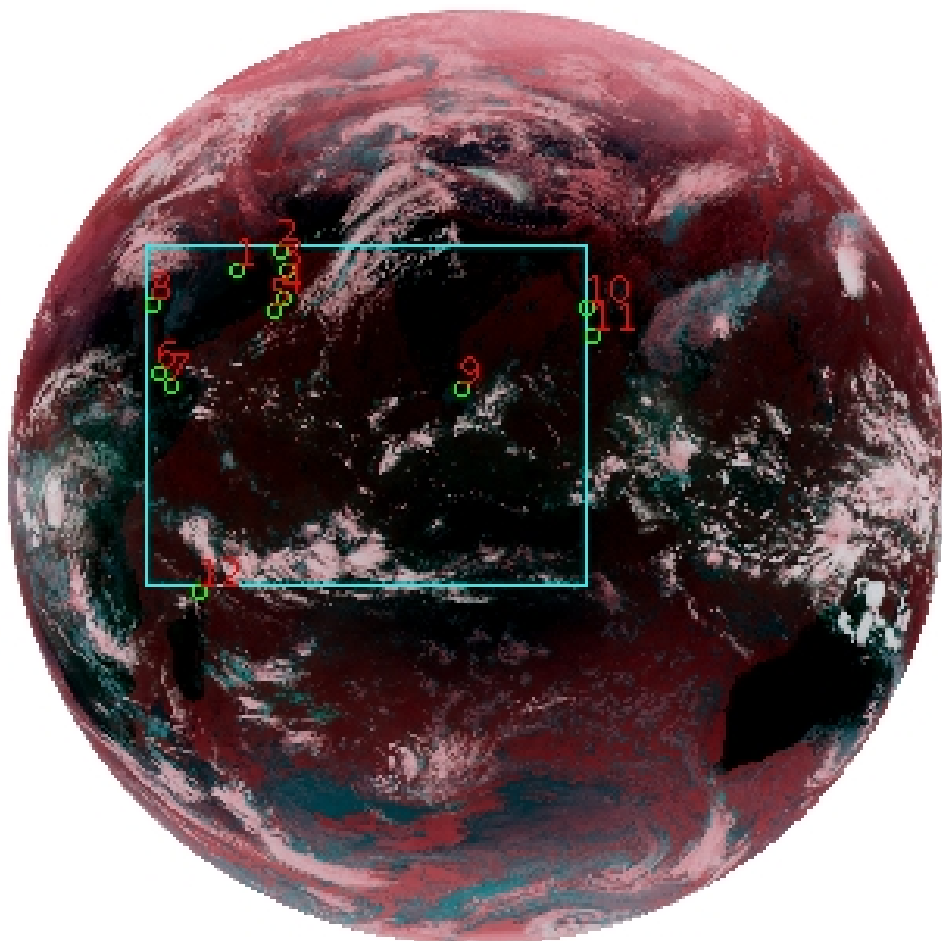


# DQE Report: Location Accuracy of INSAT-3D-IMG STANDARD(FULL DISK) Product 3DIMG\_27NOV2018\_0600

**Satellite** INSAT-3D      **No Of Bands** 6      **Product Type** STANDARD  
**Sensor** IMG      **LvlOfProcess** L1B      **Selected Band** 2-TIR1  
**DOP/Time** 27-11-18/06:00      **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 3DIMG27NOV20180600L1BSTD

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

**GCP Coverage(%)**      34.74      **(N-S)** 45.20      **(E-W)**

## Location Error(E)

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

## Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	0.752	N	1.372	1.565
Across	-3.083	W	1.983	3.666

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.550	0.432	13.750
Along	4.805	3.302	20.116
Across	4.723	0.571	18.070

## Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	3.671	-0.704	1.24	1.430
Across	5.544	2.207	1.60	2.727

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.02373	-0.00660	0.02523

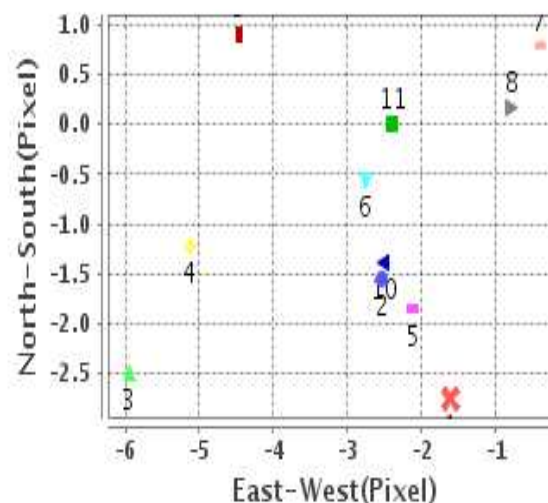
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

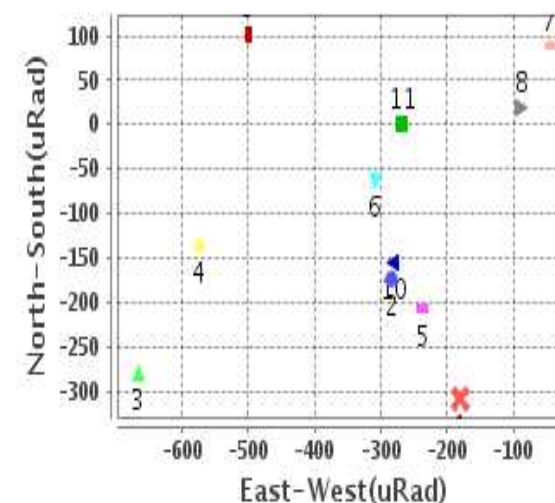
## Radial Error (in IR Pixels)

<b>Mean</b>	3.484
<b>Min</b>	.734
<b>Max</b>	8.291
<b>CE90</b>	3.841

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3D	<b>Generation Date</b>	27-11-18
<b>Sensor</b>	IMG	<b>DQE Date</b>	28-11-2018
<b>PassType</b>	NONE	<b>Aquisition Date</b>	27-11-18
<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_27NOV2	<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		-sigma	<b>SemiMinorAxis(m)</b>	6356752.31	<b>Used Reference Type</b>	REFINSREF
<b>Datum</b>	WGS_84	<b>Unit</b>	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 : 3DIMG27NOV20180600L1BSTD**

(-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

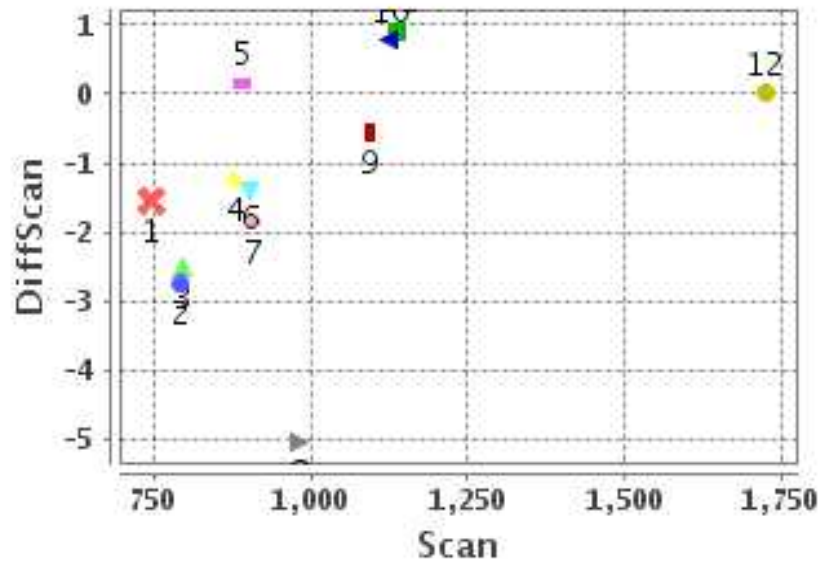
Image Width (pixels) : 2805      Image Height (pixels) : 2816      No of GCPs : 12

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	998.9	251.8	745.8	1724.00	34.74 (N-S)
<b>GCP Pix</b>	899.9	430.5	455.2	1723.25	45.20 (E-W)

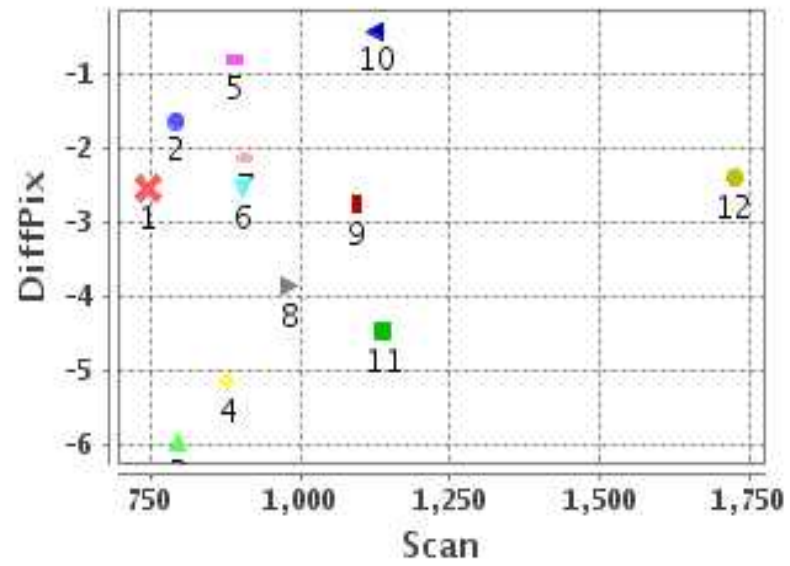
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	793.8	699.2	-2.8	-1.62	10.266	N	9.791	W	Accepted
2	745.8	824.8	-1.5	-2.53	4.501	N	10.074	W	Accepted
3	796.5	844.0	-2.5	-5.95	11.294	N	31.183	W	Accepted
4	879.0	828.8	-1.2	-5.13	6.682	N	21.778	W	Accepted
5	909.2	802.2	-1.9	-2.12	7.186	N	10.132	W	Accepted
6	1095.5	474.5	-0.6	-2.76	0.601	N	12.757	W	Accepted
7	1126.8	504.0	0.8	-0.41	6.138	S	1.584	W	Accepted
8	891.2	455.2	0.2	-0.78	1.540	S	2.501	W	Accepted
9	1138.2	1348.8	0.9	-4.46	4.380	S	14.724	W	Accepted
10	905.2	1705.2	-1.4	-2.52	4.665	N	8.753	W	Accepted
11	982.0	1723.2	-5.0	-3.84	21.036	N	13.513	W	Rejected
12	1724.0	589.0	0.0	-2.39	0.060	S	12.384	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



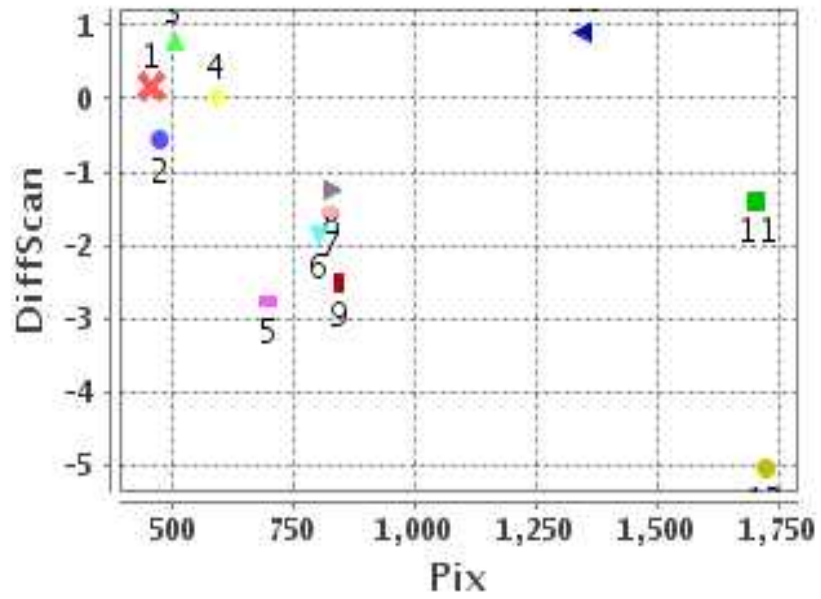
#### Number Of Points

North	7
South	4
East	0
West	11

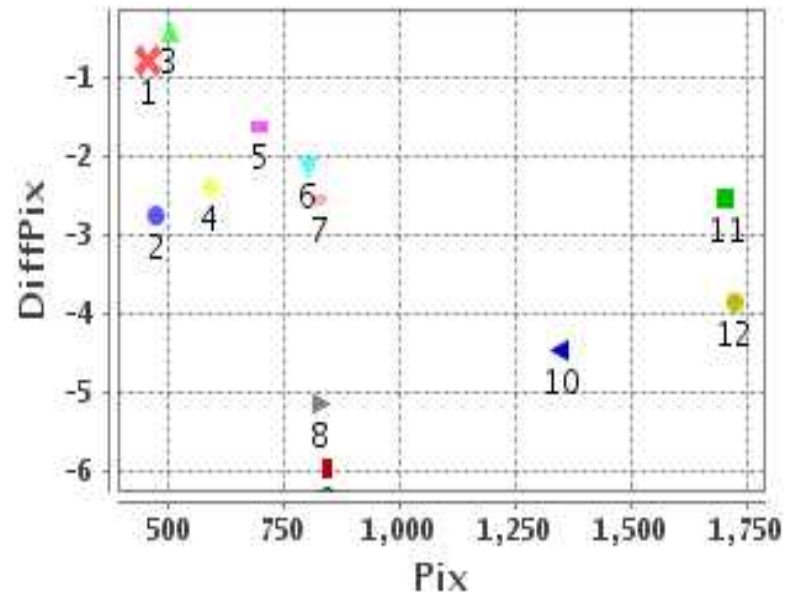
#### Radial Error ( Km )

Mean	3.484
Min	.734
Max	8.291
CE90	3.841

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	0.752	1.372	1.565	N	1.377	1.641
Across ( Km )	-3.083	1.983	3.666	W	2.950	3.843

## Block-Wise Geo location Error Statistics

### Location Accuracy,Scale,ID

<b>Scan Range-0-937; Pix Range-0-934</b>			
Number of GCPs	6		
<b>Location Error(Km)</b>			
Along(Mean,Dir)	6.39667	N	
Across(Mean,Dir)	-14.24	W	
<b>Scale(Km)</b>			
Average Scale (Mean,%Variation)	4.98	24.43	
<b>Internal Distortion(Pixel)</b>			
Along(Mean,Stddev)	0.09	1.04	
Across(Mean,Stddev)	2.69	1.73	

<b>Scan Range-0-937; Pix Range-934-1869</b>			
Number of GCPs	1		
<b>Location Error(Km)</b>			
Along(Mean,Dir)	4.67	N	
Across(Mean,Dir)	-8.76	W	
<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-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)	-1.86667	S	
Across(Mean,Dir)	-8.91	W	
<b>Scale(Km)</b>			
Average Scale (Mean,%Variation)	4.66	16.49	
<b>Internal Distortion(Pixel)</b>			
Along(Mean,Stddev)	-0.96	0.39	
Across(Mean,Stddev)	-1.36	0.99	

<b>Scan Range-937-1876; Pix Range-934-1869</b>			
Number of GCPs	1		
<b>Location Error(Km)</b>			
Along(Mean,Dir)	-4.38	S	
Across(Mean,Dir)	-14.72	W	
<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