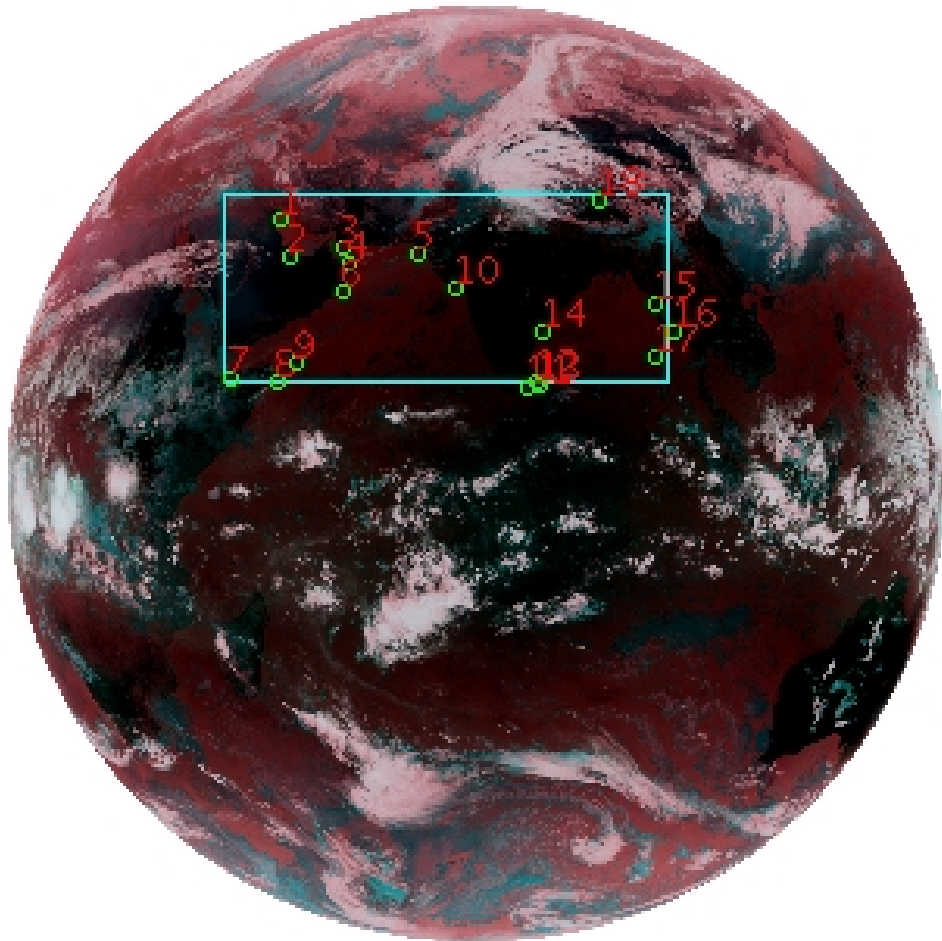


DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG_21FEB2019_0615

Satellite INSAT-3DR **No Of Bands** 6 **Product Type** STANDARD
Sensor IMG **LvlOfProcess** L1B **Selected Band** 2-TIR1
DOP/Time 21-02-19/06:15 **Station ID** BES **Field View(deg)** 17.99
Res(Y,X) [Km] (4.0,4.0) **Res(Y,X) [uRad]** (112.0,112.0)

(81.042N,-7.157W)

(81.042N,155.157E)



(-81.042S,-7.157W)

(-81.042S,155.157E)

GCP Distribution overview for 3RIMG21FEB20190615L1BSTD

Image Width: 2805 **Image Height:** 2816 **No Of GCPs:** 18

GCP Coverage(%) 19.35 **(N-S)** 45.32 **(E-W)**

Location Error(E)

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

Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	1.265	N	0.958	1.587
Across	-2.700	W	1.126	2.925

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.366	0.325	9.154
Along	4.972	3.218	24.299
Across	4.343	0.474	8.587

Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	2.964	-0.406	0.80	0.898
Across	3.108	0.680	0.86	1.098

Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.01700	-0.00718	-0.05429

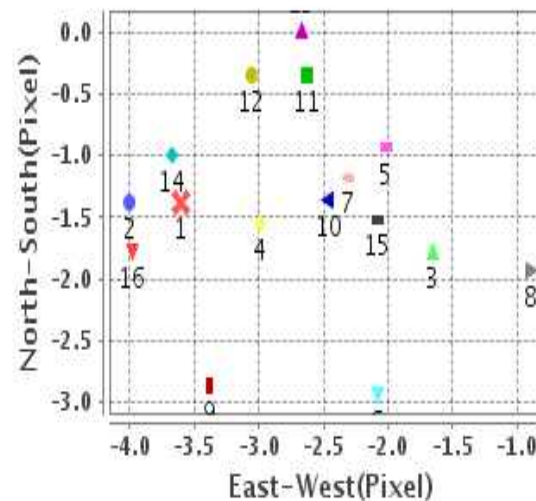
Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

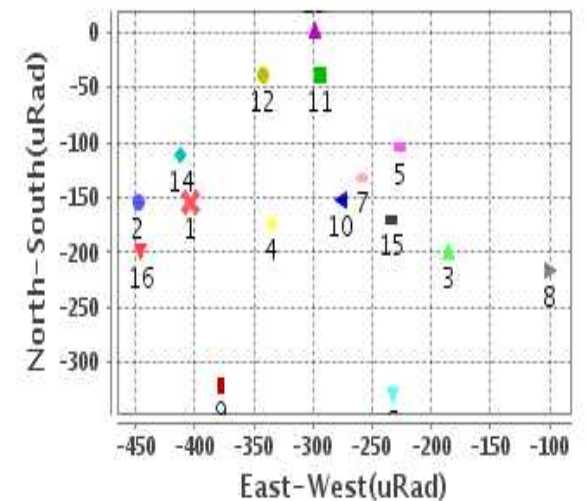
Radial Error (in IR Pixels)

Mean	3.135
Min	1.631
Max	5.049
CE90	4.622

Location Error For GCPs(Pixel)



Location Error For GCPs(uRad)



Detailed Product Information

Ancillary Info

Satellite	INSAT-3DR	Generation Date	21-02-19
Sensor	IMG	DQE Date	22-02-2019
PassType	NONE	Aquisition Date	21-02-19
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_21FEB20	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)	0.0
Center Lon(deg)	74.0
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)	81.042
NW_Lon(deg)	-7.157
SW_Lat(deg)	-81.042
SW_Lon(deg)	-7.157
NE_Lat(deg)	81.042
NE_Lon(deg)	155.157
SE_Lat(deg)	-81.042
SE_Lon(deg)	155.157

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	pixels	Standardparallel1(deg)	17.0		
Zone	Not Applicable			Standardparallel2(deg)	17.0		

* -999.99 : Not Applicable/Not Available

References

JobId : 3RIMG21FEB20190615L1BSTD

(-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 : 18

	Mean	StdDev	Min	Max	Coverage(in %)
GCP Scan	929.8	174.7	605.5	1150.50	19.35 (N-S)
GCP Pix	1298.2	416.6	683.2	1954.50	45.32 (E-W)

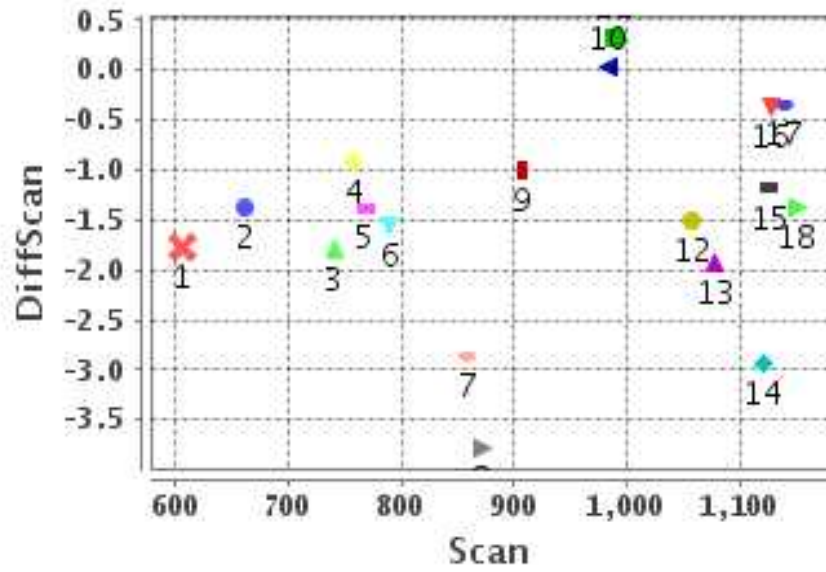
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	661.5	819.2	-1.4	-3.60	6.052	N	19.269	W	Accepted
2	768.2	853.2	-1.4	-4.00	6.449	N	19.038	W	Accepted
3	740.2	1001.5	-1.8	-1.65	7.538	N	6.879	W	Accepted
4	790.0	1023.5	-1.6	-2.99	8.359	N	13.035	W	Accepted
5	757.5	1221.0	-0.9	-2.02	2.857	N	8.596	W	Accepted
6	871.0	1004.2	-3.8	-3.03	17.510	N	14.400	W	Rejected
7	1120.8	683.2	-2.9	-2.08	9.614	N	9.938	W	Accepted
8	1127.2	812.2	-1.2	-2.31	3.997	N	9.025	W	Accepted
9	1078.2	868.5	-1.9	-0.89	6.198	N	2.031	W	Accepted
10	859.0	1323.5	-2.9	-3.38	13.447	N	12.260	W	Accepted
11	1150.5	1536.5	-1.4	-2.47	3.488	N	7.863	W	Accepted
12	1128.2	1563.2	-0.4	-2.63	0.454	N	9.399	W	Accepted
13	1139.5	1573.8	-0.3	-3.06	0.041	S	9.142	W	Accepted

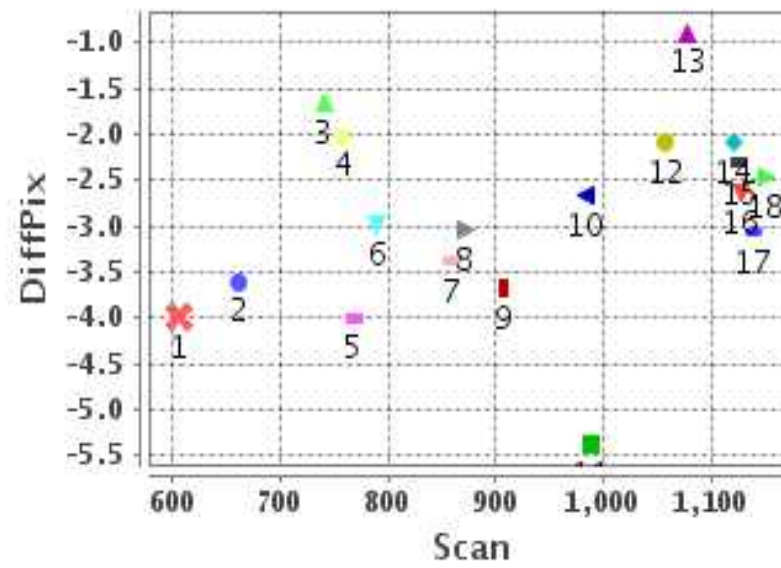
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
14	983.5	1583.5	0.0	-2.67	2.302	S	8.270	W	Accepted
15	908.5	1902.5	-1.0	-3.68	2.195	N	13.456	W	Accepted
16	988.5	1954.5	0.3	-5.37	4.318	S	22.731	W	Rejected
17	1058.0	1900.2	-1.5	-2.08	5.496	N	7.536	W	Accepted
18	605.5	1743.2	-1.8	-3.98	7.139	N	17.054	W	Accepted

Error(Pixels) Vs. GCPScan



Error(Pixels) Vs. GCPScan



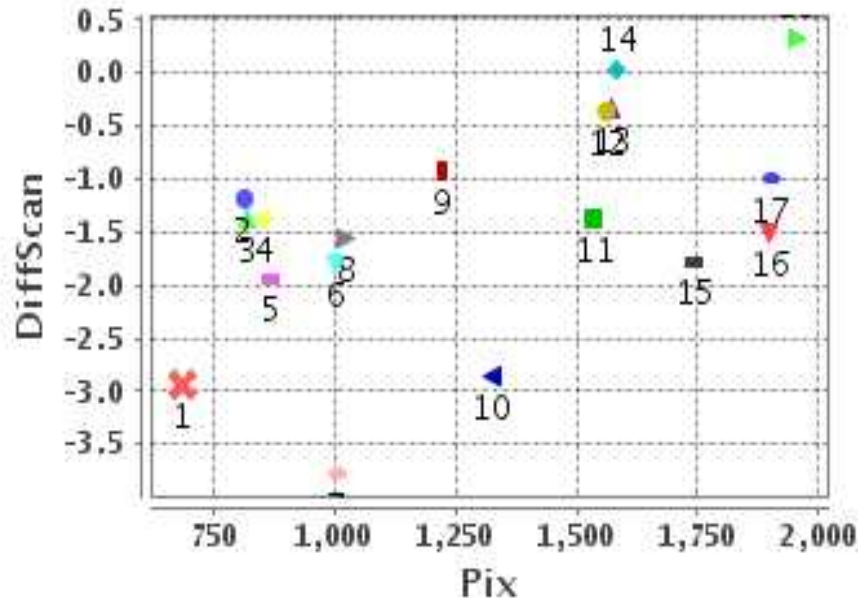
Number Of Points

North	14
South	2
East	0
West	16

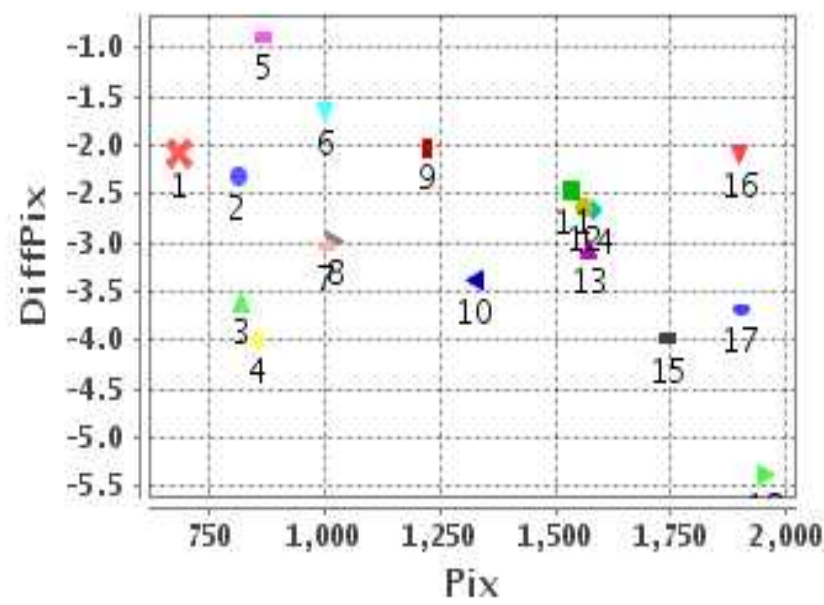
Radial Error (Km)

Mean	3.135
Min	1.631
Max	5.049
CE90	4.622

Error(Pixels) Vs. GCPPix



Error(Pixels) Vs. GCPPix



Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	1.265	0.958	1.587	N	1.390	1.639
Across (Km)	-2.700	1.126	2.925	W	2.753	3.018

Block-Wise Geo location Error Statistics

Location Accuracy,Scale,ID

<p>Scan Range-0-937; Pix Range-0-934</p> <p>Number of GCPs 2</p> <p>Location Error(Km)</p> <p>Along(Mean,Dir) 6.245 N</p> <p>Across(Mean,Dir) -19.16 W</p> <p>Scale(Km)</p> <p>Average Scale (Mean,%Variation) 5.81 45.34</p> <p>Internal Distortion(Pixel)</p> <p>Along(Mean,Stddev) 0.00 0.00</p> <p>Across(Mean,Stddev) 0.40 0.00</p>	<p>Scan Range-0-937; Pix Range-934-1869</p> <p>Number of GCPs 5</p> <p>Location Error(Km)</p> <p>Along(Mean,Dir) 7.87 N</p> <p>Across(Mean,Dir) -11.56 W</p> <p>Scale(Km)</p> <p>Average Scale (Mean,%Variation) 4.60 14.99</p> <p>Internal Distortion(Pixel)</p> <p>Along(Mean,Stddev) 0.01 0.70</p> <p>Across(Mean,Stddev) 1.44 0.71</p>	<p>Scan Range-0-937; Pix Range-1869-2805</p> <p>Number of GCPs 1</p> <p>Location Error(Km)</p> <p>Along(Mean,Dir) 2.2 N</p> <p>Across(Mean,Dir) -13.45 W</p> <p>Scale(Km)</p> <p>Average Scale (Mean,%Variation) -999.99 -999.9</p> <p>Internal Distortion(Pixel)</p> <p>Along(Mean,Stddev) -999.99 -999.99</p> <p>Across(Mean,Stddev) -999.99 -999.99</p>
<p>Scan Range-937-1876; Pix Range-0-934</p> <p>Number of GCPs 3</p> <p>Location Error(Km)</p> <p>Along(Mean,Dir) 6.6 N</p> <p>Across(Mean,Dir) -7.00 W</p> <p>Scale(Km)</p> <p>Average Scale (Mean,%Variation) 4.40 10.08</p> <p>Internal Distortion(Pixel)</p> <p>Along(Mean,Stddev) 0.13 0.88</p> <p>Across(Mean,Stddev) -0.48 0.71</p>	<p>Scan Range-937-1876; Pix Range-934-1869</p> <p>Number of GCPs 4</p> <p>Location Error(Km)</p> <p>Along(Mean,Dir) 0.3975 N</p> <p>Across(Mean,Dir) -8.67 W</p> <p>Scale(Km)</p> <p>Average Scale (Mean,%Variation) 3.98 0.40</p> <p>Internal Distortion(Pixel)</p> <p>Along(Mean,Stddev) 0.72 0.48</p> <p>Across(Mean,Stddev) 0.32 0.19</p>	<p>Scan Range-937-1876; Pix Range-1869-2805</p> <p>Number of GCPs 1</p> <p>Location Error(Km)</p> <p>Along(Mean,Dir) 5.5 N</p> <p>Across(Mean,Dir) -7.54 W</p> <p>Scale(Km)</p> <p>Average Scale (Mean,%Variation) -999.99 -999.9</p> <p>Internal Distortion(Pixel)</p> <p>Along(Mean,Stddev) -999.99 -999.99</p> <p>Across(Mean,Stddev) -999.99 -999.99</p>
<p>Scan Range-1876-2816; Pix Range-0-934</p> <p>Number of GCPs -999</p> <p>Location Error(Km)</p> <p>Along(Mean,Dir) -999.99 NotAvail</p> <p>Across(Mean,Dir) -999.99 NotAvail</p> <p>Scale(Km)</p> <p>Average Scale (Mean,%Variation) -999.99 -999.9</p> <p>Internal Distortion(Pixel)</p> <p>Along(Mean,Stddev) -999.99 -999.99</p> <p>Across(Mean,Stddev) -999.99 -999.99</p>	<p>Scan Range-1876-2816; Pix Range-937-1869</p> <p>Number of GCPs -999</p> <p>Location Error(Km)</p> <p>Along(Mean,Dir) -999.99 NotAvail</p> <p>Across(Mean,Dir) -999.99 NotAvail</p> <p>Scale(Km)</p> <p>Average Scale (Mean,%Variation) -999.99 -999.9</p> <p>Internal Distortion(Pixel)</p> <p>Along(Mean,Stddev) -999.99 -999.99</p> <p>Across(Mean,Stddev) -999.99 -999.99</p>	<p>Scan Range-1876-2816; Pix Range-1869-2805</p> <p>Number of GCPs -999</p> <p>Location Error(Km)</p> <p>Along(Mean,Dir) -999.99 NotAvail</p> <p>Across(Mean,Dir) -999.99 NotAvail</p> <p>Scale(Km)</p> <p>Average Scale (Mean,%Variation) -999.99 -999.9</p> <p>Internal Distortion(Pixel)</p> <p>Along(Mean,Stddev) -999.99 -999.99</p> <p>Across(Mean,Stddev) -999.99 -999.99</p>

*-999 : no gcp available

* -999.99 : values are not computed