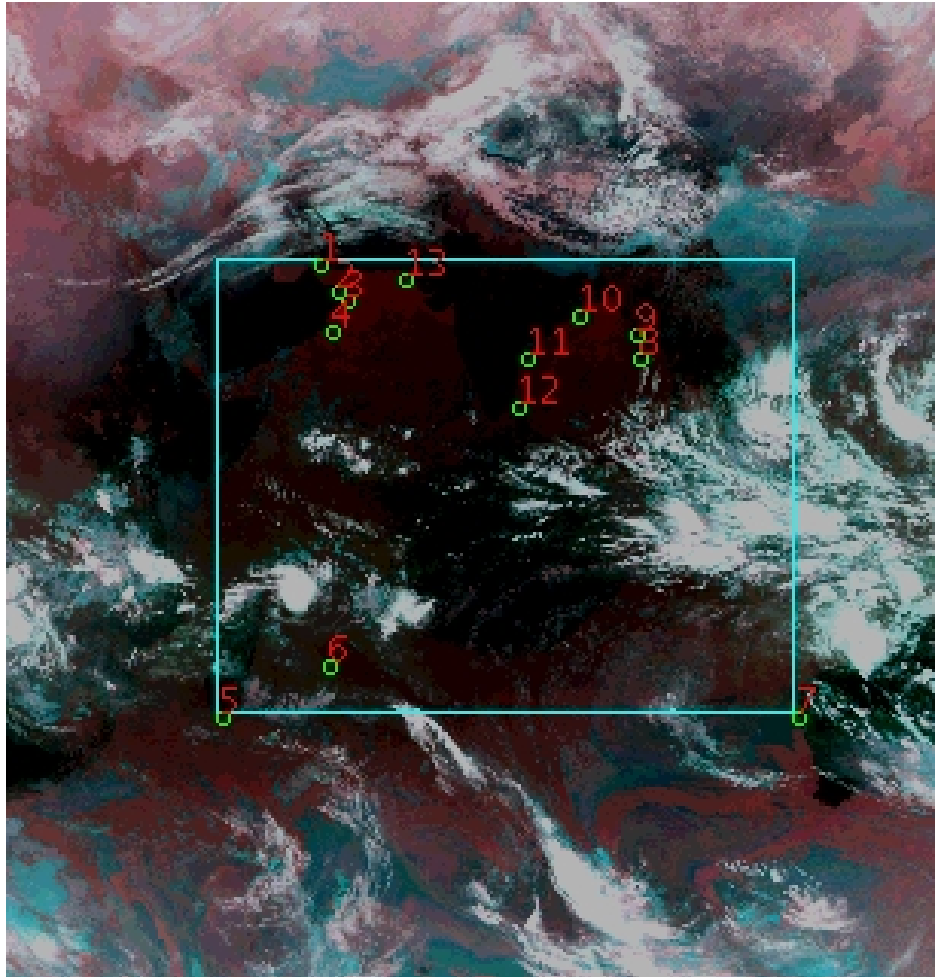


# DQE Report: GDQE - Location parameters for INSAT-3DR-IMG SECTOR Product 3RIMG\_01FEB2017\_0615\_SGP

**Satellite** INSAT-3DR      **No Of Bands** 6      **Product Type** SECTOR  
**Sensor** IMG      **LvlOfProcess** L1C      **Selected Band** 2-TIR1  
**DOP/Time** 01-02-17/06:15      **Station ID** BES      **Field View(deg)** 0.0  
**Res(Y,X) [Km]** (4.0,4.0)      **Res(Y,X) [uRad]** (112.0,112.0)

(50.0N,20.0W)

(50.0N,130.0E)



(-50.0S,20.0W)

(-50.0S,130.0E)

GCP Distribution overview for 3RIMG01FEB20170615L1CSGP

**Image Width:** 3062      **Image Height:** 3207      **No Of GCPs:** 13

**GCP Coverage(%)** 46.44      **(N-S)** 61.65      **(E-W)**

## Location Error(E)

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

## Location Error (Km)

	Mean	Direction	Stddev	RMS
Along	-1.313	S	1.826	2.249
Across	-3.029	W	5.312	6.115

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	3.995	0.018	0.117
Along	3.996	0.011	0.103
Across	3.996	0.027	0.099

## Internal Distortion (in Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	1.468	0.519	0.45	0.689
Across	4.320	0.207	1.39	1.407

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.00501	0.00204	0.01174

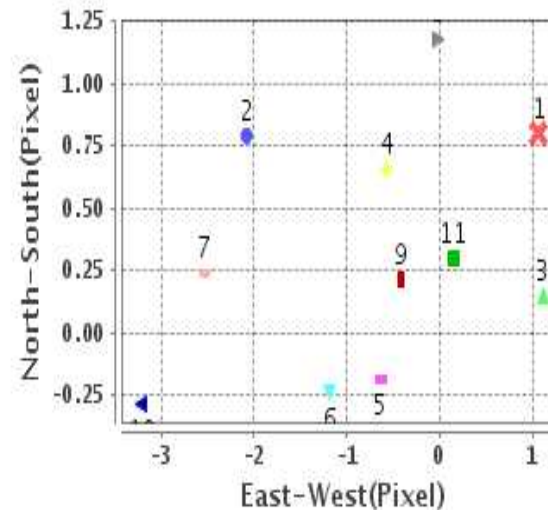
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

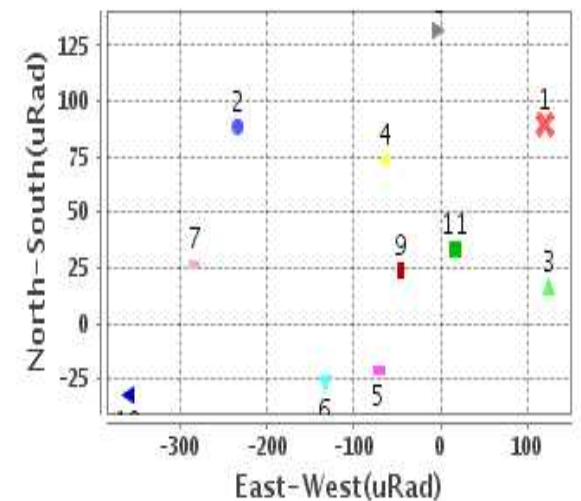
## Radial Error (Km)

Mean	5.513
Min	1.320
Max	12.879
CE90	8.903

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3DR	<b>Generation Date</b>	01-02-17
<b>Sensor</b>	IMG	<b>DQE Date</b>	03-02-2017
<b>PassType</b>	NONE	<b>Aquisition Date</b>	01-02-17
<b>Imaging Mode</b>	NONE	<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>	SECTOR	<b>Predicted Center Lat(deg)</b>	0.0
<b>DP JobId</b>	3RIMG_01FEB20	<b>Predicted Center Lon(deg)</b>	0.0
<b>ProductCode</b>	NONE		
<b>Field View(deg)</b>	0.0		

### Projection Parameters

<b>Projection</b>	MER
<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>	0.0
<b>Standard_Parallel2(deg)</b>	-999.0
<b>Projection_Origin_Lon(deg)</b>	75.0
<b>Projection_Origin_Lat(deg)</b>	0.0
<b>Projection_False_Easting(Km)</b>	0.0
<b>Projection_False_Northing(Km)</b>	0.0

### Scene Center Desc

<b>Centre Lat(deg)</b>	0.0
<b>Center Lon(deg)</b>	75.0
<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>	50.0
<b>NW_Lon(deg)</b>	20.0
<b>SW_Lat(deg)</b>	-50.0
<b>SW_Lon(deg)</b>	20.0
<b>NE_Lat(deg)</b>	50.0
<b>NE_Lon(deg)</b>	130.0
<b>SE_Lat(deg)</b>	-50.0
<b>SE_Lon(deg)</b>	130.0

### Band Wise Details

	Res_AL(Km)	Res_AX(Km)	Image Height	Image Width
<b>MIR</b>	4.0	4.0	3207	3062
<b>SWIR</b>	4.0	4.0	3207	3062
<b>TIR1</b>	4.0	4.0	3207	3062
<b>TIR2</b>	4.0	4.0	3207	3062
<b>VIS</b>	4.0	4.0	3207	3062
<b>WV</b>	4.0	4.0	3207	3062

## 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>	corner
<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>	0.0		
<b>Zone</b>	Not Applicable			<b>Standardparallel2(deg)</b>	-999.0		

\* -999.99 : Not Applicable/Not Available

## References

**JobId : 3RIMG01FEB20170615L1CSGP**

(-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

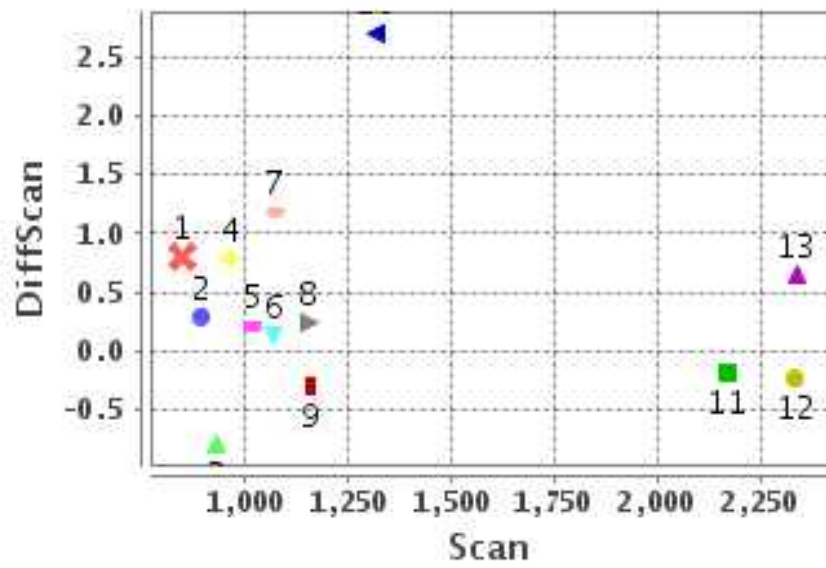
Image Width (pixels) : 3062      Image Height (pixels) : 3207      No of GCPs : 13

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	1328.2	535.5	846.8	2336.00	46.44 (N-S)
<b>GCP Pix</b>	1478.5	530.3	699.2	2587.00	61.65 (E-W)

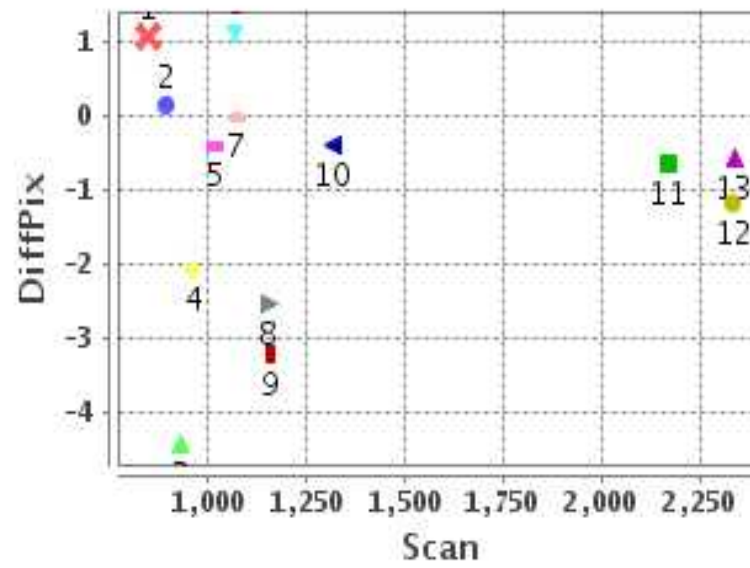
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	846.8	1011.0	0.8	1.06	3.202	S	4.255	E	Accepted
2	932.5	1077.8	-0.8	-4.42	3.148	N	17.697	W	Rejected
3	963.5	1108.5	0.8	-2.08	3.172	S	8.319	W	Accepted
4	1069.2	1051.0	0.1	1.11	0.568	S	4.453	E	Accepted
5	2336.0	699.2	0.7	-0.57	2.616	S	2.276	W	Accepted
6	2168.5	1048.0	-0.2	-0.64	0.740	N	2.558	W	Accepted
7	2333.2	2587.0	-0.2	-1.18	0.954	N	4.733	W	Accepted
8	1155.2	2065.5	0.2	-2.53	0.951	S	10.116	W	Accepted
9	1071.5	2051.0	1.2	-0.03	4.727	S	0.105	W	Accepted
10	1019.2	1865.8	0.2	-0.42	0.862	S	1.672	W	Accepted
11	1159.2	1692.8	-0.3	-3.21	1.149	N	12.828	W	Accepted
12	1316.8	1666.2	2.7	-0.41	10.829	S	1.648	W	Rejected
13	894.5	1297.2	0.3	0.14	1.187	S	0.578	E	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



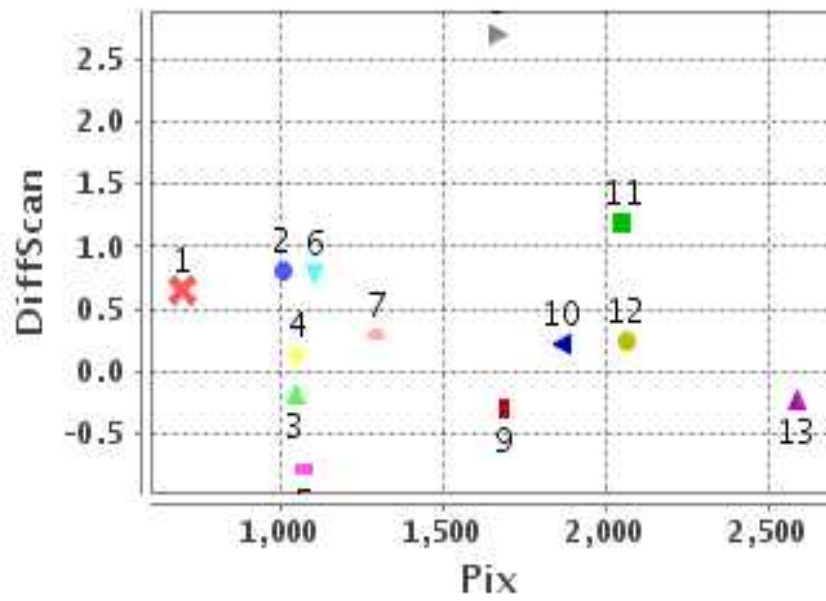
#### Number Of Points

North	3
South	8
East	3
West	8

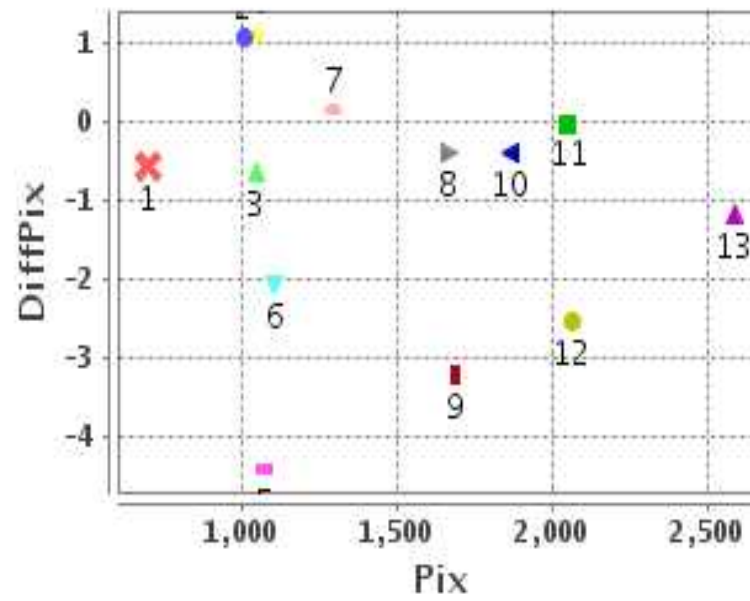
#### Radial Error ( Km )

Mean	5.513
Min	1.320
Max	12.879
CE90	8.903

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	-1.313	1.826	2.249	S	1.825	2.352
Across ( Km )	-3.029	5.312	6.115	W	4.967	6.413

## Block-Wise Geo location Error Statistics

### Location Accuracy,Scale,ID

<b>Scan Range-0-1068; Pix Range-0-1019</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-3.2	S
Across(Mean,Dir)	4.25	E
<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-0-1068; Pix Range-1019-2040</b>		
Number of GCPs	3	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-1.74	S
Across(Mean,Dir)	-3.14	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.02	0.42
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.21	0.29
Across(Mean,Stddev)	-1.94	0.28

<b>Scan Range-0-1068; Pix Range-2040-3062</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-1068-2137; Pix Range-0-1019</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-1068-2137; Pix Range-1019-2040</b>		
Number of GCPs	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	0.29	N
Across(Mean,Dir)	-4.19	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	3.97	0.66
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	0.43	0.00
Across(Mean,Stddev)	4.32	0.00

<b>Scan Range-1068-2137; Pix Range-2040-3062</b>		
Number of GCPs	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-2.84	S
Across(Mean,Dir)	-5.11	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	3.94	1.54
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	0.94	0.00
Across(Mean,Stddev)	2.50	0.00

<b>Scan Range-2137-3207; Pix Range-0-1019</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-2.61	S
Across(Mean,Dir)	-2.28	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-2137-3207; Pix Range-1068-2040</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	0.74	N
Across(Mean,Dir)	-2.56	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-2137-3207; Pix Range-2040-3062</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	0.95	N
Across(Mean,Dir)	-4.73	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

\*-999 : no gcp available

\* -999.99 : values are not computed