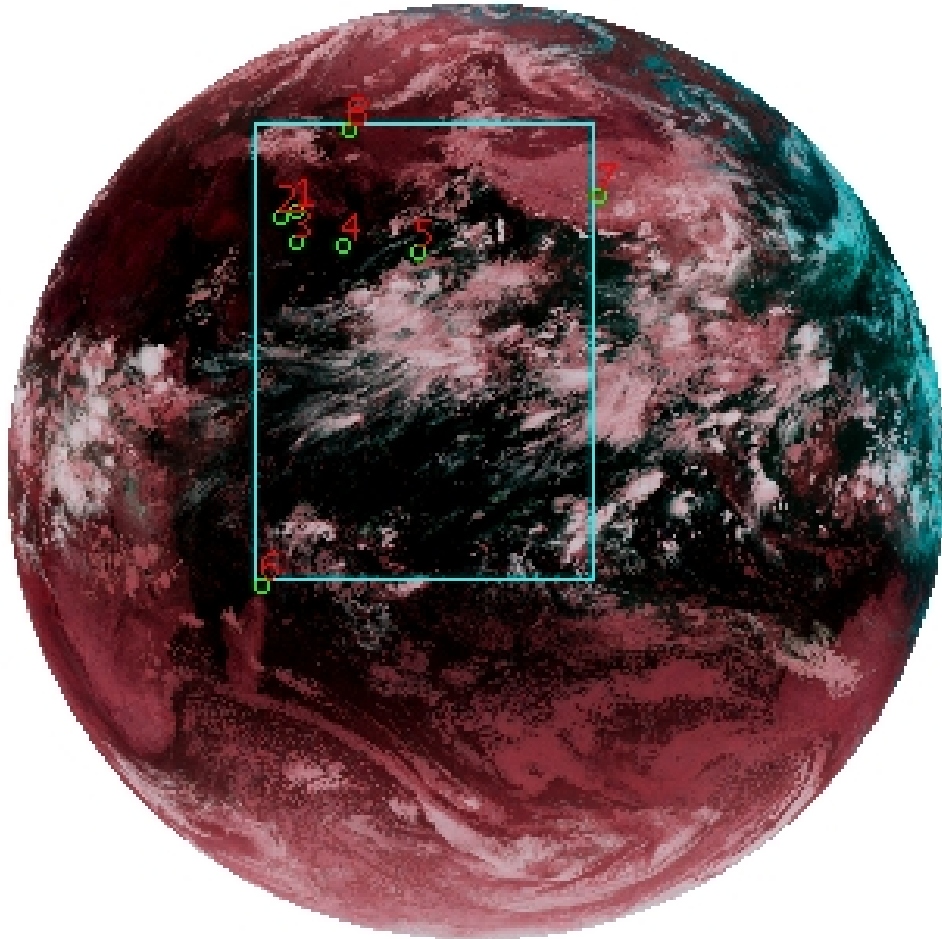


# DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG\_30JUN2020\_2145

**Satellite** INSAT-3DR      **No Of Bands** 6      **Product Type** STANDARD  
**Sensor** IMG      **LvlOfProcess** L1B      **Selected Band** 2-TIR1  
**DOP/Time** 30-06-20/21:45      **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,-7.157W)

(81.042N,155.157E)



(-81.042S,-7.157W)

(-81.042S,155.157E)

GCP Distribution overview for 3RIMG30JUN20202145L1BSTD

**Image Width:** 2805      **Image Height:** 2816      **No Of GCPs:** 8

**GCP Coverage(%)** 46.94      **(N-S)** 34.82      **(E-W)**

## Location Error(E)

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

## Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	0.117	N	1.109	1.115
Across	-3.738	W	0.381	3.757

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	5.085	0.715	27.132
Along	6.083	0.433	52.063
Across	4.699	0.264	17.487

## Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	3.015	0.114	1.00	1.002
Across	1.281	-0.595	0.43	0.736

## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.01970	-0.00940	0.14419

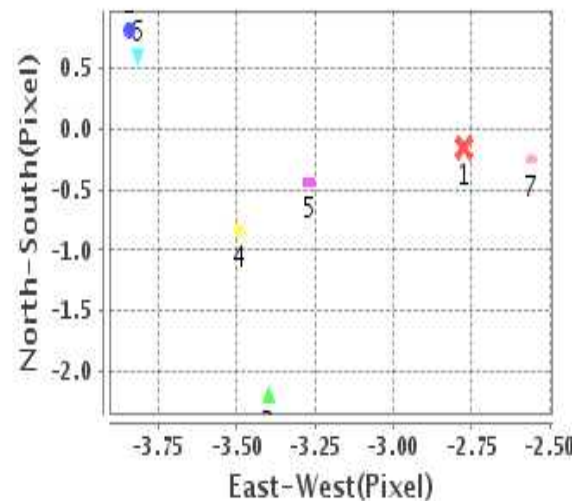
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

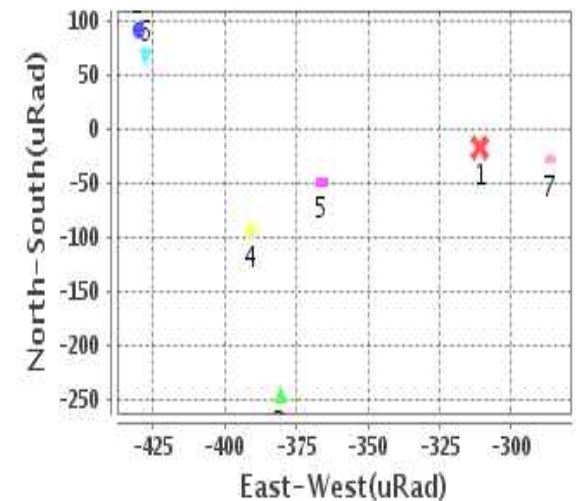
## Radial Error (in IR Pixels)

<b>Mean</b>	3.889
<b>Min</b>	3.292
<b>Max</b>	4.776
<b>CE90</b>	4.184

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3DR	<b>Generation Date</b>	01-07-20
<b>Sensor</b>	IMG	<b>DQE Date</b>	01-07-2020
<b>PassType</b>	NONE	<b>Aquisition Date</b>	30-06-20
<b>Imaging Mode</b>	FULL_FRAME	<b>Aquisition Time(GMT)</b>	21:45
<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_30JUN20	<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>	0.0
<b>Center Lon(deg)</b>	74.0
<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>	-7.157
<b>SW_Lat(deg)</b>	-81.042
<b>SW_Lon(deg)</b>	-7.157
<b>NE_Lat(deg)</b>	81.042
<b>NE_Lon(deg)</b>	155.157
<b>SE_Lat(deg)</b>	-81.042
<b>SE_Lon(deg)</b>	155.157

### 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 : 3RIMG30JUN20202145L1BSTD**

(-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

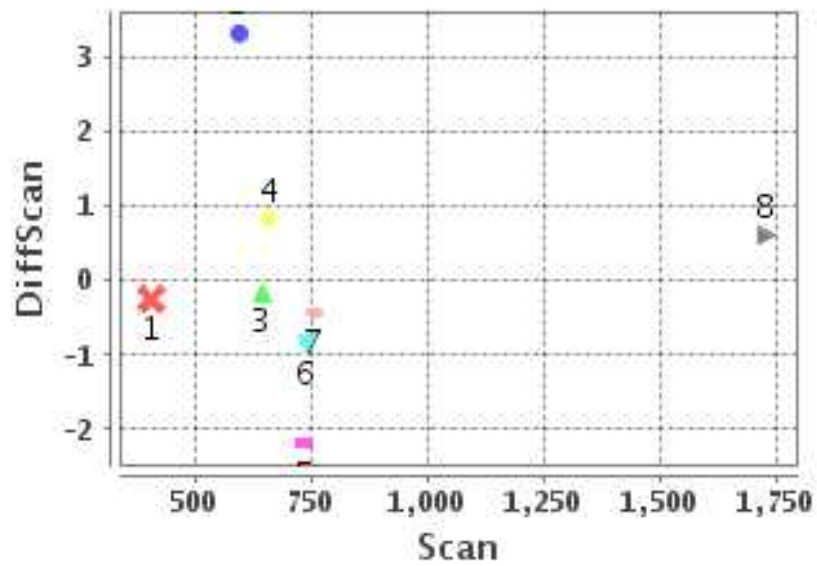
Image Width (pixels) : 2805      Image Height (pixels) : 2816      No of GCPs : 8

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	782.9	372.4	405.8	1727.50	46.94 (N-S)
<b>GCP Pix</b>	1038.3	298.5	766.5	1743.25	34.82 (E-W)

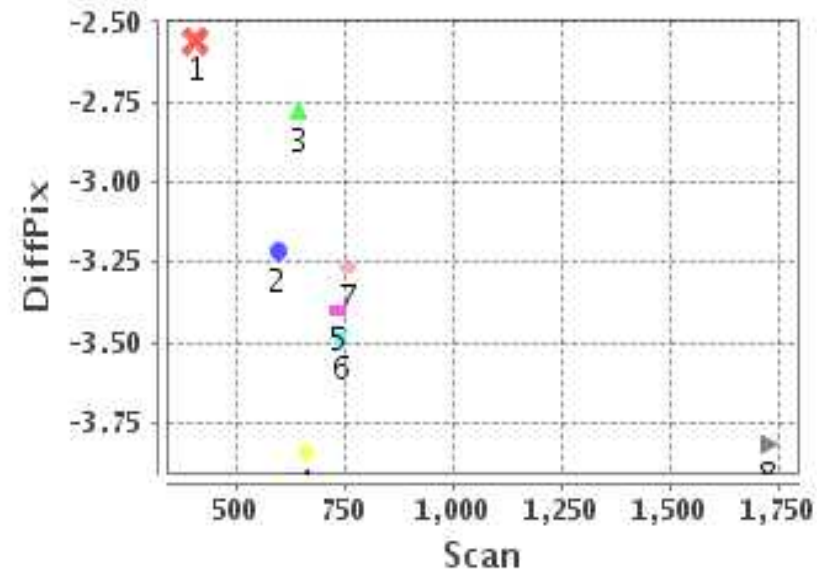
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	644.0	865.2	-0.2	-2.78	1.449	N	13.159	W	Accepted
2	659.2	819.5	0.8	-3.84	4.655	S	16.075	W	Accepted
3	735.8	869.2	-2.2	-3.40	8.254	N	17.230	W	Accepted
4	739.2	1003.2	-0.8	-3.49	3.080	N	15.842	W	Accepted
5	757.0	1222.2	-0.4	-3.27	2.857	N	12.855	W	Accepted
6	1727.5	766.5	0.6	-3.82	4.160	S	15.578	W	Accepted
7	595.0	1743.2	3.3	-3.22	19.826	S	17.766	W	Rejected
8	405.8	1017.0	-0.3	-2.56	3.537	S	13.927	W	Accepted

## Error(Pixels) Vs. GCPScan



## Error(Pixels) Vs. GCPScan



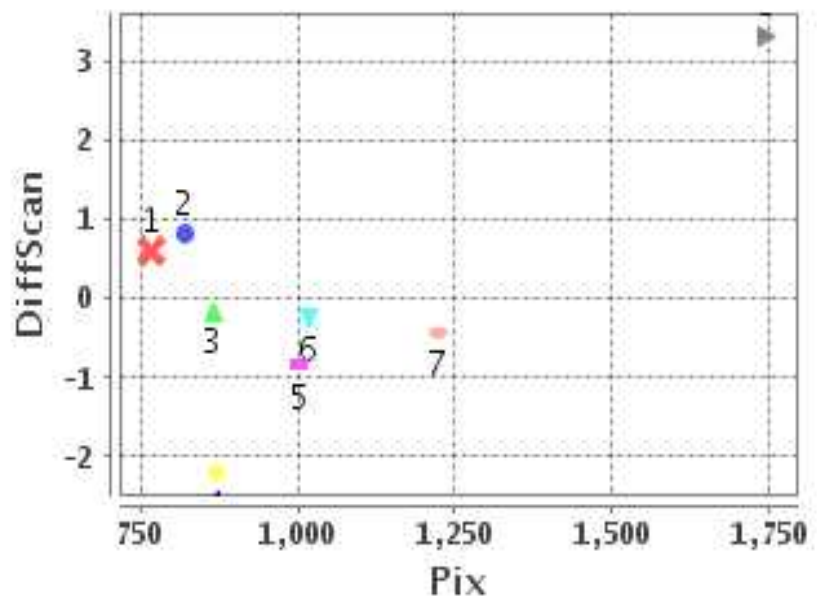
### Number Of Points

North	4
South	3
East	0
West	7

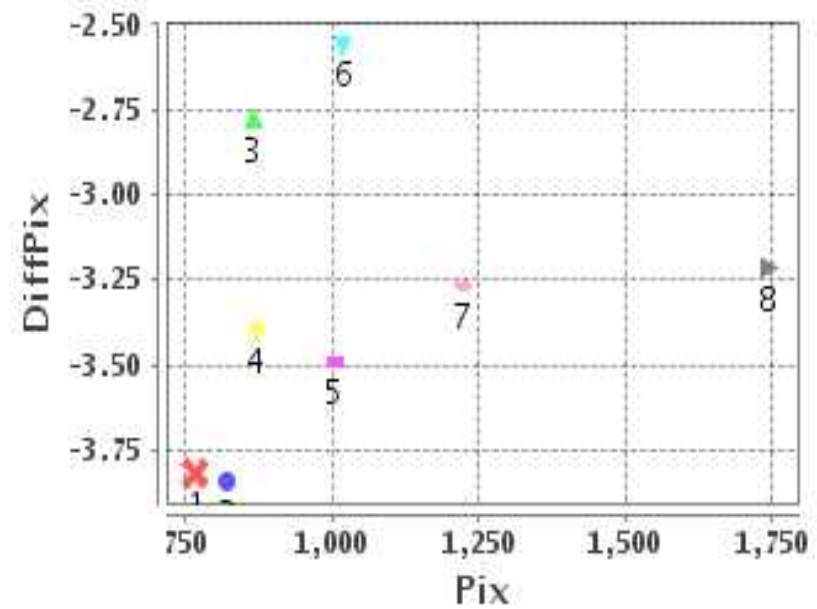
### Radial Error ( Km )

Mean	3.889
Min	3.292
Max	4.776
CE90	4.184

## Error(Pixels) Vs. GCPPix



## Error(Pixels) Vs. GCPPix



### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	0.117	1.109	1.115	N	0.861	1.196
Across ( Km )	-3.738	0.381	3.757	W	3.658	3.841

## 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)	1.68333	N
Across(Mean,Dir)	-15.49	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	5.44	36.07
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	0.54	1.51
Across(Mean,Stddev)	-0.75	0.31

<b>Scan Range-0-937; Pix Range-934-1869</b>		
Number of GCPs	3	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	0.8	N
Across(Mean,Dir)	-14.21	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	5.78	44.49
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	0.38	0.20
Across(Mean,Stddev)	-0.58	0.36

<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	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-4.16	S
Across(Mean,Dir)	-15.58	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-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