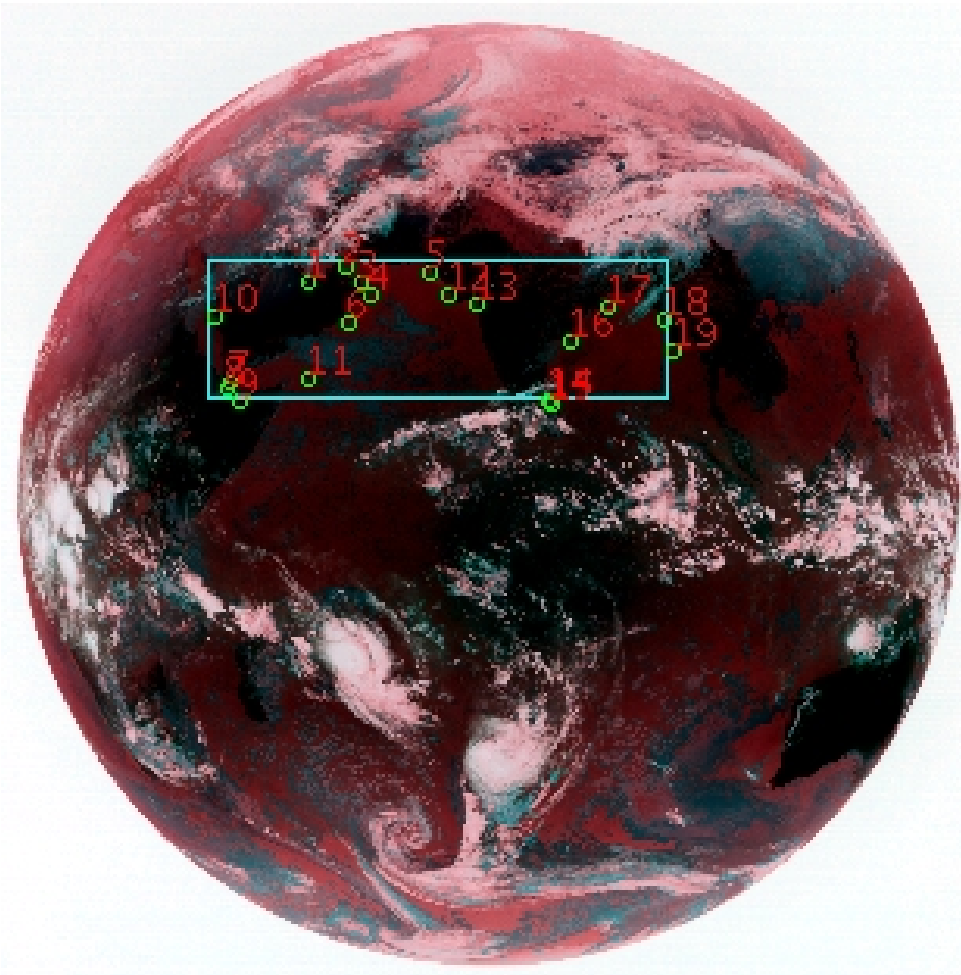


DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG\_09FEB2019\_0615

Satellite	INSAT-3DR	No Of Bands	6	Product Type	STANDARD
Sensor	IMG	LvlOfProcess	L1B	Selected Band	2-TIR1
DOP/Time	09-02-19/06:15	Station ID	BES	Field View(deg)	17.99
Res(Y,X) [Km]	(4.0,4.0)	Res(Y,X) [uRad]	(112.0,112.0)		

(81.171N,-7.004W)

(81.171N,155.225E)



(-81.183S,-7.004W)

(-81.183S,155.225E)

GCP Distribution overview for 3RIMG09FEB20190615L1BDQE

Image Width: 2805 Image Height: 2816 No Of GCPs: 19

GCP Coverage(%) 14.10 (N-S) 47.21 (E-W)

Location Error(E)

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

Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	-4.494	S	0.943	4.592
Across	7.873	E	1.839	8.085

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.325	0.243	8.131
Along	4.553	1.167	13.831
Across	4.448	1.432	11.198

Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	2.988	-0.161	0.85	0.870
Across	3.133	1.618	0.95	1.877

Attitude Residuals (Deg)

Pitch	Roll	Yaw
0.04598	0.02889	-0.00920

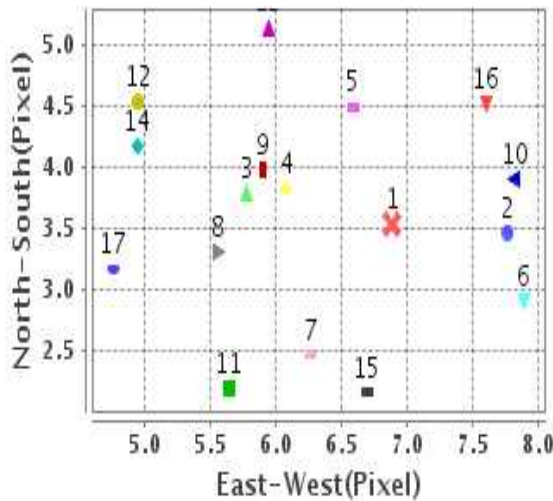
Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

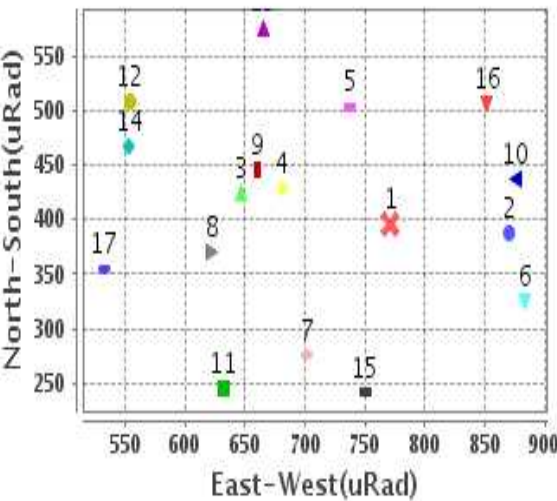
Radial Error  
(in IR Pixels)

Mean	9.136
Min	6.671
Max	13.602
CE90	10.827

Location Error For GCPs(Pixel)



Location Error For GCPs(uRad)



Detailed Product Information

Ancillary Info

Satellite	INSAT-3DR	Generation Date	09-02-19
Sensor	IMG	DQE Date	12-02-2019
PassType	NONE	Aquisition Date	09-02-19
Imaging Mode	FULL_FRAME	Aquisition Time(GMT)	06:15
Sat Altitude(m)	3.6E7	Nominal Altitude(Km)	3.6E7
Station	BES	Predicted Altitude(Km)	-999.99
Sat Location(deg)	-999.99 E	Nominal Center Lat(deg)	0.0
Format	hdf5-1.8.8	Nominal Center Lon(deg)	74.0
LvlOfProcessing	STANDARD	Predicted Center Lat(deg)	-999.99
DP JobId	3RIMG_09FEB20	Predicted Center Lon(deg)	-999.99
ProductCode	NONE		
Field View(deg)	17.99		

Projection Parameters

Projection	None
Ellipsoid	WGS_84
Datum	WGS_84
Zone	NotAvail
Semi_Major_Axis(Km)	6378.14
Semi_Minor_Axis(Km)	6356.75
Standard_Parallel1(deg)	-999.99
Standard_Parallel2(deg)	-999.99
Projection_Origin_Lon(deg)	-999.99
Projection_Origin_Lat(deg)	-999.99
Projection_False_Easting(Km)	-999.99
Projection_False_Northing(Km)	-999.99

Scene Center Desc

Centre Lat(deg)	-0.0060
Center Lon(deg)	74.11
Centre Roll(deg)	-999.0
Centre Pitch(deg)	-999.0
Center Yaw(deg)	-999.0
SunElevation(deg)	-999.99
SunAzimuth(deg)	-999.99
SatElevation(deg)	-999.99
SatAzimuth(deg)	-999.99

Scene Corner Desc

NW_Lat(deg)	81.171
NW_Lon(deg)	-7.004
SW_Lat(deg)	-81.183
SW_Lon(deg)	-7.004
NE_Lat(deg)	81.171
NE_Lon(deg)	155.225
SE_Lat(deg)	-81.183
SE_Lon(deg)	155.225

Band Wise Details

	Res_AL(Km)	Res_AX(Km)	Image Height	Image Width
MIR	4.0	4.0	2816	2805
SWIR	1.0	1.0	11264	11220
TIR1	4.0	4.0	2816	2805
TIR2	4.0	4.0	2816	2805
VIS	1.0	1.0	11264	11220
WV	8.0	8.0	1408	1402

GDQE Computation Base

Projection	MER	Wildpoint Rejection Threshold	2.60	SemiMajorAxis(m)	6378137.00	Mode Of Computation	grid
Ellipsoid	WGS_84		-sigma	SemiMinorAxis(m)	6356752.31	Used Reference Type	REFINSREF
Datum	WGS_84	Unit	pixels	Standardparallel1(deg)	17.0		
Zone	Not Applicable			Standardparallel2(deg)	17.0		

\* -999.99 : Not Applicable/Not Available

## References

**JobId : 3RIMG09FEB20190615L1BDQE**

(-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 : 19

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	939.9	133.4	753.5	1150.50	14.10 (N-S)
<b>GCP Pix</b>	1183.7	422.6	598.2	1922.50	47.21 (E-W)

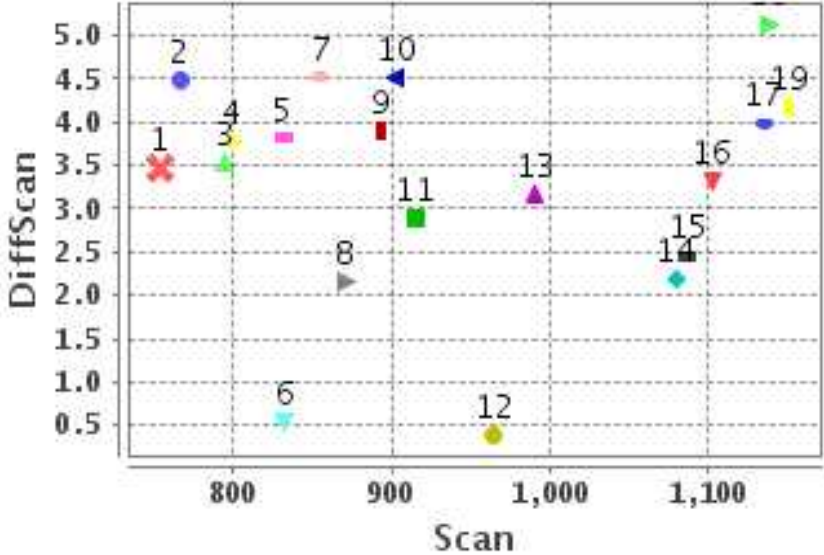
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	794.5	869.0	3.5	6.89	20.119	S	38.349	E	Accepted
2	753.5	977.5	3.5	7.77	20.770	S	41.732	E	Accepted
3	798.5	1023.5	3.8	5.78	20.983	S	31.289	E	Accepted
4	831.2	1049.0	3.8	6.08	19.771	S	29.170	E	Accepted
5	766.2	1221.0	4.5	6.59	23.759	S	30.582	E	Accepted
6	914.2	989.2	2.9	7.89	15.206	S	36.944	E	Accepted
7	1086.5	647.0	2.5	6.27	12.317	S	33.195	E	Accepted
8	1102.2	634.0	3.3	5.56	15.402	S	29.616	E	Accepted
9	1135.2	671.8	4.0	5.89	17.580	S	34.622	E	Accepted
10	893.0	598.2	3.9	7.82	20.738	S	50.298	E	Accepted
11	1079.2	872.2	2.2	5.64	10.558	S	26.498	E	Accepted
12	832.0	1276.2	0.5	4.51	3.600	S	21.114	E	Rejected
13	855.0	1352.0	4.5	4.95	21.562	S	20.943	E	Accepted

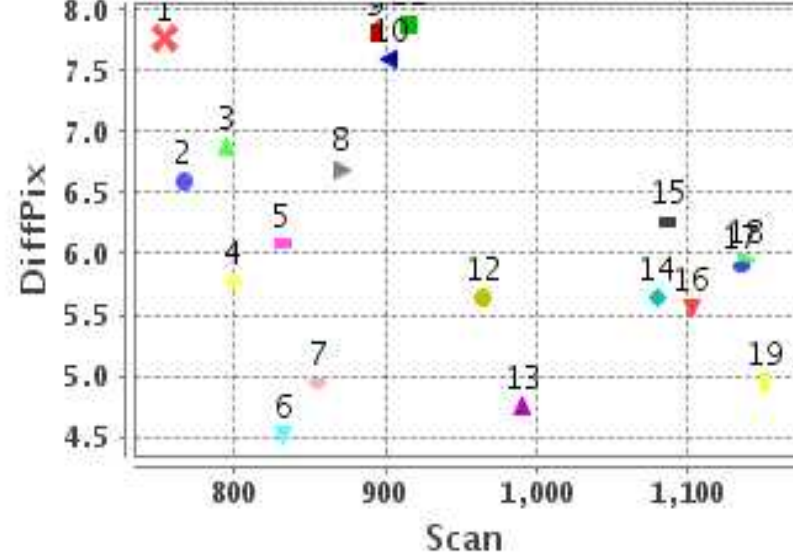
# Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
14	1138.0	1563.5	5.1	5.94	20.426	S	25.298	E	Accepted
15	1150.5	1574.8	4.2	4.94	17.895	S	21.739	E	Accepted
16	964.2	1622.2	0.4	5.63	2.818	S	24.388	E	Rejected
17	870.5	1733.5	2.2	6.69	12.012	S	30.295	E	Accepted
18	902.2	1892.2	4.5	7.60	21.422	S	32.783	E	Accepted
19	990.5	1922.5	3.2	4.76	15.062	S	22.027	E	Accepted

Error(Pixels) Vs. GCPScan



Error(Pixels) Vs. GCPScan



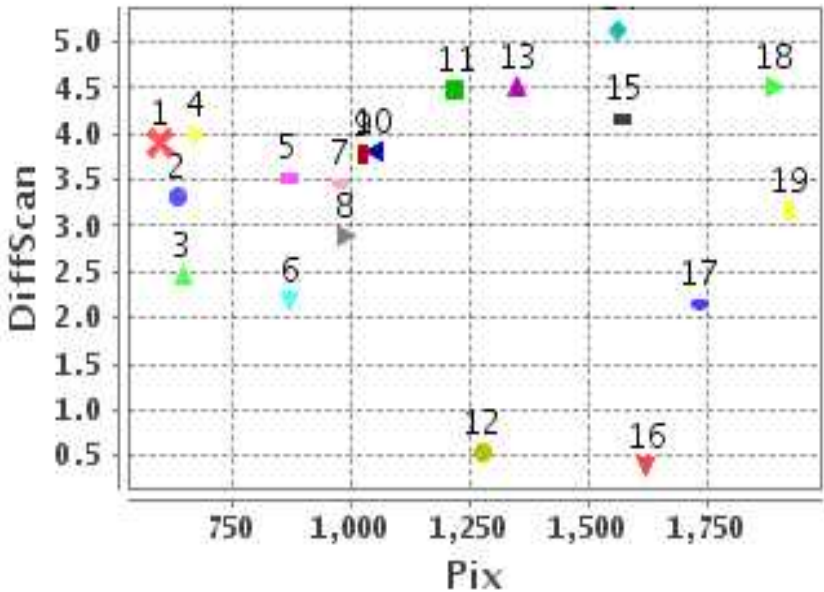
Number Of Points

North	0
South	17
East	17
West	0

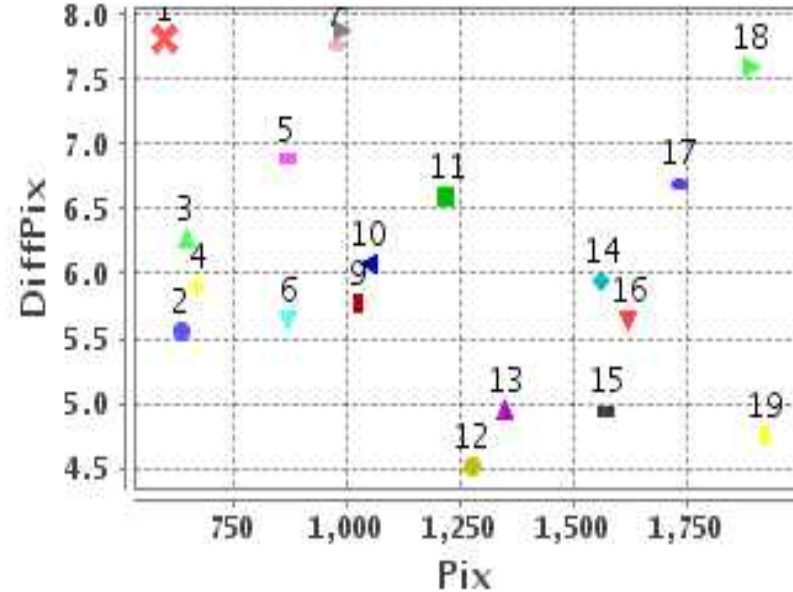
Radial Error ( Km )

Mean	9.136
Min	6.671
Max	13.602
CE90	10.827

Error(Pixels) Vs. GCPPix



Error(Pixels) Vs. GCPPix



Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	-4.494	0.943	4.592	S	4.494	4.687
Across ( Km )	7.873	1.839	8.085	E	7.718	8.231

Block-Wise Geo location Error Statistics

Location Accuracy,Scale,ID

Scan Range-0-937; Pix Range-0-934				
Number of GCPs	2			
Location Error(Km)				
Along(Mean,Dir)	-20.43	S		
Across(Mean,Dir)	44.32	E		
Scale(Km)				
Average Scale (Mean,%Variation)	4.66	16.52		
Internal Distortion(Pixel)				
Along(Mean,Stddev)	-0.38	0.00		
Across(Mean,Stddev)	0.93	0.00		

Scan Range-0-937; Pix Range-934-1869				
Number of GCPs	7			
Location Error(Km)				
Along(Mean,Dir)	-19.15	S		
Across(Mean,Dir)	31.57	E		
Scale(Km)				
Average Scale (Mean,%Variation)	4.44	10.92		
Internal Distortion(Pixel)				
Along(Mean,Stddev)	-0.15	0.85		
Across(Mean,Stddev)	1.44	0.90		

Scan Range-0-937; Pix Range-1869-2805				
Number of GCPs	1			
Location Error(Km)				
Along(Mean,Dir)	-21.43	S		
Across(Mean,Dir)	32.78	E		
Scale(Km)				
Average Scale (Mean,%Variation)	-999.99	-999.9		
Internal Distortion(Pixel)				
Along(Mean,Stddev)	-999.99	-999.99		
Across(Mean,Stddev)	-999.99	-999.99		

Scan Range-937-1876; Pix Range-0-934				
Number of GCPs	4			
Location Error(Km)				
Along(Mean,Dir)	-13.9675	S		
Across(Mean,Dir)	30.98	E		
Scale(Km)				
Average Scale (Mean,%Variation)	4.60	15.07		
Internal Distortion(Pixel)				
Along(Mean,Stddev)	-1.07	0.63		
Across(Mean,Stddev)	-0.37	0.26		

Scan Range-937-1876; Pix Range-934-1869				
Number of GCPs	2			
Location Error(Km)				
Along(Mean,Dir)	-19.165	S		
Across(Mean,Dir)	23.52	E		
Scale(Km)				
Average Scale (Mean,%Variation)	3.53	11.70		
Internal Distortion(Pixel)				
Along(Mean,Stddev)	0.97	0.00		
Across(Mean,Stddev)	1.00	0.00		

Scan Range-937-1876; Pix Range-1869-2805				
Number of GCPs	1			
Location Error(Km)				
Along(Mean,Dir)	-15.06	S		
Across(Mean,Dir)	22.02	E		
Scale(Km)				
Average Scale (Mean,%Variation)	-999.99	-999.9		
Internal Distortion(Pixel)				
Along(Mean,Stddev)	-999.99	-999.99		
Across(Mean,Stddev)	-999.99	-999.99		

Scan Range-1876-2816; Pix Range-0-934				
Number of GCPs	-999			
Location Error(Km)				
Along(Mean,Dir)	-999.99	NotAvail		
Across(Mean,Dir)	-999.99	NotAvail		
Scale(Km)				
Average Scale (Mean,%Variation)	-999.99	-999.9		
Internal Distortion(Pixel)				
Along(Mean,Stddev)	-999.99	-999.99		
Across(Mean,Stddev)	-999.99	-999.99		

Scan Range-1876-2816; Pix Range-937-1869				
Number of GCPs	-999			
Location Error(Km)				
Along(Mean,Dir)	-999.99	NotAvail		
Across(Mean,Dir)	-999.99	NotAvail		
Scale(Km)				
Average Scale (Mean,%Variation)	-999.99	-999.9		
Internal Distortion(Pixel)				
Along(Mean,Stddev)	-999.99	-999.99		
Across(Mean,Stddev)	-999.99	-999.99		

Scan Range-1876-2816; Pix Range-1869-2805				
Number of GCPs	-999			
Location Error(Km)				
Along(Mean,Dir)	-999.99	NotAvail		
Across(Mean,Dir)	-999.99	NotAvail		
Scale(Km)				
Average Scale (Mean,%Variation)	-999.99	-999.9		
Internal Distortion(Pixel)				
Along(Mean,Stddev)	-999.99	-999.99		
Across(Mean,Stddev)	-999.99	-999.99		

\*-999 : no gcp available  
\* -999.99 : values are not computed