean,Dir)	-20.18	S
Across(Mean,Dir)	34.06	E
Scale(Km)		
Average Scale (Mean,%Variation)	-999.99	-999.9
Internal Distortion(Pixel)		
Along(Mean,Stddev)	-999.99	-999.99
Across(Mean,Stddev)	-999.99	-999.99

Scan Range-937-1876; Pix Range-0-934		
Number of GCPs	4	
Location Error(Km)		
Along(Mean,Dir)	-14.7125	S
Across(Mean,Dir)	40.32	E
Scale(Km)		
Average Scale (Mean,%Variation)	4.44	11.07
Internal Distortion(Pixel)		
Along(Mean,Stddev)	-0.67	0.56
Across(Mean,Stddev)	0.10	0.38

Scan Range-937-1876; Pix Range-934-1869		
Number of GCPs	2	
Location Error(Km)		
Along(Mean,Dir)	-14.445	S
Across(Mean,Dir)	27.93	E
Scale(Km)		
Average Scale (Mean,%Variation)	3.95	1.31
Internal Distortion(Pixel)		
Along(Mean,Stddev)	-1.85	0.00
Across(Mean,Stddev)	-0.73	0.00

Scan Range-937-1876; Pix Range-1869-2805		
Number of GCPs	-999	
Location Error(Km)		
Along(Mean,Dir)	-999.99	NotAvail
Across(Mean,Dir)	-999.99	NotAvail
Scale(Km)		
Average Scale (Mean,%Variation)	-999.99	-999.9
Internal Distortion(Pixel)		
Along(Mean,Stddev)	-999.99	-999.99
Across(Mean,Stddev)	-999.99	-999.99

Scan Range-1876-2816; Pix Range-0-934		
Number of GCPs	-999	
Location Error(Km)		
Along(Mean,Dir)	-999.99	NotAvail
Across(Mean,Dir)	-999.99	NotAvail
Scale(Km)		
Average Scale (Mean,%Variation)	-999.99	-999.9
Internal Distortion(Pixel)		
Along(Mean,Stddev)	-999.99	-999.99
Across(Mean,Stddev)	-999.99	-999.99

Scan Range-1876-2816; Pix Range-937-1869		
Number of GCPs	-999	
Location Error(Km)		
Along(Mean,Dir)	-999.99	NotAvail
Across(Mean,Dir)	-999.99	NotAvail
Scale(Km)		
Average Scale (Mean,%Variation)	-999.99	-999.9
Internal Distortion(Pixel)		
Along(Mean,Stddev)	-999.99	-999.99
Across(Mean,Stddev)	-999.99	-999.99

Scan Range-1876-2816; Pix Range-1869-2805		
Number of GCPs	-999	
Location Error(Km)		
Along(Mean,Dir)	-999.99	NotAvail
Across(Mean,Dir)	-999.99	NotAvail
Scale(Km)		
Average Scale (Mean,%Variation)	-999.99	-999.9
Internal Distortion(Pixel)		
Along(Mean,Stddev)	-999.99	-999.99
Across(Mean,Stddev)	-999.99	-999.99

*-999 : no gcp available

* -999.99 : values are not computed