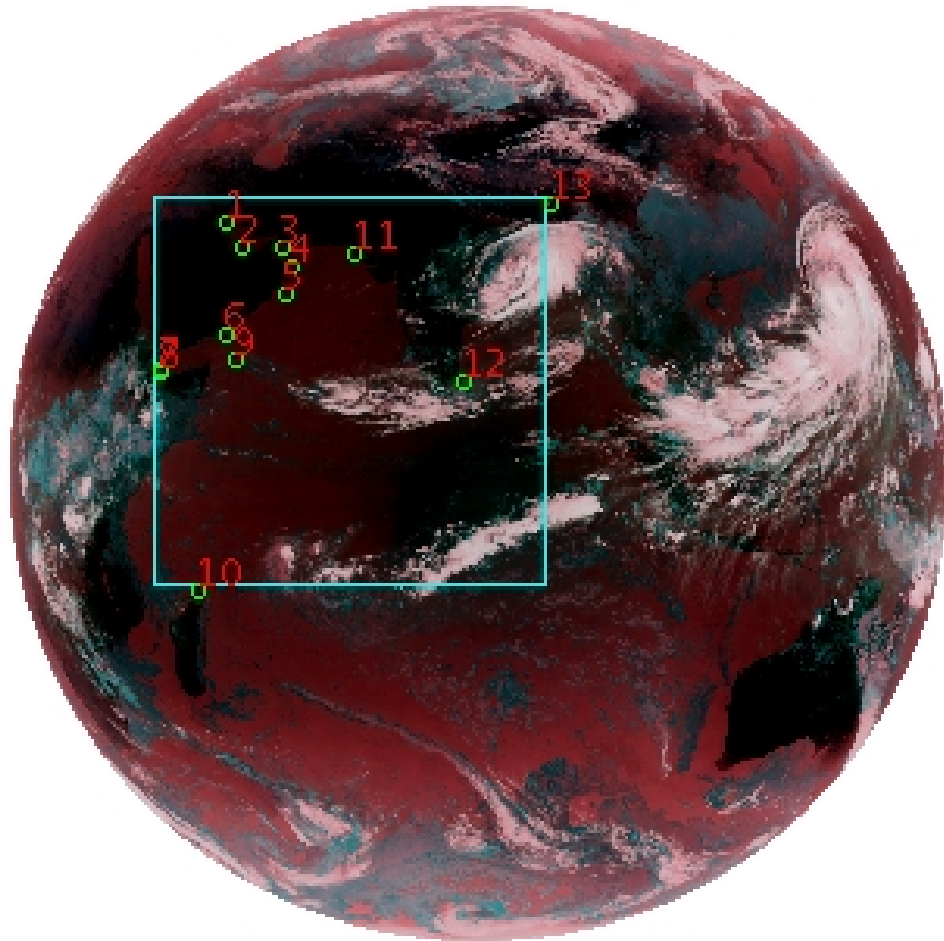


# DQE Report: Location Accuracy of INSAT-3D-IMG STANDARD(FULL DISK) Product 3DIMG\_20OCT2017\_0600

Satellite	INSAT-3D	No Of Bands	6	Product Type	STANDARD
Sensor	IMG	LvlOfProcess	L1B	Selected Band	2-TIR1
DOP/Time	20-10-17/06:00	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 3DIMG20OCT20170600L1BSTD

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

GCP Coverage(%) 39.63 (N-S) 40.09 (E-W)

Location Error(E)

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

## Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	-0.112	S	1.150	1.155
Across	-4.078	W	1.870	4.486

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.602	0.490	15.050
Along	4.930	2.467	23.247
Across	4.982	1.339	24.540

## Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	3.239	0.194	1.00	1.019
Across	6.596	-0.759	1.71	1.874

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.02384	-0.00116	0.02611

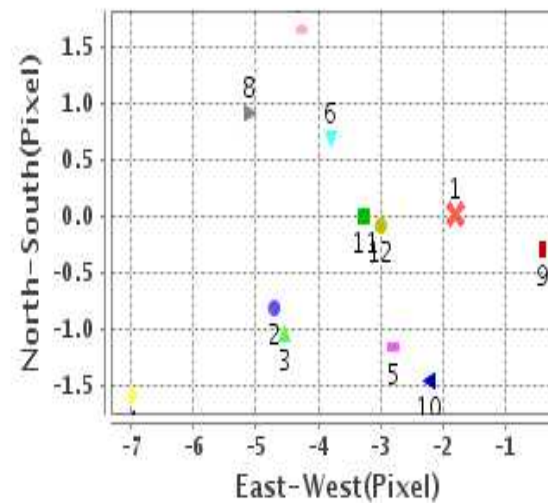
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

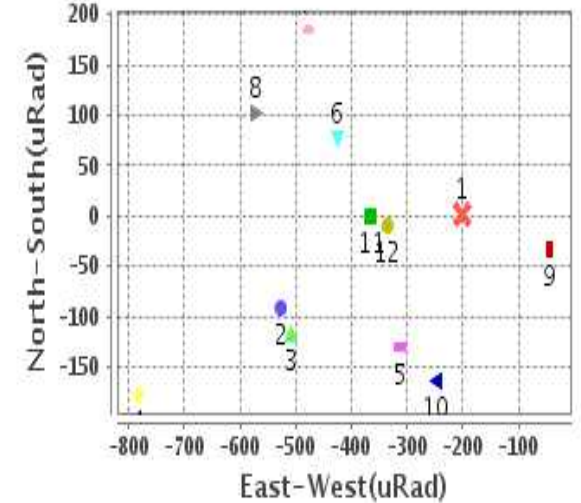
## Radial Error (in IR Pixels)

Mean	4.234
Min	.650
Max	8.150
CE90	5.474

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3D	<b>Generation Date</b>	20-10-17
<b>Sensor</b>	IMG	<b>DQE Date</b>	23-10-2017
<b>PassType</b>	NONE	<b>Aquisition Date</b>	20-10-17
<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_20OCT2	<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 : 3DIMG20OCT20170600L1BSTD**

(-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

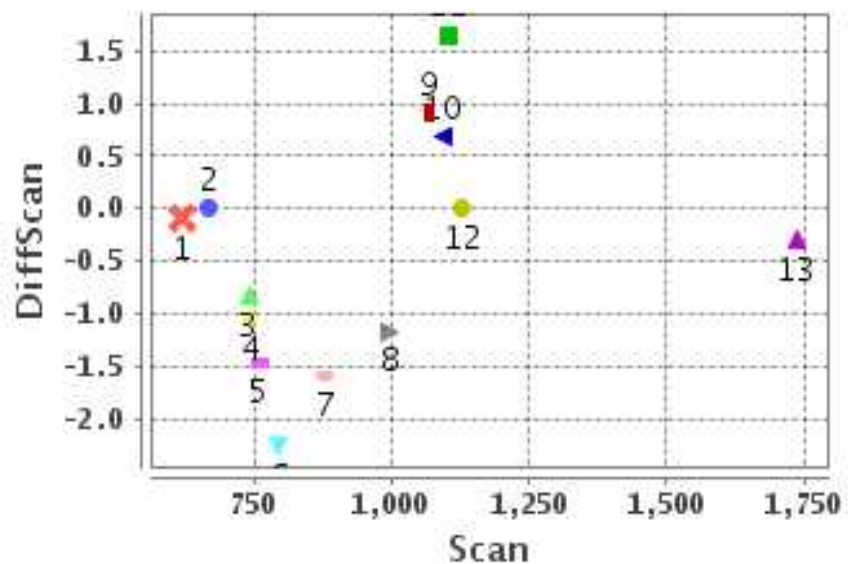
Image Width (pixels) : 2805      Image Height (pixels) : 2816      No of GCPs : 13

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	949.1	283.8	619.5	1735.50	39.63 (N-S)
<b>GCP Pix</b>	824.8	316.2	470.5	1595.00	40.09 (E-W)

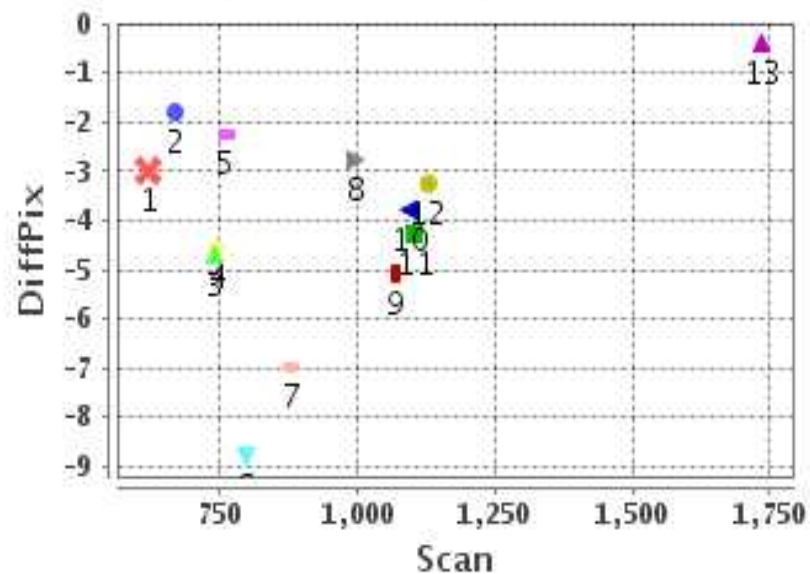
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	668.8	665.2	0.0	-1.80	3.945	S	8.177	W	Accepted
2	741.8	705.5	-0.8	-4.70	0.930	N	23.619	W	Accepted
3	745.2	826.8	-1.0	-4.53	4.501	N	19.658	W	Accepted
4	796.2	846.8	-2.3	-8.79	11.294	N	41.210	W	Rejected
5	879.2	830.5	-1.6	-6.99	7.152	N	31.806	W	Accepted
6	996.5	665.5	-1.2	-2.79	2.918	N	12.641	W	Accepted
7	1094.2	475.5	0.7	-3.80	3.726	S	18.303	W	Accepted
8	1103.5	470.5	1.7	-4.27	8.223	S	20.293	W	Accepted
9	1069.2	688.5	0.9	-5.10	4.275	S	21.421	W	Accepted
10	1735.5	578.0	-0.3	-0.39	0.920	S	2.431	W	Accepted
11	761.2	1029.0	-1.5	-2.22	6.356	N	11.569	W	Accepted
12	1127.8	1346.2	-0.0	-3.26	3.219	S	11.750	W	Accepted
13	619.5	1595.0	-0.1	-3.00	2.910	S	14.072	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



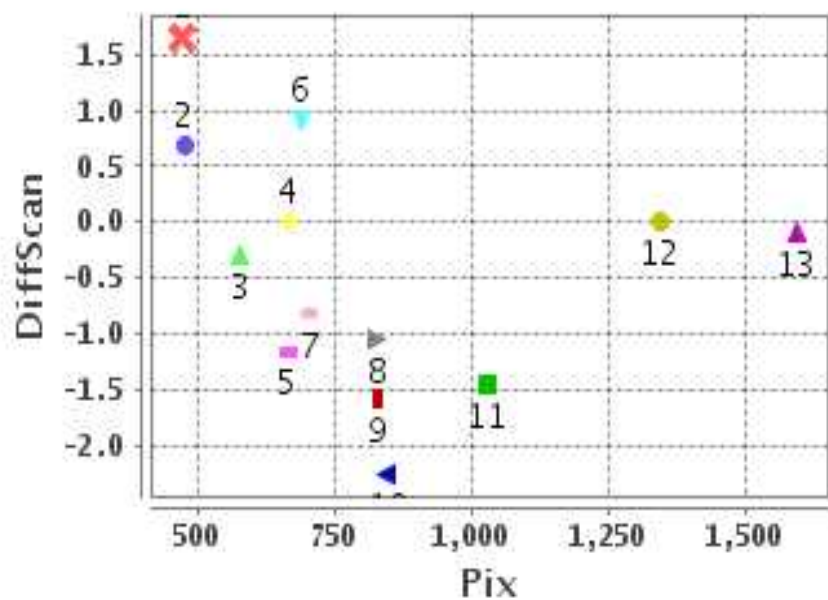
#### Number Of Points

North	5
South	7
East	0
West	12

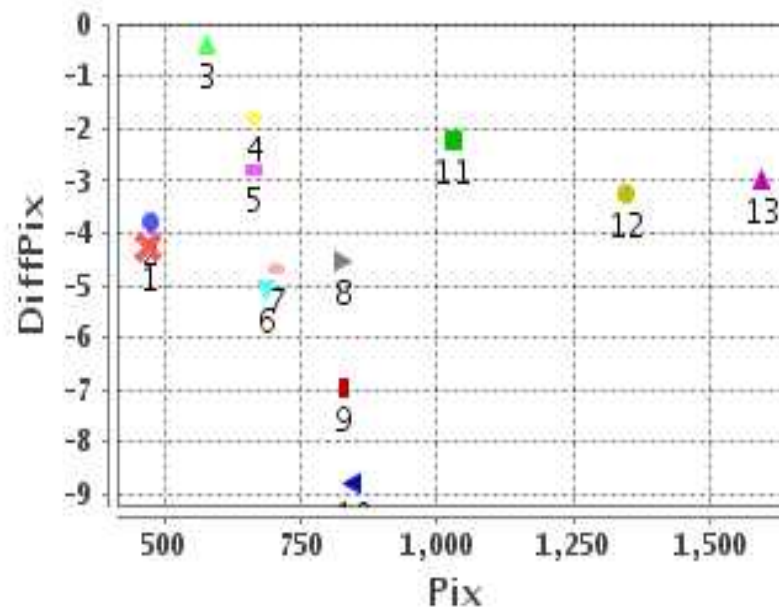
#### Radial Error ( Km )

Mean	4.234
Min	.650
Max	8.150
CE90	5.474

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	-0.112	1.150	1.155	S	1.035	1.205
Across ( Km )	-4.078	1.870	4.486	W	4.026	4.682

## Block-Wise Geo location Error Statistics

### Location Accuracy,Scale,ID

<b>Scan Range-0-937; Pix Range-0-934</b>		
Number of GCPs	4	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	2.16	N
Across(Mean,Dir)	-20.82	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	5.74	43.56
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	1.16	0.32
Across(Mean,Stddev)	3.61	1.12

<b>Scan Range-0-937; Pix Range-934-1869</b>		
Number of GCPs	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	1.725	N
Across(Mean,Dir)	-12.82	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.48	12.09
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	1.37	0.00
Across(Mean,Stddev)	0.78	0.00

<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	5	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-2.842	S
Across(Mean,Dir)	-15.02	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.53	13.30
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-1.90	0.69
Across(Mean,Stddev)	-1.25	1.72

<b>Scan Range-937-1876; Pix Range-934-1869</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-3.22	S
Across(Mean,Dir)	-11.75	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