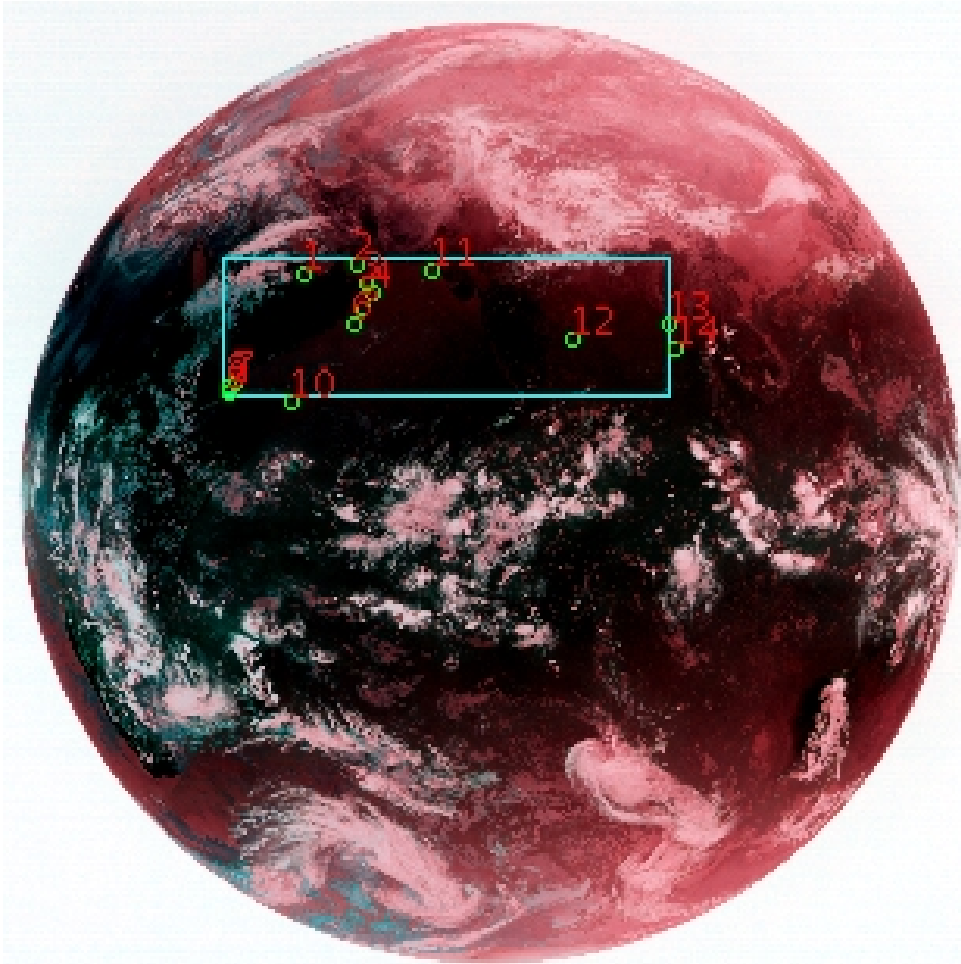


DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG_14FEB2019_1215

Satellite	INSAT-3DR	No Of Bands	6	Product Type	STANDARD
Sensor	IMG	LvlOfProcess	L1B	Selected Band	2-TIR1
DOP/Time	14-02-19/24:15	Station ID	BES	Field View(deg)	18.006
Res(Y,X) [Km]	(4.0,4.0)	Res(Y,X) [uRad]	(112.0,112.0)		

(80.909N,-7.144W)

(80.909N,155.216E)



(-80.825S,-7.144W)

(-80.825S,155.216E)

GCP Distribution overview for 3RIMG14FEB20191215L1BDQE

Image Width: 2805 Image Height: 2816 No Of GCPs: 14

GCP Coverage(%) 13.92 (N-S) 45.85 (E-W)

Location Error(E)

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

Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	-0.830	S	1.342	1.578
Across	9.032	E	1.677	9.186

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.347	0.276	8.664
Along	4.701	1.517	17.520
Across	4.497	0.632	12.436

Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	4.168	0.849	1.06	1.359
Across	4.423	0.660	1.25	1.415

Attitude Residuals (Deg)

Pitch	Roll	Yaw
0.05373	0.00439	0.02727

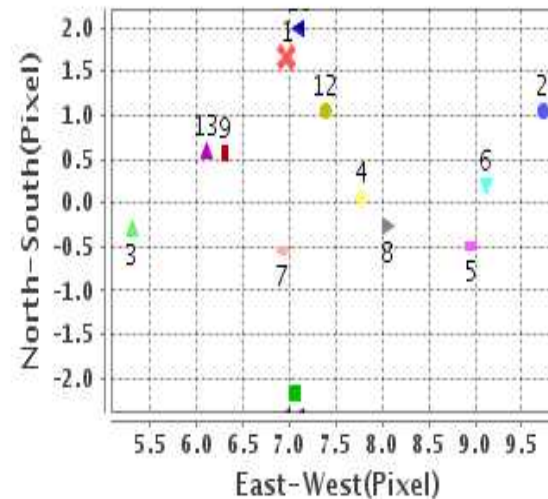
Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

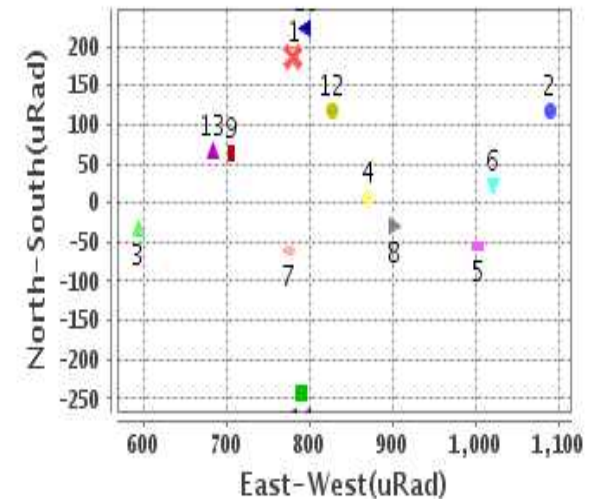
Radial Error (in IR Pixels)

Mean	9.164
Min	6.420
Max	12.905
CE90	10.419

Location Error For GCPs(Pixel)



Location Error For GCPs(uRad)



Detailed Product Information

Ancillary Info

Satellite	INSAT-3DR	Generation Date	14-02-19
Sensor	IMG	DQE Date	15-02-2019
PassType	NONE	Aquisition Date	14-02-19
Imaging Mode	FULL_FRAME	Aquisition Time(GMT)	24:15
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_14FEB20	Predicted Center Lon(deg)	-999.99
ProductCode	NONE		
Field View(deg)	18.006		

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)	0.042
Center Lon(deg)	74.036
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)	80.909
NW_Lon(deg)	-7.144
SW_Lat(deg)	-80.825
SW_Lon(deg)	-7.144
NE_Lat(deg)	80.909
NE_Lon(deg)	155.216
SE_Lat(deg)	-80.825
SE_Lon(deg)	155.216

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 : 3RIMG14FEB20191215L1BDQE

(-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 : 14

	Mean	StdDev	Min	Max	Coverage(in %)
GCP Scan	934.8	134.4	752.8	1144.75	13.92 (N-S)
GCP Pix	1097.0	415.2	636.0	1922.00	45.85 (E-W)

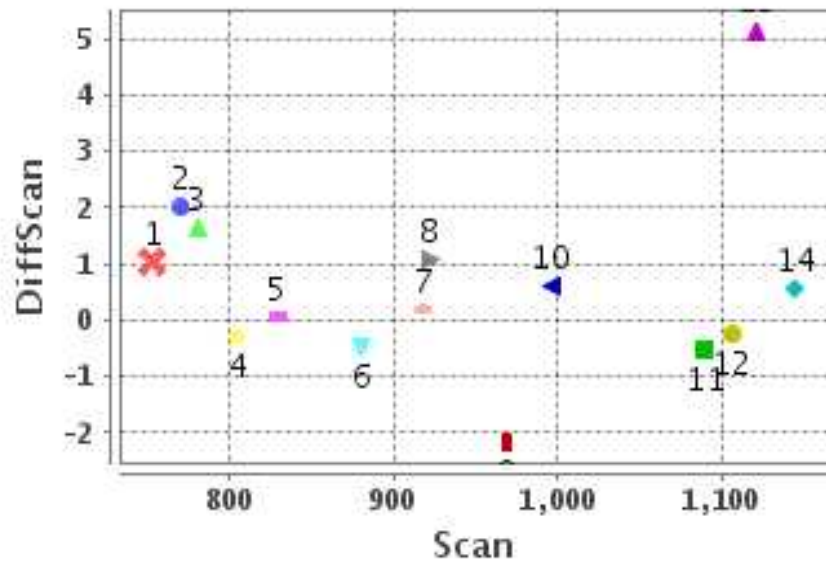
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	780.2	854.8	1.7	6.97	10.851	S	40.240	E	Accepted
2	752.8	1002.8	1.0	9.73	10.105	S	50.623	E	Accepted
3	804.5	1028.2	-0.3	5.30	1.174	S	25.654	E	Accepted
4	829.2	1051.2	0.0	7.77	1.361	S	35.914	E	Accepted
5	880.5	1023.2	-0.5	8.96	0.411	S	40.818	E	Accepted
6	918.2	991.5	0.2	9.11	3.120	S	42.046	E	Accepted
7	1090.2	650.8	-0.5	6.92	0.470	N	38.741	E	Accepted
8	1106.2	636.0	-0.3	8.05	0.255	S	40.708	E	Accepted
9	1121.8	636.2	5.2	9.17	25.479	S	50.642	E	Rejected
10	1144.8	814.5	0.6	6.30	5.237	S	30.863	E	Accepted
11	770.5	1223.5	2.0	7.10	12.561	S	34.220	E	Accepted
12	969.2	1622.2	-2.2	7.06	8.478	N	30.556	E	Accepted
13	922.2	1901.0	1.1	7.38	4.750	S	32.554	E	Accepted

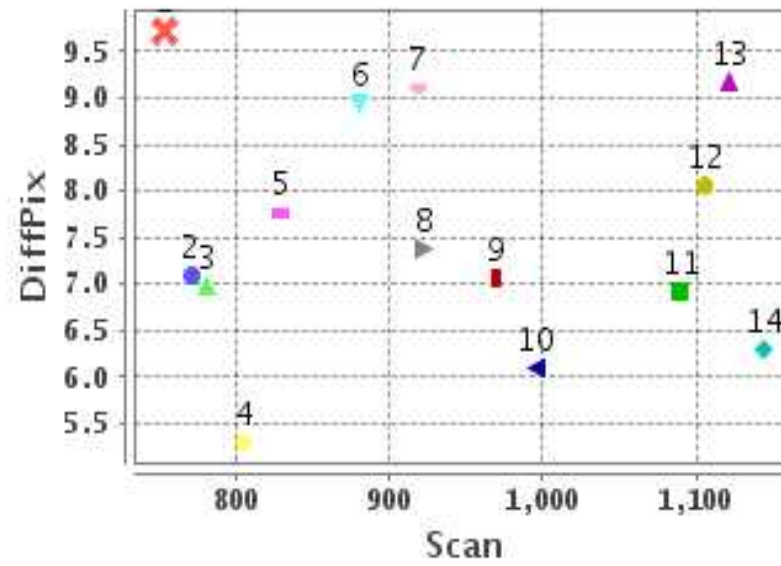
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
14	996.0	1922.0	0.6	6.10	2.304	S	26.730	E	Accepted

Error(Pixels) Vs. GCPScan



Error(Pixels) Vs. GCPScan



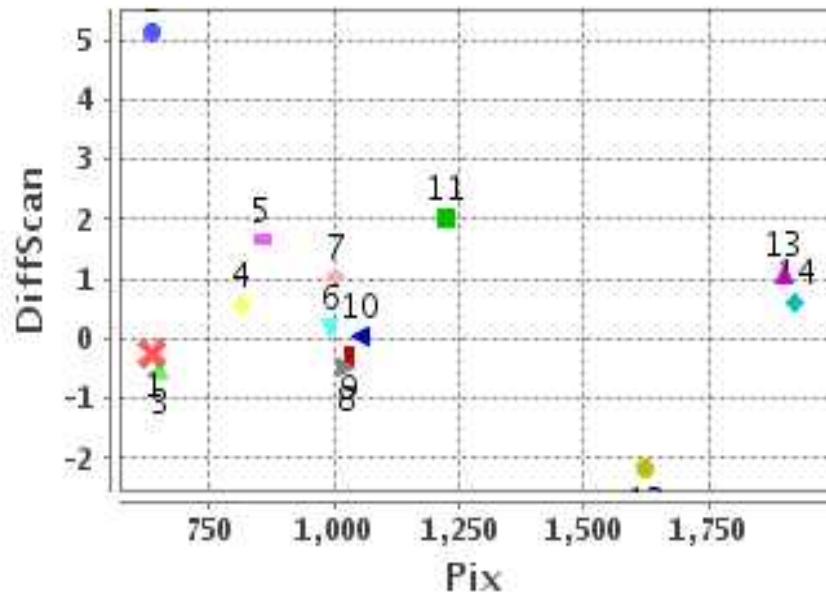
Number Of Points

North	2
South	11
East	13
West	0

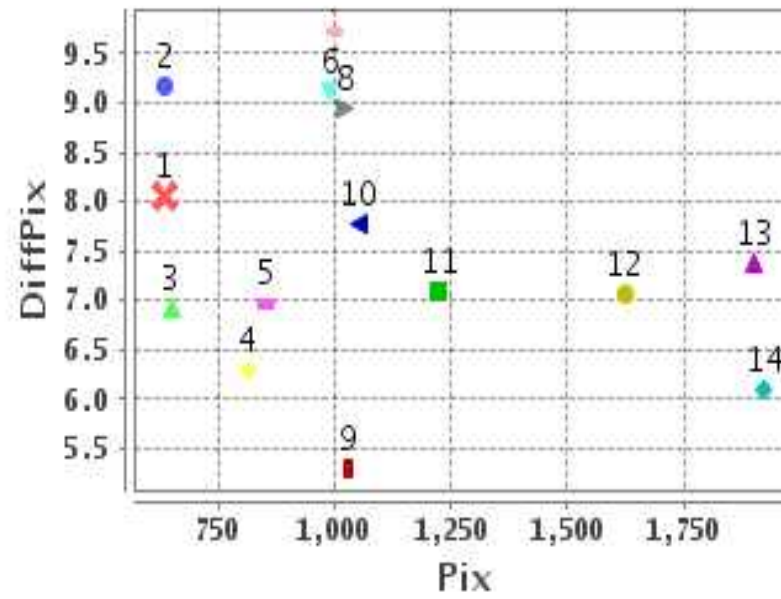
Radial Error (Km)

Mean	9.164
Min	6.420
Max	12.905
CE90	10.419

Error(Pixels) Vs. GCPPix



Error(Pixels) Vs. GCPPix



Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	-0.830	1.342	1.578	S	1.370	1.643
Across (Km)	9.032	1.677	9.186	E	8.836	9.381

Block-Wise Geo location Error Statistics

Location Accuracy,Scale,ID

Scan Range-0-937; Pix Range-0-934		
Number of GCPs	1	
Location Error(Km)		
Along(Mean,Dir)	-10.85	S
Across(Mean,Dir)	40.24	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-0-937; Pix Range-934-1869		
Number of GCPs	6	
Location Error(Km)		
Along(Mean,Dir)	-4.79167	S
Across(Mean,Dir)	38.21	E
Scale(Km)		
Average Scale (Mean,%Variation)	4.56	13.92
Internal Distortion(Pixel)		
Along(Mean,Stddev)	0.75	0.89
Across(Mean,Stddev)	1.34	1.54

Scan Range-0-937; Pix Range-1869-2805		
Number of GCPs	1	
Location Error(Km)		
Along(Mean,Dir)	-4.75	S
Across(Mean,Dir)	32.55	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	3	
Location Error(Km)		
Along(Mean,Dir)	-1.67333	S
Across(Mean,Dir)	36.77	E
Scale(Km)		
Average Scale (Mean,%Variation)	4.54	13.40
Internal Distortion(Pixel)		
Along(Mean,Stddev)	-0.69	0.41
Across(Mean,Stddev)	1.44	0.31

Scan Range-937-1876; Pix Range-934-1869		
Number of GCPs	1	
Location Error(Km)		
Along(Mean,Dir)	8.48	N
Across(Mean,Dir)	30.56	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)	-2.3	S
Across(Mean,Dir)	26.73	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