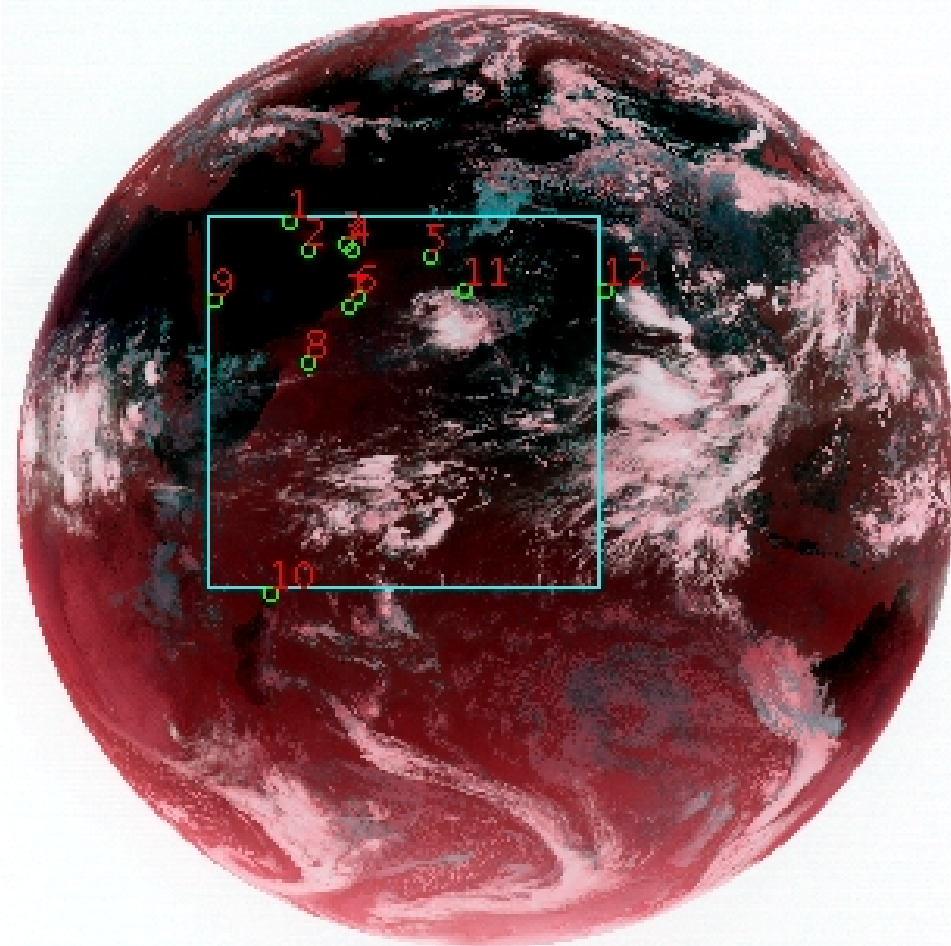


# DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG\_18JUN2018\_0615

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

(80.928N,-7.22W)

(80.928N,155.187E)



(-81.093S,-7.22W)

(-81.093S,155.187E)

GCP Distribution overview for 3RIMG18JUN20180615L1BDQE

**Image Width:** 2805    **Image Height:** 2816    **No Of GCPs:** 12

**GCP Coverage(%)** 38.09    **(N-S)** 40.30    **(E-W)**

## Location Error(E)

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

## Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	10.898	N	1.842	11.052
Across	-27.577	W	3.048	27.745

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.559	0.447	13.972
Along	7.805	21.150	95.120
Across	4.727	2.678	18.173

## Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	2.285	-0.364	0.74	0.828
Across	4.387	0.929	1.13	1.464

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.15301	-0.06680	-0.05508

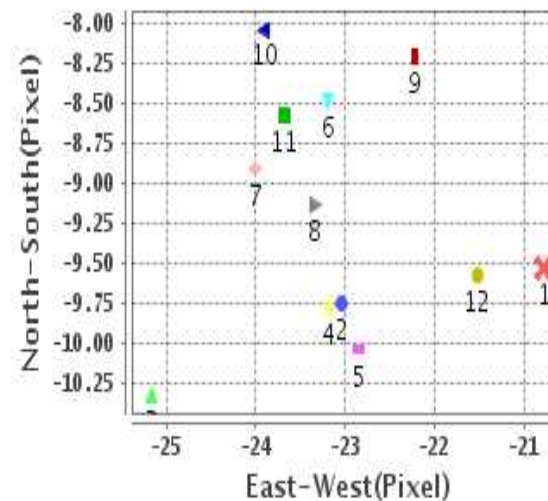
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

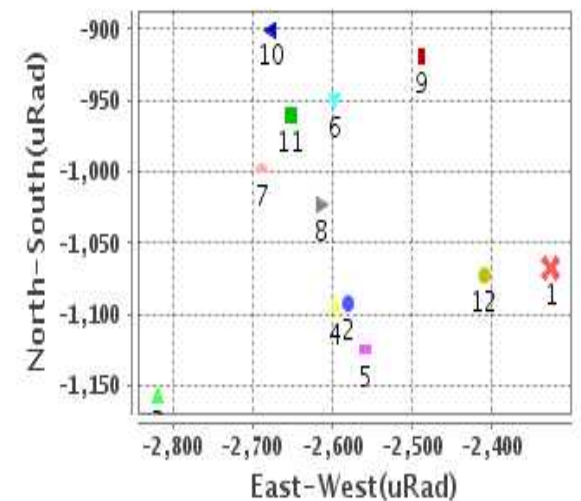
## Radial Error (in IR Pixels)

<b>Mean</b>	29.688
<b>Min</b>	23.833
<b>Max</b>	34.913
<b>CE90</b>	33.329

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3DR	<b>Generation Date</b>	18-06-18
<b>Sensor</b>	IMG	<b>DQE Date</b>	22-06-2018
<b>PassType</b>	NONE	<b>Aquisition Date</b>	18-06-18
<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_18JUN20	<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>	-0.083
<b>Center Lon(deg)</b>	73.984
<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>	80.928
<b>NW_Lon(deg)</b>	-7.22
<b>SW_Lat(deg)</b>	-81.093
<b>SW_Lon(deg)</b>	-7.22
<b>NE_Lat(deg)</b>	80.928
<b>NE_Lon(deg)</b>	155.187
<b>SE_Lat(deg)</b>	-81.093
<b>SE_Lon(deg)</b>	155.187

### 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 : 3RIMG18JUN20180615L1BDQE**

(-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

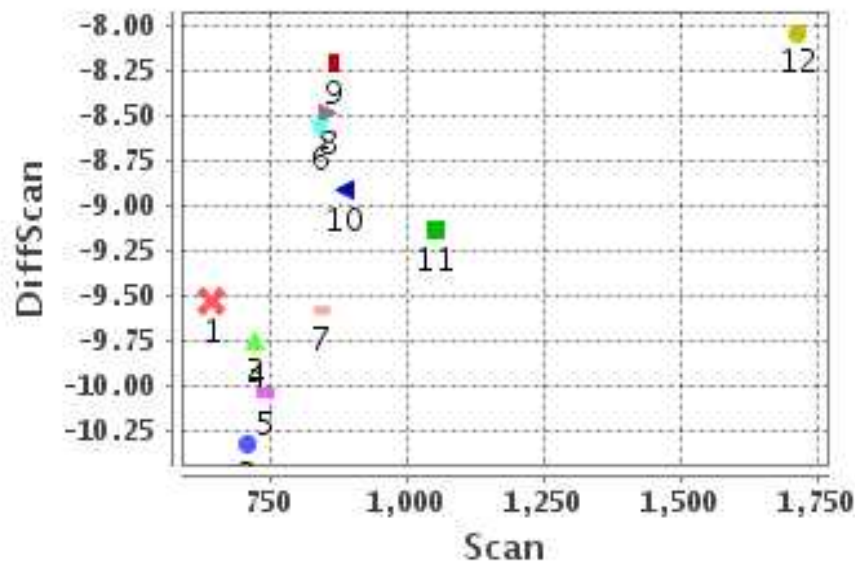
Image Width (pixels) : 2805      Image Height (pixels) : 2816      No of GCPs : 12

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	882.9	271.5	642.2	1715.00	38.09 (N-S)
<b>GCP Pix</b>	1019.5	283.4	603.0	1733.50	40.30 (E-W)

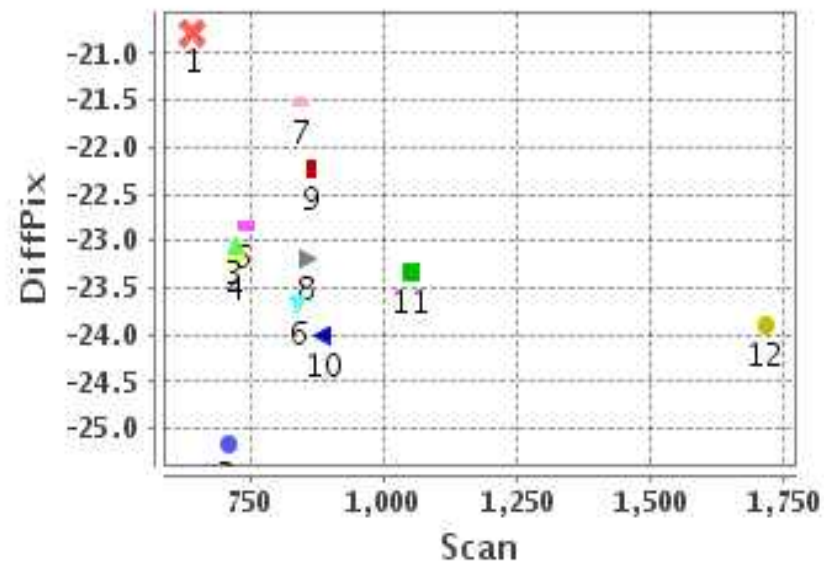
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	642.2	820.5	-9.5	-20.78	55.610	N	121.717	W	Accepted
2	722.2	877.5	-9.8	-23.04	51.464	N	120.530	W	Accepted
3	709.2	988.8	-10.3	-25.16	54.074	N	121.858	W	Accepted
4	722.2	1006.0	-9.8	-23.18	49.789	N	114.652	W	Accepted
5	741.5	1224.0	-10.0	-22.85	47.121	N	101.860	W	Accepted
6	856.2	1017.0	-8.5	-23.19	38.216	N	105.369	W	Accepted
7	886.5	995.0	-8.9	-24.00	38.723	N	109.385	W	Accepted
8	1050.5	875.0	-9.1	-23.34	37.368	N	105.545	W	Accepted
9	864.2	603.0	-8.2	-22.22	41.062	N	133.478	W	Accepted
10	1715.0	768.2	-8.0	-23.90	31.545	N	104.804	W	Accepted
11	840.2	1325.2	-8.6	-23.68	38.778	N	97.670	W	Accepted
12	844.5	1733.5	-9.6	-21.52	39.336	N	86.840	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



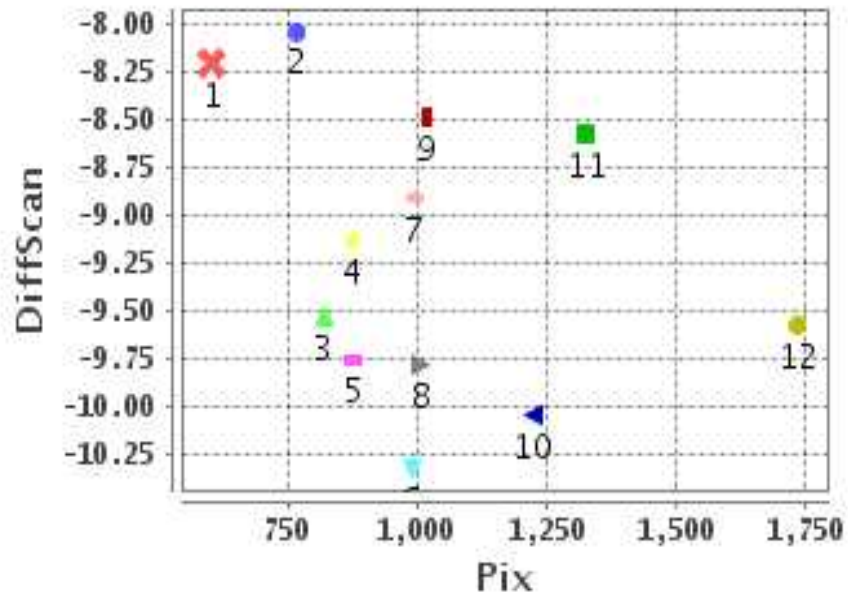
#### Number Of Points

North	12
South	0
East	0
West	12

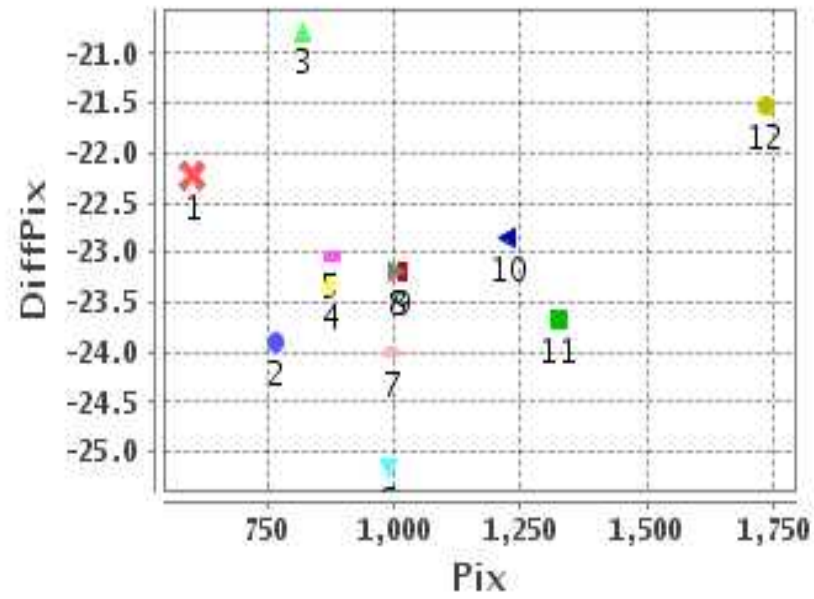
#### Radial Error ( Km )

Mean	29.688
Min	23.833
Max	34.913
CE90	33.329

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	10.898	1.842	11.052	N	10.756	11.296
Across ( Km )	-27.577	3.048	27.745	W	27.176	28.230

## 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)	49.3767	N
Across(Mean,Dir)	-125.24	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.98	24.53
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.55	0.78
Across(Mean,Stddev)	-0.31	1.13

<b>Scan Range-0-937; Pix Range-934-1869</b>		
Number of GCPs	7	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	43.72	N
Across(Mean,Dir)	-105.37	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.53	13.28
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-1.09	0.60
Across(Mean,Stddev)	-2.09	0.79

<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)	34.455	N
Across(Mean,Dir)	-105.18	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	3.97	0.83
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-1.10	0.00
Across(Mean,Stddev)	-0.56	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