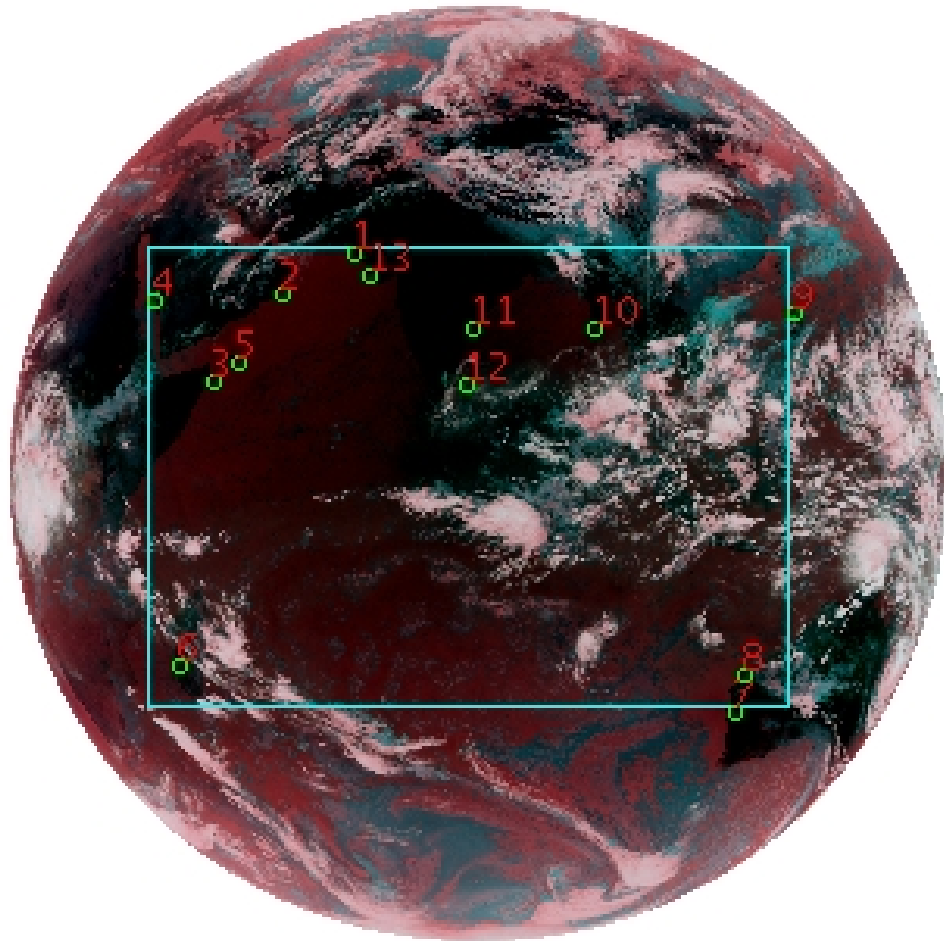


# DQE Report: Location Accuracy of INSAT-3D-IMG STANDARD(FULL DISK) Product 3DIMG\_29MAR2017\_0600

Satellite	INSAT-3D	No Of Bands	6	Product Type	STANDARD
Sensor	IMG	LvlOfProcess	L1B	Selected Band	2-TIR1
DOP/Time	29-03-17/06:00	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 3DIMG29MAR20170600L1BSTD

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

GCP Coverage(%) 46.95 (N-S) 65.61 (E-W)

## Location Error(E)

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

## Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	0.286	N	1.576	1.601
Across	-2.455	W	2.187	3.288

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.428	0.311	10.711
Along	4.760	3.732	18.990
Across	4.529	0.525	13.222

## Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	4.173	0.070	1.29	1.293
Across	6.819	-1.978	2.02	2.831

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.01440	-0.00288	0.05885

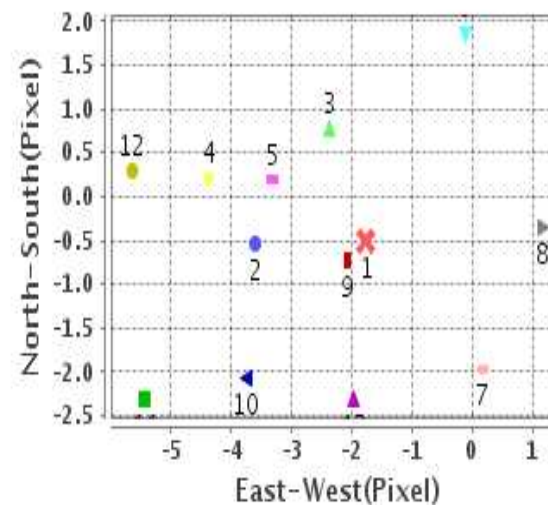
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

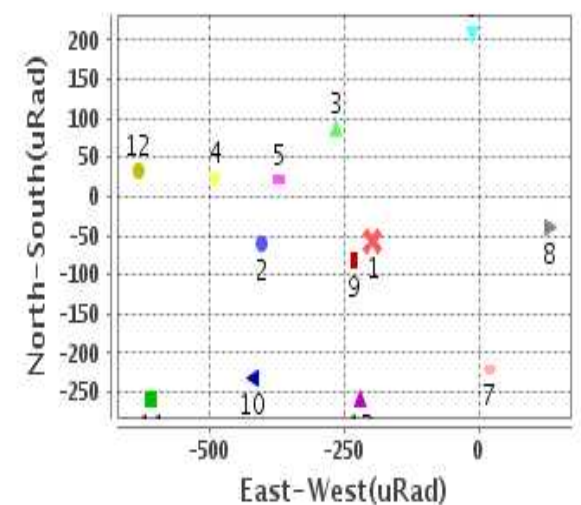
## Radial Error (in IR Pixels)

Mean	3.437
Min	1.687
Max	5.796
CE90	5.044

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3D	<b>Generation Date</b>	29-03-17
<b>Sensor</b>	IMG	<b>DQE Date</b>	03-04-2017
<b>PassType</b>	NONE	<b>Aquisition Date</b>	29-03-17
<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_29MAR2	<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 : 3DIMG29MAR20170600L1BSTD**

(-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

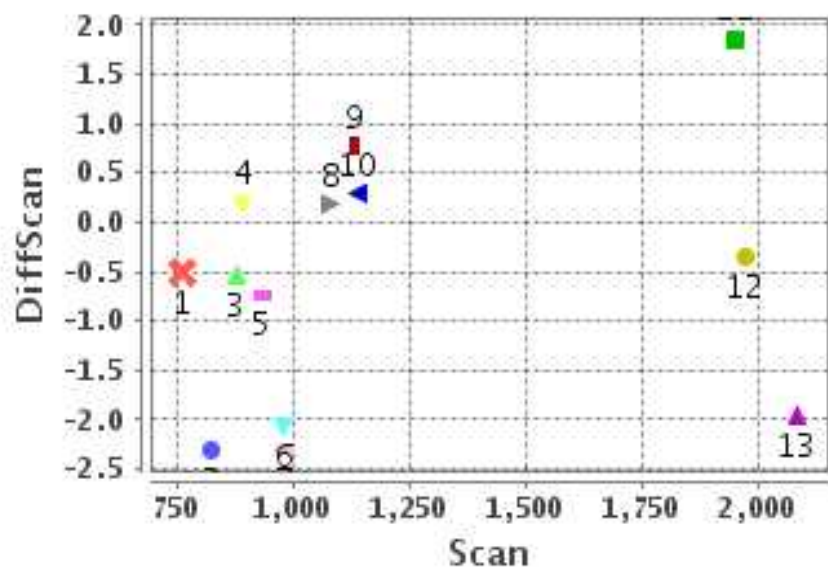
Image Width (pixels) : 2805      Image Height (pixels) : 2816      No of GCPs : 13

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	1199.6	452.6	760.2	2082.25	46.95 (N-S)
<b>GCP Pix</b>	1251.7	622.6	458.8	2299.25	65.61 (E-W)

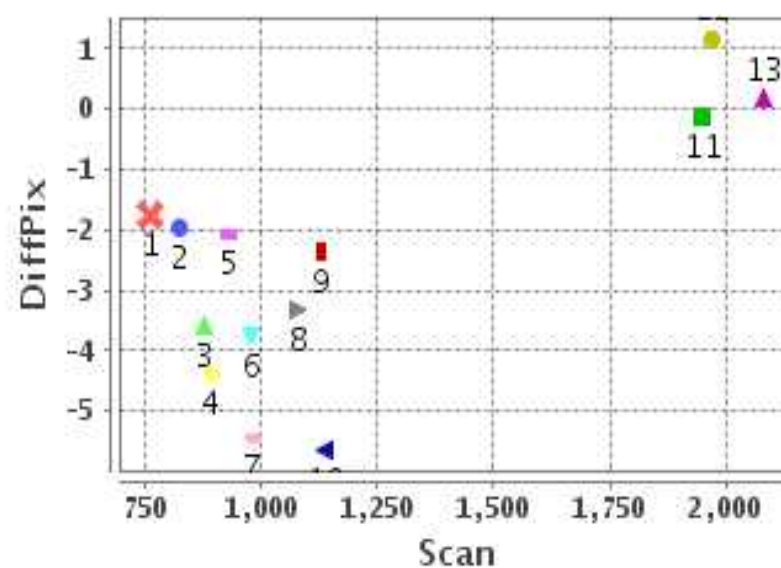
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	760.2	1028.5	-0.5	-1.76	1.933	N	6.466	W	Accepted
2	878.2	826.5	-0.5	-3.60	1.280	N	14.457	W	Accepted
3	1128.8	629.8	0.8	-2.36	5.462	S	6.896	W	Accepted
4	891.2	458.8	0.2	-4.37	0.646	S	23.177	W	Accepted
5	1079.0	696.8	0.2	-3.31	0.841	S	12.694	W	Accepted
6	1950.8	523.5	1.9	-0.11	12.795	S	1.713	W	Accepted
7	2082.2	2124.5	-2.0	0.18	9.322	N	0.590	E	Accepted
8	1971.2	2155.5	-0.3	1.17	0.068	S	9.284	E	Accepted
9	931.5	2299.2	-0.7	-2.06	0.090	S	10.235	W	Accepted
10	979.0	1723.0	-2.1	-3.76	8.062	N	15.243	W	Accepted
11	980.5	1372.5	-2.3	-5.43	7.965	N	19.449	W	Accepted
12	1138.8	1358.5	0.3	-5.65	3.933	S	19.791	W	Accepted
13	823.2	1075.5	-2.3	-1.96	10.123	N	7.416	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



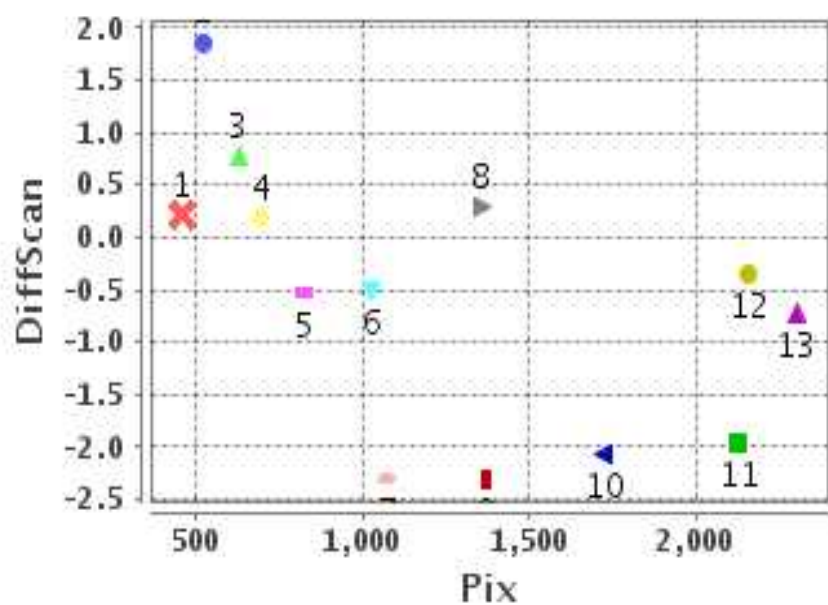
#### Number Of Points

North	6
South	7
East	2
West	11

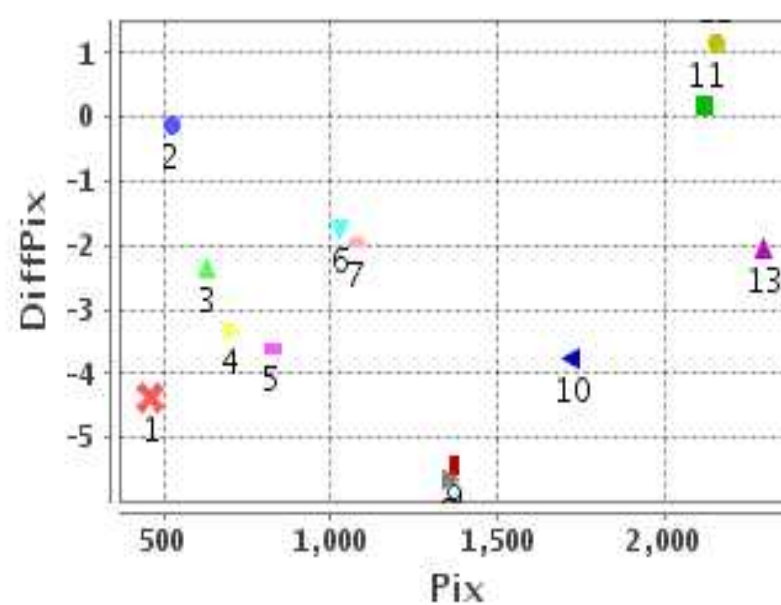
#### Radial Error ( Km )

Mean	3.437
Min	1.687
Max	5.796
CE90	5.044

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	0.286	1.576	1.601	N	1.388	1.667
Across ( Km )	-2.455	2.187	3.288	W	2.985	3.422

## Block-Wise Geo location Error Statistics

### Location Accuracy,Scale,ID

<b>Scan Range-0-937; Pix Range-0-934</b>		
Number of GCPs	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	0.31	N
Across(Mean,Dir)	-18.82	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	5.43	35.74
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.75	0.00
Across(Mean,Stddev)	-0.77	0.00

<b>Scan Range-0-937; Pix Range-934-1869</b>		
Number of GCPs	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	6.03	N
Across(Mean,Dir)	-6.94	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.92	23.01
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	1.80	0.00
Across(Mean,Stddev)	0.20	0.00

<b>Scan Range-0-937; Pix Range-1869-2805</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-0.09	S
Across(Mean,Dir)	-10.23	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-0-934</b>		
Number of GCPs	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-3.15	S
Across(Mean,Dir)	-9.80	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.27	6.75
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.58	0.00
Across(Mean,Stddev)	0.95	0.00

<b>Scan Range-937-1876; Pix Range-934-1869</b>		
Number of GCPs	3	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	4.03333	N
Across(Mean,Dir)	-18.16	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.11	2.70
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-1.08	1.30
Across(Mean,Stddev)	-1.06	0.84

<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	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-12.8	S
Across(Mean,Dir)	-1.72	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-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	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	4.625	N
Across(Mean,Dir)	4.94	E
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.69	17.36
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	1.61	0.00
Across(Mean,Stddev)	-0.99	0.00

\*-999 : no gcp available

\* -999.99 : values are not computed