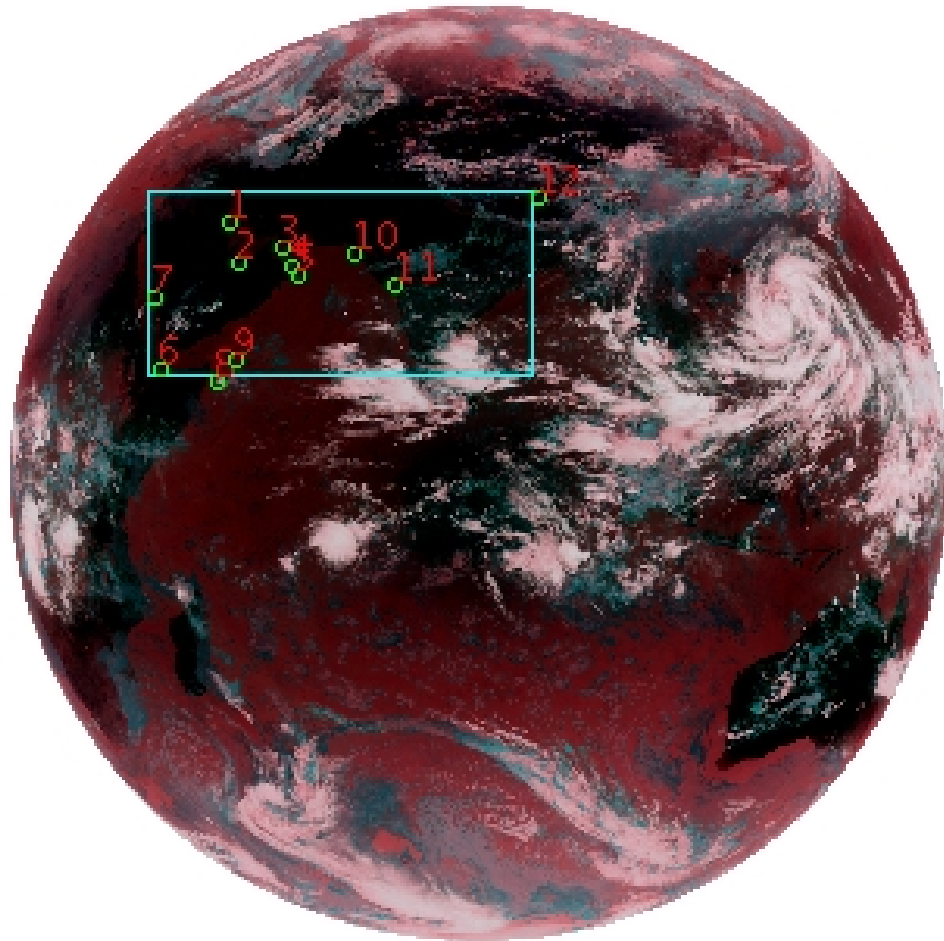


# DQE Report: Location Accuracy of INSAT-3D-IMG STANDARD(FULL DISK) Product 3DIMG\_13OCT2017\_0600

Satellite	INSAT-3D	No Of Bands	6	Product Type	STANDARD
Sensor	IMG	LvlOfProcess	L1B	Selected Band	2-TIR1
DOP/Time	13-10-17/06:00	Station ID	BES	Field View(deg)	17.974
Res(Y,X) [Km]	(4.0,4.0)	Res(Y,X) [uRad]	(112.0,112.0)		

(81.042N,0.843W)

(81.042N,163.157E)



(-81.042S,0.843W)

(-81.042S,163.157E)

GCP Distribution overview for 3DIMG13OCT20170600L1BSTD

Image Width: 2805 Image Height: 2816 No Of GCPs: 12

GCP Coverage(%) 18.68 (N-S) 39.39 (E-W)

## Location Error(E)

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

## Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	-0.958	S	1.541	1.815
Across	-3.679	W	1.227	3.879

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.774	0.504	19.344
Along	5.355	1.844	33.863
Across	4.925	0.668	23.136

## Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	4.678	-0.786	1.40	1.604
Across	4.367	0.618	1.28	1.422

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.02068	-0.00164	0.10678

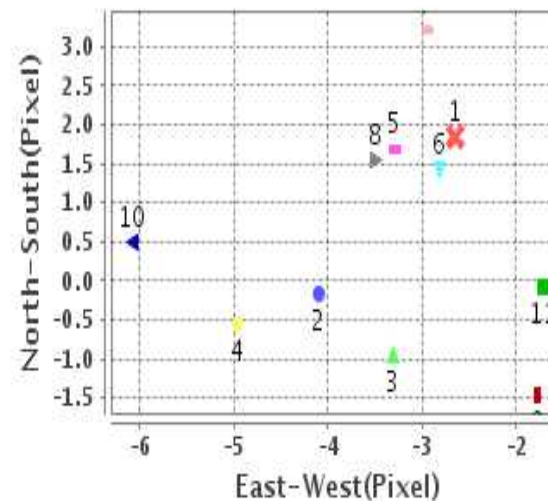
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

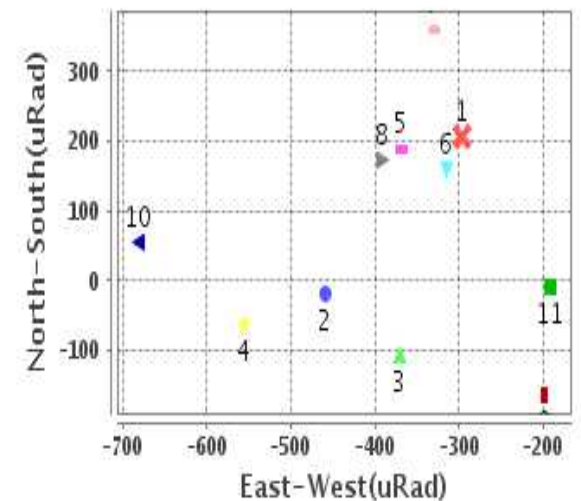
## Radial Error (in IR Pixels)

Mean	4.145
Min	2.116
Max	5.791
CE90	4.757

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3D	<b>Generation Date</b>	13-10-17
<b>Sensor</b>	IMG	<b>DQE Date</b>	16-10-2017
<b>PassType</b>	NONE	<b>Aquisition Date</b>	13-10-17
<b>Imaging Mode</b>	FULL_FRAME	<b>Aquisition Time(GMT)</b>	06:00
<b>Sat Altitude(m)</b>	3.6E7	<b>Nominal Altitude(Km)</b>	3.6E7
<b>Station</b>	BES	<b>Predicted Altitude(Km)</b>	-999.99
<b>Sat Location(deg)</b>	-999.99 E	<b>Nominal Center Lat(deg)</b>	0.0
<b>Format</b>	hdf5-1.8.8	<b>Nominal Center Lon(deg)</b>	82.0
<b>LvlOfProcessing</b>	STANDARD(FULL)	<b>Predicted Center Lat(deg)</b>	-999.99
<b>DP JobId</b>	3DIMG_13OCT2	<b>Predicted Center Lon(deg)</b>	-999.99
<b>ProductCode</b>	NONE		
<b>Field View(deg)</b>	17.974		

### Projection Parameters

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

### Scene Center Desc

<b>Centre Lat(deg)</b>	0.0
<b>Center Lon(deg)</b>	82.0
<b>Centre Roll(deg)</b>	-999.0
<b>Centre Pitch(deg)</b>	-999.0
<b>Center Yaw(deg)</b>	-999.0
<b>SunElevation(deg)</b>	-999.99
<b>SunAzimuth(deg)</b>	-999.99
<b>SatElevation(deg)</b>	-999.99
<b>SatAzimuth(deg)</b>	-999.99

### Scene Corner Desc

<b>NW_Lat(deg)</b>	81.042
<b>NW_Lon(deg)</b>	0.843
<b>SW_Lat(deg)</b>	-81.042
<b>SW_Lon(deg)</b>	0.843
<b>NE_Lat(deg)</b>	81.042
<b>NE_Lon(deg)</b>	163.157
<b>SE_Lat(deg)</b>	-81.042
<b>SE_Lon(deg)</b>	163.157

### Band Wise Details

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

## GDQE Computation Base

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

\* -999.99 : Not Applicable/Not Available

## References

**JobId : 3DIMG13OCT20170600L1BSTD**

(-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

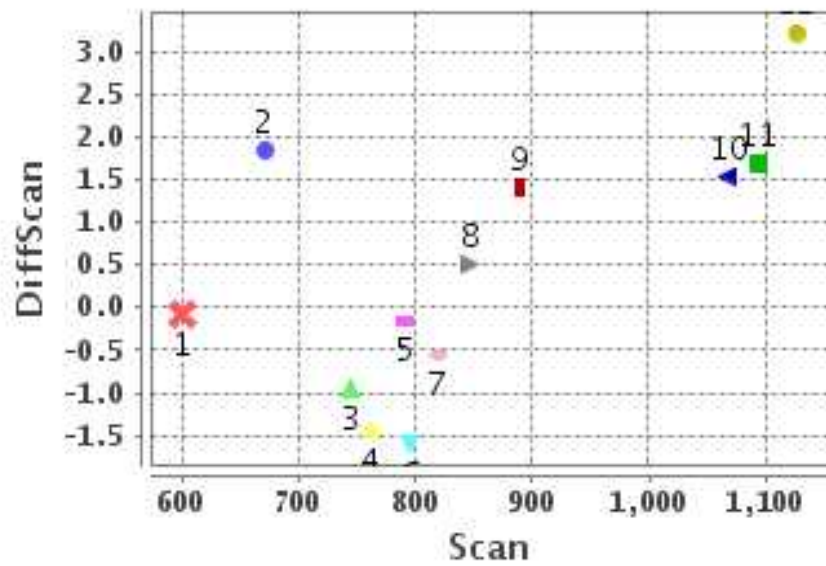
Image Width (pixels) : 2805      Image Height (pixels) : 2816      No of GCPs : 12

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	850.8	159.5	600.2	1126.25	18.68 (N-S)
<b>GCP Pix</b>	824.7	295.6	457.2	1562.00	39.39 (E-W)

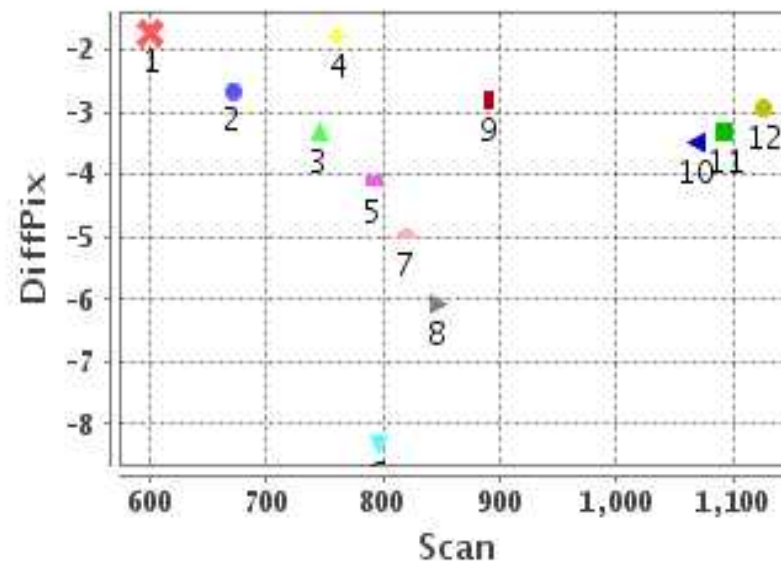
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	671.5	667.0	1.8	-2.65	11.792	S	10.533	W	Accepted
2	791.2	701.8	-0.2	-4.10	0.515	N	18.088	W	Accepted
3	745.2	825.5	-0.9	-3.31	4.011	N	15.398	W	Accepted
4	795.5	846.2	-1.6	-8.32	7.155	N	40.367	W	Rejected
5	819.5	864.5	-0.6	-4.96	0.979	N	21.454	W	Accepted
6	1093.2	475.0	1.7	-3.30	8.053	S	17.238	W	Accepted
7	890.0	457.2	1.4	-2.82	6.055	S	14.436	W	Accepted
8	1126.2	630.2	3.2	-2.94	13.848	S	11.599	W	Accepted
9	1068.5	687.0	1.5	-3.49	8.163	S	15.653	W	Accepted
10	761.2	1028.5	-1.5	-1.77	6.356	N	6.466	W	Accepted
11	846.5	1151.8	0.5	-6.08	4.524	S	22.716	W	Accepted
12	600.2	1562.0	-0.1	-1.72	1.582	S	8.313	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



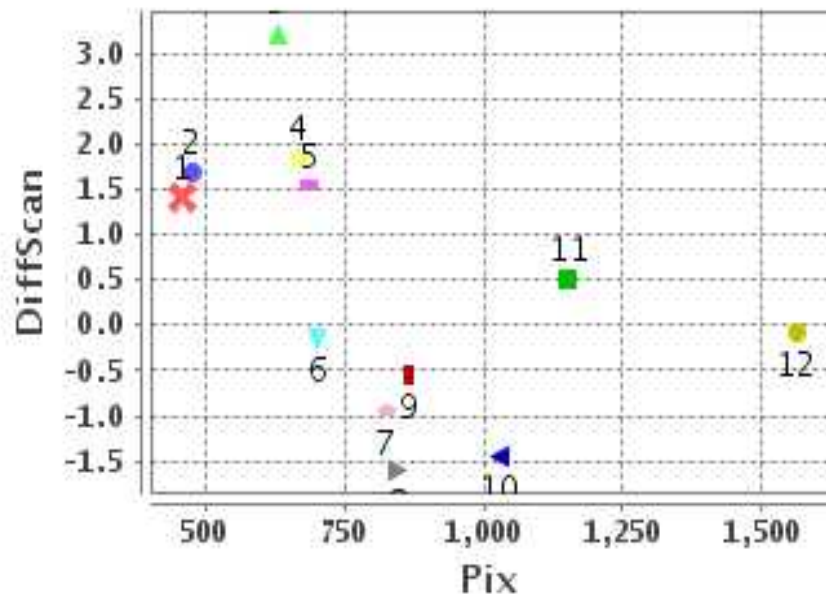
#### Number Of Points

North	4
South	7
East	0
West	11

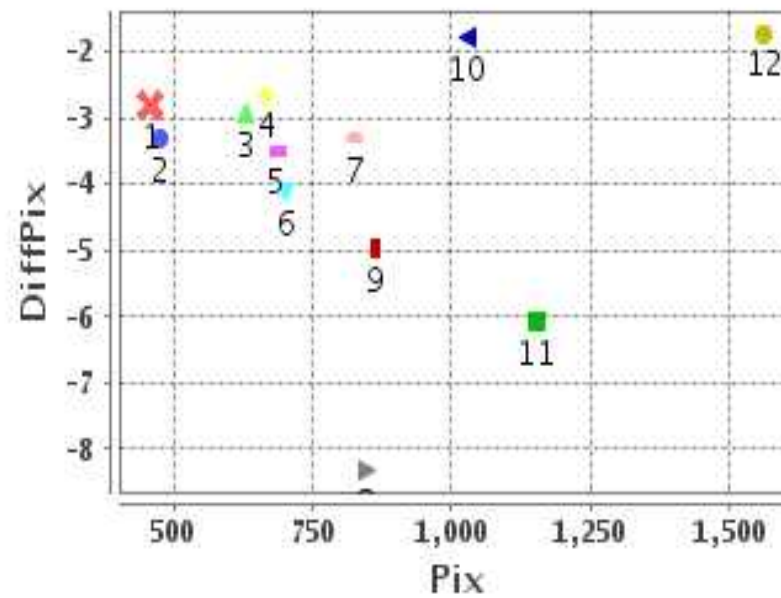
#### Radial Error ( Km )

Mean	4.145
Min	2.116
Max	5.791
CE90	4.757

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	-0.958	1.541	1.815	S	1.557	1.903
Across ( Km )	-3.679	1.227	3.879	W	3.650	4.036

## Block-Wise Geo location Error Statistics

### Location Accuracy,Scale,ID

<b>Scan Range-0-937; Pix Range-0-934</b>			
Number of GCPs	5		
<b>Location Error(Km)</b>			
Along(Mean,Dir)	-2.466	S	
Across(Mean,Dir)	-15.98	W	
<b>Scale(Km)</b>			
Average Scale (Mean,%Variation)	5.33	33.33	
<b>Internal Distortion(Pixel)</b>			
Along(Mean,Stddev)	1.90	0.90	
Across(Mean,Stddev)	0.94	0.87	

<b>Scan Range-0-937; Pix Range-934-1869</b>			
Number of GCPs	3		
<b>Location Error(Km)</b>			
Along(Mean,Dir)	0.0833333	N	
Across(Mean,Dir)	-12.50	W	
<b>Scale(Km)</b>			
Average Scale (Mean,%Variation)	4.62	15.42	
<b>Internal Distortion(Pixel)</b>			
Along(Mean,Stddev)	0.40	0.98	
Across(Mean,Stddev)	2.13	2.18	

<b>Scan Range-0-937; Pix Range-1869-2805</b>			
Number of GCPs	-999		
<b>Location Error(Km)</b>			
Along(Mean,Dir)	-999.99	NotAvail	
Across(Mean,Dir)	-999.99	NotAvail	
<b>Scale(Km)</b>			
Average Scale (Mean,%Variation)	-999.99	-999.9	
<b>Internal Distortion(Pixel)</b>			
Along(Mean,Stddev)	-999.99	-999.99	
Across(Mean,Stddev)	-999.99	-999.99	

<b>Scan Range-937-1876; Pix Range-0-934</b>			
Number of GCPs	3		
<b>Location Error(Km)</b>			
Along(Mean,Dir)	-10.02	S	
Across(Mean,Dir)	-14.83	W	
<b>Scale(Km)</b>			
Average Scale (Mean,%Variation)	4.94	23.61	
<b>Internal Distortion(Pixel)</b>			
Along(Mean,Stddev)	-0.92	0.76	
Across(Mean,Stddev)	-0.08	0.27	

<b>Scan Range-937-1876; Pix Range-934-1869</b>			
Number of GCPs	-999		
<b>Location Error(Km)</b>			
Along(Mean,Dir)	-999.99	NotAvail	
Across(Mean,Dir)	-999.99	NotAvail	
<b>Scale(Km)</b>			
Average Scale (Mean,%Variation)	-999.99	-999.9	
<b>Internal Distortion(Pixel)</b>			
Along(Mean,Stddev)	-999.99	-999.99	
Across(Mean,Stddev)	-999.99	-999.99	

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

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

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

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

\*-999 : no gcp available

\* -999.99 : values are not computed