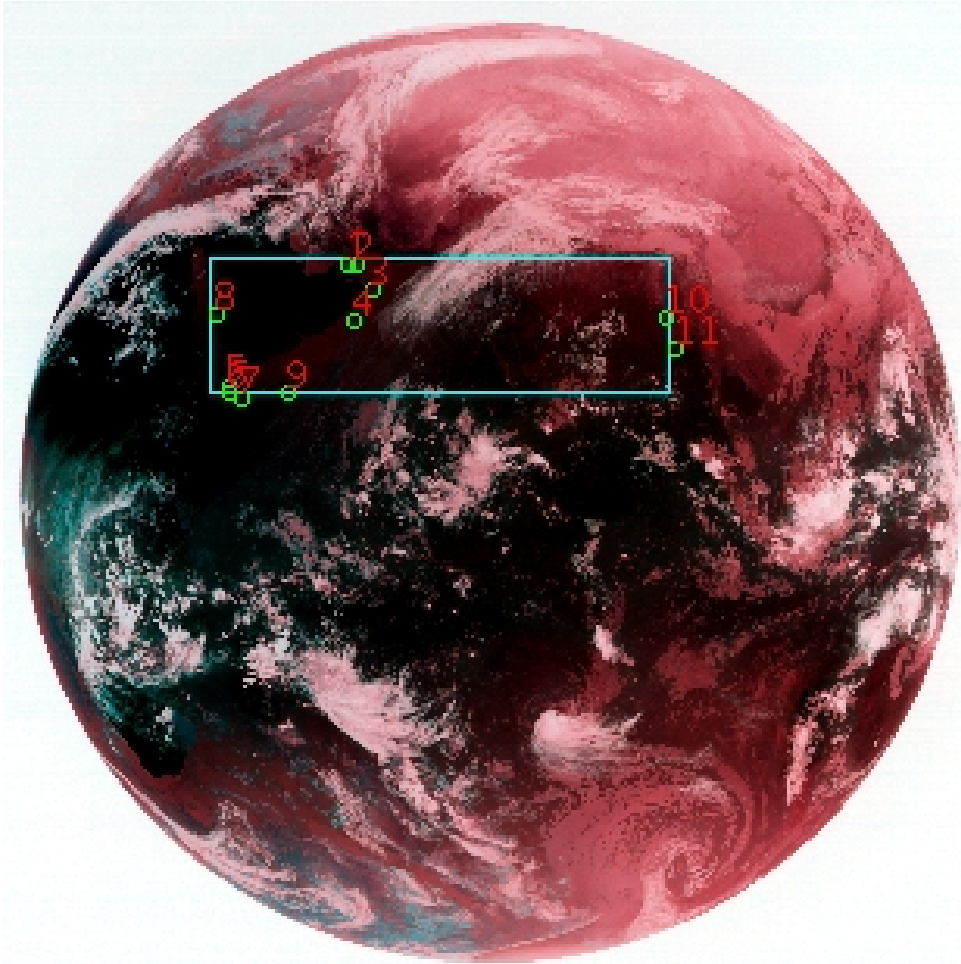


# DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD(FULL DISK) Product 3RIMG\_05FEB2018\_1215

Satellite	INSAT-3DR	No Of Bands	6	Product Type	STANDARD
Sensor	IMG	LvlOfProcess	L1B	Selected Band	2-TIR1
DOP/Time	05-02-18/24:15	Station ID	BES	Field View(deg)	17.99
Res(Y,X) [Km]	(4.0,4.0)	Res(Y,X) [uRad]	(112.0,112.0)		

(81.042N,-7.042W)

(81.042N,155.335E)



(-81.221S,-7.042W)

(-81.221S,155.335E)

GCP Distribution overview for 3RIMG05FEB20181215L1BDQE

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

GCP Coverage(%) 13.72 (N-S) 47.09 (E-W)

## Location Error(E)

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

## Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	-2.695	S	0.597	2.761
Across	9.561	E	1.662	9.704

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.407	0.297	10.181
Along	4.457	0.135	11.428
Across	4.556	0.291	13.888

## Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	1.841	-0.128	0.53	0.545
Across	2.564	0.550	0.97	1.115

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
0.05645	0.01799	-0.01959

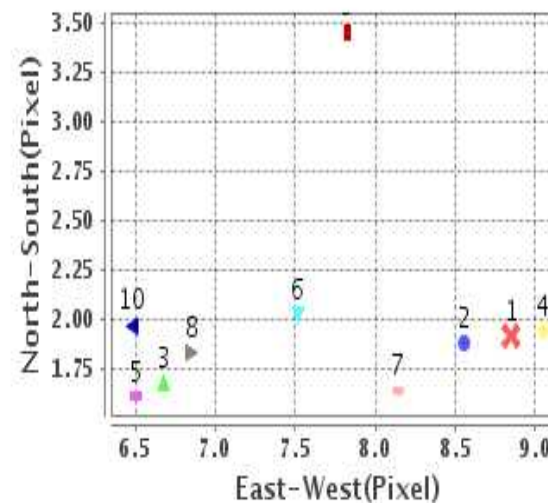
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

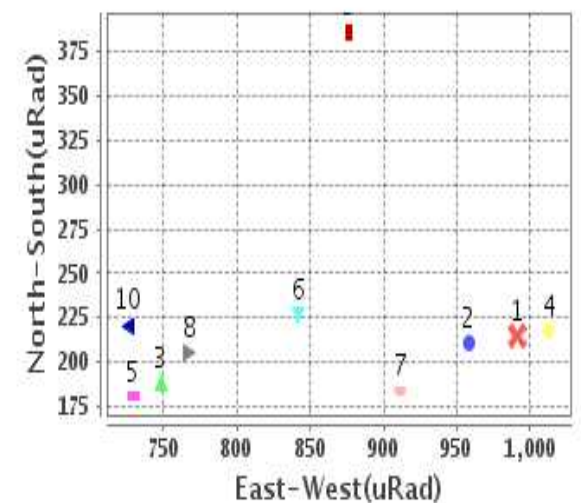
## Radial Error (in IR Pixels)

Mean	9.949
Min	7.587
Max	13.183
CE90	12.051

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3DR	<b>Generation Date</b>	05-02-18
<b>Sensor</b>	IMG	<b>DQE Date</b>	07-02-2018
<b>PassType</b>	NONE	<b>Aquisition Date</b>	05-02-18
<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_05FEB20	<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>	-0.09
<b>Center Lon(deg)</b>	74.146
<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>	81.042
<b>NW_Lon(deg)</b>	-7.042
<b>SW_Lat(deg)</b>	-81.221
<b>SW_Lon(deg)</b>	-7.042
<b>NE_Lat(deg)</b>	81.042
<b>NE_Lon(deg)</b>	155.335
<b>SE_Lat(deg)</b>	-81.221
<b>SE_Lon(deg)</b>	155.335

### 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 : 3RIMG05FEB20181215L1BDQE**

(-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

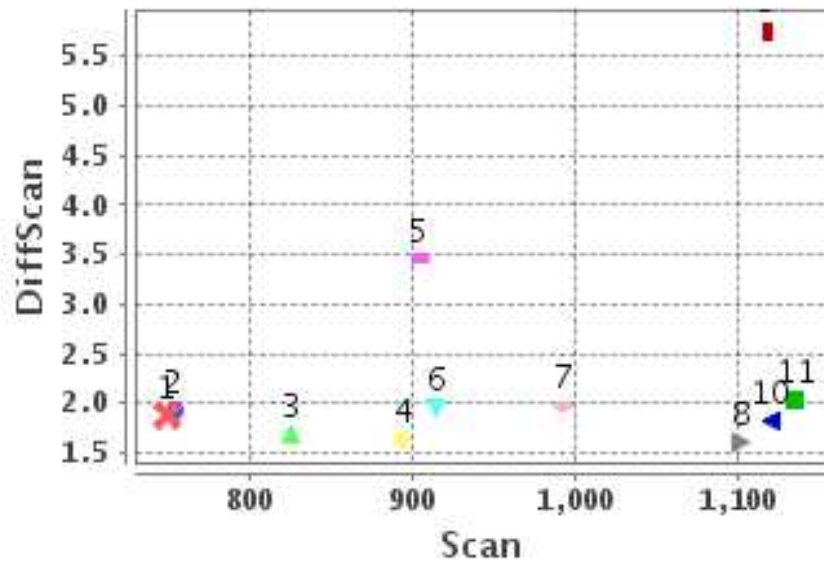
Image Width (pixels) : 2805      Image Height (pixels) : 2816      No of GCPs : 11

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	955.3	140.5	749.0	1135.25	13.72 (N-S)
<b>GCP Pix</b>	1017.0	448.7	600.5	1921.25	47.09 (E-W)

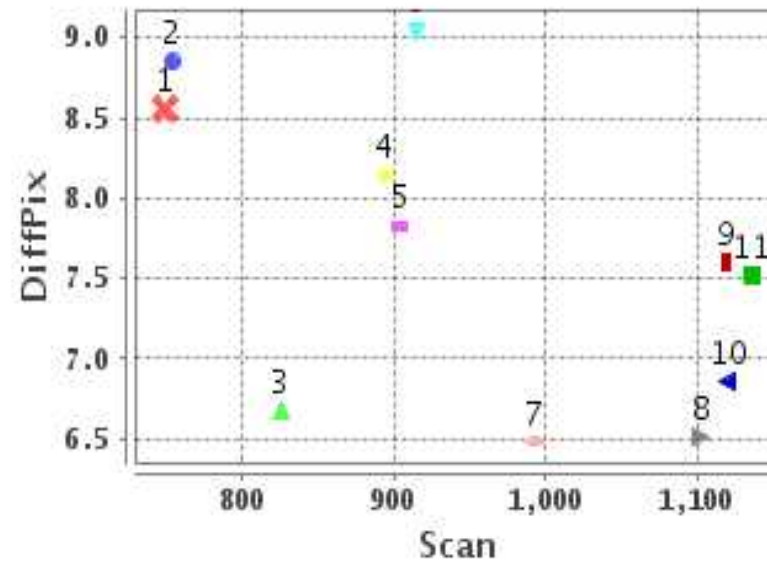
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	753.8	978.5	1.9	8.85	13.715	S	46.213	E	Accepted
2	749.0	1002.2	1.9	8.56	11.724	S	41.882	E	Accepted
3	825.8	1050.2	1.7	6.68	12.112	S	31.345	E	Accepted
4	914.5	990.0	1.9	9.04	10.958	S	41.425	E	Accepted
5	1102.0	635.2	1.6	6.51	6.971	S	34.940	E	Accepted
6	1118.5	635.5	5.8	7.60	26.333	S	43.809	E	Rejected
7	1135.2	672.2	2.0	7.52	9.817	S	38.437	E	Accepted
8	893.5	600.5	1.6	8.14	11.936	S	51.363	E	Accepted
9	1120.0	809.2	1.8	6.85	7.449	S	32.821	E	Accepted
10	904.0	1892.5	3.5	7.82	14.448	S	34.912	E	Accepted
11	992.2	1921.2	2.0	6.48	8.682	S	29.082	E	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



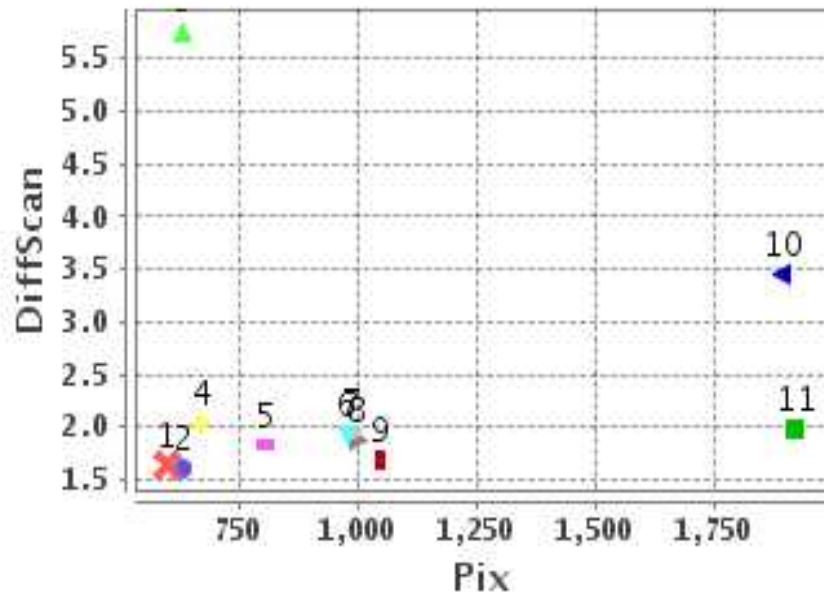
#### Number Of Points

North	0
South	10
East	10
West	0

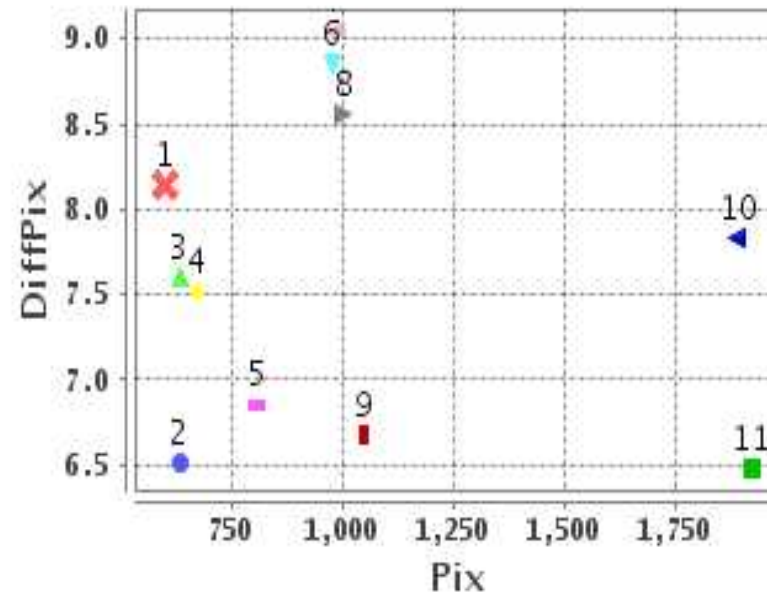
#### Radial Error ( Km )

Mean	9.949
Min	7.587
Max	13.183
CE90	12.051

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	-2.695	0.597	2.761	S	2.649	2.851
Across ( Km )	9.561	1.662	9.704	E	9.290	9.938

## 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) -11.94 S Across(Mean,Dir) 51.37 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 4 <b>Location Error(Km)</b> Along(Mean,Dir) -12.1275 S Across(Mean,Dir) 40.22 E <b>Scale(Km)</b> Average Scale (Mean,%Variation) 4.71 17.66 <b>Internal Distortion(Pixel)</b> Along(Mean,Stddev) 0.03 0.12 Across(Mean,Stddev) 0.75 1.02	<b>Scan Range-0-937; Pix Range-1869-2805</b> Number of GCPs 1 <b>Location Error(Km)</b> Along(Mean,Dir) -14.45 S Across(Mean,Dir) 34.91 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 3 <b>Location Error(Km)</b> Along(Mean,Dir) -8.08 S Across(Mean,Dir) 35.40 E <b>Scale(Km)</b> Average Scale (Mean,%Variation) 4.78 19.60 <b>Internal Distortion(Pixel)</b> Along(Mean,Stddev) -0.32 0.10 Across(Mean,Stddev) -0.68 0.33	<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) -8.68 S Across(Mean,Dir) 29.08 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