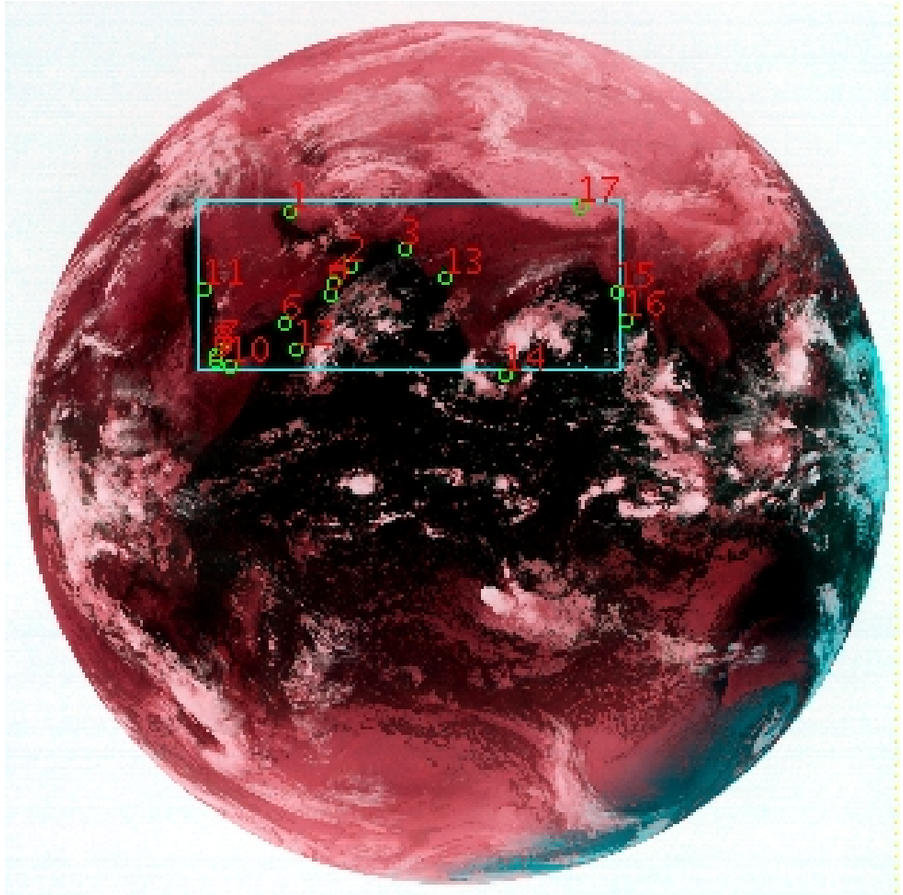
DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG_20NOV2018_2145

Satellite	INSAT-3DR	**No Of Bands**	6	**Product Type**	STANDARD
Sensor	IMG	**LvlOfProcess**	L1B	**Selected Band**	2-TIR1
DOP/Time	20-11-18/21:45	**Station ID**	BES	**Field View(deg)**	17.99
Res(Y,X) [Km]	(4.0,4.0)	**Res(Y,X) [uRad]**	(112.0,112.0)		

(81.187N,-7.163W) (81.187N,155.182E)



(-81.111S,-7.163W) (-81.111S,155.182E)

GCP Distribution overview for 3RIMG20NOV20182145L1BDQE

Image Width: 2805 **Image Height:** 2816 **No Of GCPs:** 17

GCP Coverage(%) 18.76 **(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	-3.866	S	0.975	3.987
Across	7.969	E	1.820	8.174

Radial Error (in IR Pixels)

Mean	8.920
Min	6.527
Max	14.378
CE90	10.011

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.393	0.299	9.814
Along	91.478	1405.720	2186.960
Across	32.406	452.536	710.145

Internal Distortion (in IR Pixels)

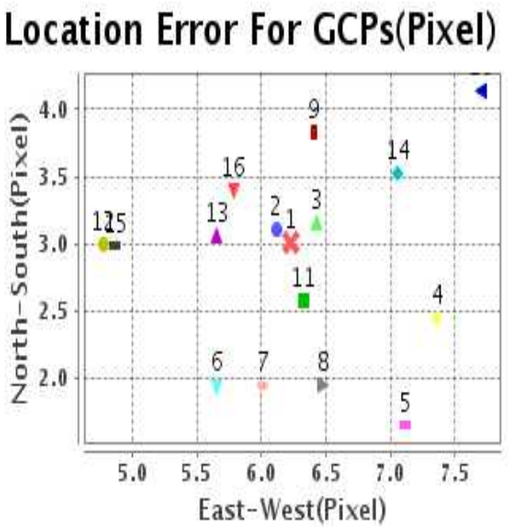
	PeakToPeak	Mean	Stddev	RMS
Along	2.498	0.582	0.71	0.915
Across	2.589	1.550	0.72	1.708

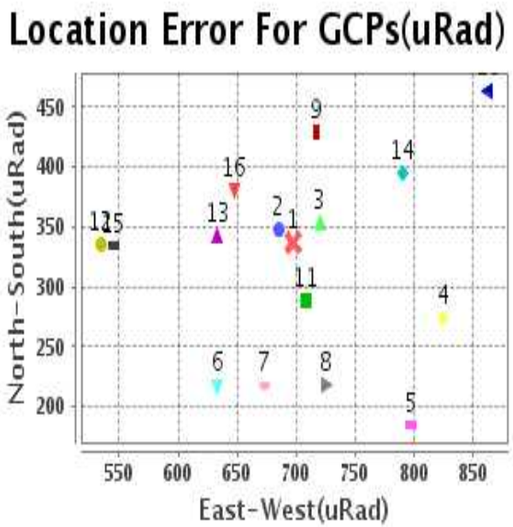
Attitude Residuals (Deg)

Pitch	Roll	Yaw
0.04545	0.02540	-0.02294

Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP





Detailed Product Information

Ancillary Info

Satellite	INSAT-3DR	Generation Date	21-11-18
Sensor	IMG	DQE Date	22-11-2018
PassType	NONE	Aquisition Date	20-11-18
Imaging Mode	FULL_FRAME	Aquisition Time(GMT)	21:45
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_20NOV2	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)	0.038
Center Lon(deg)	74.009
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)	81.187
NW_Lon(deg)	-7.163
SW_Lat(deg)	-81.111
SW_Lon(deg)	-7.163
NE_Lat(deg)	81.187
NE_Lon(deg)	155.182
SE_Lat(deg)	-81.111
SE_Lon(deg)	155.182

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 -sigma	SemiMajorAxis(m)	6378137.00	Mode Of Computation	grid
Ellipsoid	WGS_84			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 : **3RIMG20NOV20182145L1BDQE**

(-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 :** 17

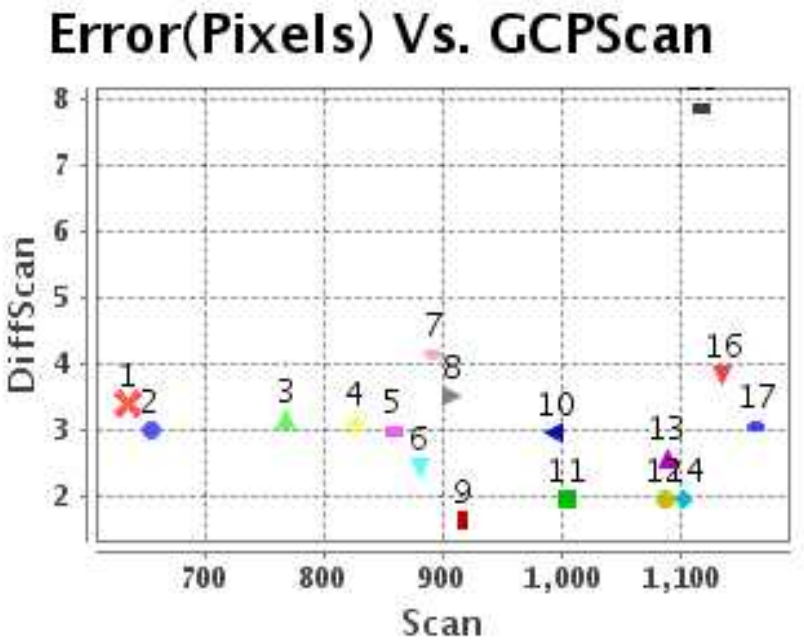
	Mean	StdDev	Min	Max	Coverage(in %)
GCP Scan	942.9	158.5	635.2	1163.50	18.76 (N-S)
GCP Pix	1101.9	439.5	611.8	1932.50	47.09 (E-W)

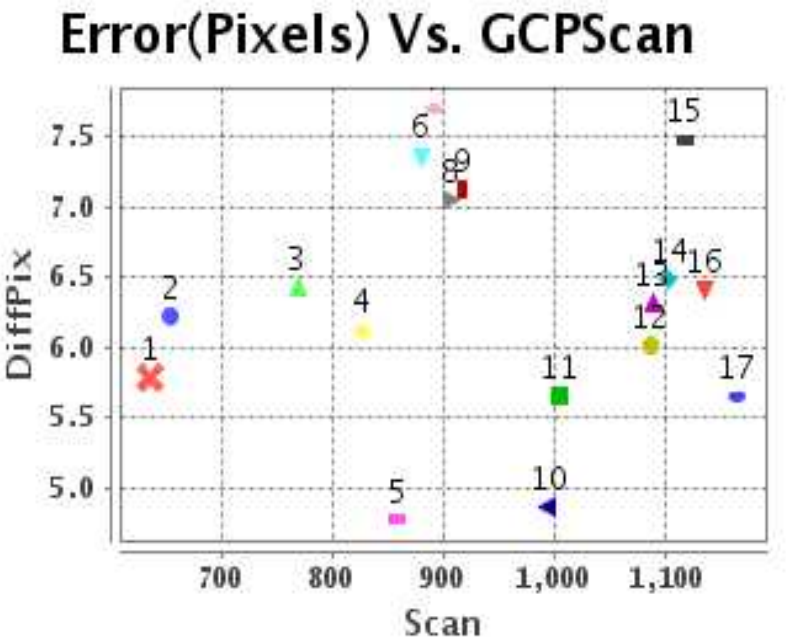
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	654.2	879.0	3.0	6.23	19.666	S	37.954	E	Accepted
2	826.2	1062.2	3.1	6.12	16.509	S	29.969	E	Accepted
3	768.5	1233.5	3.2	6.43	19.570	S	31.647	E	Accepted
4	880.0	1015.2	2.5	7.36	11.427	S	34.583	E	Accepted
5	916.5	1002.8	1.6	7.12	9.605	S	35.657	E	Accepted
6	1003.5	858.5	1.9	5.66	10.729	S	29.731	E	Accepted
7	1086.5	660.2	1.9	6.01	10.600	S	33.417	E	Accepted
8	1102.8	646.0	1.9	6.48	11.299	S	33.875	E	Accepted
9	1117.5	646.5	7.9	7.48	35.195	S	44.253	E	Rejected
10	1134.8	684.2	3.8	6.40	19.734	S	34.843	E	Accepted
11	892.2	611.8	4.1	7.70	22.103	S	53.094	E	Accepted
12	1088.5	895.8	2.6	6.32	12.758	S	32.252	E	Accepted
13	858.5	1364.2	3.0	4.77	15.881	S	20.721	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	1163.5	1548.5	3.1	5.65	13.898	S	23.461	E	Accepted
15	906.8	1903.0	3.5	7.06	18.052	S	29.588	E	Accepted
16	993.8	1932.5	3.0	4.87	16.393	S	22.471	E	Accepted
17	635.2	1788.5	3.4	5.78	19.182	S	26.742	E	Accepted



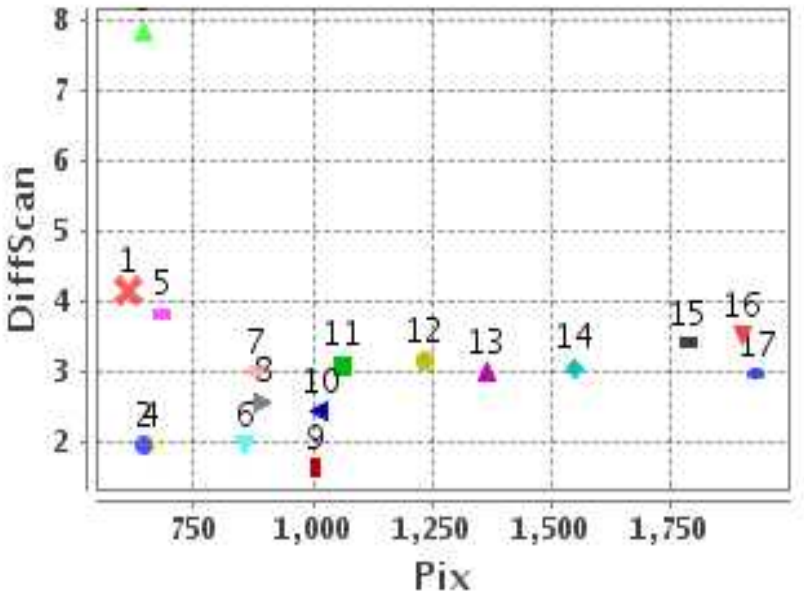


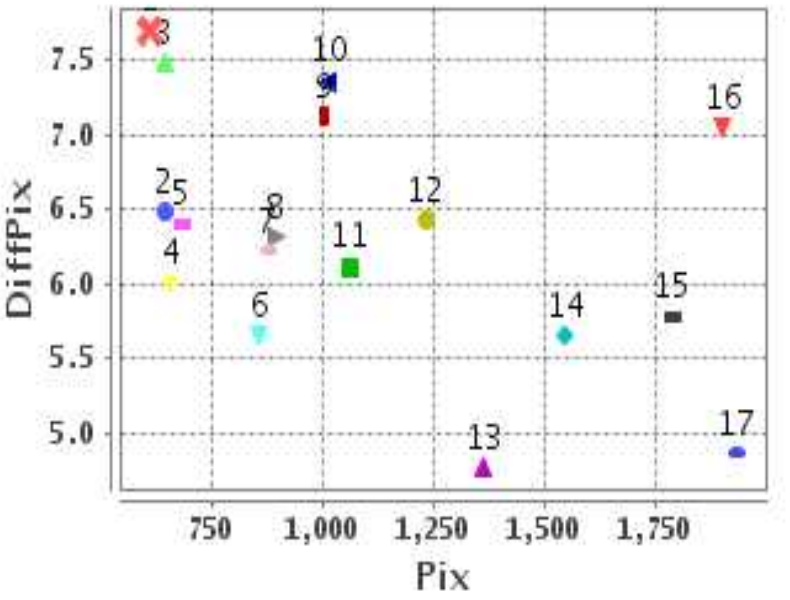
Number Of Points

North	0
South	16
East	16
West	0

Radial Error (Km

Mean	8.920
Min	6.527
Max	14.378
CE90	10.011





Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	-3.866	0.975	3.987	S	3.862	4.071
Across (Km)	7.969	1.820	8.174	E	7.715	8.335

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)	-20.89	S
Across(Mean,Dir)	45.52	E
Scale(Km)		
Average Scale (Mean,%Variation)	4.44	11.02
Internal Distortion(Pixel)		
Along(Mean,Stddev)	-1.14	0.00
Across(Mean,Stddev)	1.47	0.00

Scan Range-0-937; Pix Range-934-1869

Number of GCPs	6	
Location Error(Km)		
Along(Mean,Dir)	-15.3632999	S
Across(Mean,Dir)	29.89	E
Scale(Km)		
Average Scale (Mean,%Variation)	4.35	8.87
Internal Distortion(Pixel)		
Along(Mean,Stddev)	0.73	0.57
Across(Mean,Stddev)	1.03	0.84

Scan Range-0-937; Pix Range-1869-2805

Number of GCPs	1	
Location Error(Km)		
Along(Mean,Dir)	-18.06	S
Across(Mean,Dir)	29.59	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	5	
Location Error(Km)		
Along(Mean,Dir)	-13.022	S
Across(Mean,Dir)	32.83	E
Scale(Km)		
Average Scale (Mean,%Variation)	4.49	12.36
Internal Distortion(Pixel)		
Along(Mean,Stddev)	-0.64	0.77
Across(Mean,Stddev)	0.38	0.29

Scan Range-937-1876; Pix Range-934-1869

Number of GCPs	1	
Location Error(Km)		
Along(Mean,Dir)	-13.89	S
Across(Mean,Dir)	23.46	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-1869-2805

Number of GCPs	1	
Location Error(Km)		
Along(Mean,Dir)	-16.39	S
Across(Mean,Dir)	22.47	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