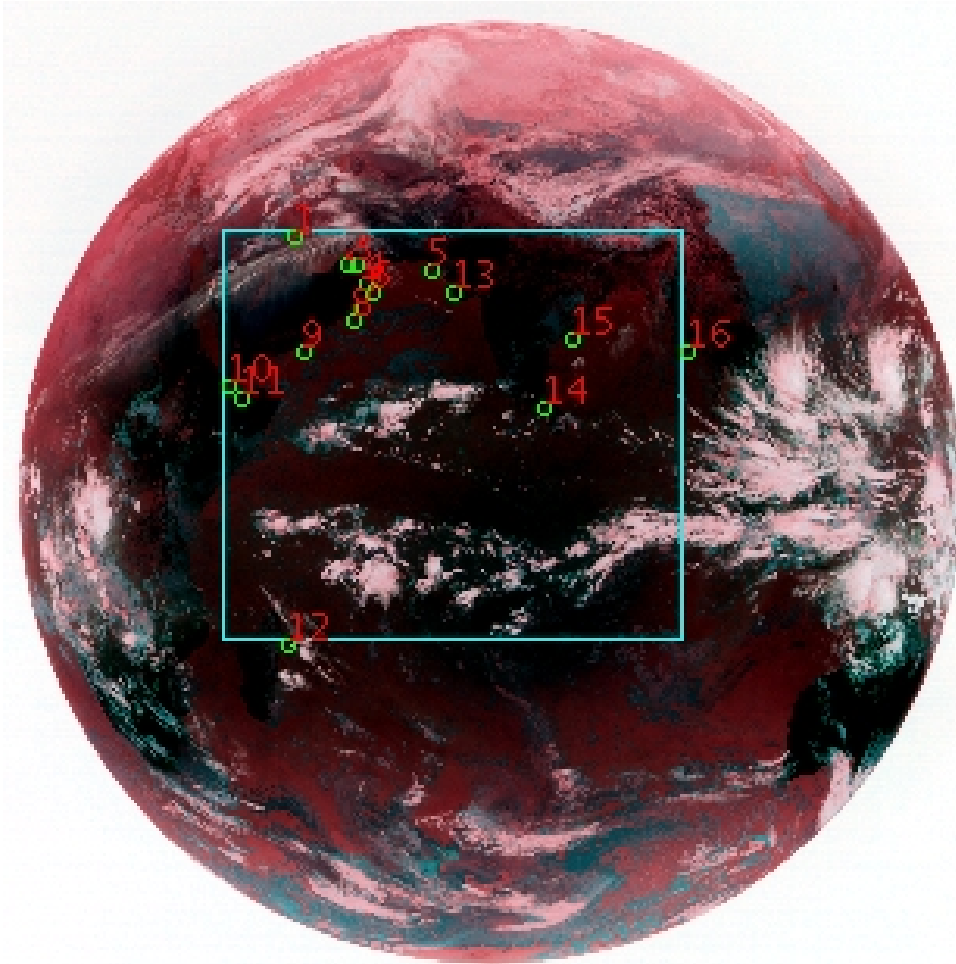


DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG_27DEC2018_0615

Satellite	INSAT-3DR	No Of Bands	6	Product Type	STANDARD
Sensor	IMG	LvlOfProcess	L1B	Selected Band	2-TIR1
DOP/Time	27-12-18/06:15	Station ID	BES	Field View(deg)	18.006
Res(Y,X) [Km]	(4.0,4.0)	Res(Y,X) [uRad]	(112.0,112.0)		

(81.055N,-7.124W)

(81.055N,155.101E)



(-81.106S,-7.124W)

(-81.106S,155.101E)

GCP Distribution overview for 3RIMG27DEC20180615L1BDQE

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

GCP Coverage(%) 41.94 (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	-3.155	S	1.100	3.342
Across	8.979	E	2.098	9.221

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.386	0.383	9.638
Along	4.672	1.441	16.796
Across	4.438	0.815	10.952

Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	3.355	0.202	1.01	1.031
Across	5.605	0.361	1.42	1.467

Attitude Residuals (Deg)

Pitch	Roll	Yaw
0.04735	0.01926	0.01973

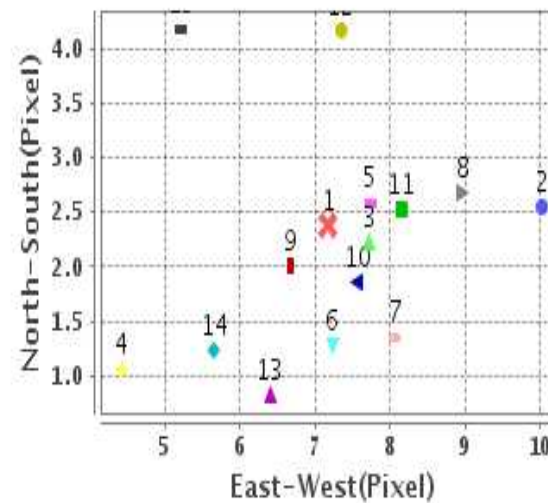
Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

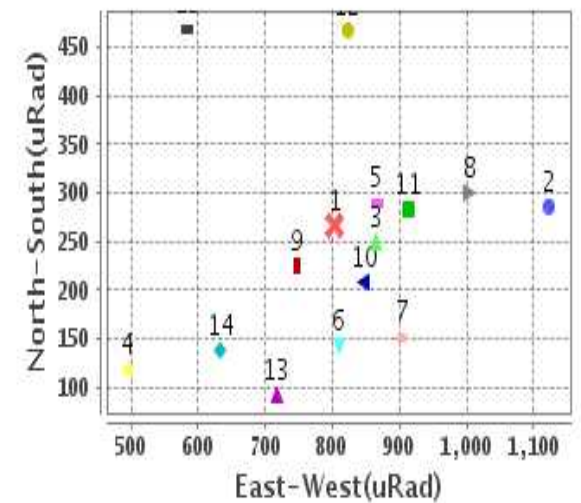
Radial Error (in IR Pixels)

Mean	9.570
Min	5.558
Max	13.256
CE90	11.214

Location Error For GCPs(Pixel)



Location Error For GCPs(uRad)



Detailed Product Information

Ancillary Info

Satellite	INSAT-3DR	Generation Date	27-12-18
Sensor	IMG	DQE Date	01-01-2019
PassType	NONE	Aquisition Date	27-12-18
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_27DEC20	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)	-0.025
Center Lon(deg)	73.988
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)	81.055
NW_Lon(deg)	-7.124
SW_Lat(deg)	-81.106
SW_Lon(deg)	-7.124
NE_Lat(deg)	81.055
NE_Lon(deg)	155.101
SE_Lat(deg)	-81.106
SE_Lon(deg)	155.101

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 : 3RIMG27DEC20180615L1BDQE

(-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	964.7	269.7	670.5	1851.50	41.94 (N-S)
GCP Pix	1092.8	346.6	635.8	1956.50	47.09 (E-W)

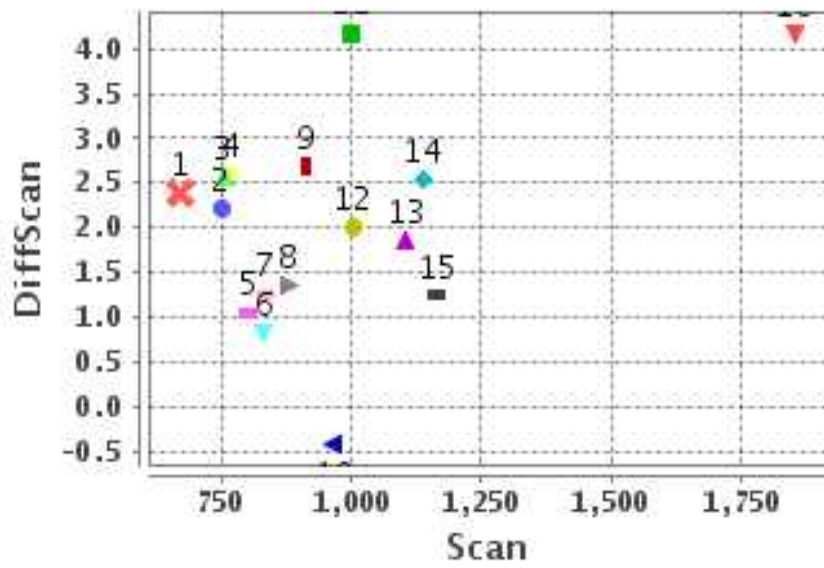
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	670.5	821.5	2.4	7.17	17.812	S	45.465	E	Accepted
2	754.8	979.0	2.6	10.03	18.663	S	49.629	E	Accepted
3	750.5	1004.8	2.2	7.72	15.501	S	41.039	E	Accepted
4	802.2	1029.2	1.1	4.42	6.038	S	21.394	E	Accepted
5	768.2	1223.8	2.6	7.73	14.411	S	37.637	E	Accepted
6	834.5	1051.8	1.3	7.23	9.227	S	36.003	E	Accepted
7	878.8	1024.5	1.4	8.07	9.689	S	38.467	E	Accepted
8	915.2	992.2	2.7	8.96	13.153	S	41.869	E	Accepted
9	1004.2	848.5	2.0	6.68	10.729	S	33.991	E	Accepted
10	1104.5	635.8	1.9	7.56	10.217	S	42.838	E	Accepted
11	1137.5	673.2	2.5	8.15	13.048	S	42.918	E	Accepted
12	1851.5	802.5	4.2	7.34	19.889	S	32.804	E	Accepted
13	832.8	1278.2	0.8	6.40	7.271	S	28.568	E	Accepted

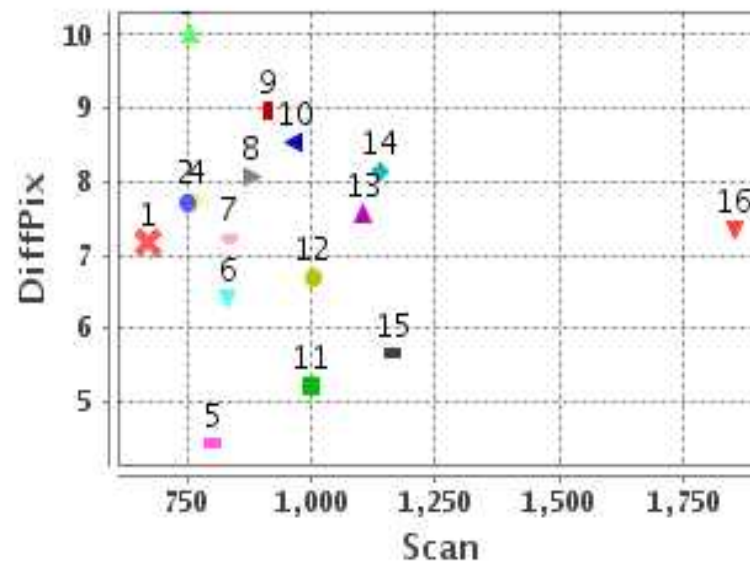
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
14	1164.5	1541.5	1.2	5.65	6.388	S	23.461	E	Accepted
15	966.2	1622.0	-0.4	8.54	0.733	N	34.861	E	Rejected
16	999.0	1956.5	4.2	5.22	17.286	S	22.658	E	Accepted

Error(Pixels) Vs. GCPScan



Error(Pixels) Vs. GCPScan



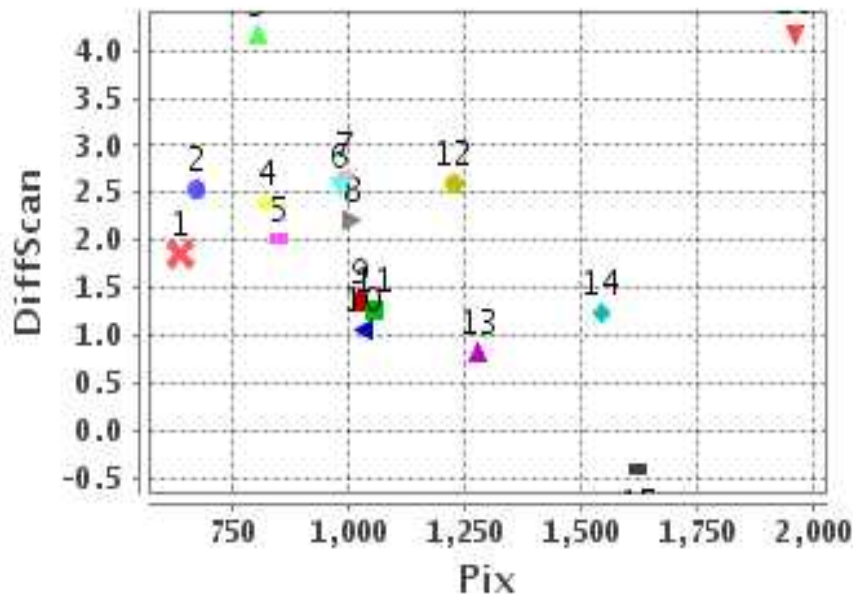
Number Of Points

North	0
South	15
East	15
West	0

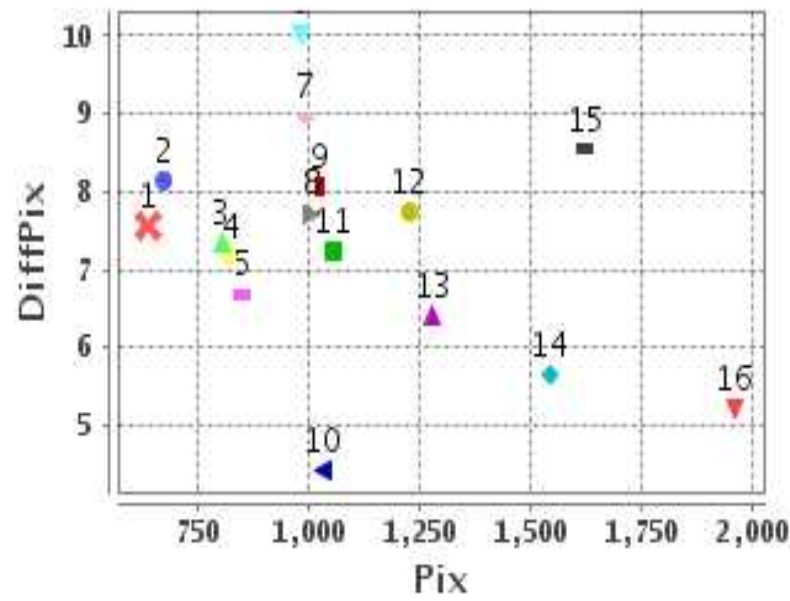
Radial Error (Km)

Mean	9.570
Min	5.558
Max	13.256
CE90	11.214

Error(Pixels) Vs. GCPPix



Error(Pixels) Vs. GCPPix



Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	-3.155	1.100	3.342	S	3.193	3.435
Across (Km)	8.979	2.098	9.221	E	8.950	9.437

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)	-17.81	S
Across(Mean,Dir)	45.46	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-0-937; Pix Range-934-1869		
Number of GCPs	8	
Location Error(Km)		
Along(Mean,Dir)	-11.7437999	S
Across(Mean,Dir)	36.83	E
Scale(Km)		
Average Scale (Mean,%Variation)	4.54	13.52
Internal Distortion(Pixel)		
Along(Mean,Stddev)	0.46	0.75
Across(Mean,Stddev)	2.81	1.35

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	4	
Location Error(Km)		
Along(Mean,Dir)	-13.4725	S
Across(Mean,Dir)	38.14	E
Scale(Km)		
Average Scale (Mean,%Variation)	4.25	6.28
Internal Distortion(Pixel)		
Along(Mean,Stddev)	-0.85	0.97
Across(Mean,Stddev)	0.17	0.60

Scan Range-937-1876; Pix Range-934-1869		
Number of GCPs	1	
Location Error(Km)		
Along(Mean,Dir)	-6.38	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)	-17.28	S
Across(Mean,Dir)	22.66	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