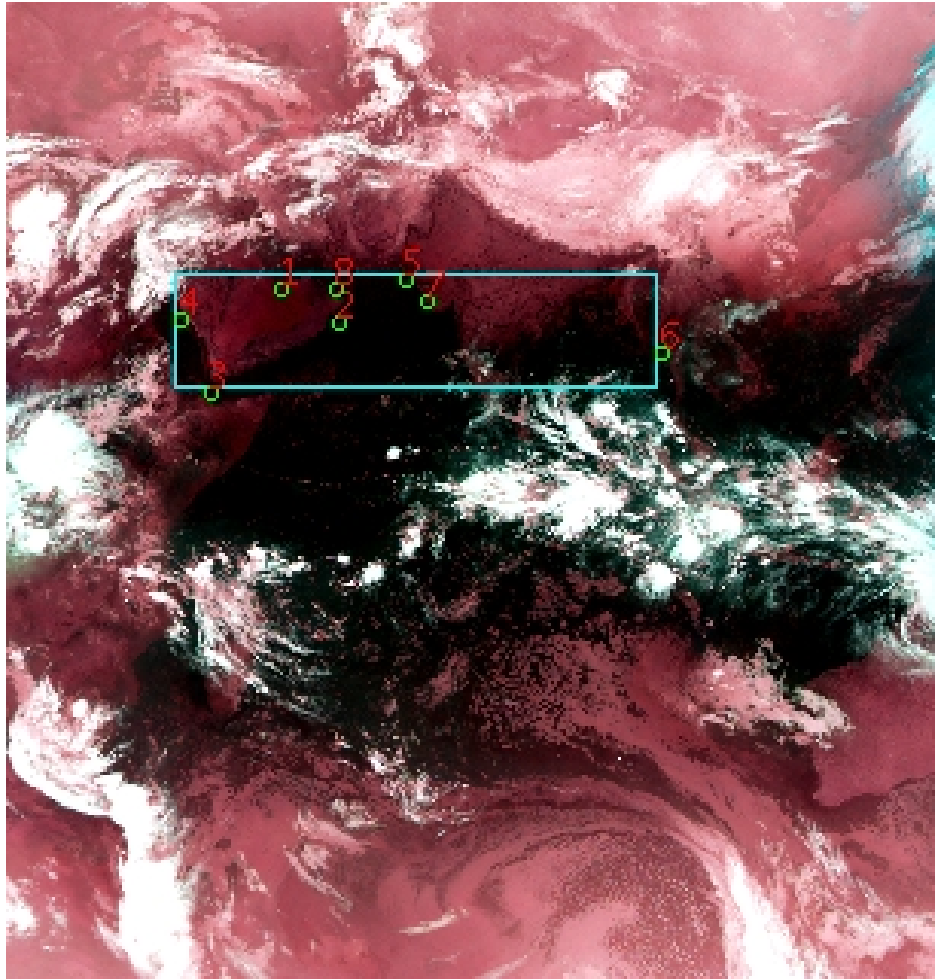


DQE Report: Location Accuracy of INSAT-3D-IMG SECTOR Product 3DIMG_10APR2017_2130_SGP

Satellite	INSAT-3D	No Of Bands	6	Product Type	SECTOR
Sensor	IMG	LvlOfProcess	L1C	Selected Band	2-TIR1
DOP/Time	10-04-17/21:30	Station ID	BES	Field View(deg)	0.0
Res(Y,X) [Km]	(4.0,4.0)	Res(Y,X) [uRad]	(112.0,112.0)		

(50.0N,20.0W)

(50.0N,130.0E)



(-50.0S,20.0W)

(-50.0S,130.0E)

GCP Distribution overview for 3DIMG10APR20172130L1CSGP

Image Width: 3062 **Image Height:** 3207 **No Of GCPs:** 8

GCP Coverage(%) 11.76 **(N-S)** 51.69 **(E-W)**

Location Error(E)

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

Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	-1.485	S	0.716	1.648
Across	-1.121	W	1.762	2.089

Scale (Km)

	Pixel Size	Stddev	%variation
Average	3.996	0.014	0.091
Along	4.009	0.058	0.219
Across	3.996	0.022	0.106

Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	1.944	1.165	0.64	1.328
Across	5.507	2.371	1.68	2.906

Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.01350	0.01113	-0.03811

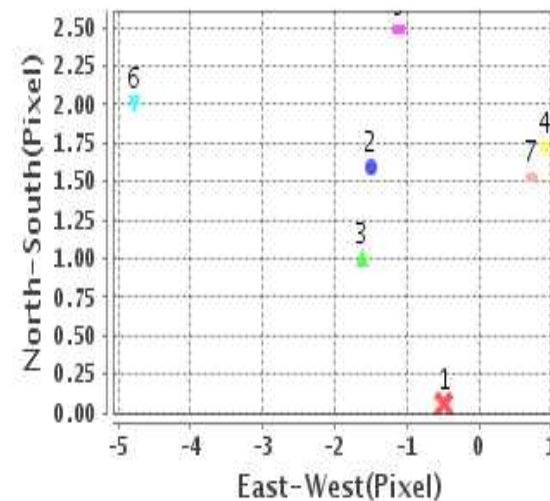
Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

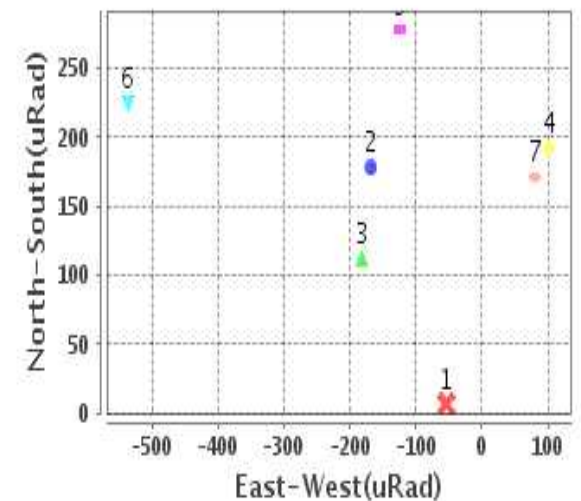
Radial Error (in IR Pixels)

Mean	2.302
Min	.486
Max	5.186
CE90	2.719

Location Error For GCPs(Pixel)



Location Error For GCPs(uRad)



Detailed Product Information

Ancillary Info

Satellite	INSAT-3D	Generation Date	11-04-17
Sensor	IMG	DQE Date	12-04-2017
PassType	NONE	Aquisition Date	10-04-17
Imaging Mode	NONE	Aquisition Time(GMT)	21:30
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	SECTOR	Predicted Center Lat(deg)	-999.99
DP JobId	3DIMG_10APR20	Predicted Center Lon(deg)	-999.99
ProductCode	NONE		
Field View(deg)	0.0		

Projection Parameters

Projection	MER
Ellipsoid	WGS_84
Datum	WGS_84
Zone	NotAvail
Semi_Major_Axis(Km)	6378.14
Semi_Minor_Axis(Km)	6356.75
Standard_Parallel1(deg)	0.0
Standard_Parallel2(deg)	-999.0
Projection_Origin_Lon(deg)	75.0
Projection_Origin_Lat(deg)	0.0
Projection_False_Easting(Km)	0.0
Projection_False_Northing(Km)	0.0

Scene Center Desc

Centre Lat(deg)	0.0
Center Lon(deg)	75.0
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)	50.0
NW_Lon(deg)	20.0
SW_Lat(deg)	-50.0
SW_Lon(deg)	20.0
NE_Lat(deg)	50.0
NE_Lon(deg)	130.0
SE_Lat(deg)	-50.0
SE_Lon(deg)	130.0

Band Wise Details

	Res_AL(Km)	Res_AX(Km)	Image Height	Image Width
MIR	4.0	4.0	3207	3062
SWIR	4.0	4.0	3207	3062
TIR1	4.0	4.0	3207	3062
TIR2	4.0	4.0	3207	3062
VIS	4.0	4.0	3207	3062
WV	4.0	4.0	3207	3062

GDQE Computation Base

Projection	MER	Wildpoint Rejection Threshold	2.60	SemiMajorAxis(m)	6378137.00	Mode Of Computation	corner
Ellipsoid	WGS_84		-sigma	SemiMinorAxis(m)	6356752.31	Used Reference Type	REFINSREF
Datum	WGS_84	Unit	pixels	Standardparallel1(deg)	0.0		
Zone	Not Applicable			Standardparallel2(deg)	-999.0		

* -999.99 : Not Applicable/Not Available

References

JobId : 3DIMG10APR20172130L1CSGP

(-999.99 - Not Available/Not Computed)

Ref.No	Source	File Name	Resolution (m)	Projection
1	ETM	world_Band1.img	500.0	GCP

Location Accuracy

GCP Distribution Statistics

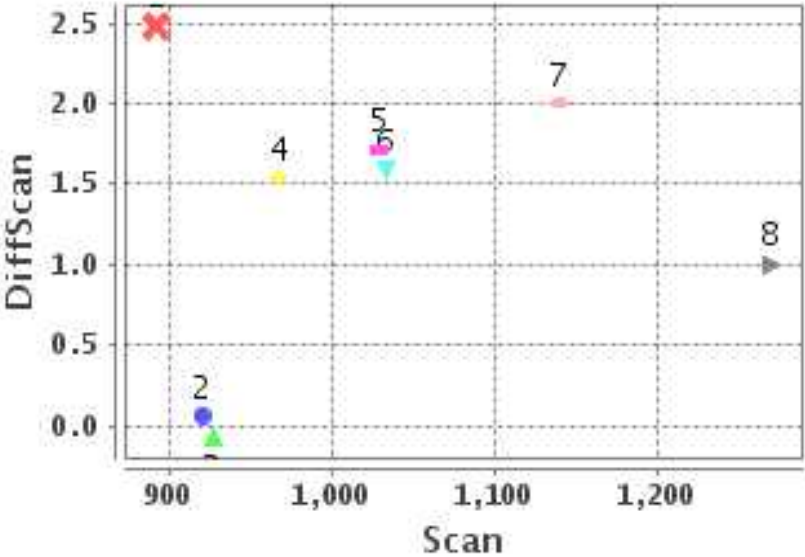
Image Width (pixels) : 3062 Image Height (pixels) : 3207 No of GCPs : 8

	Mean	StdDev	Min	Max	Coverage(in %)
GCP Scan	1022.4	119.6	892.2	1269.50	11.76 (N-S)
GCP Pix	1127.2	463.8	551.2	2134.00	51.69 (E-W)

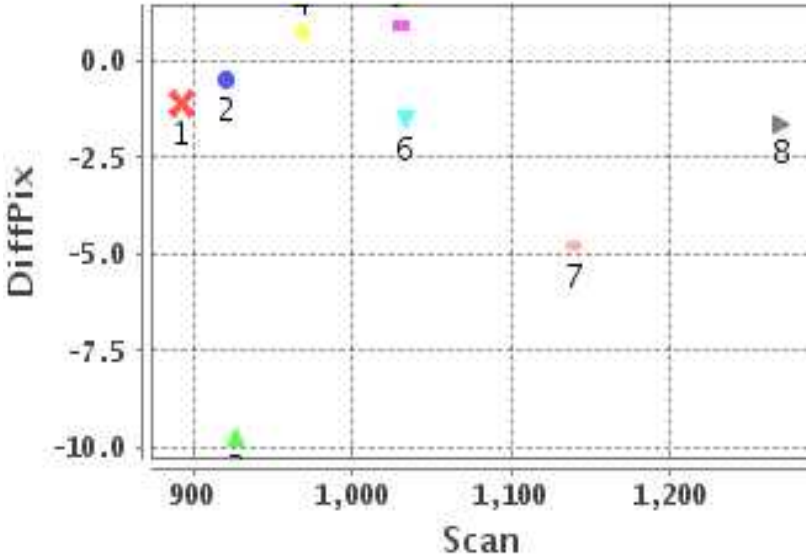
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	920.5	885.5	0.1	-0.48	0.248	S	1.927	W	Accepted
2	1033.2	1075.8	1.6	-1.50	6.354	S	5.987	W	Accepted
3	1269.5	651.5	1.0	-1.62	4.016	S	6.482	W	Accepted
4	1029.5	551.2	1.7	0.91	6.861	S	3.646	E	Accepted
5	892.2	1298.5	2.5	-1.11	9.935	S	4.422	W	Accepted
6	1139.5	2134.0	2.0	-4.78	8.024	S	19.129	W	Accepted
7	967.8	1360.2	1.5	0.73	6.129	S	2.901	E	Accepted
8	927.0	1060.5	-0.1	-9.72	0.284	N	38.883	W	Rejected

Error(Pixels) Vs. GCPScan



Error(Pixels) Vs. GCPScan



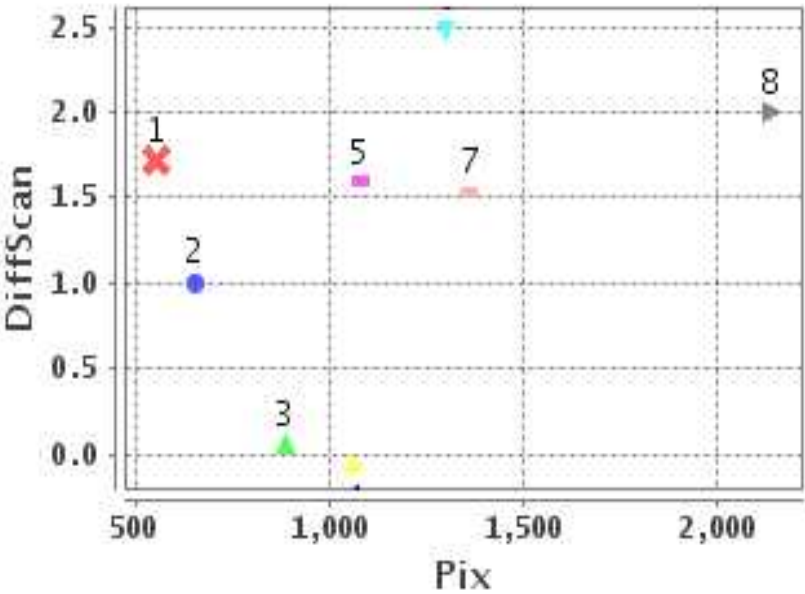
Number Of Points

North	0
South	7
East	2
West	5

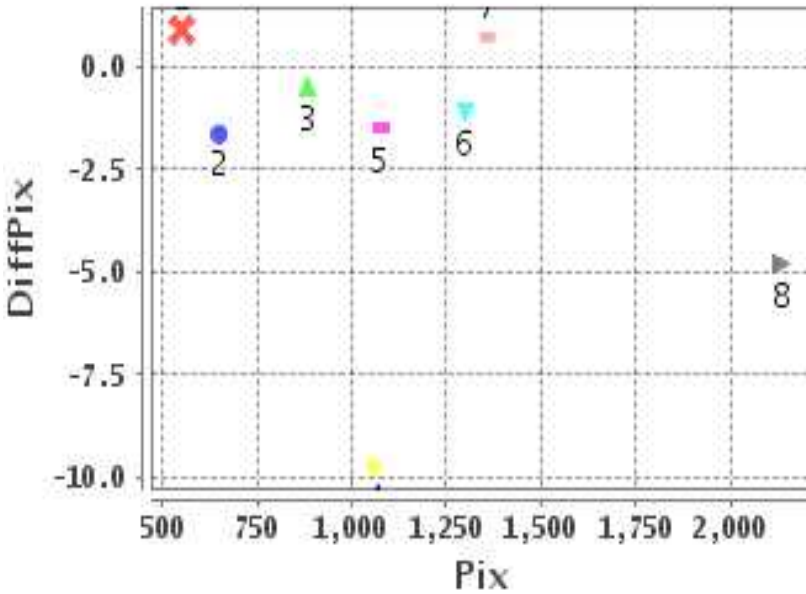
Radial Error (Km)

Mean	2.302
Min	.486
Max	5.186
CE90	2.719

Error(Pixels) Vs. GCPPix



Error(Pixels) Vs. GCPPix



Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	-1.485	0.716	1.648	S	1.463	1.780
Across (Km)	-1.121	1.762	2.089	W	1.131	2.248

Block-Wise Geo location Error Statistics

Location Accuracy,Scale,ID

Scan Range-0-1068; Pix Range-0-1019				
Number of GCPs	2			
Location Error(Km)				
Along(Mean,Dir)	-3.555	S		
Across(Mean,Dir)	0.86	E		
Scale(Km)				
Average Scale (Mean,%Variation)	3.99	0.22		
Internal Distortion(Pixel)				
Along(Mean,Stddev)	-1.65	0.00		
Across(Mean,Stddev)	1.39	0.00		

Scan Range-0-1068; Pix Range-1019-2040				
Number of GCPs	3			
Location Error(Km)				
Along(Mean,Dir)	-7.47333	S		
Across(Mean,Dir)	-2.50	W		
Scale(Km)				
Average Scale (Mean,%Variation)	4.02	0.40		
Internal Distortion(Pixel)				
Along(Mean,Stddev)	0.92	0.03		
Across(Mean,Stddev)	-1.31	0.92		

Scan Range-0-1068; Pix Range-2040-3062				
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-1068-2137; Pix Range-0-1019				
Number of GCPs	1			
Location Error(Km)				
Along(Mean,Dir)	-4.02	S		
Across(Mean,Dir)	-6.48	W		
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-1068-2137; Pix Range-1019-2040				
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-1068-2137; Pix Range-2040-3062				
Number of GCPs	1			
Location Error(Km)				
Along(Mean,Dir)	-8.02	S		
Across(Mean,Dir)	-19.13	W		
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-2137-3207; Pix Range-0-1019				
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-2137-3207; Pix Range-1068-2040				
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-2137-3207; Pix Range-2040-3062				
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