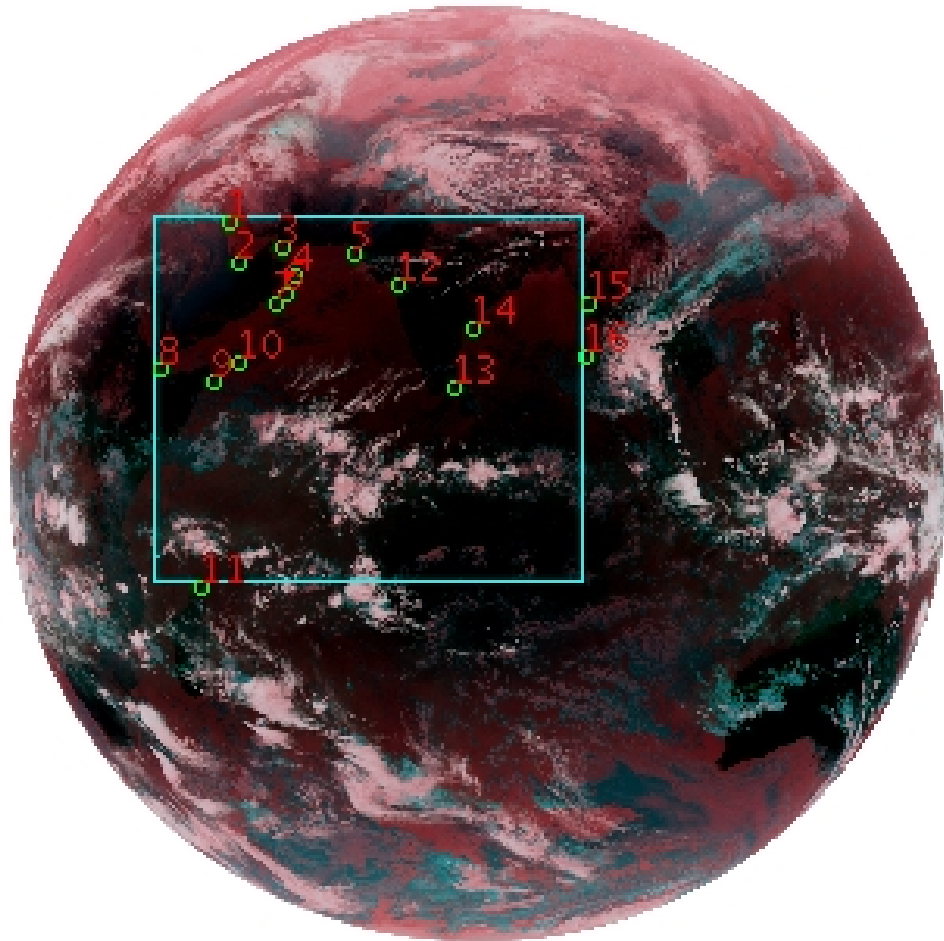


DQE Report: Location Accuracy of INSAT-3D-IMG STANDARD(FULL DISK) Product 3DIMG_05JAN2019_0600

Satellite INSAT-3D **No Of Bands** 6 **Product Type** STANDARD
Sensor IMG **LvlOfProcess** L1B **Selected Band** 2-TIR1
DOP/Time 05-01-19/06:00 **Station ID** BES **Field View(deg)** 17.974
Res(Y,X) [Km] (4.0,4.0) **Res(Y,X) [uRad]** (112.0,112.0)

(81.042N,0.843W)

(81.042N,163.157E)



(-81.042S,0.843W)

(-81.042S,163.157E)

GCP Distribution overview for 3DIMG05JAN20190600L1BSTD

Image Width: 2805 **Image Height:** 2816 **No Of GCPs:** 16

GCP Coverage(%) 37.33 **(N-S)** 43.89 **(E-W)**

Location Error(E)

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

Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	0.126	N	1.067	1.074
Across	-3.115	W	1.447	3.435

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.509	0.498	12.713
Along	4.915	3.338	22.885
Across	4.641	0.849	16.022

Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	3.071	1.300	0.87	1.563
Across	4.827	-0.548	1.25	1.366

Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.02123	-0.00631	0.10187

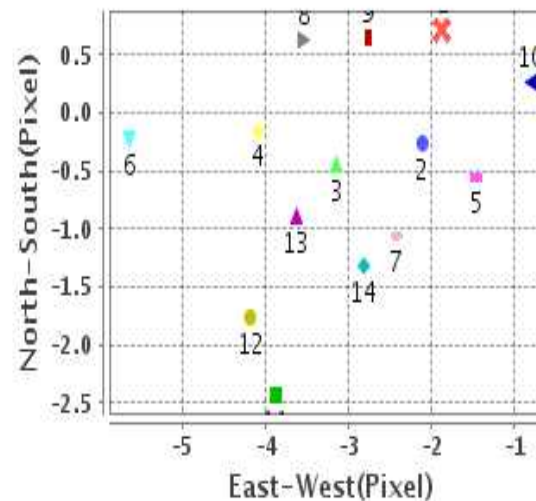
Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

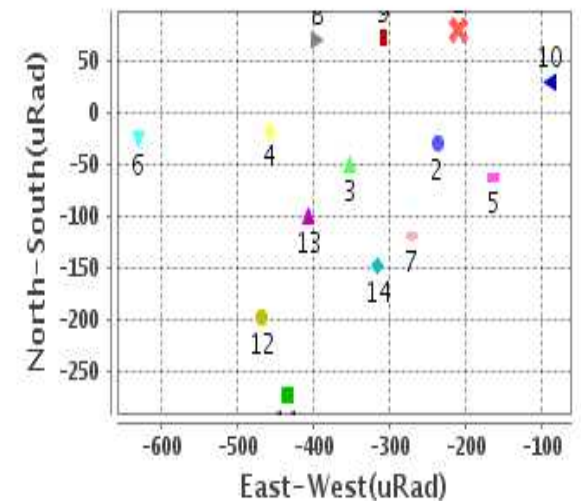
Radial Error (in IR Pixels)

Mean	3.334
Min	1.245
Max	6.532
CE90	4.500

Location Error For GCPs(Pixel)



Location Error For GCPs(uRad)



Detailed Product Information

Ancillary Info

Satellite	INSAT-3D	Generation Date	05-01-19
Sensor	IMG	DQE Date	07-01-2019
PassType	NONE	Aquisition Date	05-01-19
Imaging Mode	FULL_FRAME	Aquisition Time(GMT)	06:00
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)	82.0
LvlOfProcessing	STANDARD(FULL)	Predicted Center Lat(deg)	-999.99
DP JobId	3DIMG_05JAN20	Predicted Center Lon(deg)	-999.99
ProductCode	NONE		
Field View(deg)	17.974		

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)	0.0
Center Lon(deg)	82.0
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)	81.042
NW_Lon(deg)	0.843
SW_Lat(deg)	-81.042
SW_Lon(deg)	0.843
NE_Lat(deg)	81.042
NE_Lon(deg)	163.157
SE_Lat(deg)	-81.042
SE_Lon(deg)	163.157

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	meters	Standardparallel1(deg)	17.0		
Zone	Not Applicable			Standardparallel2(deg)	17.0		

* -999.99 : Not Applicable/Not Available

References

JobId : 3DIMG05JAN20190600L1BSTD

(-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 : 16

	Mean	StdDev	Min	Max	Coverage(in %)
GCP Scan	971.1	241.1	672.5	1723.75	37.33 (N-S)
GCP Pix	959.4	372.2	475.2	1706.25	43.89 (E-W)

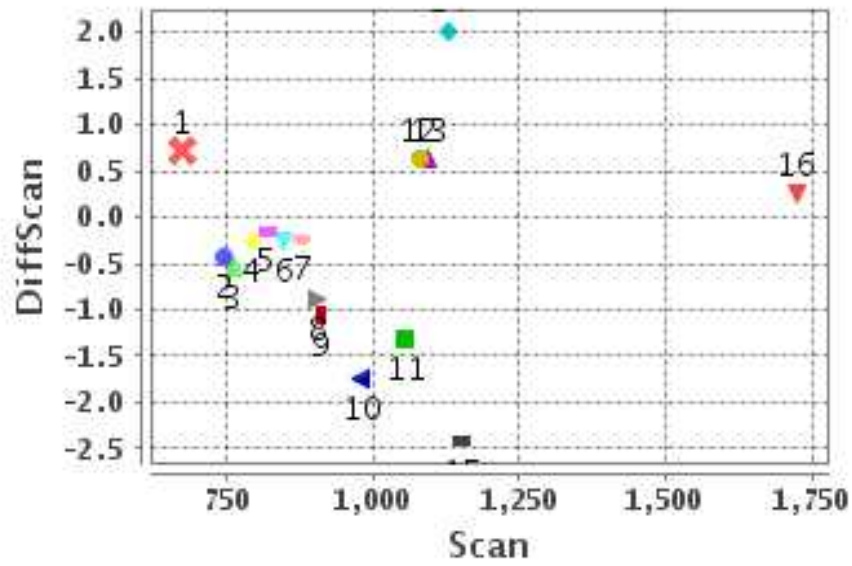
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	672.5	666.2	0.7	-1.88	6.673	S	7.338	W	Accepted
2	791.2	699.8	-0.3	-2.12	0.161	S	7.661	W	Accepted
3	744.8	825.2	-0.4	-3.15	0.693	S	13.712	W	Accepted
4	819.2	863.5	-0.2	-4.09	0.263	N	17.638	W	Accepted
5	760.2	1028.2	-0.6	-1.46	2.176	N	6.244	W	Accepted
6	878.0	829.2	-0.2	-5.63	2.172	N	26.038	W	Accepted
7	908.5	802.5	-1.1	-2.43	2.477	N	9.288	W	Accepted
8	1094.2	475.2	0.6	-3.54	3.500	S	18.303	W	Accepted
9	1127.5	629.5	2.0	-2.15	9.767	S	7.118	W	Rejected
10	1078.5	696.2	0.6	-2.76	4.948	S	11.407	W	Accepted
11	1723.8	587.5	0.3	-0.80	4.385	S	2.356	W	Accepted
12	847.2	1152.5	-0.3	-6.89	1.151	N	27.198	W	Rejected
13	1151.5	1319.8	-2.4	-3.88	7.777	N	12.744	W	Accepted

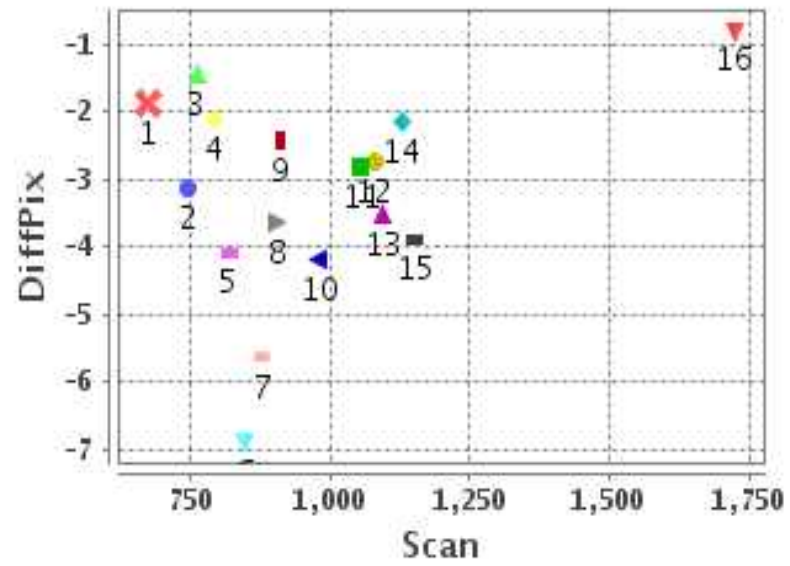
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
14	980.0	1371.2	-1.8	-4.18	7.736	N	16.254	W	Accepted
15	904.8	1706.2	-0.9	-3.63	0.191	N	14.521	W	Accepted
16	1055.2	1697.0	-1.3	-2.82	4.636	N	10.952	W	Accepted

Error(Pixels) Vs. GCPScan



Error(Pixels) Vs. GCPScan



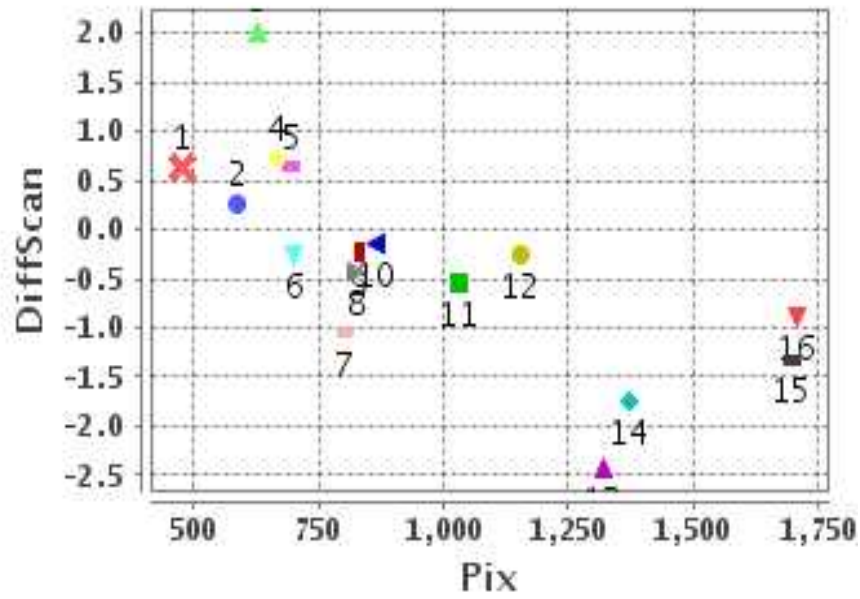
Number Of Points

North	8
South	6
East	0
West	14

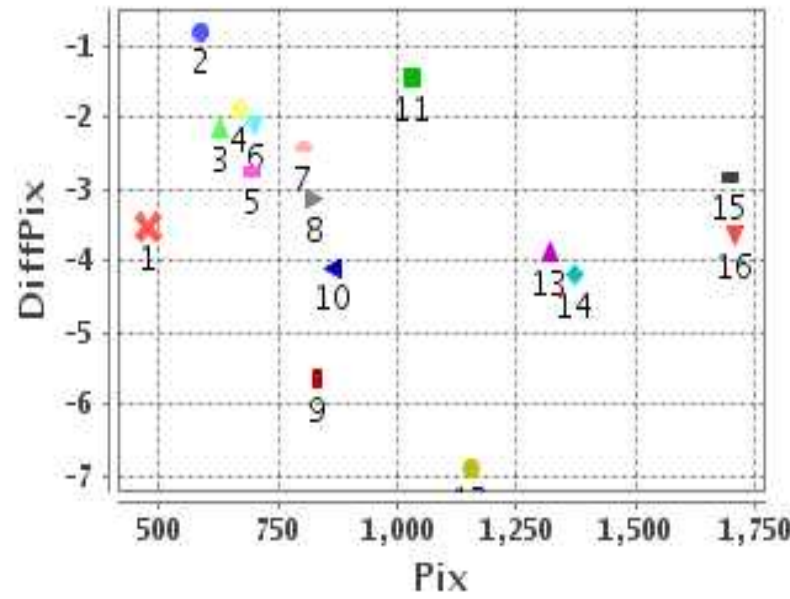
Radial Error (Km)

Mean	3.334
Min	1.245
Max	6.532
CE90	4.500

Error(Pixels) Vs. GCPPix



Error(Pixels) Vs. GCPPix



Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	0.126	1.067	1.074	N	0.976	1.115
Across (Km)	-3.115	1.447	3.435	W	3.074	3.561

Block-Wise Geo location Error Statistics

Location Accuracy,Scale,ID

Scan Range-0-937; Pix Range-0-934		
Number of GCPs	6	
Location Error(Km)		
Along(Mean,Dir)	-0.43666699	S
Across(Mean,Dir)	-13.61	W
Scale(Km)		
Average Scale (Mean,%Variation)	5.23	30.67
Internal Distortion(Pixel)		
Along(Mean,Stddev)	1.15	0.33
Across(Mean,Stddev)	1.60	1.27

Scan Range-0-937; Pix Range-934-1869		
Number of GCPs	2	
Location Error(Km)		
Along(Mean,Dir)	1.185	N
Across(Mean,Dir)	-10.38	W
Scale(Km)		
Average Scale (Mean,%Variation)	4.27	6.83
Internal Distortion(Pixel)		
Along(Mean,Stddev)	0.34	0.00
Across(Mean,Stddev)	2.17	0.00

Scan Range-0-937; 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

Scan Range-937-1876; Pix Range-0-934		
Number of GCPs	3	
Location Error(Km)		
Along(Mean,Dir)	-4.28	S
Across(Mean,Dir)	-10.69	W
Scale(Km)		
Average Scale (Mean,%Variation)	4.44	11.08
Internal Distortion(Pixel)		
Along(Mean,Stddev)	0.20	0.18
Across(Mean,Stddev)	-1.76	0.98

Scan Range-937-1876; Pix Range-934-1869		
Number of GCPs	3	
Location Error(Km)		
Along(Mean,Dir)	6.716	N
Across(Mean,Dir)	-13.32	W
Scale(Km)		
Average Scale (Mean,%Variation)	4.02	0.44
Internal Distortion(Pixel)		
Along(Mean,Stddev)	0.12	0.56
Across(Mean,Stddev)	-0.38	0.68

Scan Range-937-1876; 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

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