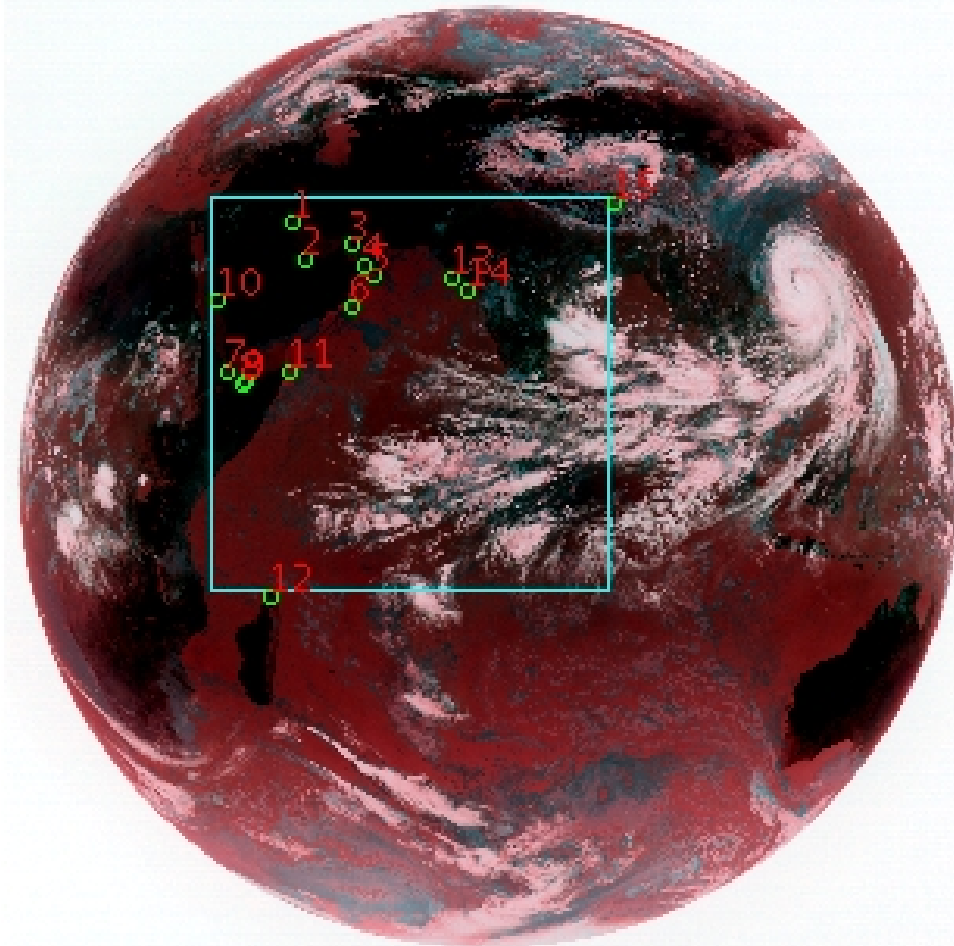


DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG_16SEP2018_0615

Satellite INSAT-3DR **No Of Bands** 6 **Product Type** STANDARD
Sensor IMG **LvlOfProcess** L1B **Selected Band** 2-TIR1
DOP/Time 16-09-18/06:15 **Station ID** BES **Field View(deg)** 18.006
Res(Y,X) [Km] (4.0,4.0) **Res(Y,X) [uRad]** (112.0,112.0)

(81.109N,-7.3W)

(81.109N,154.984E)



(-80.796S,-7.3W)

(-80.796S,154.984E)

GCP Distribution overview for 3RIMG16SEP20180615L1BDQE

Image Width: 2805 **Image Height:** 2816 **No Of GCPs:** 15

GCP Coverage(%) 40.48 **(N-S)** 40.68 **(E-W)**

Location Error(E)

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

Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	10.620	N	1.200	10.688
Across	-27.618	W	2.325	27.716

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.464	0.305	11.594
Along	6.898	22.328	72.461
Across	4.914	3.026	22.854

Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	2.494	0.571	0.63	0.850
Across	2.619	1.128	0.80	1.385

Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.16541	-0.06966	0.04058

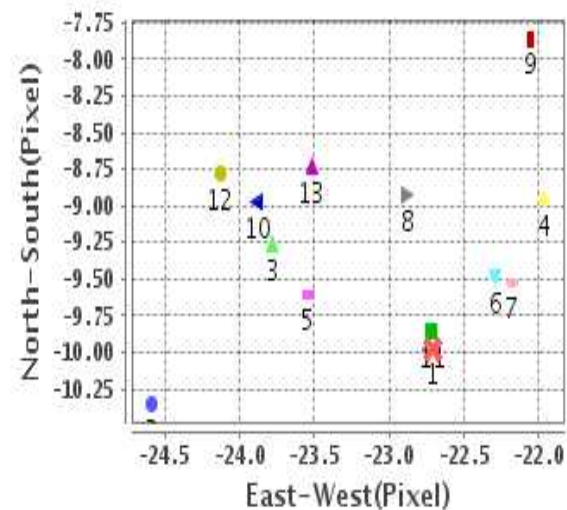
Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

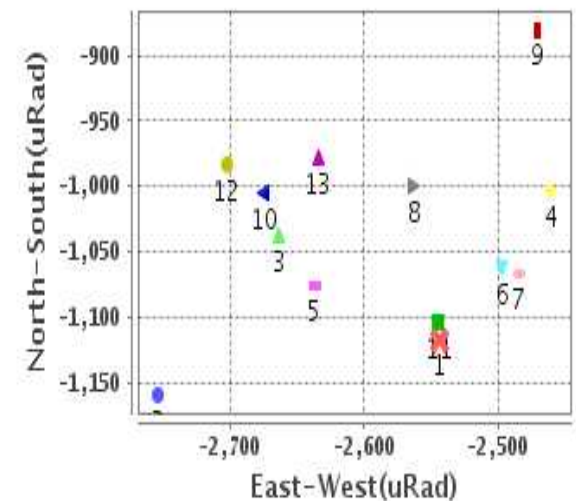
Radial Error (in IR Pixels)

Mean	29.612
Min	26.746
Max	34.374
CE90	32.490

Location Error For GCPs(Pixel)



Location Error For GCPs(uRad)



Detailed Product Information

Ancillary Info

Satellite	INSAT-3DR	Generation Date	16-09-18
Sensor	IMG	DQE Date	19-09-2018
PassType	NONE	Aquisition Date	16-09-18
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_16SEP20	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)	0.156
Center Lon(deg)	73.842
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)	81.109
NW_Lon(deg)	-7.3
SW_Lat(deg)	-80.796
SW_Lon(deg)	-7.3
NE_Lat(deg)	81.109
NE_Lon(deg)	154.984
SE_Lat(deg)	-80.796
SE_Lon(deg)	154.984

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 : 3RIMG16SEP20180615L1BDQE

(-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 : 15

	Mean	StdDev	Min	Max	Coverage(in %)
GCP Scan	916.0	269.4	587.5	1727.50	40.48 (N-S)
GCP Pix	952.8	299.5	605.0	1746.00	40.68 (E-W)

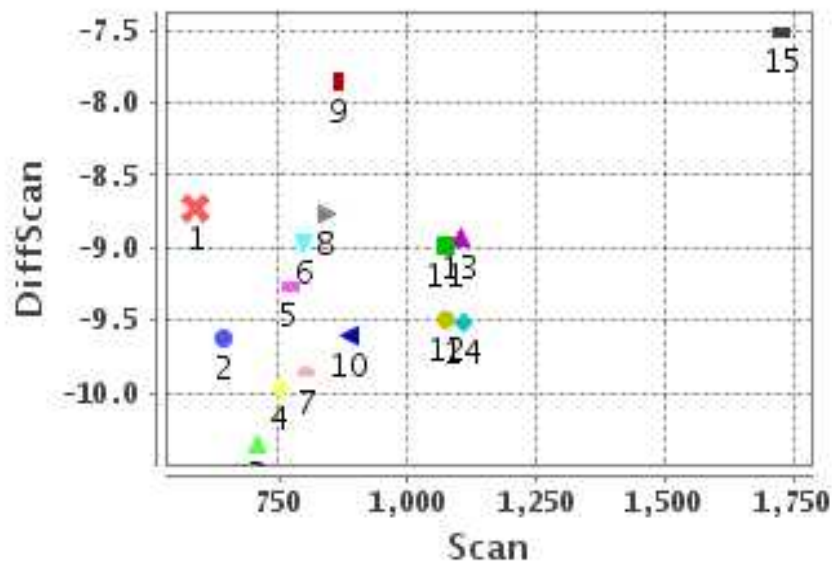
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	642.2	822.5	-9.6	-20.31	56.117	N	119.366	W	Rejected
2	750.5	858.0	-10.0	-22.71	49.945	N	119.978	W	Accepted
3	709.5	991.0	-10.4	-24.59	52.896	N	123.145	W	Accepted
4	772.2	1030.0	-9.3	-23.78	45.279	N	111.623	W	Accepted
5	798.0	1054.0	-9.0	-21.97	43.334	N	101.540	W	Accepted
6	887.5	997.5	-9.6	-23.54	41.841	N	104.061	W	Accepted
7	1074.2	638.5	-9.5	-22.29	39.961	N	113.075	W	Accepted
8	1108.2	676.5	-9.5	-22.18	38.831	N	107.226	W	Accepted
9	1102.0	688.8	-8.9	-22.88	37.379	N	109.192	W	Accepted
10	864.0	605.0	-7.9	-22.05	39.936	N	131.570	W	Accepted
11	1072.2	812.0	-9.0	-23.88	37.343	N	109.865	W	Accepted
12	1727.5	762.0	-7.5	-22.96	27.172	N	102.043	W	Rejected
13	804.2	1280.2	-9.9	-22.72	45.043	N	97.086	W	Accepted

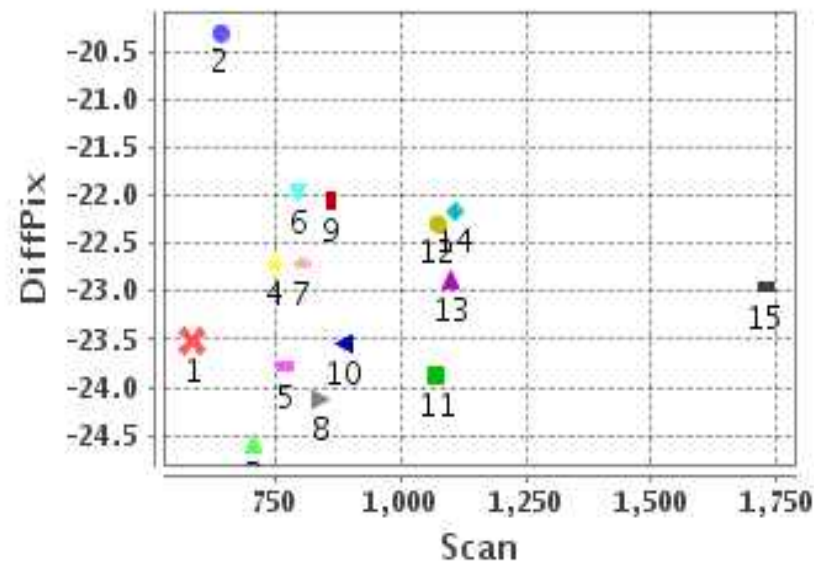
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
14	840.8	1329.2	-8.8	-24.13	36.284	N	100.643	W	Accepted
15	587.5	1746.0	-8.7	-23.52	44.179	N	107.123	W	Accepted

Error(Pixels) Vs. GCPScan



Error(Pixels) Vs. GCPScan



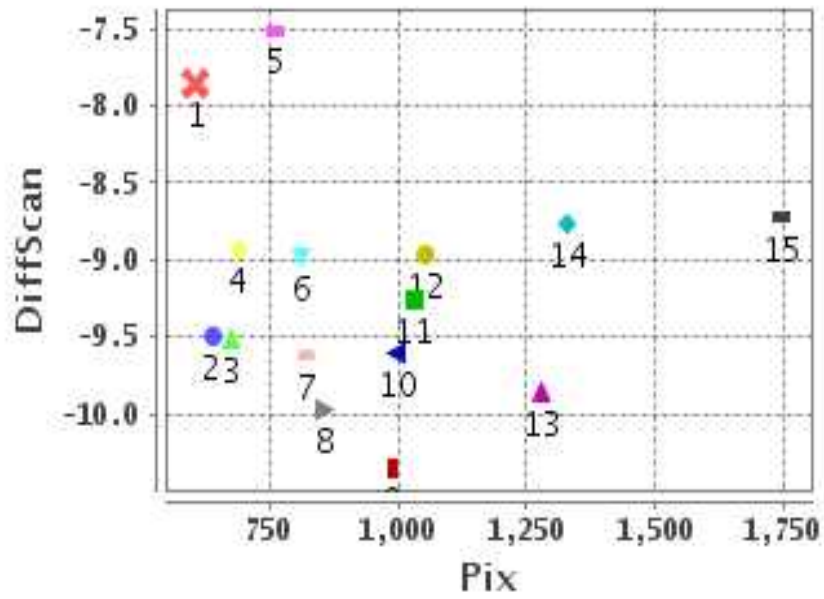
Number Of Points

North	13
South	0
East	0
West	13

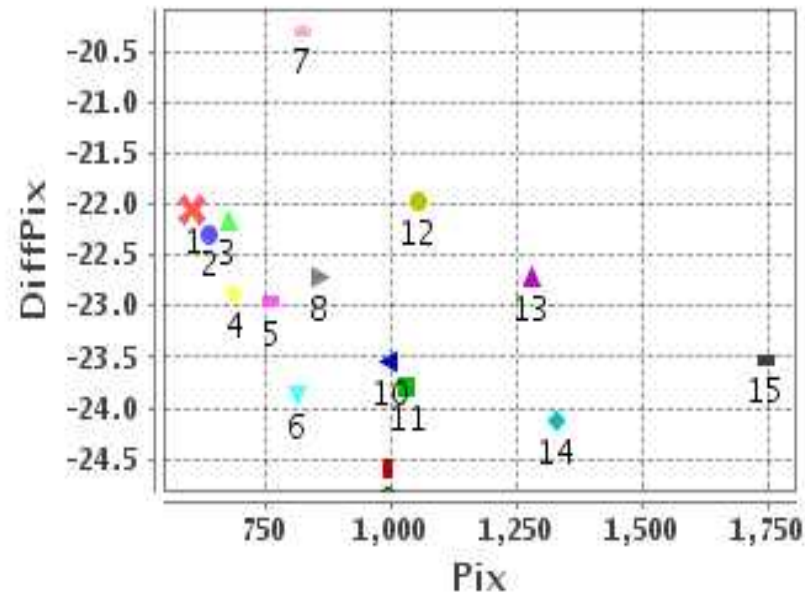
Radial Error (Km)

Mean	29.612
Min	26.746
Max	34.374
CE90	32.490

Error(Pixels) Vs. GCPPix



Error(Pixels) Vs. GCPPix



Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	10.620	1.200	10.688	N	10.449	10.812
Across (Km)	-27.618	2.325	27.716	W	27.240	27.984

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)	44.94	N
Across(Mean,Dir)	-125.78	W
Scale(Km)		
Average Scale (Mean,%Variation)	4.61	15.15
Internal Distortion(Pixel)		
Along(Mean,Stddev)	-2.12	0.00
Across(Mean,Stddev)	0.66	0.00

Scan Range-0-937; Pix Range-934-1869		
Number of GCPs	7	
Location Error(Km)		
Along(Mean,Dir)	44.12	N
Across(Mean,Dir)	-106.46	W
Scale(Km)		
Average Scale (Mean,%Variation)	4.60	15.01
Internal Distortion(Pixel)		
Along(Mean,Stddev)	0.74	0.54
Across(Mean,Stddev)	-1.31	0.72

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)	38.3775	N
Across(Mean,Dir)	-109.84	W
Scale(Km)		
Average Scale (Mean,%Variation)	4.59	14.68
Internal Distortion(Pixel)		
Along(Mean,Stddev)	0.33	0.27
Across(Mean,Stddev)	0.69	0.70

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