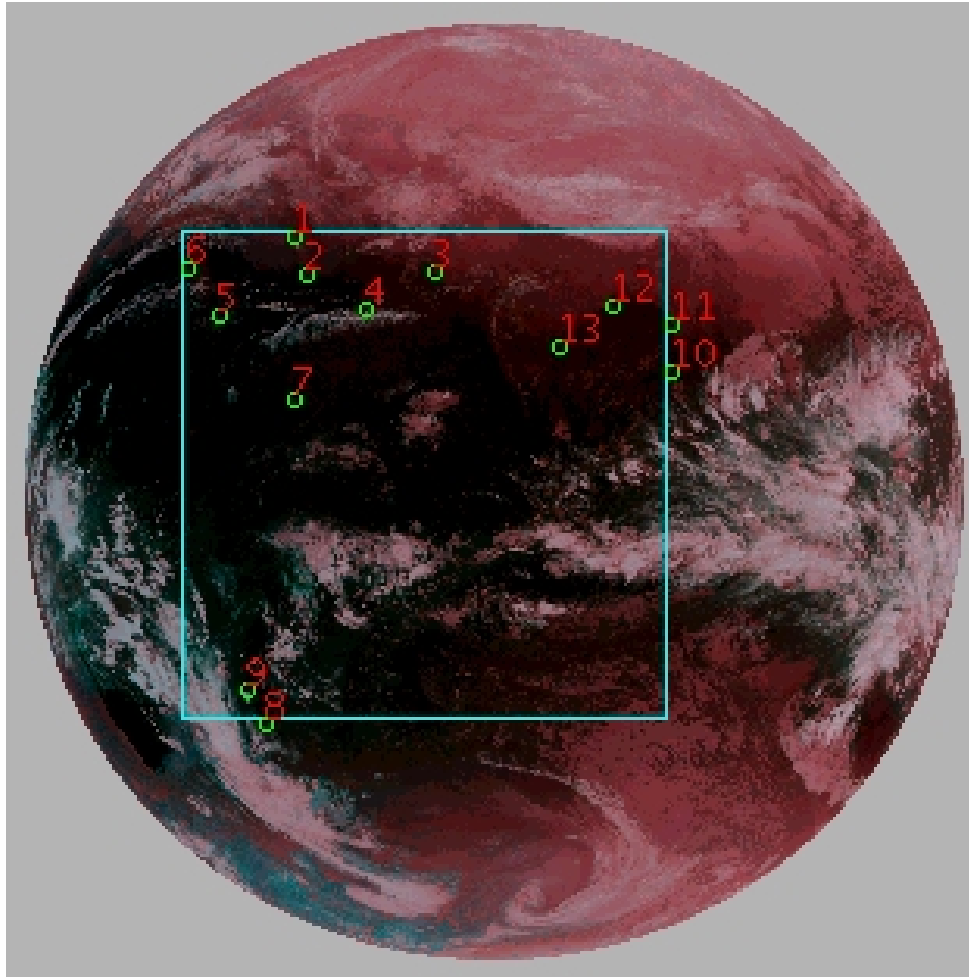


# DQE Report: GDQE - Location parameters for INSAT-3DR-IMG STANDARD(FULL DISK) Product

Satellite	INSAT-3DR	No Of Bands	6	Product Type	STANDARD
Sensor	IMG	LvlOfProcess	L1B	Selected Band	2-TIR1
DOP/Time	16-01-17/24:45	Station ID	BES	Field View(deg)	18.006
Res(Y,X) [Km]	(4.0,4.0)	Res(Y,X) [uRad]	(112.0,112.0)		

(81.042N,-7.157W)

(81.042N,155.157E)



(-81.042S,-7.157W)

(-81.042S,155.157E)

GCP Distribution overview for 3RIMG16JAN20171245L1BSTD

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

GCP Coverage(%) 49.83 (N-S) 49.56 (E-W)

## Location Error(E)

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

## Location Error (Km)

	Mean	Direction	Stddev	RMS
Along	6.601	N	2.688	7.128
Across	-10.872	W	4.865	11.911

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.520	0.484	12.995
Along	8.434	18.793	110.858
Across	5.192	2.865	29.791

## Internal Distortion (in Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	1.495	-0.432	0.40	0.586
Across	3.984	2.723	1.28	3.008

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.01995	-0.00911	-0.03081

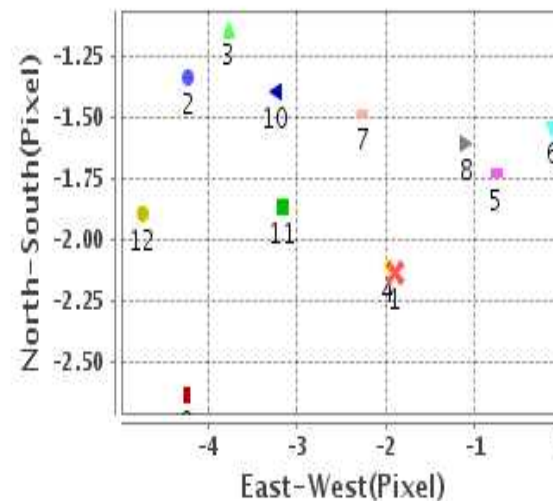
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

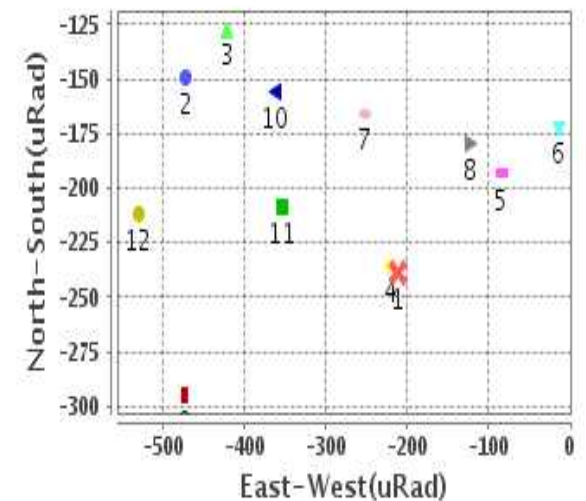
## Radial Error (Km)

Mean	13.170
Min	6.829
Max	20.551
CE90	17.849

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3DR	<b>Generation Date</b>	16-01-17
<b>Sensor</b>	IMG	<b>DQE Date</b>	19-01-2017
<b>PassType</b>	NONE	<b>Aquisition Date</b>	16-01-17
<b>Imaging Mode</b>	FULL_FRAME	<b>Aquisition Time(GMT)</b>	24:45
<b>Sat Altitude(m)</b>	3.6E7	<b>Nominal Altitude(Km)</b>	3.6E7
<b>Station</b>	BES	<b>Predicted Altitude(Km)</b>	0.0
<b>Sat Location(deg)</b>	0.0 E	<b>Nominal Center Lat(deg)</b>	0.0
<b>Format</b>	hdf5-1.8.8	<b>Nominal Center Lon(deg)</b>	74.0
<b>LvlOfProcessing</b>	STANDARD(FULL)	<b>Predicted Center Lat(deg)</b>	0.0
<b>DP JobId</b>	3RIMG_16JAN20	<b>Predicted Center Lon(deg)</b>	0.0
<b>ProductCode</b>	NONE		
<b>Field View(deg)</b>	18.006		

### 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>	74.0
<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>	-7.157
<b>SW_Lat(deg)</b>	-81.042
<b>SW_Lon(deg)</b>	-7.157
<b>NE_Lat(deg)</b>	81.042
<b>NE_Lon(deg)</b>	155.157
<b>SE_Lat(deg)</b>	-81.042
<b>SE_Lon(deg)</b>	155.157

### 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 : 3RIMG16JAN20171245L1BSTD**

(-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

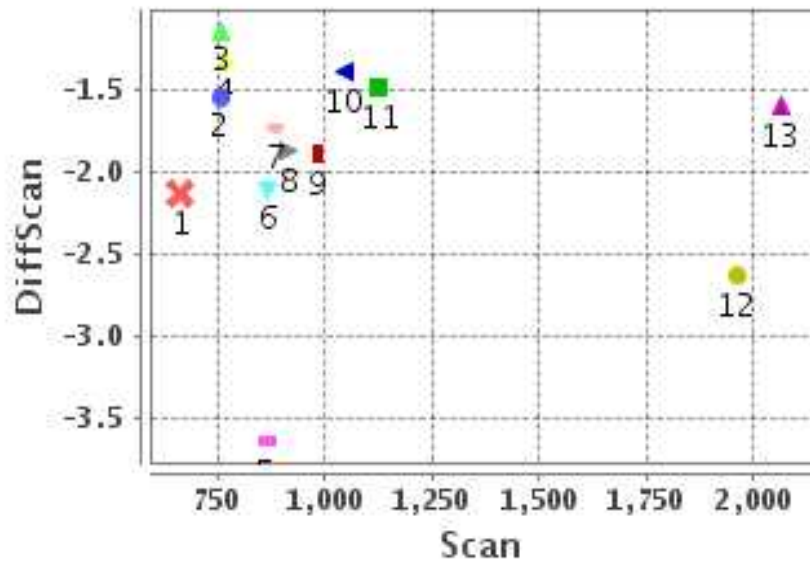
Image Width (pixels) : 2805      Image Height (pixels) : 2816      No of GCPs : 13

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	1050.3	428.9	662.2	2065.50	49.83 (N-S)
<b>GCP Pix</b>	1105.6	486.1	512.0	1902.25	49.56 (E-W)

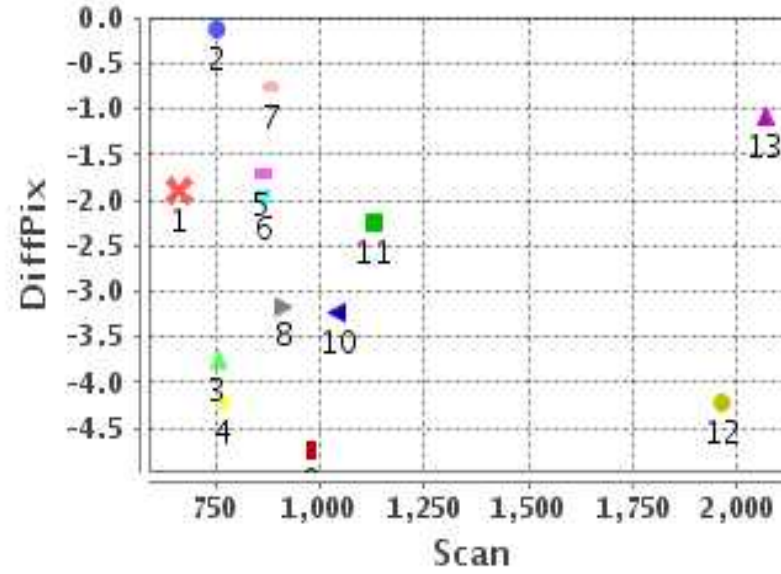
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	662.2	817.5	-2.1	-1.90	10.921	N	9.907	W	Accepted
2	768.2	853.5	-1.3	-4.22	6.206	N	18.816	W	Accepted
3	757.8	1222.8	-1.1	-3.77	2.614	N	12.855	W	Accepted
4	867.0	1022.2	-2.1	-1.98	9.522	N	9.008	W	Accepted
5	885.2	598.0	-1.7	-0.75	7.017	N	5.917	W	Accepted
6	755.5	512.0	-1.5	-0.13	6.187	N	3.105	W	Accepted
7	1127.5	812.2	-1.5	-2.26	4.221	N	8.804	W	Accepted
8	2065.5	735.0	-1.6	-1.09	5.489	N	4.063	W	Accepted
9	1963.0	679.5	-2.6	-4.23	11.965	N	16.709	W	Accepted
10	1044.2	1900.5	-1.4	-3.24	4.966	N	11.308	W	Accepted
11	913.8	1902.2	-1.9	-3.16	4.985	N	12.879	W	Accepted
12	863.0	1733.5	-3.6	-1.72	16.507	N	3.781	W	Rejected
13	980.5	1583.5	-1.9	-4.74	5.124	N	17.098	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



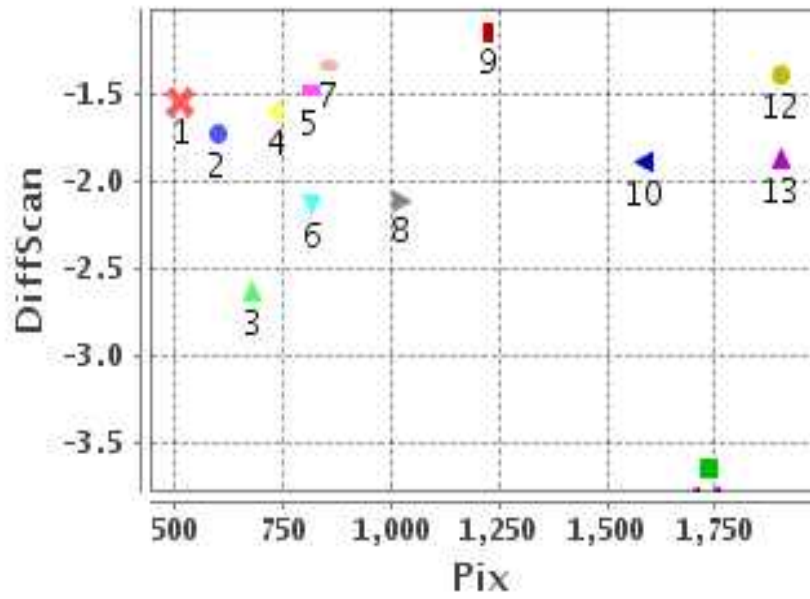
#### Number Of Points

North	12
South	0
East	0
West	12

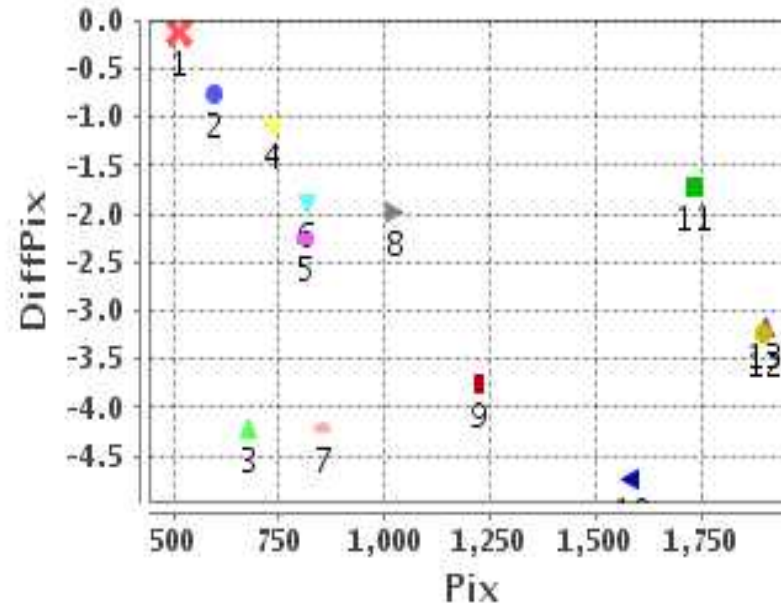
#### Radial Error ( Km )

Mean	13.170
Min	6.829
Max	20.551
CE90	17.849

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	6.601	2.688	7.128	N	6.512	7.403
Across ( Km )	-10.872	4.865	11.911	W	11.072	12.406

## 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)	7.5825	N
Across(Mean,Dir)	-9.43	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	5.38	34.44
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.60	0.16
Across(Mean,Stddev)	2.16	1.44

<b>Scan Range-0-937; Pix Range-934-1869</b>		
Number of GCPs	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	6.07	N
Across(Mean,Dir)	-10.93	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.20	5.03
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	0.97	0.00
Across(Mean,Stddev)	1.79	0.00

<b>Scan Range-0-937; Pix Range-1869-2805</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	4.99	N
Across(Mean,Dir)	-12.87	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	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	4.22	N
Across(Mean,Dir)	-8.80	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-934-1869</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	5.13	N
Across(Mean,Dir)	-17.10	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	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	4.96	N
Across(Mean,Dir)	-11.30	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-0-934</b>		
Number of GCPs	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	8.73	N
Across(Mean,Dir)	-10.38	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.52	12.99
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-1.03	0.00
Across(Mean,Stddev)	-3.13	0.00

<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