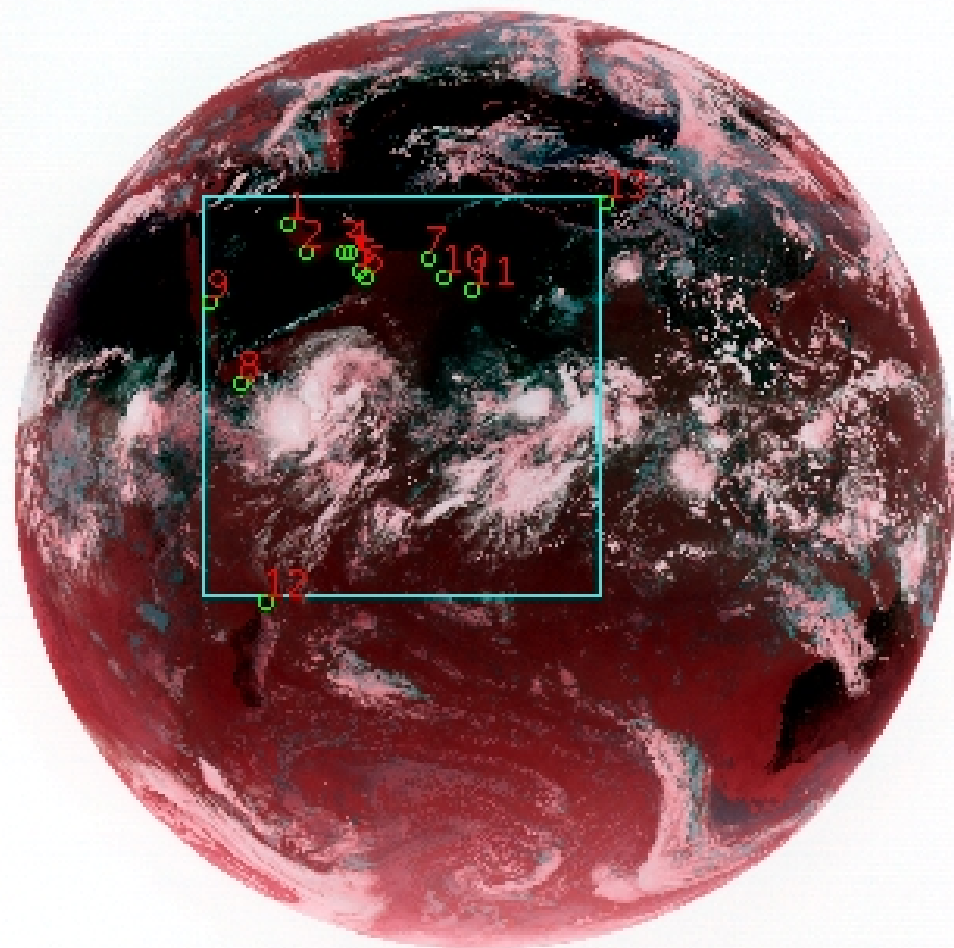


# DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG\_21MAY2018\_0615

**Satellite** INSAT-3DR    **No Of Bands** 6    **Product Type** STANDARD  
**Sensor** IMG    **LvlOfProcess** L1B    **Selected Band** 2-TIR1  
**DOP/Time** 21-05-18/06:15    **Station ID** BES    **Field View(deg)** 18.006  
**Res(Y,X) [Km]** (4.0,4.0)    **Res(Y,X) [uRad]** (112.0,112.0)

(80.974N,-7.12W)

(80.974N,155.303E)



(-80.907S,-7.12W)

(-80.907S,155.303E)

GCP Distribution overview for 3RIMG21MAY20180615L1BDQE

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

**GCP Coverage(%)** 40.80    **(N-S)** 40.70    **(E-W)**

## Location Error(E)

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

## Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	11.699	N	2.423	11.947
Across	-29.929	W	2.351	30.021

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.573	0.398	14.326
Along	4.979	1.201	24.473
Across	4.562	0.777	14.043

## Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	4.138	3.717	1.02	3.855
Across	7.090	2.192	1.85	2.868

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.18420	-0.06715	-0.16027

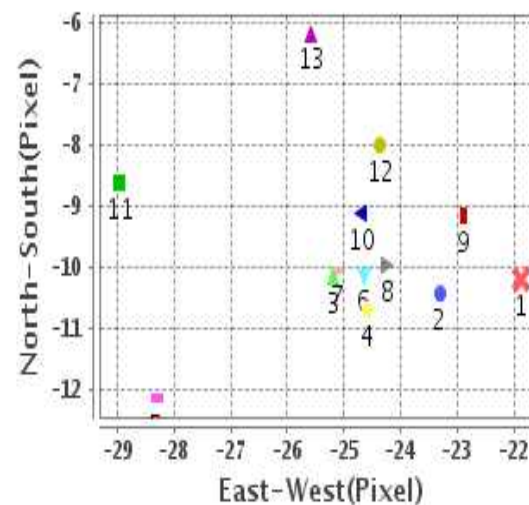
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

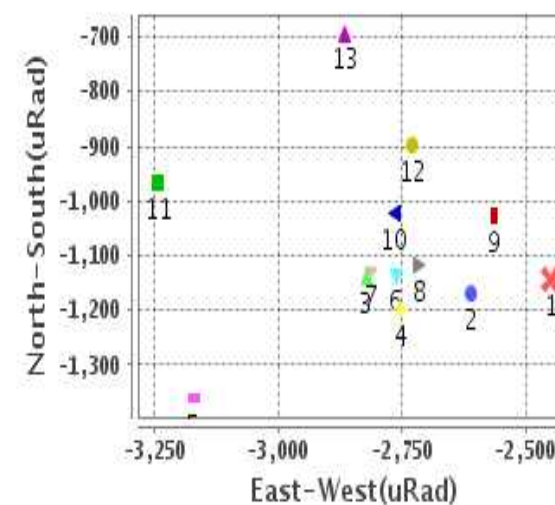
## Radial Error (in IR Pixels)

<b>Mean</b>	32.196
<b>Min</b>	27.440
<b>Max</b>	36.157
<b>CE90</b>	35.613

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3DR	<b>Generation Date</b>	21-05-18
<b>Sensor</b>	IMG	<b>DQE Date</b>	29-05-2018
<b>PassType</b>	NONE	<b>Aquisition Date</b>	21-05-18
<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_21MAY2	<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>	0.033
<b>Center Lon(deg)</b>	74.091
<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>	80.974
<b>NW_Lon(deg)</b>	-7.12
<b>SW_Lat(deg)</b>	-80.907
<b>SW_Lon(deg)</b>	-7.12
<b>NE_Lat(deg)</b>	80.974
<b>NE_Lon(deg)</b>	155.303
<b>SE_Lat(deg)</b>	-80.907
<b>SE_Lon(deg)</b>	155.303

### 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 : 3RIMG21MAY20180615L1BDQE**

(-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

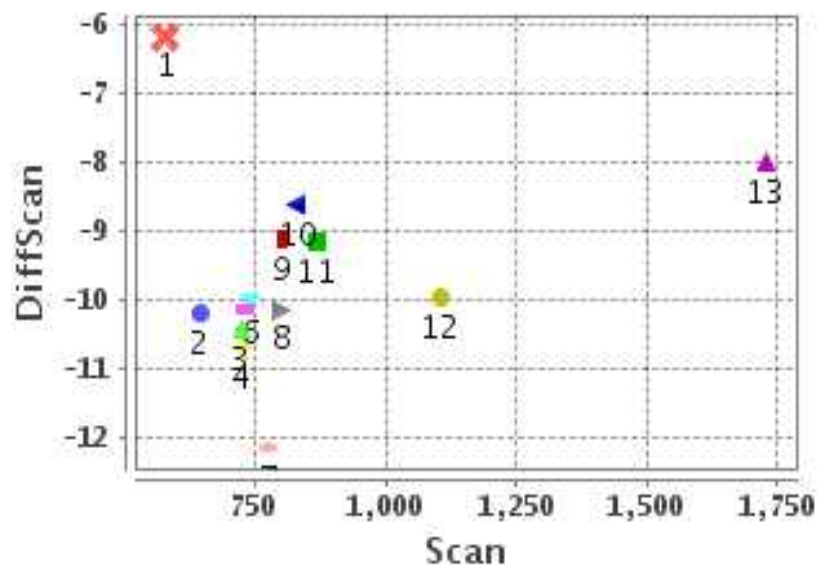
Image Width (pixels) : 2805      Image Height (pixels) : 2816      No of GCPs : 13

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	849.9	280.2	579.2	1728.25	40.80 (N-S)
<b>GCP Pix</b>	1032.1	299.1	602.2	1744.00	40.70 (E-W)

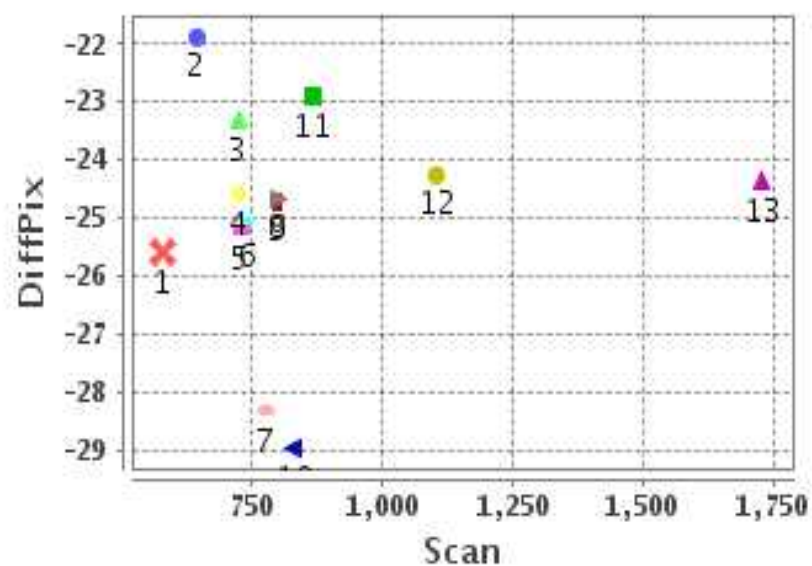
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	644.5	819.5	-10.2	-21.87	59.387	N	129.481	W	Accepted
2	724.0	876.2	-10.5	-23.30	56.646	N	123.724	W	Accepted
3	728.2	983.0	-10.2	-25.19	52.884	N	125.451	W	Accepted
4	724.2	1005.8	-10.7	-24.58	55.892	N	118.068	W	Accepted
5	776.2	1030.8	-12.2	-28.31	59.718	N	131.723	W	Accepted
6	800.2	1052.5	-10.2	-24.65	48.758	N	111.879	W	Accepted
7	742.2	1224.8	-10.1	-25.11	48.527	N	109.536	W	Accepted
8	1104.0	686.2	-10.0	-24.24	41.907	N	119.219	W	Accepted
9	866.5	602.2	-9.2	-22.88	44.675	N	136.451	W	Accepted
10	800.5	1277.2	-9.1	-24.70	40.900	N	105.205	W	Accepted
11	830.5	1357.5	-8.6	-28.96	38.088	N	120.062	W	Accepted
12	1728.2	757.5	-8.0	-24.37	30.288	N	105.500	W	Accepted
13	579.2	1744.0	-6.2	-25.58	30.657	N	119.993	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



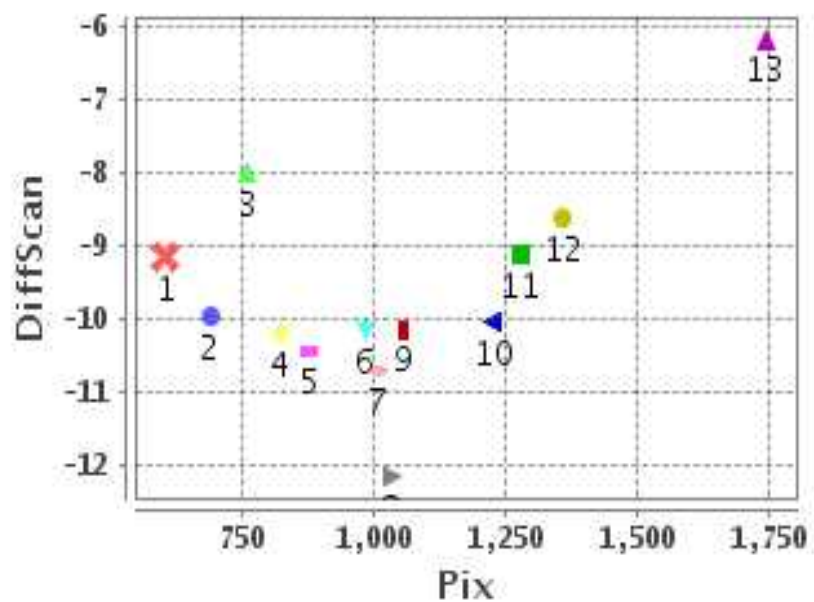
#### Number Of Points

North	13
South	0
East	0
West	13

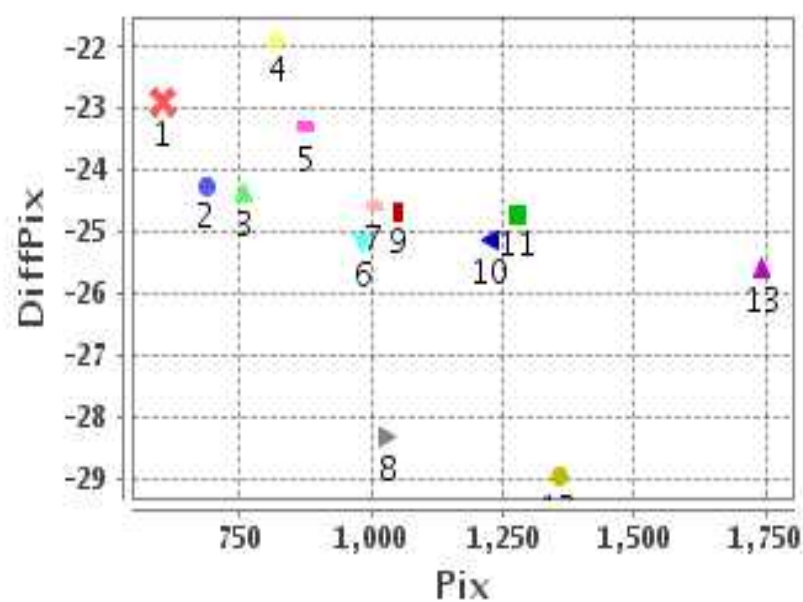
#### Radial Error ( Km )

Mean	32.196
Min	27.440
Max	36.157
CE90	35.613

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	11.699	2.423	11.947	N	11.664	12.241
Across ( Km )	-29.929	2.351	30.021	W	29.654	30.310

## Block-Wise Geo location Error Statistics

### Location Accuracy,Scale,ID

<b>Scan Range-0-937; Pix Range-0-934</b>		
Number of GCPs	3	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	53.57	N
Across(Mean,Dir)	-129.88	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.99	24.72
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.40	0.65
Across(Mean,Stddev)	-0.29	0.72

<b>Scan Range-0-937; Pix Range-934-1869</b>		
Number of GCPs	8	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	46.9288	N
Across(Mean,Dir)	-117.74	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.63	15.69
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	3.96	1.05
Across(Mean,Stddev)	0.80	1.72

<b>Scan Range-0-937; 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-937-1876; Pix Range-0-934</b>		
Number of GCPs	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	36.09	N
Across(Mean,Dir)	-112.36	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	3.98	0.58
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-1.95	0.00
Across(Mean,Stddev)	0.12	0.00

<b>Scan Range-937-1876; Pix Range-934-1869</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-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	-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