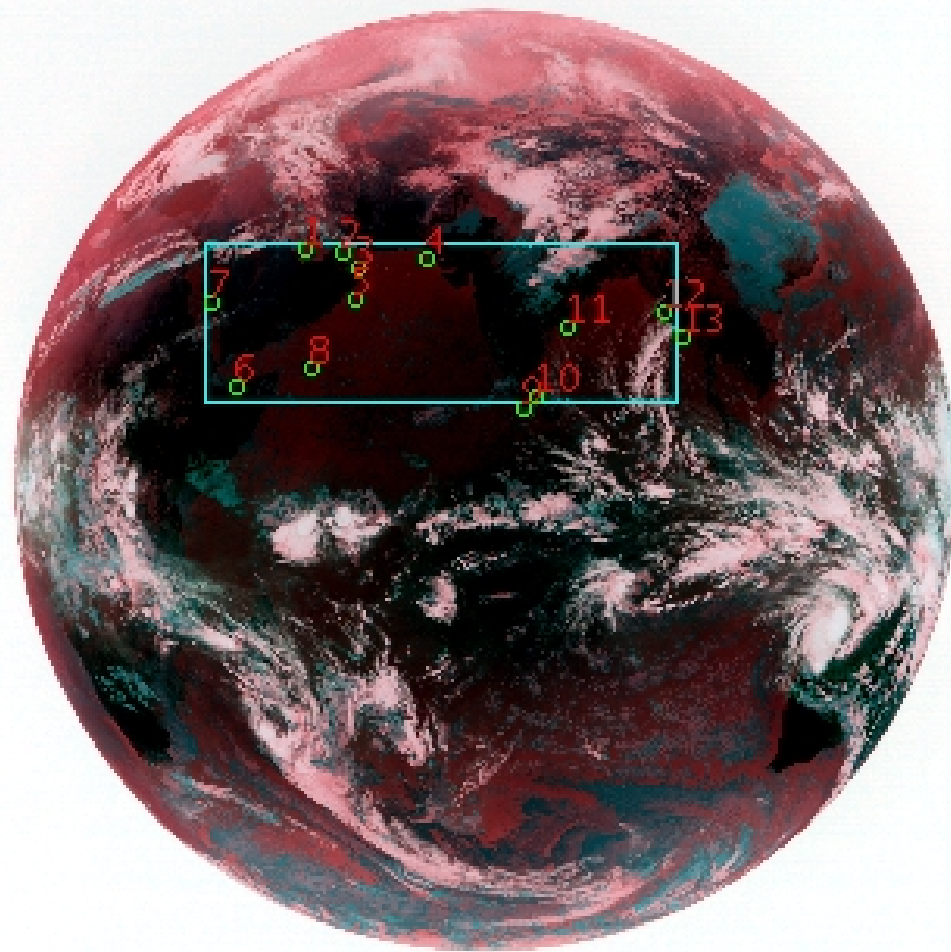


# DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG\_25JAN2019\_0615

**Satellite** INSAT-3DR      **No Of Bands** 6      **Product Type** STANDARD  
**Sensor** IMG      **LvlOfProcess** L1B      **Selected Band** 2-TIR1  
**DOP/Time** 25-01-19/06:15      **Station ID** BES      **Field View(deg)** 18.006  
**Res(Y,X) [Km]** (4.0,4.0)      **Res(Y,X) [uRad]** (112.0,112.0)

(80.993N,-7.167W)

(80.993N,155.214E)



(-80.946S,-7.167W)

(-80.946S,155.214E)

GCP Distribution overview for 3RIMG25JAN20190615L1BDQE

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

**GCP Coverage(%)**      16.14      **(N-S)** 48.30      **(E-W)**

## Location Error(E)

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

## Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	-4.285	S	0.738	4.348
Across	9.491	E	2.264	9.757

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.334	0.269	8.346
Along	4.376	0.291	9.412
Across	4.368	0.310	9.209

## Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	2.318	-0.545	0.68	0.871
Across	3.232	1.464	0.90	1.719

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
0.05442	0.02801	-0.02857

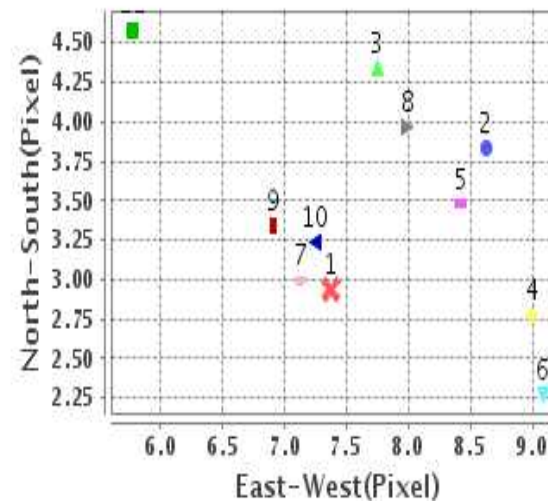
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

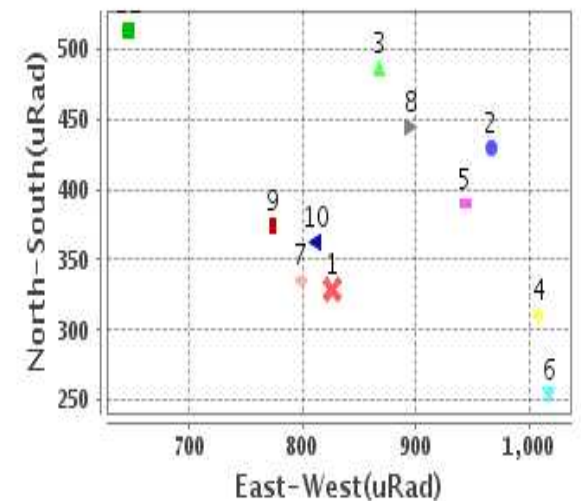
## Radial Error (in IR Pixels)

<b>Mean</b>	10.497
<b>Min</b>	7.966
<b>Max</b>	14.908
<b>CE90</b>	11.939

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3DR	<b>Generation Date</b>	25-01-19
<b>Sensor</b>	IMG	<b>DQE Date</b>	31-01-2019
<b>PassType</b>	NONE	<b>Aquisition Date</b>	25-01-19
<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>	-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>	74.0
<b>LvlOfProcessing</b>	STANDARD	<b>Predicted Center Lat(deg)</b>	-999.99
<b>DP JobId</b>	3RIMG_25JAN20	<b>Predicted Center Lon(deg)</b>	-999.99
<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>	0.024
<b>Center Lon(deg)</b>	74.024
<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>	80.993
<b>NW_Lon(deg)</b>	-7.167
<b>SW_Lat(deg)</b>	-80.946
<b>SW_Lon(deg)</b>	-7.167
<b>NE_Lat(deg)</b>	80.993
<b>NE_Lon(deg)</b>	155.214
<b>SE_Lat(deg)</b>	-80.946
<b>SE_Lon(deg)</b>	155.214

### 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 : 3RIMG25JAN20190615L1BDQE**

(-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

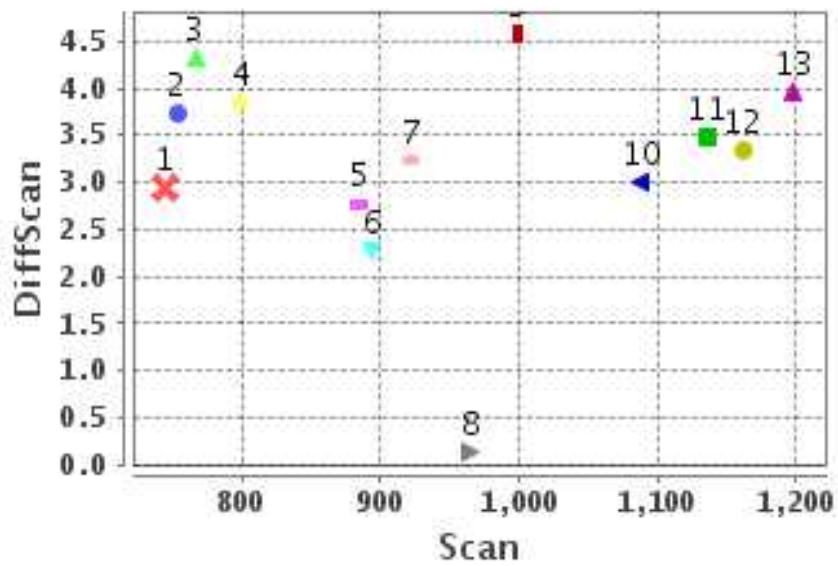
Image Width (pixels) : 2805      Image Height (pixels) : 2816      No of GCPs : 13

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	947.0	154.1	744.0	1198.50	16.14 (N-S)
<b>GCP Pix</b>	1213.8	430.3	599.5	1954.25	48.30 (E-W)

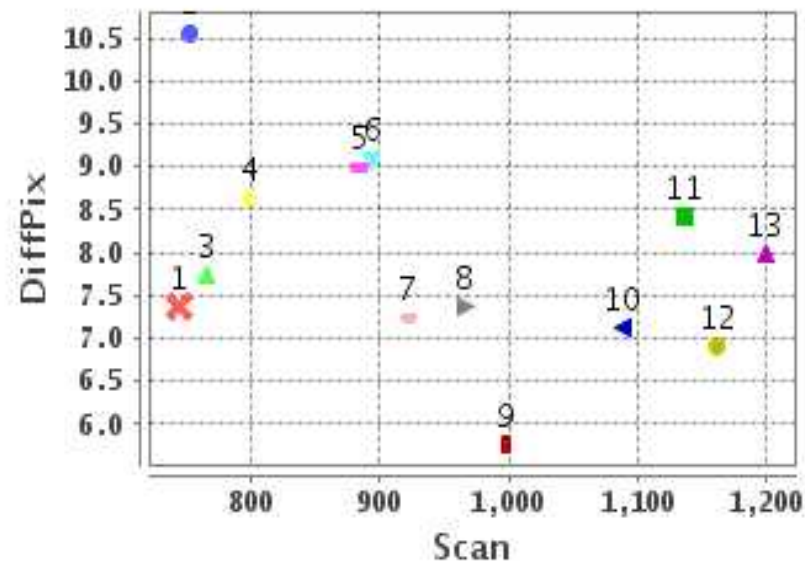
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	744.0	870.2	2.9	7.37	16.782	S	40.716	E	Accepted
2	753.0	977.2	3.7	10.57	21.015	S	53.667	E	Rejected
3	798.5	1023.0	3.8	8.63	21.223	S	42.781	E	Accepted
4	766.2	1222.2	4.3	7.75	22.590	S	36.350	E	Accepted
5	884.5	1013.2	2.8	9.00	14.748	S	42.202	E	Accepted
6	1136.0	671.8	3.5	8.42	15.426	S	46.335	E	Accepted
7	894.2	599.5	2.3	9.09	13.960	S	57.974	E	Accepted
8	1088.2	884.8	3.0	7.13	14.067	S	35.446	E	Accepted
9	1198.5	1500.2	4.0	8.00	17.772	S	31.263	E	Accepted
10	1161.8	1538.2	3.3	6.90	16.670	S	27.277	E	Accepted
11	965.2	1622.5	0.1	7.37	0.605	S	32.464	E	Rejected
12	922.2	1902.5	3.2	7.25	14.482	S	33.131	E	Accepted
13	998.2	1954.2	4.6	5.77	20.816	S	24.123	E	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



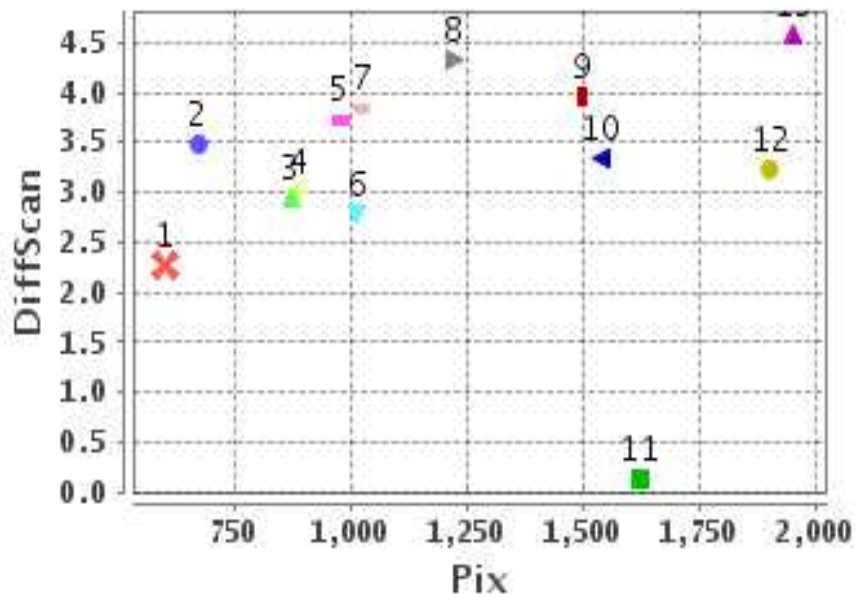
#### Number Of Points

North	0
South	11
East	11
West	0

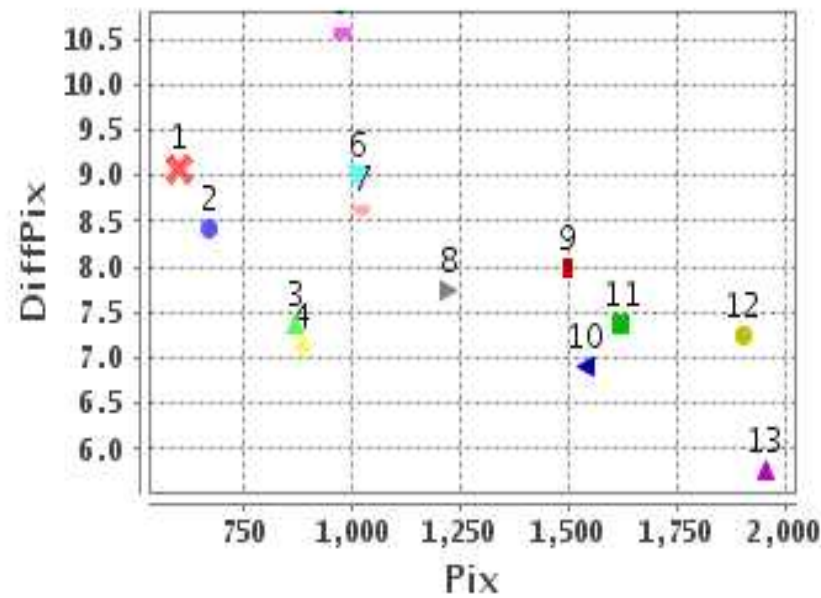
#### Radial Error ( Km )

Mean	10.497
Min	7.966
Max	14.908
CE90	11.939

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	-4.285	0.738	4.348	S	4.196	4.425
Across ( Km )	9.491	2.264	9.757	E	9.150	10.054

## 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)	-15.37	S
Across(Mean,Dir)	49.34	E
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.50	12.40
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	0.67	0.00
Across(Mean,Stddev)	1.71	0.00

<b>Scan Range-0-937; Pix Range-934-1869</b>		
Number of GCPs	3	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-19.52	S
Across(Mean,Dir)	40.44	E
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.37	9.25
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	1.03	0.53
Across(Mean,Stddev)	0.81	0.44

<b>Scan Range-0-937; Pix Range-1869-2805</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-14.49	S
Across(Mean,Dir)	33.14	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-937-1876; Pix Range-0-934</b>		
Number of GCPs	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-14.745	S
Across(Mean,Dir)	40.90	E
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.40	9.89
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.48	0.00
Across(Mean,Stddev)	1.30	0.00

<b>Scan Range-937-1876; Pix Range-934-1869</b>		
Number of GCPs	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-17.221	S
Across(Mean,Dir)	29.27	E
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	3.92	2.05
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.63	0.00
Across(Mean,Stddev)	1.10	0.00

<b>Scan Range-937-1876; Pix Range-1869-2805</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-20.81	S
Across(Mean,Dir)	24.12	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-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