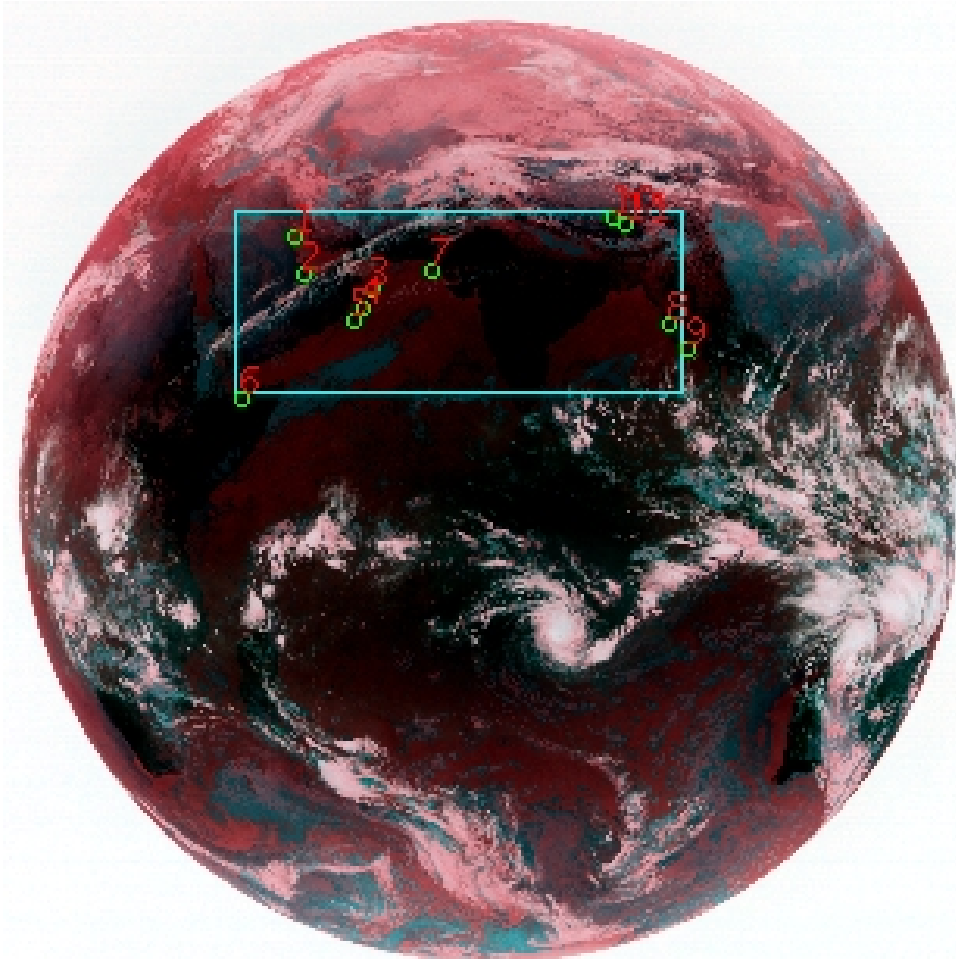


# DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD(FULL DISK) Product 3RIMG\_29JAN2018\_0615

**Satellite** INSAT-3DR    **No Of Bands** 6    **Product Type** STANDARD  
**Sensor** IMG    **LvlOfProcess** L1B    **Selected Band** 2-TIR1  
**DOP/Time** 29-01-18/06:15    **Station ID** BES    **Field View(deg)** 17.99  
**Res(Y,X) [Km]** (4.0,4.0)    **Res(Y,X) [uRad]** (112.0,112.0)

(80.808N,-7.193W)

(80.808N,155.137E)



(-80.874S,-7.193W)

(-80.874S,155.137E)

GCP Distribution overview for 3RIMG29JAN20180615L1BDQE

**Image Width:** 2805    **Image Height:** 2816    **No Of GCPs:** 11

**GCP Coverage(%)**    18.54    **(N-S)** 45.73    **(E-W)**

## Location Error(E)

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

## Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	-5.224	S	0.839	5.291
Across	8.696	E	1.562	8.835

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.516	0.360	12.907
Along	6.336	9.428	58.412
Across	4.773	1.064	19.329

## Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	1.751	0.169	0.54	0.568
Across	2.503	1.479	0.71	1.639

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
0.05363	0.03346	-0.01640

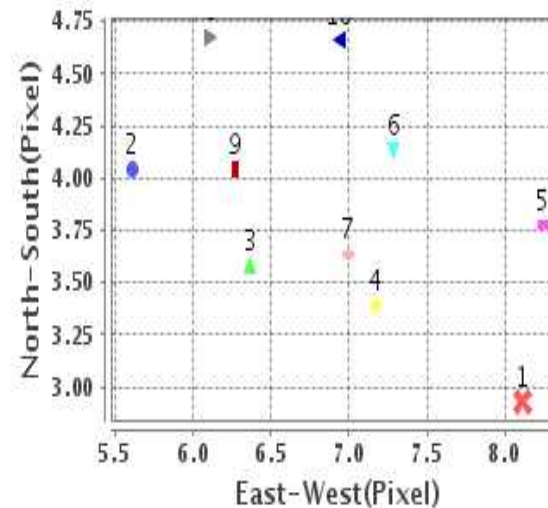
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

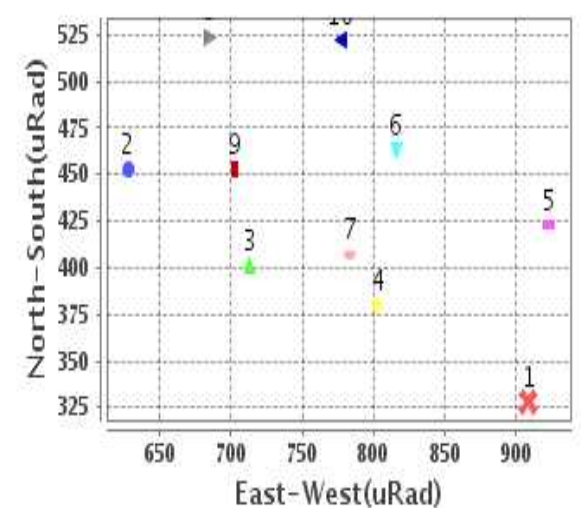
## Radial Error (in IR Pixels)

<b>Mean</b>	10.211
<b>Min</b>	8.763
<b>Max</b>	13.566
<b>CE90</b>	11.255

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3DR	<b>Generation Date</b>	29-01-18
<b>Sensor</b>	IMG	<b>DQE Date</b>	07-05-2018
<b>PassType</b>	NONE	<b>Aquisition Date</b>	29-01-18
<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(FULL)	<b>Predicted Center Lat(deg)</b>	-999.99
<b>DP JobId</b>	3RIMG_29JAN20	<b>Predicted Center Lon(deg)</b>	-999.99
<b>ProductCode</b>	NONE		
<b>Field View(deg)</b>	17.99		

### 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>	73.972
<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>	80.808
<b>NW_Lon(deg)</b>	-7.193
<b>SW_Lat(deg)</b>	-80.874
<b>SW_Lon(deg)</b>	-7.193
<b>NE_Lat(deg)</b>	80.808
<b>NE_Lon(deg)</b>	155.137
<b>SE_Lat(deg)</b>	-80.874
<b>SE_Lon(deg)</b>	155.137

### 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 : 3RIMG29JAN20180615L1BDQE**

(-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

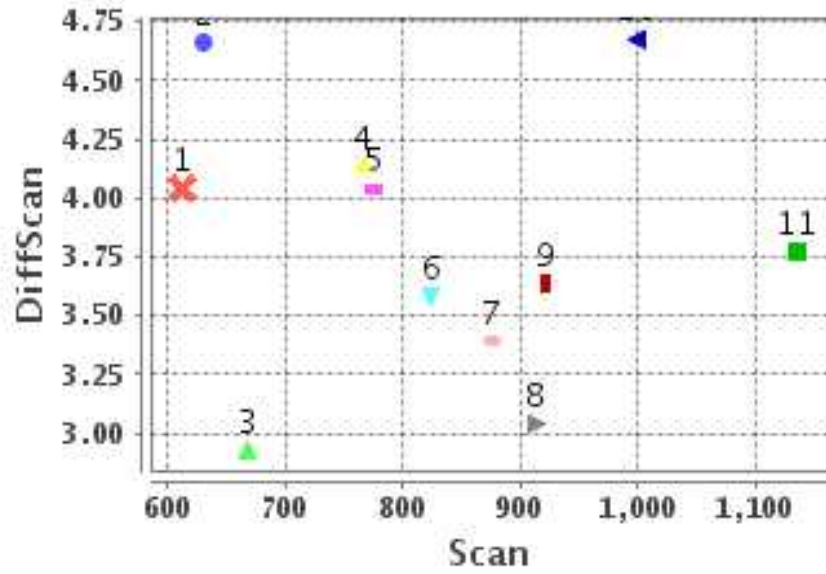
Image Width (pixels) : 2805      Image Height (pixels) : 2816      No of GCPs : 11

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	829.2	153.3	612.2	1134.25	18.54 (N-S)
<b>GCP Pix</b>	1273.4	454.6	671.0	1953.75	45.73 (E-W)

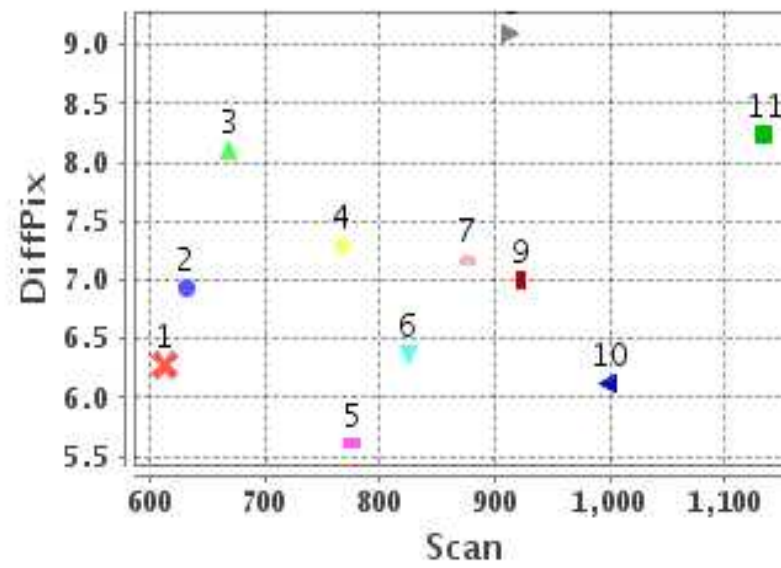
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	668.5	819.0	2.9	8.11	21.726	S	49.725	E	Accepted
2	775.8	854.5	4.0	5.61	24.375	S	35.492	E	Accepted
3	824.5	1050.5	3.6	6.37	20.144	S	32.410	E	Accepted
4	875.2	1023.5	3.4	7.17	17.606	S	35.494	E	Accepted
5	913.5	990.0	3.0	9.11	15.860	S	41.203	E	Rejected
6	1134.2	671.0	3.8	8.24	17.131	S	41.632	E	Accepted
7	766.0	1222.2	4.1	7.28	20.496	S	34.220	E	Accepted
8	922.0	1902.5	3.6	6.99	15.134	S	31.845	E	Accepted
9	998.5	1953.8	4.7	6.11	21.687	S	27.539	E	Accepted
10	612.2	1742.5	4.0	6.27	24.557	S	28.957	E	Accepted
11	631.0	1778.2	4.7	6.94	26.090	S	30.528	E	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



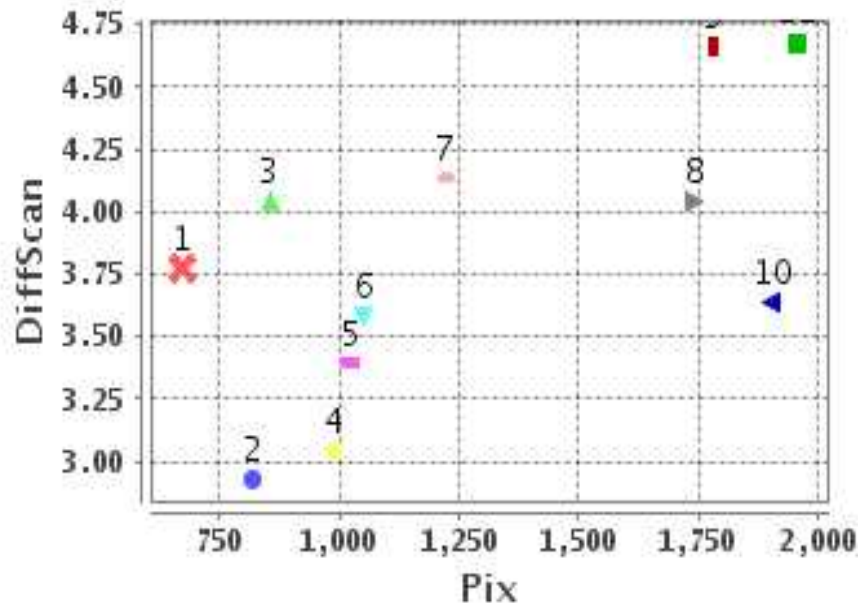
#### Number Of Points

North	0
South	10
East	10
West	0

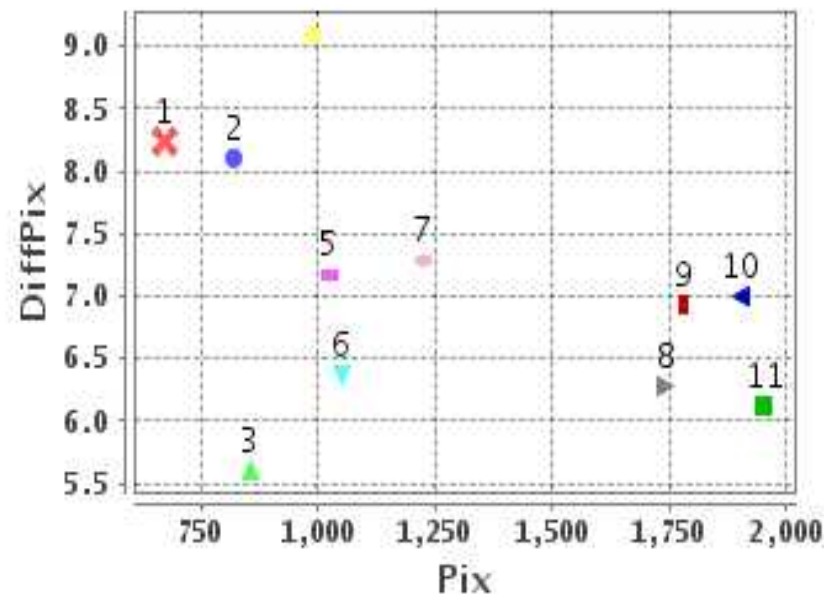
#### Radial Error ( Km )

Mean	10.211
Min	8.763
Max	13.566
CE90	11.255

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	-5.224	0.839	5.291	S	5.136	5.432
Across ( Km )	8.696	1.562	8.835	E	8.340	9.026

## 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)	-23.05	S
Across(Mean,Dir)	42.60	E
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	5.77	44.32
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-1.11	0.00
Across(Mean,Stddev)	2.50	0.00

<b>Scan Range-0-937; Pix Range-934-1869</b>		
Number of GCPs	5	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-21.782	S
Across(Mean,Dir)	32.32	E
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.49	12.37
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	0.10	0.50
Across(Mean,Stddev)	0.46	0.41

<b>Scan Range-0-937; Pix Range-1869-2805</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-15.13	S
Across(Mean,Dir)	31.84	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	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-17.13	S
Across(Mean,Dir)	41.63	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-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	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-21.68	S
Across(Mean,Dir)	27.54	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