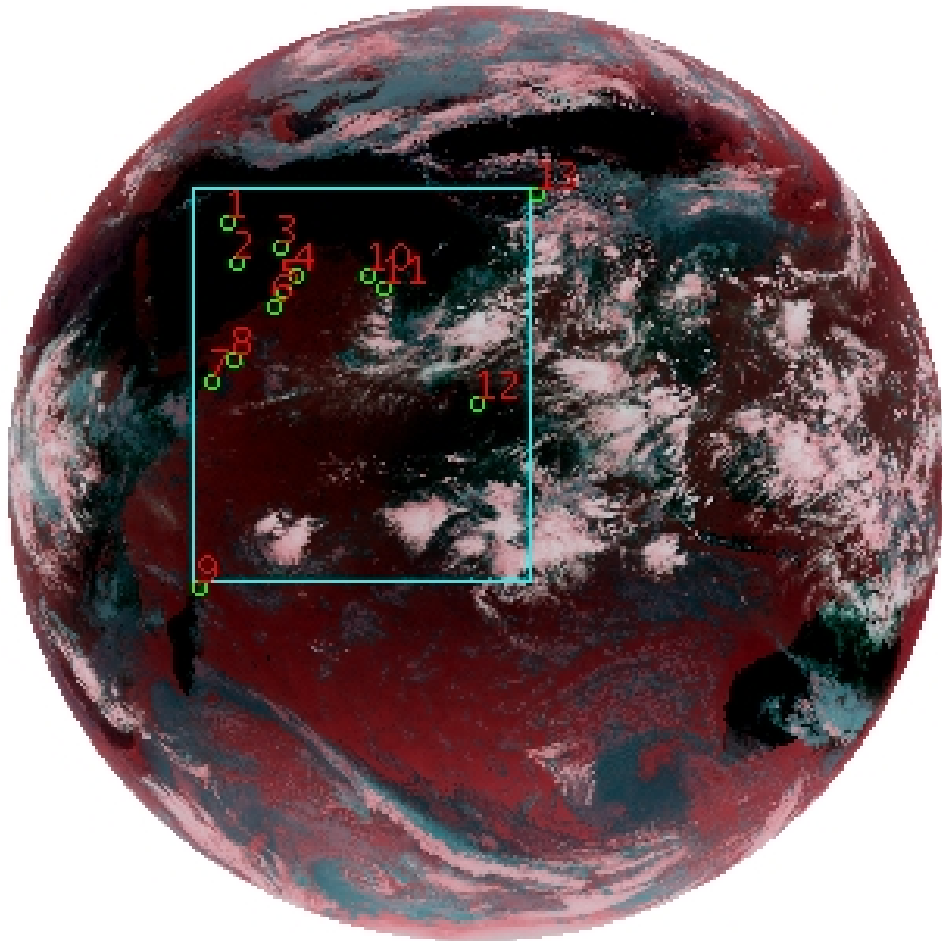


# DQE Report: Location Accuracy of INSAT-3D-IMG STANDARD(FULL DISK) Product 3DIMG\_29SEP2017\_0600

**Satellite** INSAT-3D      **No Of Bands** 6      **Product Type** STANDARD  
**Sensor** IMG      **LvlOfProcess** L1B      **Selected Band** 2-TIR1  
**DOP/Time** 29-09-17/06:00      **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 3DIMG29SEP20170600L1BSTD

**Image Width:** 2805      **Image Height:** 2816      **No Of GCPs:** 13

**GCP Coverage(%)** 40.23      **(N-S)** 34.88      **(E-W)**

## Location Error(E)

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

## Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	-0.368	S	2.732	2.757
Across	-3.033	W	1.662	3.458

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.573	0.517	14.326
Along	5.063	2.764	26.574
Across	5.541	10.664	38.531

## Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	6.535	4.620	1.84	4.971
Across	4.547	2.813	1.14	3.036

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.02117	0.01728	-0.24467

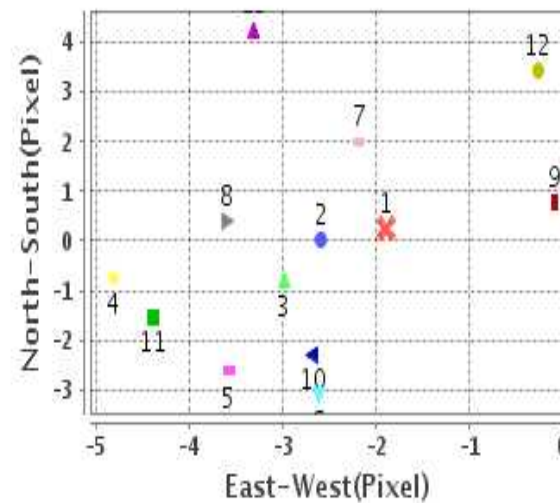
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

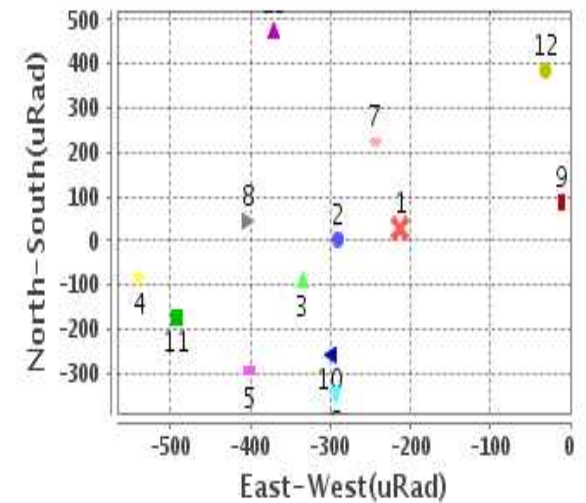
## Radial Error (in IR Pixels)

<b>Mean</b>	4.115
<b>Min</b>	1.294
<b>Max</b>	8.358
<b>CE90</b>	5.326

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3D	<b>Generation Date</b>	29-09-17
<b>Sensor</b>	IMG	<b>DQE Date</b>	04-10-2017
<b>PassType</b>	NONE	<b>Aquisition Date</b>	29-09-17
<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_29SEP20	<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 : 3DIMG29SEP20170600L1BSTD**

(-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

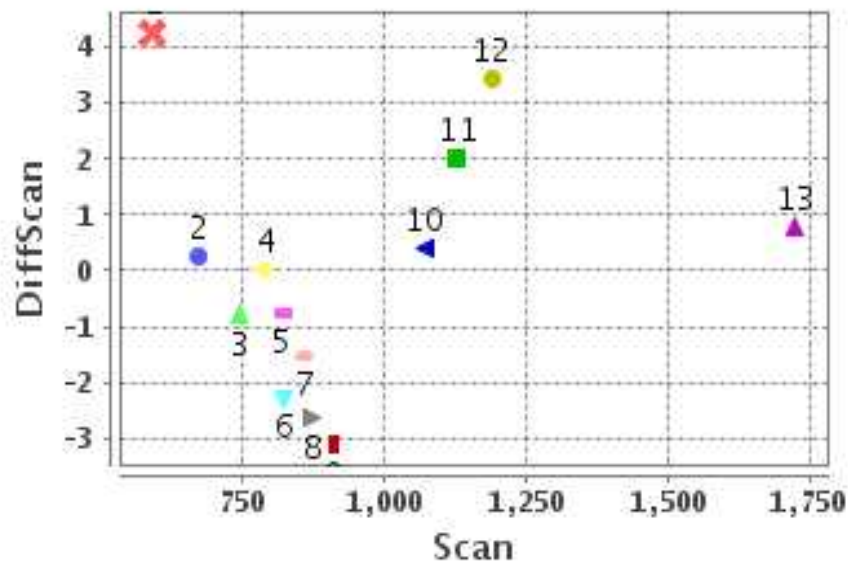
Image Width (pixels) : 2805      Image Height (pixels) : 2816      No of GCPs : 13

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	938.0	280.3	590.5	1723.25	40.23 (N-S)
<b>GCP Pix</b>	903.9	290.2	586.8	1565.00	34.88 (E-W)

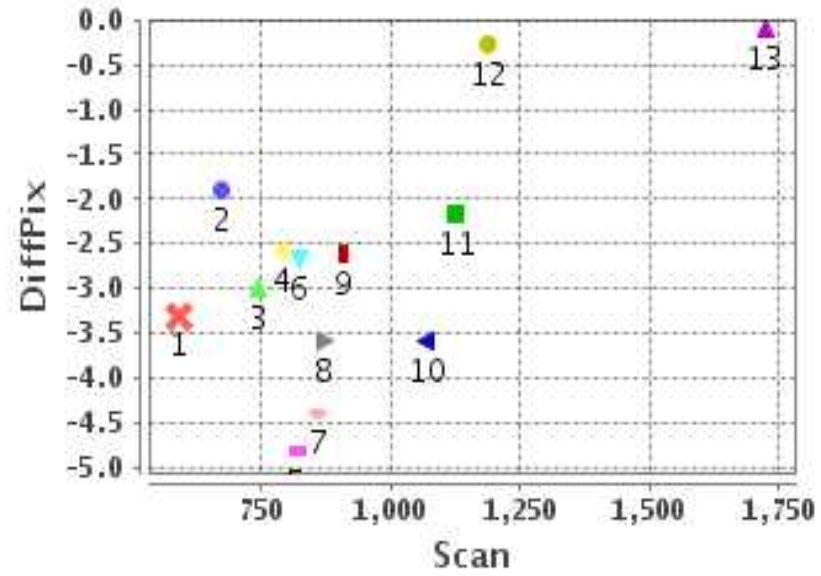
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	673.0	666.2	0.2	-1.90	0.595	S	9.689	W	Accepted
2	791.0	700.2	0.0	-2.59	0.403	S	12.764	W	Accepted
3	745.0	825.2	-0.8	-2.99	4.501	N	15.176	W	Accepted
4	819.8	864.2	-0.8	-4.82	0.740	N	21.898	W	Accepted
5	872.2	835.2	-2.6	-3.58	11.780	N	17.749	W	Accepted
6	910.5	802.8	-3.1	-2.62	11.662	N	11.196	W	Accepted
7	1127.2	629.2	2.0	-2.18	8.870	S	9.114	W	Accepted
8	1069.8	687.0	0.4	-3.60	4.275	S	17.162	W	Accepted
9	1723.2	586.8	0.8	-0.10	4.385	S	2.746	E	Accepted
10	823.2	1076.2	-2.3	-2.68	9.885	N	11.675	W	Accepted
11	859.5	1121.8	-1.5	-4.40	4.635	N	16.076	W	Accepted
12	1189.5	1390.2	3.4	-0.27	15.225	S	0.616	W	Accepted
13	590.5	1565.0	4.3	-3.31	28.592	S	17.323	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



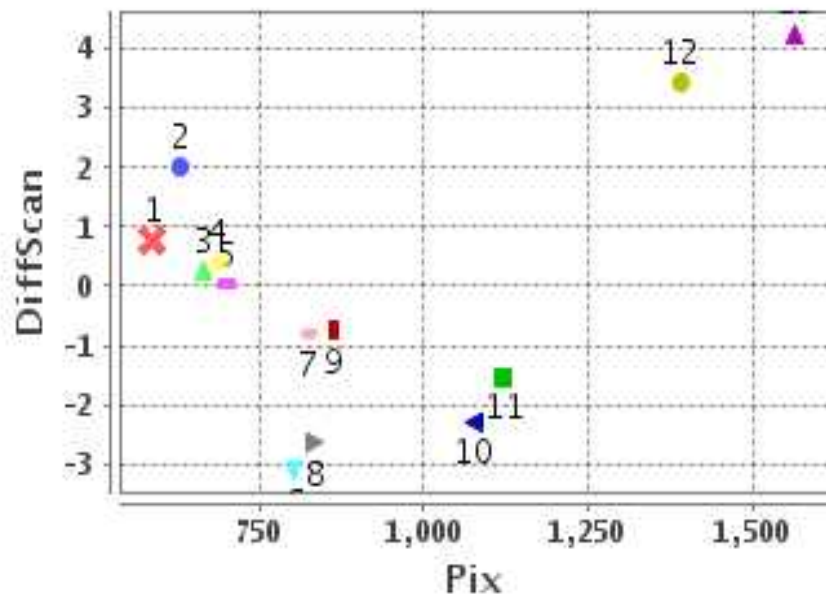
#### Number Of Points

North	6
South	7
East	1
West	12

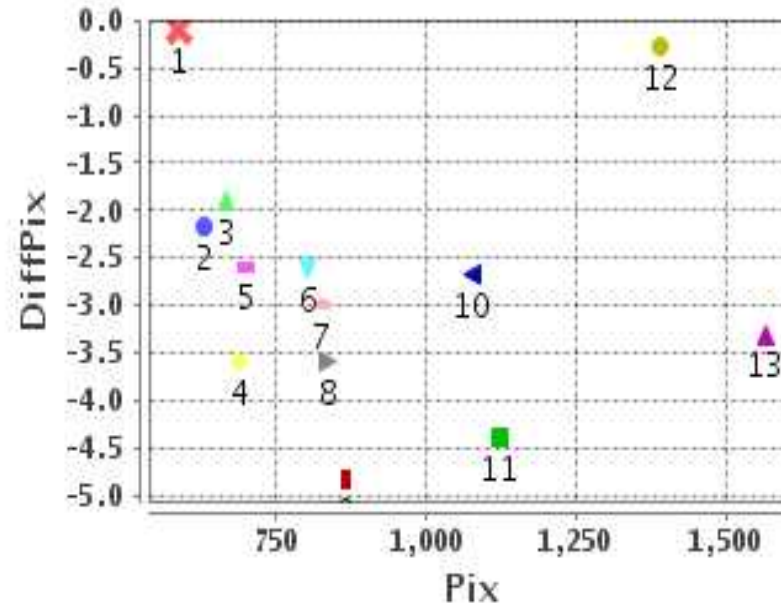
#### Radial Error ( Km )

Mean	4.115
Min	1.294
Max	8.358
CE90	5.326

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	-0.368	2.732	2.757	S	1.994	2.869
Across ( Km )	-3.033	1.662	3.458	W	3.234	3.599

## 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)	4.613329999	N
Across(Mean,Dir)	-14.74	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	5.22	30.42
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	1.69	1.20
Across(Mean,Stddev)	1.42	0.83

<b>Scan Range-0-937; Pix Range-934-1869</b>		
Number of GCPs	3	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-4.69	S
Across(Mean,Dir)	-15.03	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.56	13.94
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	6.17	0.38
Across(Mean,Stddev)	1.18	0.54

<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)	-5.84333	S
Across(Mean,Dir)	-7.84	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.08	1.98
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.98	0.62
Across(Mean,Stddev)	2.79	0.71

<b>Scan Range-937-1876; Pix Range-934-1869</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-15.225	S
Across(Mean,Dir)	-0.62	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