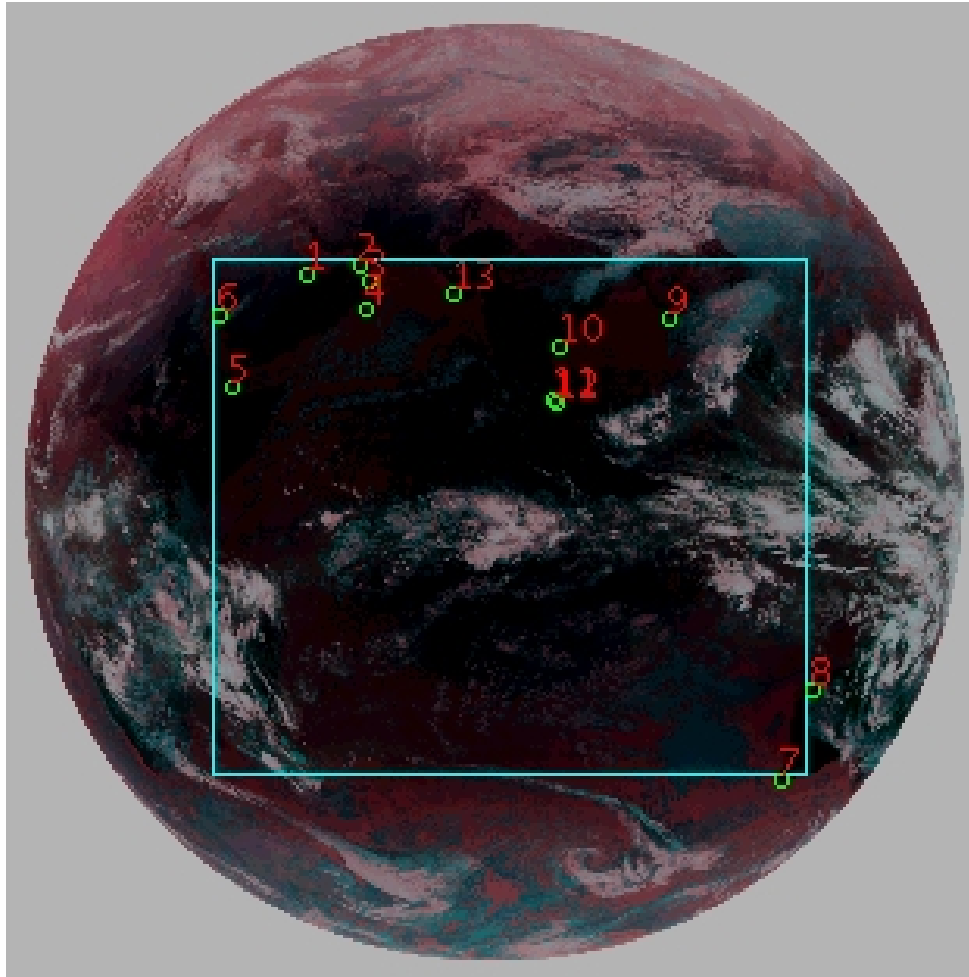


# DQE Report: GDQE - Location parameters for INSAT-3DR-IMG STANDARD(FULL DISK) Product

Satellite	INSAT-3DR	No Of Bands	6	Product Type	STANDARD
Sensor	IMG	LvlOfProcess	L1B	Selected Band	2-TIR1
DOP/Time	10-01-17/06:15	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 3RIMG10JAN20170615L1BSTD

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

GCP Coverage(%) 52.75 (N-S) 60.82 (E-W)

## Location Error(E)

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

## Location Error (Km)

	Mean	Direction	Stddev	RMS
Along	1.364	N	4.316	4.526
Across	-7.404	W	5.012	8.941

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.433	0.246	10.835
Along	4.981	5.823	24.518
Across	4.282	0.362	7.061

## Internal Distortion (in Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	3.501	1.018	0.98	1.412
Across	3.774	0.756	1.12	1.355

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.01178	-0.00222	0.03367

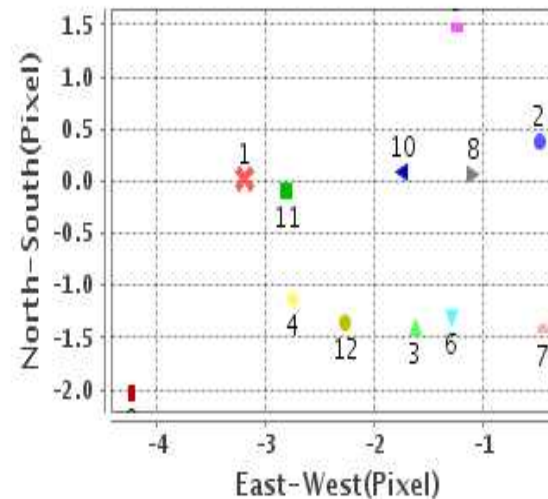
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

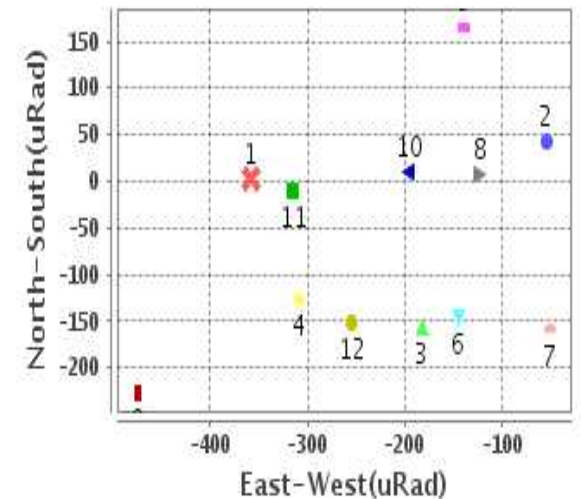
## Radial Error (Km)

Mean	9.087
Min	1.665
Max	17.723
CE90	13.270

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3DR	<b>Generation Date</b>	10-01-17
<b>Sensor</b>	IMG	<b>DQE Date</b>	16-01-2017
<b>PassType</b>	NONE	<b>Aquisition Date</b>	10-01-17
<b>Imaging Mode</b>	FULL_FRAME	<b>Aquisition Time(GMT)</b>	06:15
<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_10JAN20	<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>	meters	<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 : 3RIMG10JAN20170615L1BSTD**

(-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

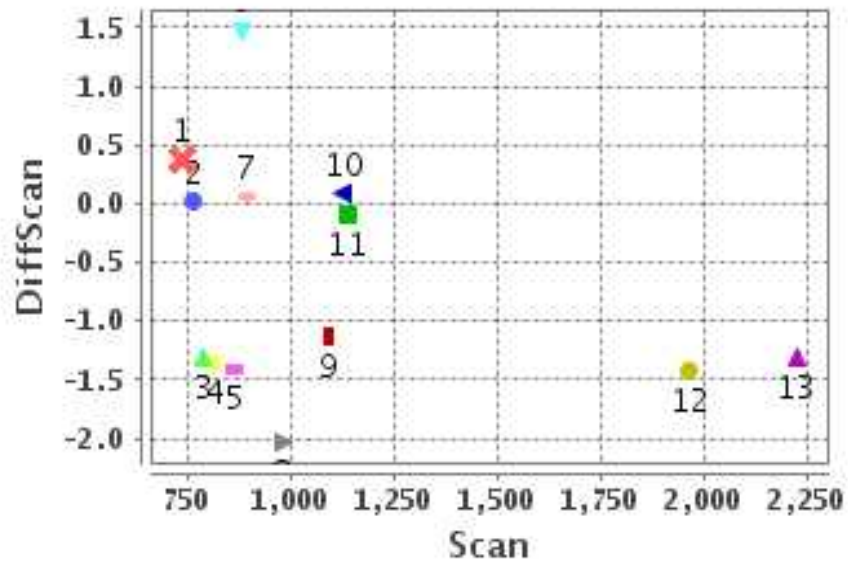
Image Width (pixels) : 2805      Image Height (pixels) : 2816      No of GCPs : 13

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	1098.8	446.1	738.0	2223.50	52.75 (N-S)
<b>GCP Pix</b>	1349.3	538.6	598.5	2304.50	60.82 (E-W)

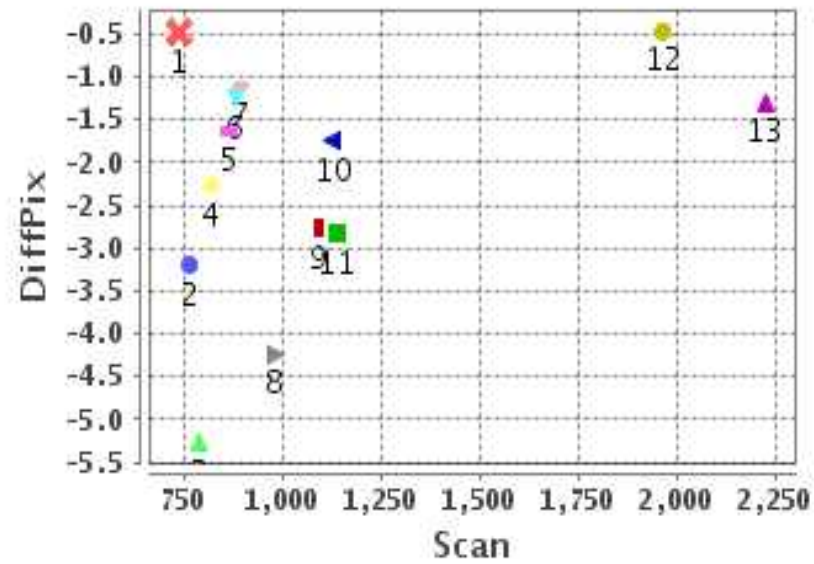
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	767.0	852.5	0.0	-3.20	0.109	S	13.270	W	Accepted
2	738.0	1000.2	0.4	-0.49	1.379	S	0.934	W	Accepted
3	790.0	1026.5	-1.3	-5.26	6.914	N	22.043	W	Rejected
4	866.2	1021.8	-1.4	-1.63	5.239	N	4.349	W	Accepted
5	1091.2	634.2	-1.1	-2.76	3.845	N	12.757	W	Accepted
6	882.0	598.5	1.5	-1.24	6.290	S	1.658	W	Accepted
7	2223.5	2217.2	-1.3	-1.29	6.320	N	10.794	W	Accepted
8	1964.2	2304.5	-1.4	-0.46	5.634	N	1.587	W	Accepted
9	893.8	1892.2	0.1	-1.10	4.108	S	4.487	W	Accepted
10	980.8	1583.0	-2.0	-4.23	4.665	N	17.098	W	Accepted
11	1127.8	1562.2	0.1	-1.75	3.622	S	5.583	W	Accepted
12	1139.2	1573.5	-0.1	-2.81	0.041	S	9.142	W	Accepted
13	820.0	1274.8	-1.4	-2.27	6.217	N	7.194	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



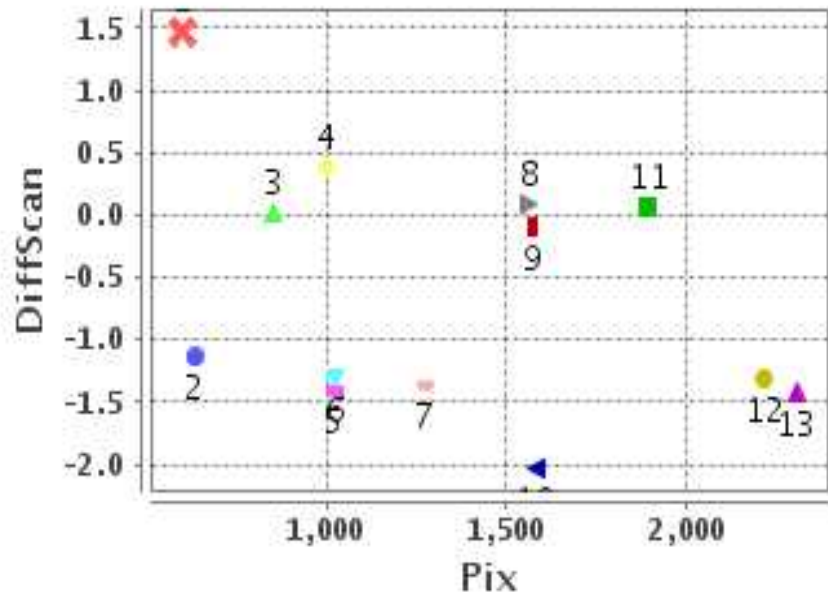
#### Number Of Points

North	6
South	6
East	0
West	12

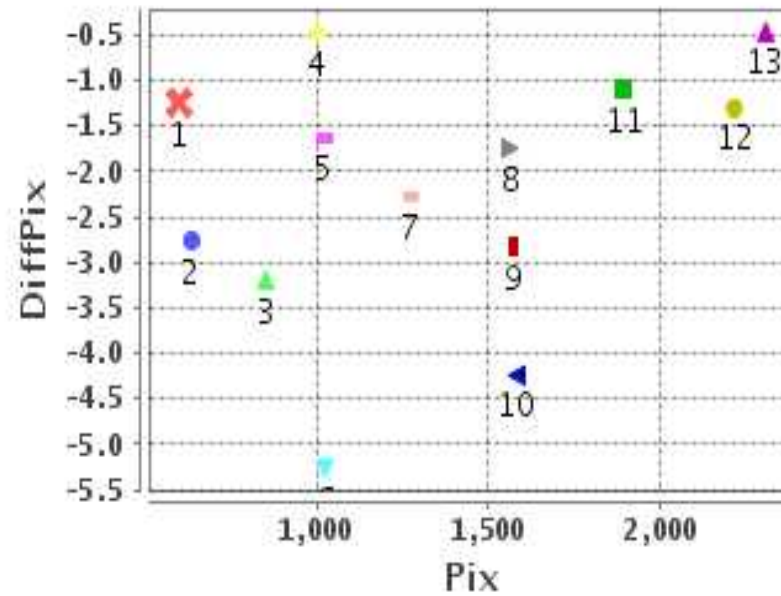
#### Radial Error ( Km )

Mean	9.087
Min	1.665
Max	17.723
CE90	13.270

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	1.364	4.316	4.526	N	4.326	4.727
Across ( Km )	-7.404	5.012	8.941	W	7.787	9.335

## 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)	-3.2	S
Across(Mean,Dir)	-7.46	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.58	14.54
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-1.45	0.00
Across(Mean,Stddev)	1.96	0.00

<b>Scan Range-0-937; Pix Range-934-1869</b>		
Number of GCPs	3	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	3.356670000	N
Across(Mean,Dir)	-4.16	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.54	13.52
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	1.76	0.02
Across(Mean,Stddev)	1.46	0.32

<b>Scan Range-0-937; Pix Range-1869-2805</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-4.11	S
Across(Mean,Dir)	-4.48	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)	3.85	N
Across(Mean,Dir)	-12.75	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-934-1869</b>		
Number of GCPs	3	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	0.33	N
Across(Mean,Dir)	-10.61	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.01	0.24
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-2.02	0.10
Across(Mean,Stddev)	1.77	0.71

<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	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	5.98	N
Across(Mean,Dir)	-6.20	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	5.15	28.82
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.10	0.00
Across(Mean,Stddev)	-0.83	0.00

\*-999 : no gcp available

\* -999.99 : values are not computed