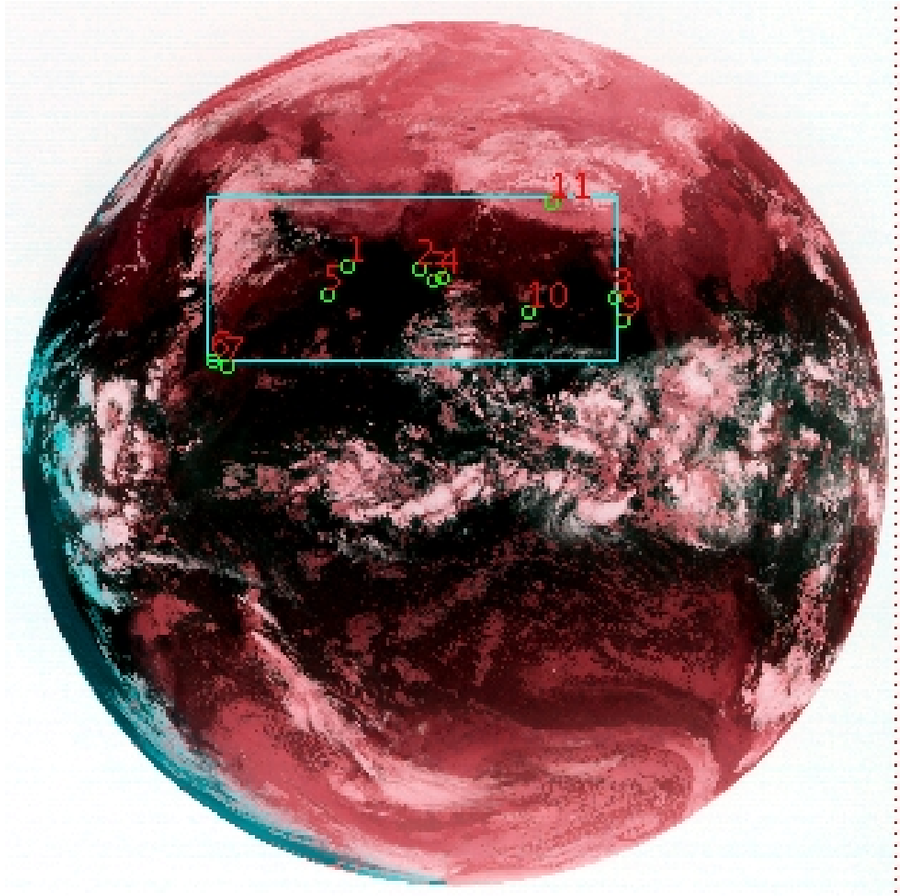
DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG_03NOV2018_1545

Satellite	INSAT-3DR	**No Of Bands**	6	**Product Type**	STANDARD
Sensor	IMG	**LvlOfProcess**	L1B	**Selected Band**	2-TIR1
DOP/Time	03-11-18/15:45	**Station ID**	BES	**Field View(deg)**	18.006
Res(Y,X) [Km]	(4.0,4.0)	**Res(Y,X) [uRad]**	(112.0,112.0)		

(81.167N,-7.069W) (81.167N,155.302E)



(-81.147S,-7.069W) (-81.147S,155.302E)

GCP Distribution overview for 3RIMG03NOV20181545L1BDQE

Image Width: 2805 **Image Height:** 2816 **No Of GCPs:** 11

GCP Coverage(%) 18.08 **(N-S)** 45.87 **(E-W)**

Location Error(E)

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

Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	-7.607	S	1.525	7.758
Across	-4.606	W	2.197	5.103

Radial Error (in IR Pixels)

Mean	9.098
Min	6.858
Max	12.714
CE90	10.638

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.273	0.195	6.822
Along	4.946	2.710	23.642
Across	4.376	1.393	9.391

Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	5.908	0.395	1.49	1.540
Across	5.116	1.474	1.40	2.031

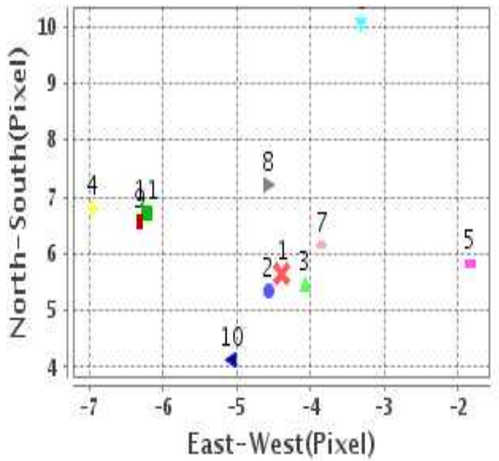
Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.03193	0.04832	0.00921

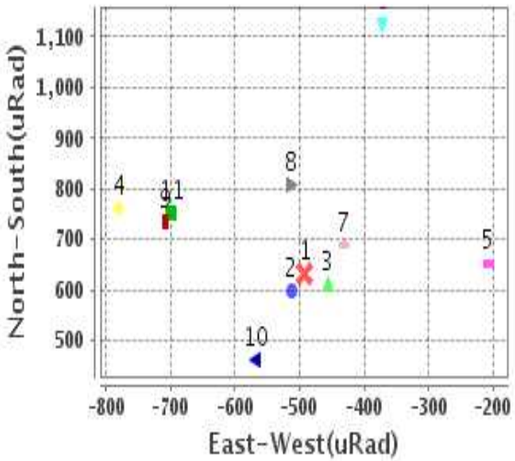
Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

Location Error For GCPs(Pixel)



Location Error For GCPs(uRad)



Detailed Product Information

Ancillary Info

Satellite	INSAT-3DR	Generation Date	03-11-18
Sensor	IMG	DQE Date	20-12-2018
PassType	NONE	Aquisition Date	03-11-18
Imaging Mode	FULL_FRAME	Aquisition Time(GMT)	15:45
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_03NOV2	Predicted Center Lon(deg)	-999.99
ProductCode	NONE		
Field View(deg)	18.006		

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)	0.01
Center Lon(deg)	74.116
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)	81.167
NW_Lon(deg)	-7.069
SW_Lat(deg)	-81.147
SW_Lon(deg)	-7.069
NE_Lat(deg)	81.167
NE_Lon(deg)	155.302
SE_Lat(deg)	-81.147
SE_Lon(deg)	155.302

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 -sigma	SemiMajorAxis(m)	6378137.00	Mode Of Computation	grid
Ellipsoid	WGS_84			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 : **3RIMG03NOV20181545L1BDQE**

(-999.99 - Not Available/Not Computed)

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

Location Accuracy

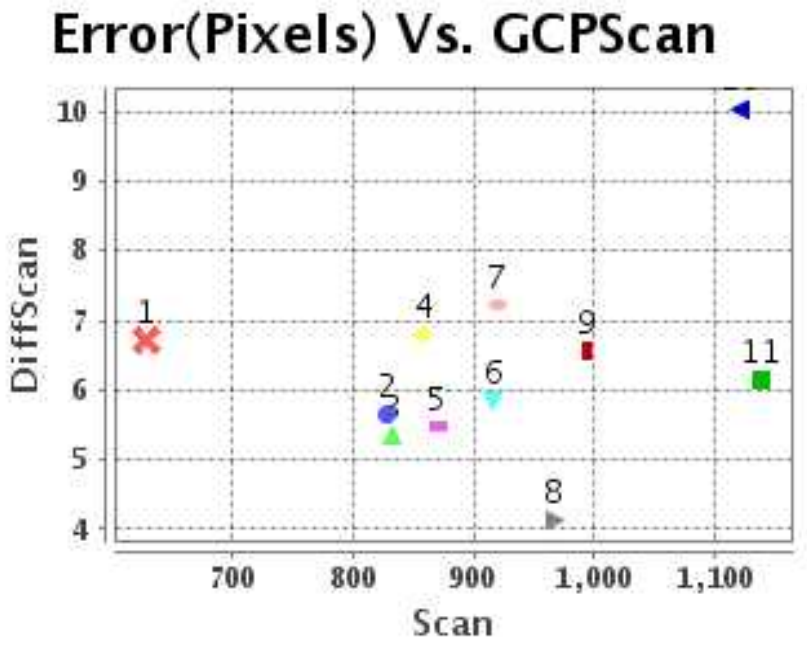
GCP Distribution Statistics

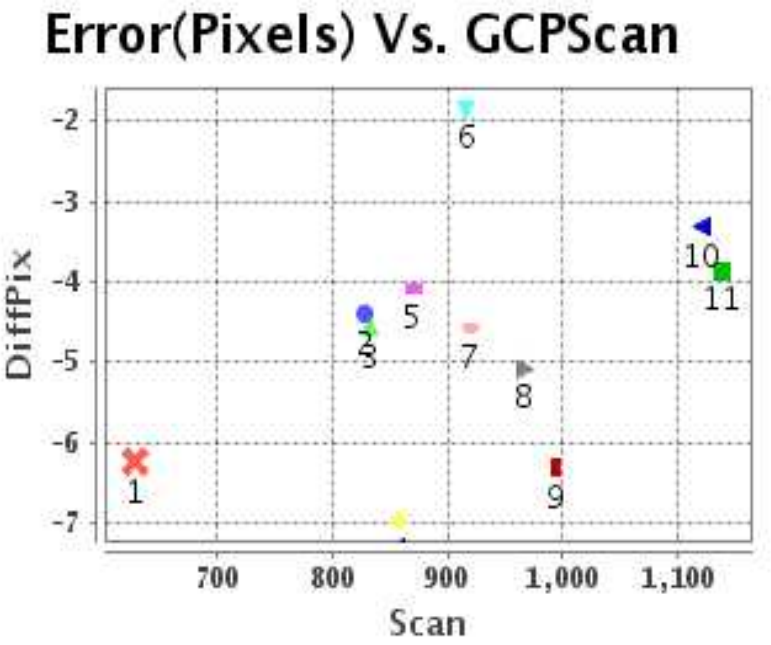
Image Width (pixels) : 2805 **Image Height (pixels) :** 2816 **No of GCPs :** 11

	Mean	StdDev	Min	Max	Coverage(in %)
GCP Scan	915.4	135.6	628.0	1137.25	18.08 (N-S)
GCP Pix	1315.4	426.3	638.5	1925.25	45.87 (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	827.8	1053.0	5.6	-4.40	29.329	S	16.130	W	Accepted
2	832.8	1278.5	5.3	-4.57	27.882	S	15.713	W	Accepted
3	870.2	1325.5	5.5	-4.08	25.940	S	14.168	W	Accepted
4	858.2	1356.8	6.8	-6.96	32.029	S	25.068	W	Accepted
5	916.2	992.5	5.8	-1.85	27.300	S	2.678	W	Accepted
6	1120.2	638.5	10.0	-3.32	42.529	S	7.925	W	Accepted
7	1137.2	675.8	6.2	-3.86	25.750	S	12.010	W	Accepted
8	919.2	1898.0	7.2	-4.58	33.819	S	25.341	W	Accepted
9	993.2	1925.2	6.6	-6.32	29.619	S	30.550	W	Accepted
10	966.5	1625.0	4.1	-5.08	20.535	S	21.622	W	Accepted
11	628.0	1700.8	6.7	-6.24	39.958	S	31.460	W	Accepted



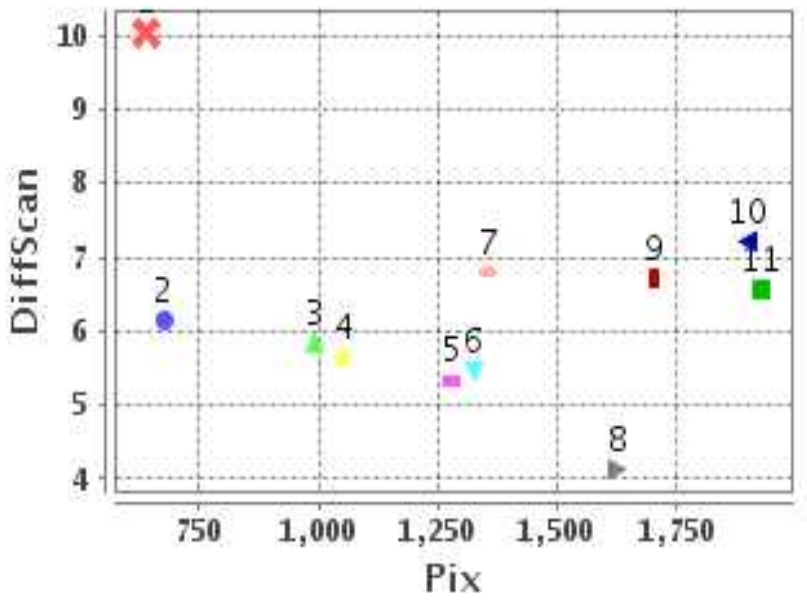


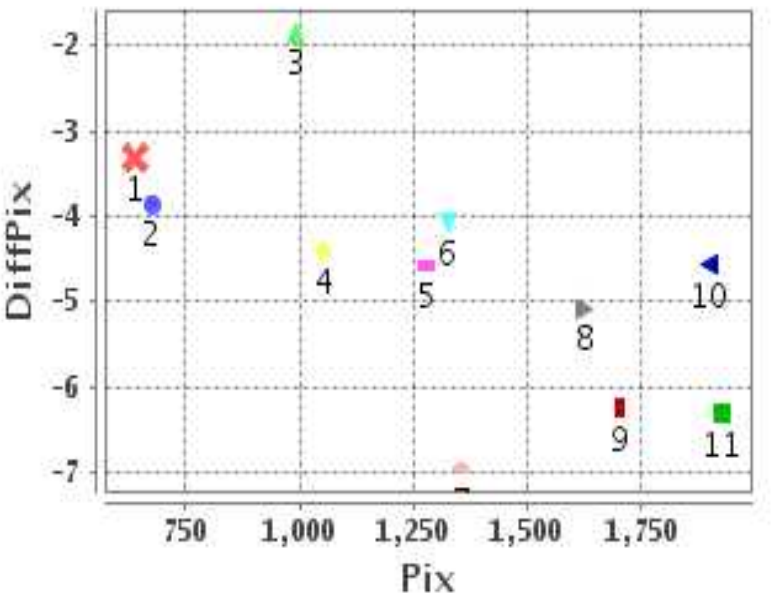
Number Of Points

North	0
South	11
East	0
West	11

Radial Error (Km

Mean	9.098
Min	6.858
Max	12.714
CE90	10.638





Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	-7.607	1.525	7.758	S	7.409	7.973
Across (Km)	-4.606	2.197	5.103	W	4.739	5.348

Block-Wise Geo location Error Statistics

Location Accuracy,Scale,ID

Scan Range-0-937; 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-0-937; Pix Range-934-1869

Number of GCPs	6		
Location Error(Km)			
Along(Mean,Dir)	-30.4067	S	
Across(Mean,Dir)	-17.54	W	
Scale(Km)			
Average Scale (Mean,%Variation)	4.34	8.52	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	0.90	0.52	
Across(Mean,Stddev)	3.40	1.14	

Scan Range-0-937; Pix Range-1869-2805

Number of GCPs	1		
Location Error(Km)			
Along(Mean,Dir)	-33.82	S	
Across(Mean,Dir)	-25.34	W	
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	2		
Location Error(Km)			
Along(Mean,Dir)	-34.14	S	
Across(Mean,Dir)	-9.96	W	
Scale(Km)			
Average Scale (Mean,%Variation)	4.76	19.00	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	3.90	0.00	
Across(Mean,Stddev)	0.54	0.00	

Scan Range-937-1876; Pix Range-934-1869

Number of GCPs	1		
Location Error(Km)			
Along(Mean,Dir)	-20.54	S	
Across(Mean,Dir)	-21.62	W	
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-1869-2805

Number of GCPs	1		
Location Error(Km)			
Along(Mean,Dir)	-29.62	S	
Across(Mean,Dir)	-30.55	W	
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