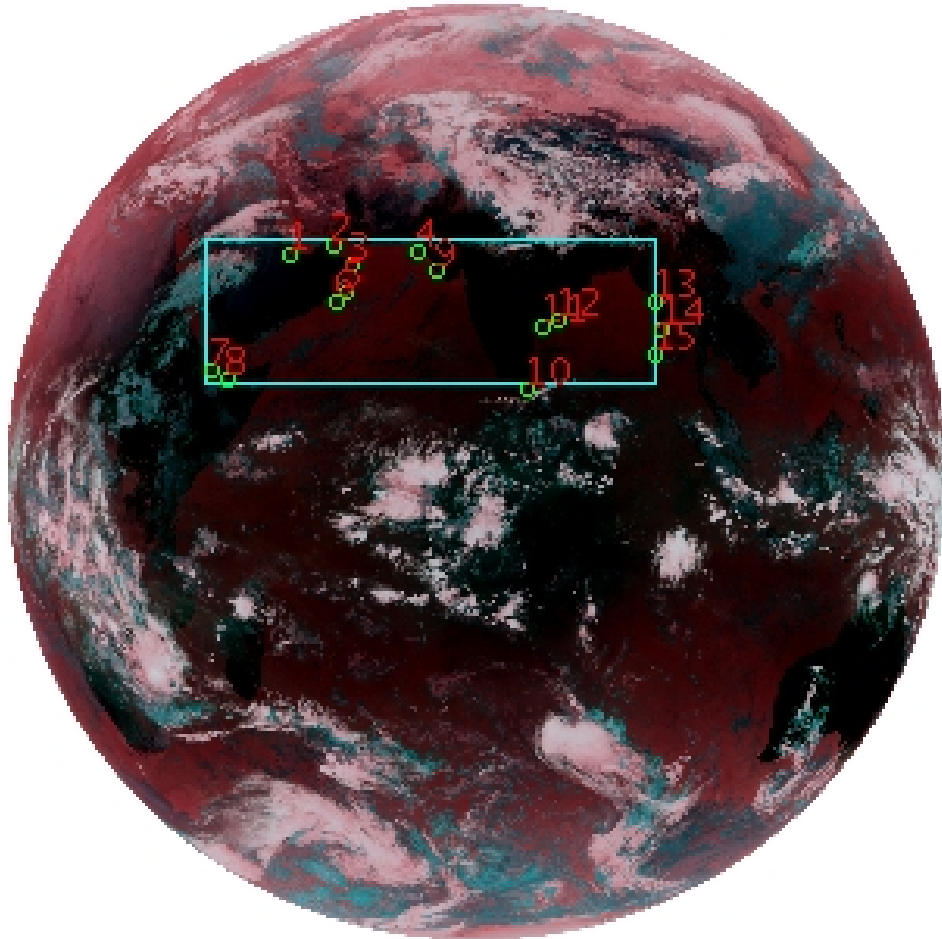


DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG_14FEB2019_0615

Satellite	INSAT-3DR	No Of Bands	6	Product Type	STANDARD
Sensor	IMG	LvlOfProcess	L1B	Selected Band	2-TIR1
DOP/Time	14-02-19/06:15	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 3RIMG14FEB20190615L1BSTD

Image Width: 2805 Image Height: 2816 No Of GCPs: 15

GCP Coverage(%) 14.45 (N-S) 46.05 (E-W)

Location Error(E)

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

Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	2.229	N	1.155	2.511
Across	-3.208	W	1.639	3.602

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.313	0.242	7.813
Along	4.483	0.739	12.083
Across	4.289	0.296	7.218

Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	3.867	-0.007	0.98	0.976
Across	4.812	-1.086	1.37	1.747

Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.01949	-0.01340	-0.04189

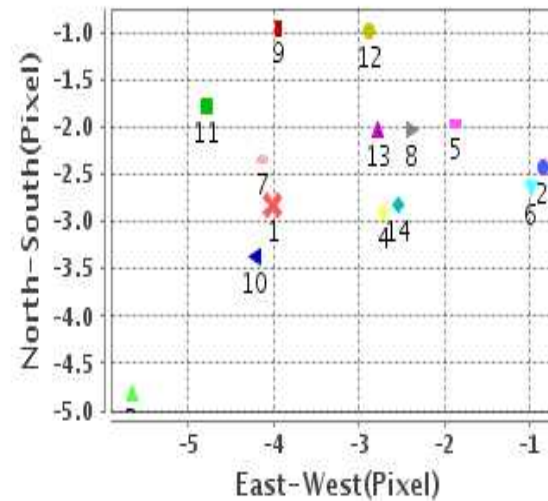
Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

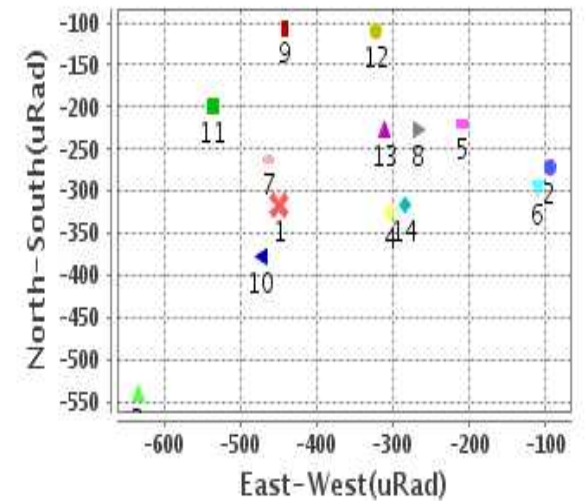
Radial Error (in IR Pixels)

Mean	4.070
Min	2.310
Max	8.888
CE90	5.033

Location Error For GCPs(Pixel)



Location Error For GCPs(uRad)



Detailed Product Information

Ancillary Info

Satellite	INSAT-3DR	Generation Date	14-02-19
Sensor	IMG	DQE Date	15-02-2019
PassType	NONE	Aquisition Date	14-02-19
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_14FEB20	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 : 3RIMG14FEB20190615L1BSTD

(-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 : 15

	Mean	StdDev	Min	Max	Coverage(in %)
GCP Scan	928.8	132.8	745.5	1152.50	14.45 (N-S)
GCP Pix	1275.1	428.0	629.5	1921.25	46.05 (E-W)

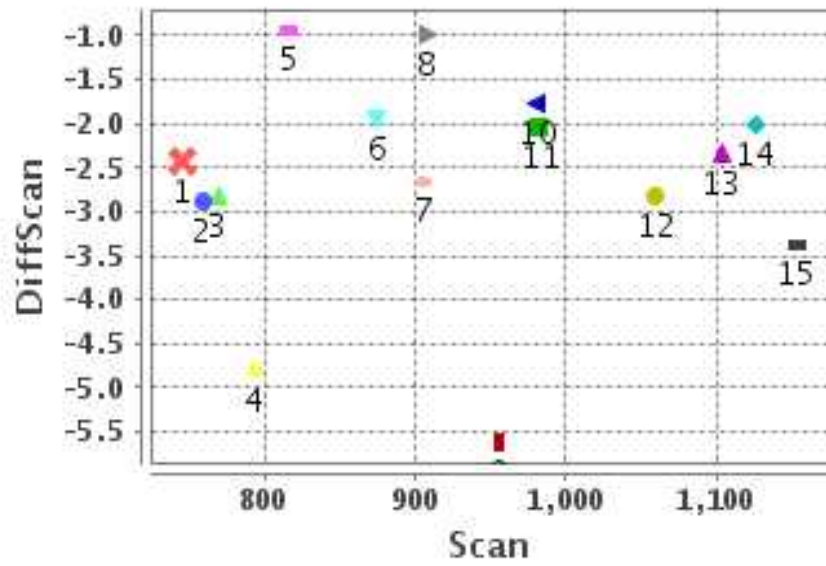
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	769.8	853.2	-2.8	-4.01	10.868	N	20.103	W	Accepted
2	745.5	977.2	-2.4	-0.85	9.775	N	4.900	W	Accepted
3	793.5	1027.0	-4.8	-5.66	21.924	N	27.989	W	Accepted
4	759.5	1221.8	-2.9	-2.72	11.944	N	9.439	W	Accepted
5	875.0	1013.2	-2.0	-1.87	9.171	N	8.467	W	Accepted
6	905.5	989.5	-2.7	-0.98	9.657	N	2.678	W	Accepted
7	1102.8	629.5	-2.3	-4.13	7.122	N	18.829	W	Accepted
8	1125.5	672.0	-2.0	-2.38	6.557	N	12.232	W	Accepted
9	816.2	1276.2	-0.9	-3.95	3.171	N	15.757	W	Accepted
10	1152.5	1538.2	-3.4	-4.22	10.994	N	15.317	W	Accepted
11	980.5	1583.5	-1.8	-4.79	4.665	N	17.319	W	Accepted
12	956.2	1621.5	-5.6	-2.27	22.623	N	6.492	W	Rejected
13	908.5	1901.8	-1.0	-2.88	2.195	N	8.975	W	Accepted

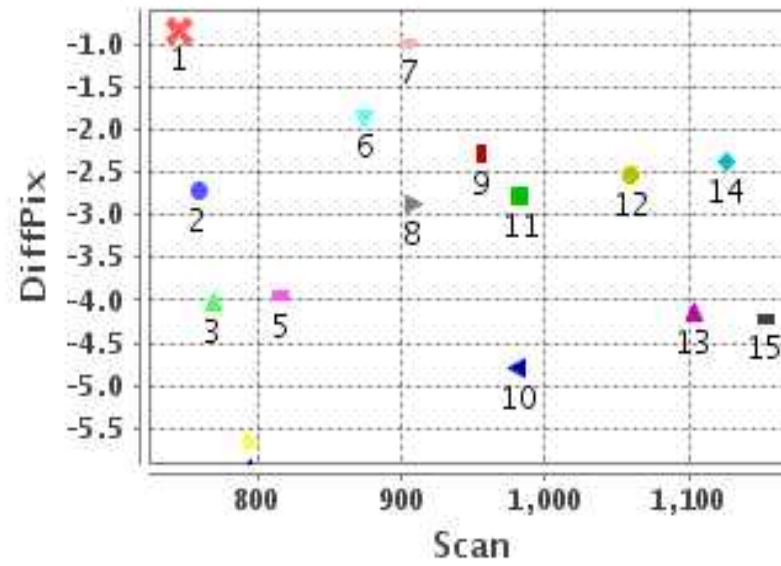
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
14	982.2	1921.2	-2.0	-2.77	6.732	N	10.318	W	Accepted
15	1059.2	1900.8	-2.8	-2.54	10.065	N	7.314	W	Accepted

Error(Pixels) Vs. GCPScan



Error(Pixels) Vs. GCPScan



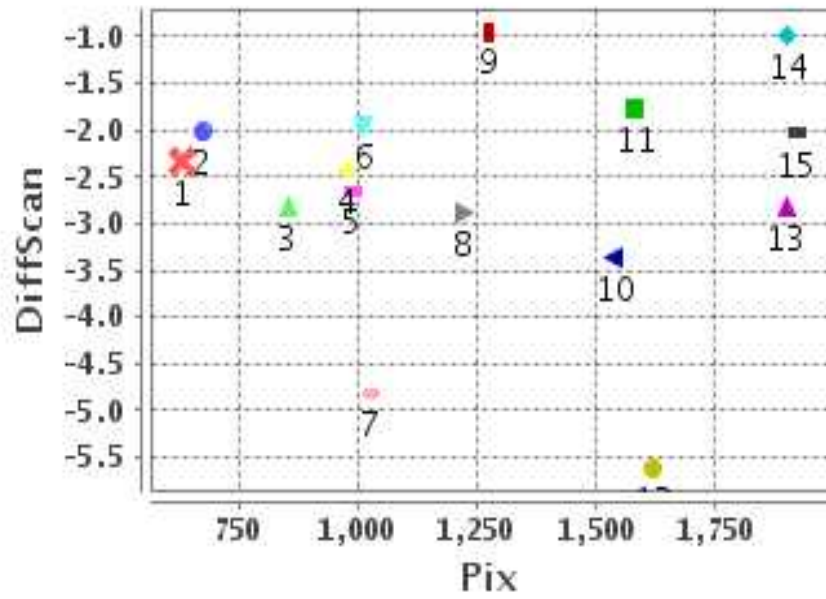
Number Of Points

North	14
South	0
East	0
West	14

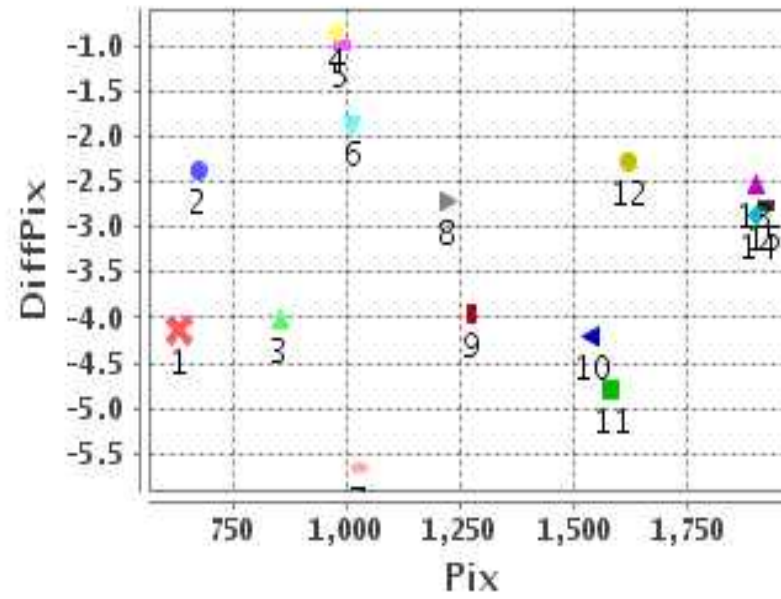
Radial Error (Km)

Mean	4.070
Min	2.310
Max	8.888
CE90	5.033

Error(Pixels) Vs. GCPPix



Error(Pixels) Vs. GCPPix



Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	2.229	1.155	2.511	N	2.116	2.601
Across (Km)	-3.208	1.639	3.602	W	3.195	3.734

Block-Wise Geo location Error Statistics

Location Accuracy,Scale,ID

<p>Scan Range-0-937; Pix Range-0-934</p> <p>Number of GCPs 1</p> <p>Location Error(Km)</p> <p>Along(Mean,Dir) 10.87 N</p> <p>Across(Mean,Dir) -20.11 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-0-937; Pix Range-934-1869</p> <p>Number of GCPs 6</p> <p>Location Error(Km)</p> <p>Along(Mean,Dir) 10.94 N</p> <p>Across(Mean,Dir) -11.54 W</p> <p>Scale(Km)</p> <p>Average Scale (Mean,%Variation) 4.49 12.19</p> <p>Internal Distortion(Pixel)</p> <p>Along(Mean,Stddev) 0.23 1.27</p> <p>Across(Mean,Stddev) 2.19 1.64</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) -8.97 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 2</p> <p>Location Error(Km)</p> <p>Along(Mean,Dir) 6.84 N</p> <p>Across(Mean,Dir) -15.53 W</p> <p>Scale(Km)</p> <p>Average Scale (Mean,%Variation) 5.20 30.12</p> <p>Internal Distortion(Pixel)</p> <p>Along(Mean,Stddev) -0.32 0.00</p> <p>Across(Mean,Stddev) -1.75 0.00</p>	<p>Scan Range-937-1876; Pix Range-934-1869</p> <p>Number of GCPs 2</p> <p>Location Error(Km)</p> <p>Along(Mean,Dir) 7.8325 N</p> <p>Across(Mean,Dir) -16.32 W</p> <p>Scale(Km)</p> <p>Average Scale (Mean,%Variation) 4.08 2.02</p> <p>Internal Distortion(Pixel)</p> <p>Along(Mean,Stddev) 1.59 0.00</p> <p>Across(Mean,Stddev) 0.57 0.00</p>	<p>Scan Range-937-1876; Pix Range-1869-2805</p> <p>Number of GCPs 2</p> <p>Location Error(Km)</p> <p>Along(Mean,Dir) 8.395 N</p> <p>Across(Mean,Dir) -8.81 W</p> <p>Scale(Km)</p> <p>Average Scale (Mean,%Variation) 4.34 8.53</p> <p>Internal Distortion(Pixel)</p> <p>Along(Mean,Stddev) 0.79 0.00</p> <p>Across(Mean,Stddev) 0.23 0.00</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