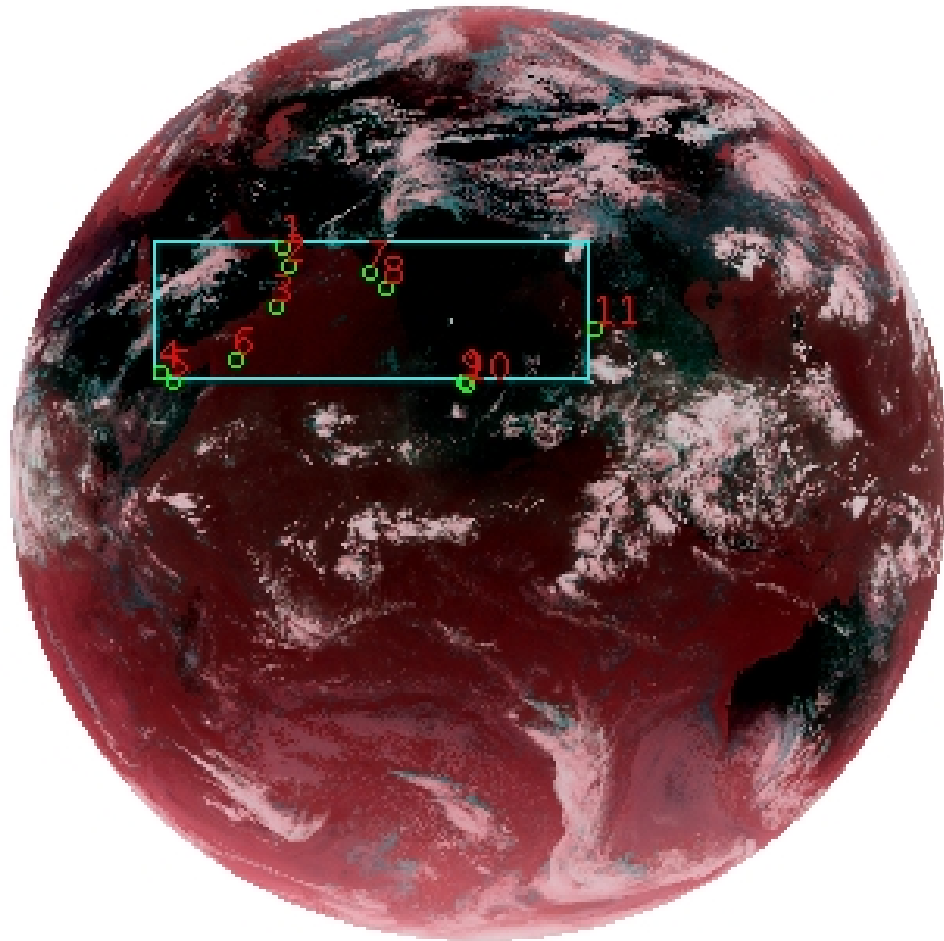


# DQE Report: Location Accuracy of INSAT-3D-IMG STANDARD(FULL DISK) Product 3DIMG\_17MAY2019\_0600

**Satellite** INSAT-3D      **No Of Bands** 6      **Product Type** STANDARD  
**Sensor** IMG      **LvlOfProcess** L1B      **Selected Band** 2-TIR1  
**DOP/Time** 17-05-19/06:00      **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 3DIMG17MAY20190600L1BSTD

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

**GCP Coverage(%)**      14.04      **(N-S)** 44.61      **(E-W)**

## Location Error(E)

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

## Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	-0.500	S	1.501	1.582
Across	-3.974	W	1.331	4.191

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.432	0.324	10.796
Along	4.448	0.383	11.210
Across	4.498	0.417	12.445

## Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	5.154	0.820	1.57	1.775
Across	2.876	-1.478	0.90	1.732

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.02205	-0.00318	0.11986

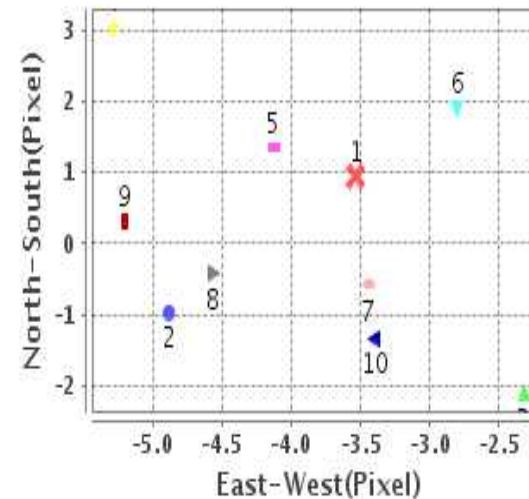
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

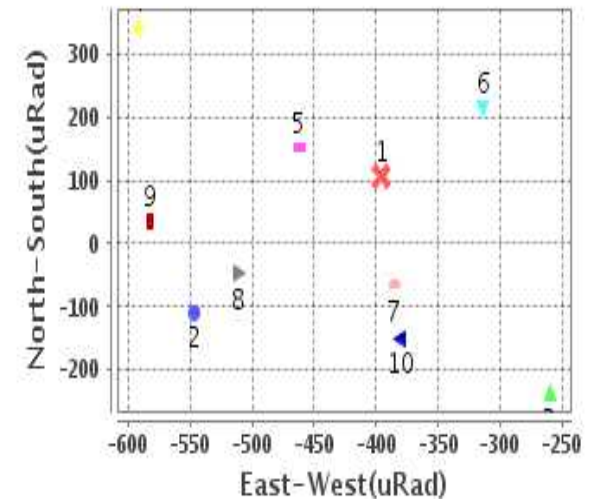
## Radial Error (in IR Pixels)

<b>Mean</b>	4.278
<b>Min</b>	2.891
<b>Max</b>	7.132
<b>CE90</b>	5.860

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3D	<b>Generation Date</b>	17-05-19
<b>Sensor</b>	IMG	<b>DQE Date</b>	20-05-2019
<b>PassType</b>	NONE	<b>Aquisition Date</b>	17-05-19
<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_17MAY2	<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 : 3DIMG17MAY20190600L1BSTD**

(-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

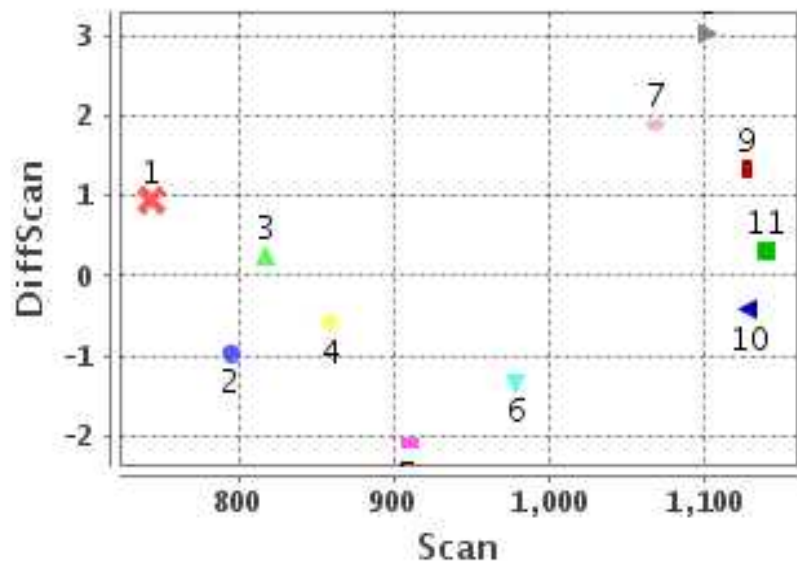
Image Width (pixels) : 2805      Image Height (pixels) : 2816      No of GCPs : 11

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	969.5	143.5	743.2	1138.75	14.04 (N-S)
<b>GCP Pix</b>	978.1	369.3	471.5	1722.75	44.61 (E-W)

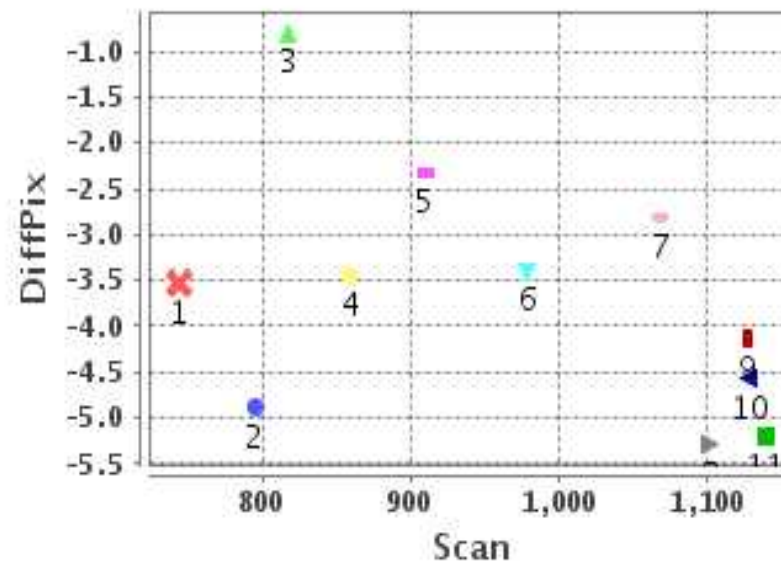
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	743.2	825.8	1.0	-3.53	6.085	S	12.204	W	Accepted
2	794.5	842.2	-1.0	-4.88	3.064	N	23.240	W	Accepted
3	909.5	802.5	-2.1	-2.32	7.186	N	9.910	W	Accepted
4	1102.0	471.5	3.0	-5.28	12.095	S	25.840	W	Accepted
5	1126.2	507.8	1.3	-4.12	6.362	S	17.335	W	Accepted
6	1068.2	686.2	1.9	-2.80	8.614	S	11.616	W	Accepted
7	817.5	1074.5	0.3	-0.79	3.460	S	0.849	W	Rejected
8	858.5	1120.8	-0.6	-3.44	0.344	N	12.038	W	Accepted
9	1128.0	1347.5	-0.4	-4.56	1.753	N	16.231	W	Accepted
10	1138.8	1358.0	0.3	-5.20	3.933	S	20.013	W	Accepted
11	978.2	1722.8	-1.3	-3.40	4.760	N	10.540	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



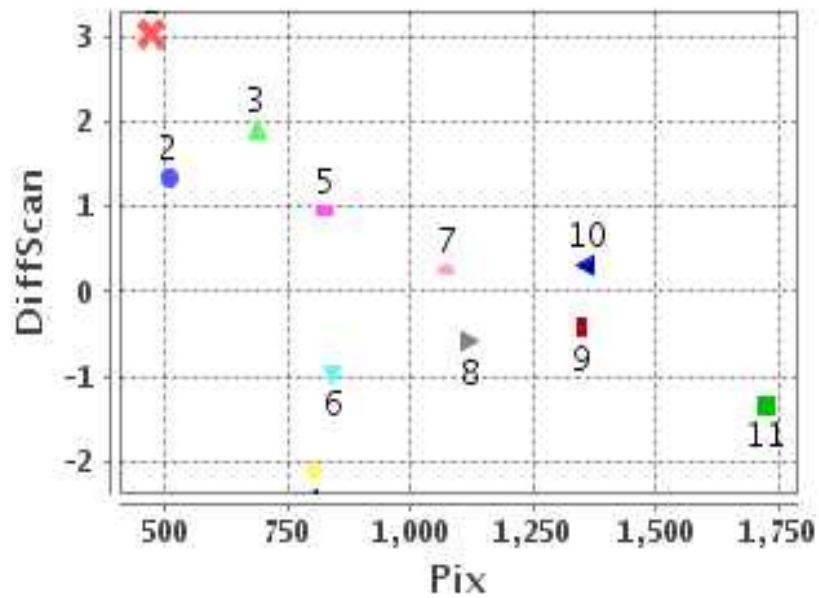
#### Number Of Points

North	5
South	5
East	0
West	10

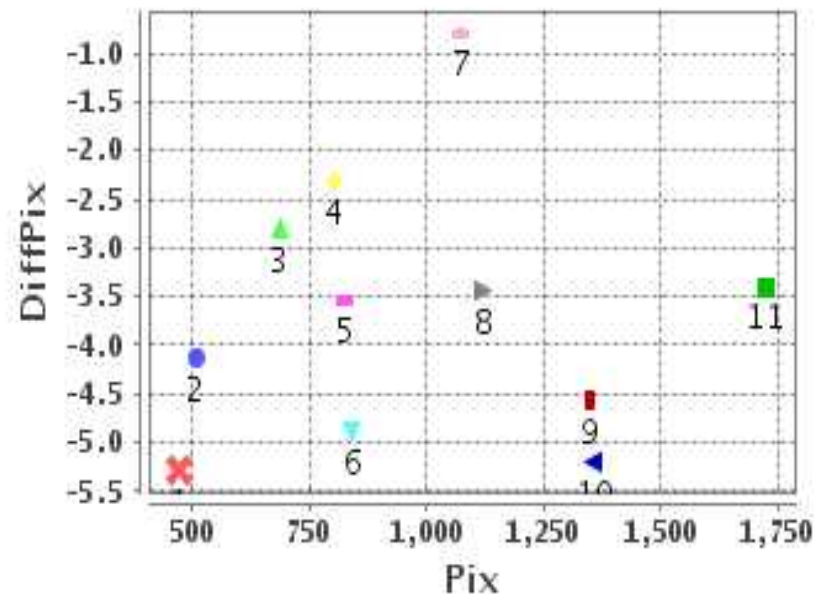
#### Radial Error ( Km )

Mean	4.278
Min	2.891
Max	7.132
CE90	5.860

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	-0.500	1.501	1.582	S	1.328	1.667
Across ( Km )	-3.974	1.331	4.191	W	3.857	4.340

## Block-Wise Geo location Error Statistics

### Location Accuracy,Scale,ID

<b>Scan Range-0-937; Pix Range-0-934</b>			
Number of GCPs	3		
<b>Location Error(Km)</b>			
Along(Mean,Dir)	1.38667	N	
Across(Mean,Dir)	-15.12	W	
<b>Scale(Km)</b>			
Average Scale (Mean,%Variation)	4.76	18.88	
<b>Internal Distortion(Pixel)</b>			
Along(Mean,Stddev)	2.49	0.57	
Across(Mean,Stddev)	1.88	0.67	

<b>Scan Range-0-937; Pix Range-934-1869</b>			
Number of GCPs	1		
<b>Location Error(Km)</b>			
Along(Mean,Dir)	0.35	N	
Across(Mean,Dir)	-12.04	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)	-9.02	S	
Across(Mean,Dir)	-18.27	W	
<b>Scale(Km)</b>			
Average Scale (Mean,%Variation)	5.27	31.69	
<b>Internal Distortion(Pixel)</b>			
Along(Mean,Stddev)	-0.30	0.85	
Across(Mean,Stddev)	-1.82	0.66	

<b>Scan Range-937-1876; Pix Range-934-1869</b>			
Number of GCPs	3		
<b>Location Error(Km)</b>			
Along(Mean,Dir)	0.856667000	N	
Across(Mean,Dir)	-15.59	W	
<b>Scale(Km)</b>			
Average Scale (Mean,%Variation)	4.04	1.07	
<b>Internal Distortion(Pixel)</b>			
Along(Mean,Stddev)	-1.28	0.36	
Across(Mean,Stddev)	-0.26	0.90	

<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