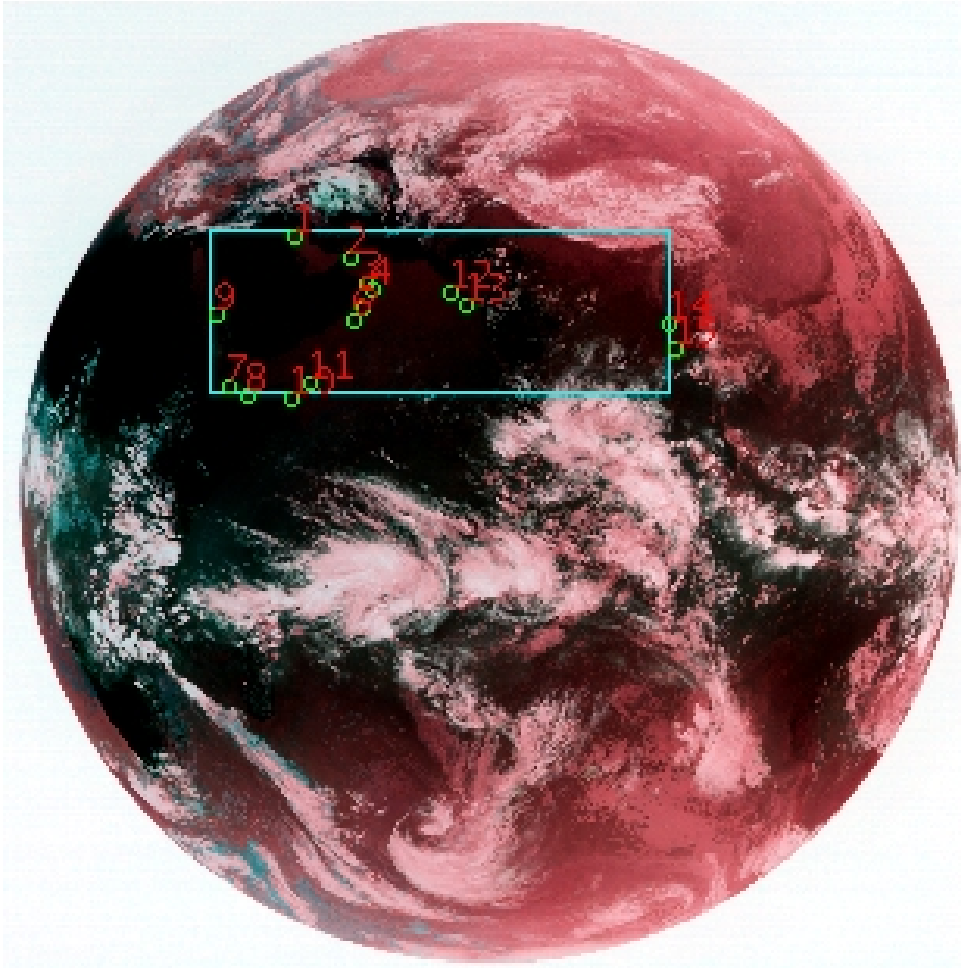


# DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD(FULL DISK) Product 3RIMG\_09MAR2018\_1215

**Satellite** INSAT-3DR    **No Of Bands** 6    **Product Type** STANDARD  
**Sensor** IMG    **LvlOfProcess** L1B    **Selected Band** 2-TIR1  
**DOP/Time** 09-03-18/24:15    **Station ID** BES    **Field View(deg)** 18.006  
**Res(Y,X) [Km]** (4.0,4.0)    **Res(Y,X) [uRad]** (112.0,112.0)

(80.857N,-7.159W)

(80.857N,155.182E)



(-80.823S,-7.159W)

(-80.823S,155.182E)

GCP Distribution overview for 3RIMG09MAR20181215L1BDQE

**Image Width:** 2805    **Image Height:** 2816    **No Of GCPs:** 15

**GCP Coverage(%)**    16.57    **(N-S)** 47.13    **(E-W)**

## Location Error(E)

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

## Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	-6.822	S	1.156	6.919
Across	-0.853	W	1.945	2.124

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.404	0.377	10.103
Along	4.997	3.340	24.918
Across	4.768	4.574	19.192

## Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	4.256	-0.022	1.08	1.079
Across	4.961	0.917	1.34	1.627

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.01211	0.04612	-0.07245

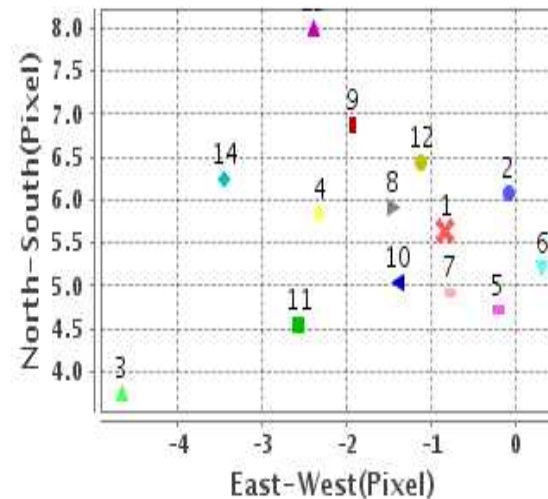
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

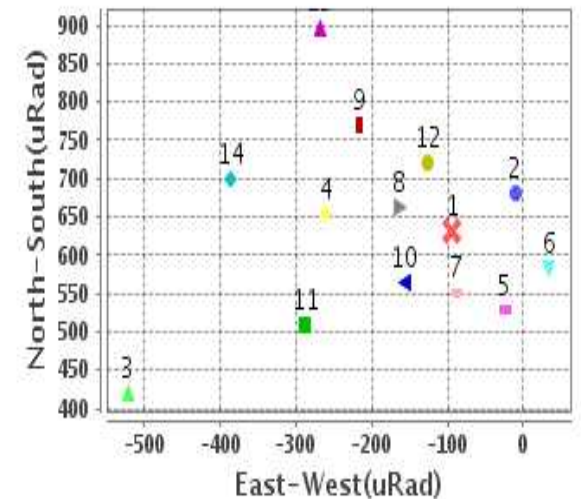
## Radial Error (in IR Pixels)

<b>Mean</b>	7.138
<b>Min</b>	5.478
<b>Max</b>	9.470
<b>CE90</b>	8.527

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3DR	<b>Generation Date</b>	09-03-18
<b>Sensor</b>	IMG	<b>DQE Date</b>	15-03-2018
<b>PassType</b>	NONE	<b>Aquisition Date</b>	09-03-18
<b>Imaging Mode</b>	FULL_FRAME	<b>Aquisition Time(GMT)</b>	24:15
<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_09MAR2	<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>	0.017
<b>Center Lon(deg)</b>	74.011
<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>	80.857
<b>NW_Lon(deg)</b>	-7.159
<b>SW_Lat(deg)</b>	-80.823
<b>SW_Lon(deg)</b>	-7.159
<b>NE_Lat(deg)</b>	80.857
<b>NE_Lon(deg)</b>	155.182
<b>SE_Lat(deg)</b>	-80.823
<b>SE_Lon(deg)</b>	155.182

### 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 : 3RIMG09MAR20181215L1BDQE**

(-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 : 15

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	919.8	139.2	671.2	1138.00	16.57 (N-S)
<b>GCP Pix</b>	1061.2	388.7	599.5	1921.50	47.13 (E-W)

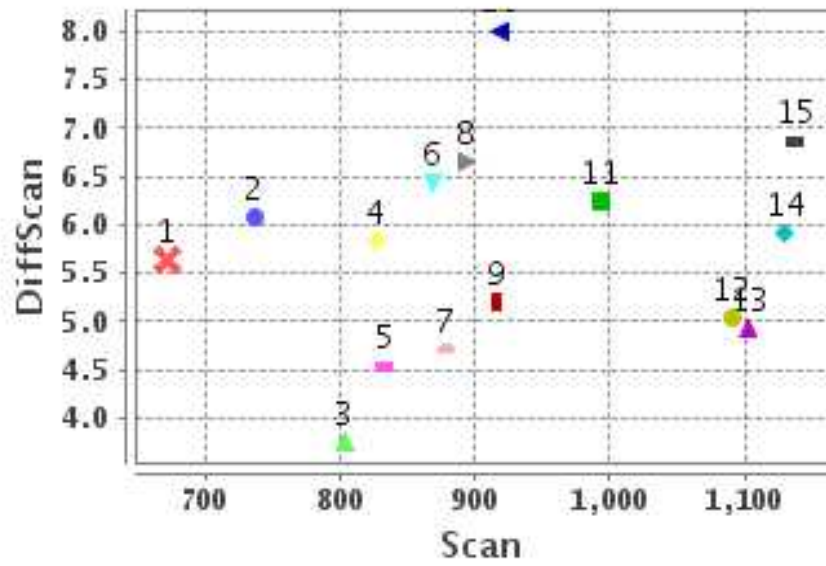
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	671.2	819.5	5.6	-0.84	33.062	S	8.107	E	Accepted
2	736.5	983.2	6.1	-0.09	33.836	S	6.147	E	Accepted
3	802.8	1028.0	3.8	-4.66	20.835	S	17.784	W	Accepted
4	826.2	1050.5	5.8	-2.33	28.852	S	4.017	W	Accepted
5	878.2	1022.2	4.7	-0.22	23.028	S	2.262	E	Accepted
6	915.8	990.2	5.2	0.30	26.412	S	4.998	E	Accepted
7	1103.2	634.2	4.9	-0.79	21.896	S	0.865	E	Accepted
8	1130.2	684.5	5.9	-1.46	24.868	S	1.863	W	Accepted
9	893.2	599.5	6.6	0.85	32.277	S	16.445	E	Rejected
10	1138.0	813.5	6.9	-1.93	27.439	S	3.479	W	Accepted
11	1090.5	871.5	5.0	-1.40	22.914	S	2.076	W	Accepted
12	832.5	1276.2	4.5	-2.57	23.062	S	9.324	W	Accepted
13	868.2	1322.2	6.4	-1.13	30.239	S	2.676	W	Accepted

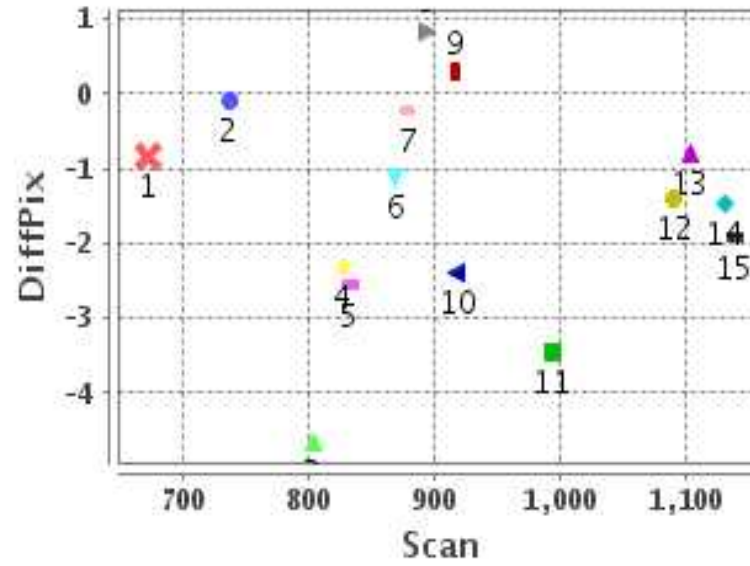
**Identified Control Point details : ( Differences are Reference - Product )**

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
14	918.0	1900.8	8.0	-2.40	35.872	S	12.170	W	Accepted
15	992.8	1921.5	6.2	-3.45	29.696	S	16.781	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



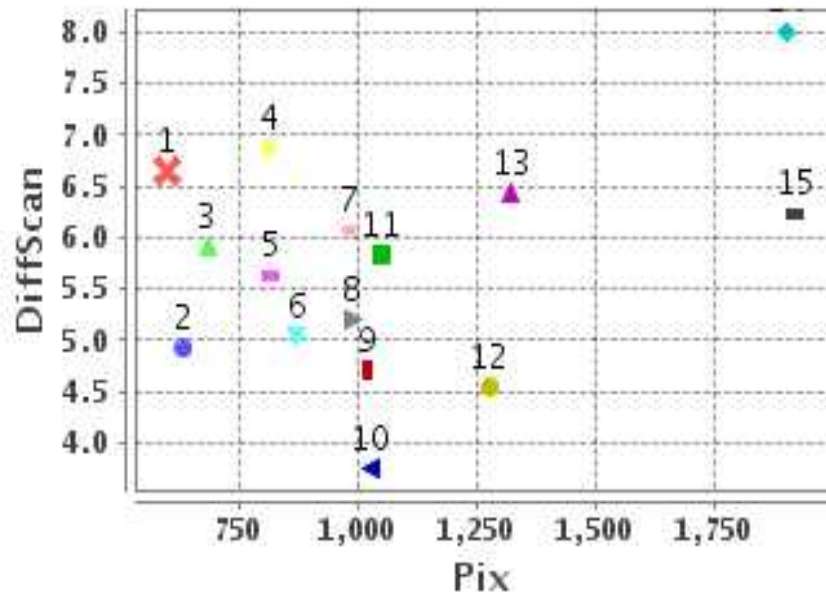
#### Number Of Points

North	0
South	14
East	5
West	9

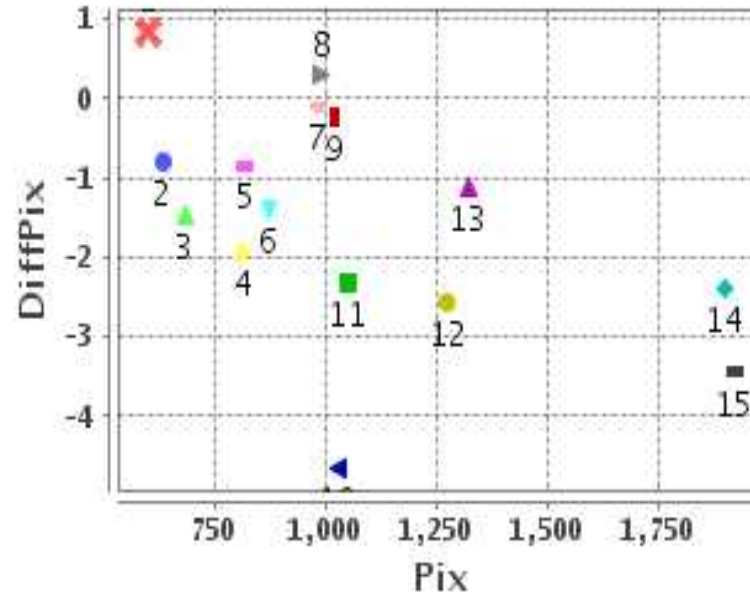
#### Radial Error ( Km )

Mean	7.138
Min	5.478
Max	9.470
CE90	8.527

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	-6.822	1.156	6.919	S	6.735	7.033
Across ( Km )	-0.853	1.945	2.124	W	1.827	2.203

## Block-Wise Geo location Error Statistics

### Location Accuracy,Scale,ID

<b>Scan Range-0-937; Pix Range-0-934</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-33.06	S
Across(Mean,Dir)	8.11	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-0-937; Pix Range-934-1869</b>		
Number of GCPs	7	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-26.61	S
Across(Mean,Dir)	-2.91	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.54	13.52
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	1.00	0.87
Across(Mean,Stddev)	1.67	1.65

<b>Scan Range-0-937; Pix Range-1869-2805</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-35.87	S
Across(Mean,Dir)	-12.17	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-937-1876; Pix Range-0-934</b>		
Number of GCPs	4	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-24.28	S
Across(Mean,Dir)	-1.64	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	4.60	14.89
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.86	0.80
Across(Mean,Stddev)	0.81	0.23

<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)	-29.7	S
Across(Mean,Dir)	-16.78	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-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