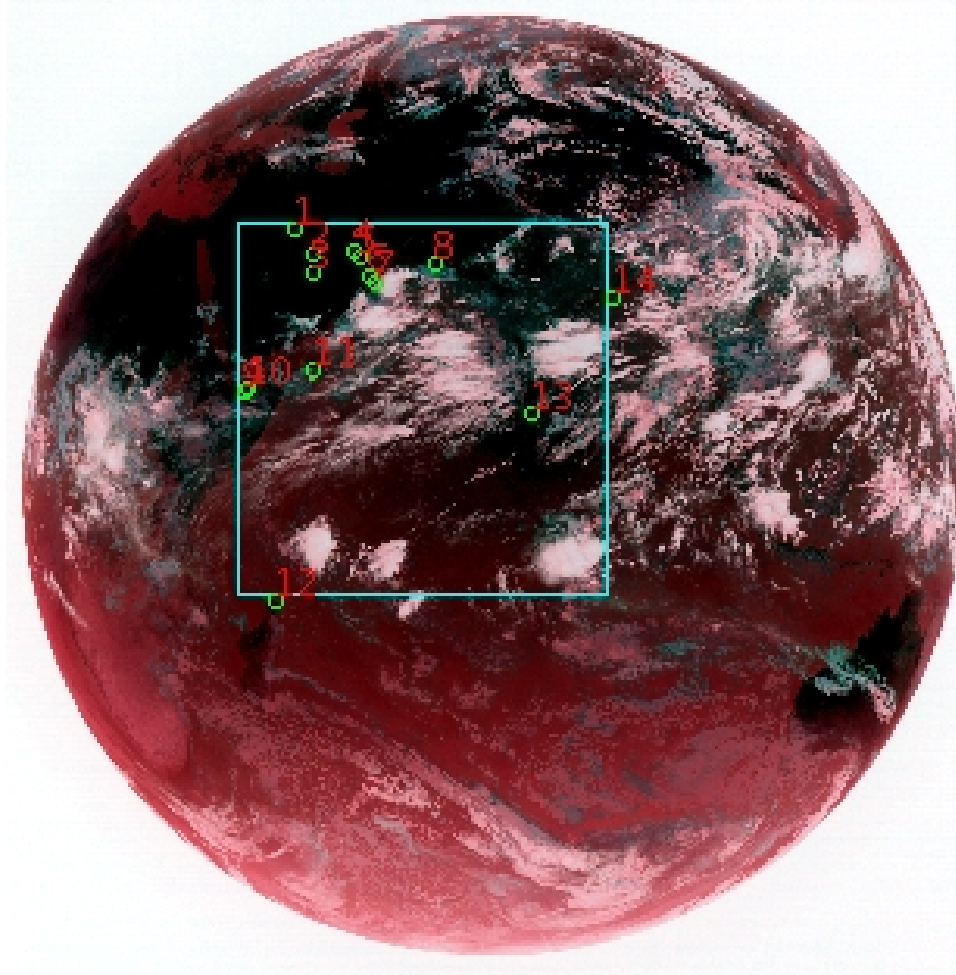


DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG_01JUL2020_0615

Satellite INSAT-3DR **No Of Bands** 6 **Product Type** STANDARD
Sensor IMG **LvlOfProcess** L1B **Selected Band** 2-TIR1
DOP/Time 01-07-20/06:15 **Station ID** BES **Field View(deg)** 18.006
Res(Y,X) [Km] (4.0,4.0) **Res(Y,X) [uRad]** (112.0,112.0)

(81.147N,-7.181W)

(81.147N,155.207E)



(-81.251S,-7.181W)

(-81.251S,155.207E)

GCP Distribution overview for 3RIMG01JUL20200615L1BDQE

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

GCP Coverage(%) 38.12 **(N-S)** 37.79 **(E-W)**

Location Error(E)

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

Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	2.680	N	0.911	2.830
Across	-7.267	W	1.333	7.388

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.452	0.434	11.294
Along	4.597	1.286	14.934
Across	4.349	0.551	8.733

Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	1.911	0.821	0.52	0.974
Across	3.126	1.296	0.87	1.558

Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.04227	-0.01663	-0.00877

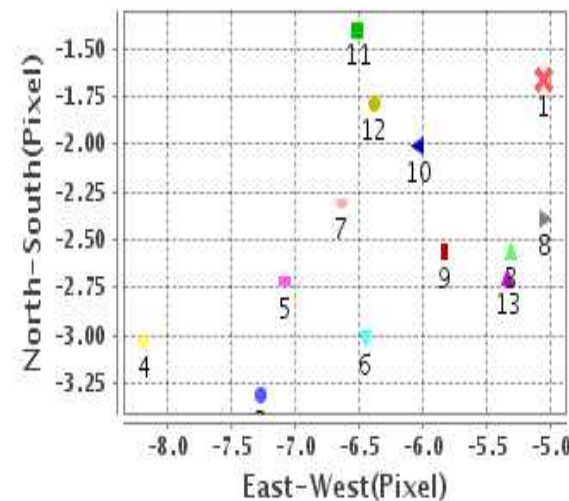
Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

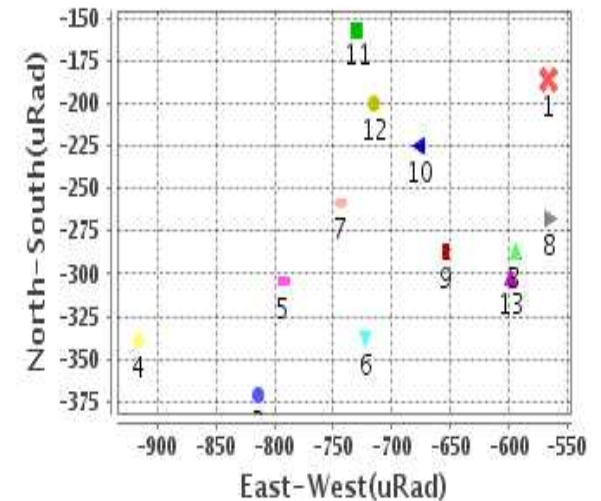
Radial Error (in IR Pixels)

Mean	7.770
Min	5.820
Max	10.842
CE90	9.045

Location Error For GCPs(Pixel)



Location Error For GCPs(uRad)



Detailed Product Information

Ancillary Info

Satellite	INSAT-3DR	Generation Date	01-07-20
Sensor	IMG	DQE Date	02-07-2020
PassType	NONE	Aquisition Date	01-07-20
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_01JUL20	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)	-0.052
Center Lon(deg)	74.013
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)	81.147
NW_Lon(deg)	-7.181
SW_Lat(deg)	-81.251
SW_Lon(deg)	-7.181
NE_Lat(deg)	81.147
NE_Lon(deg)	155.207
SE_Lat(deg)	-81.251
SE_Lon(deg)	155.207

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 : 3RIMG01JUL20200615L1BDQE

(-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) : 2805 Image Height (pixels) : 2816 No of GCPs : 14

	Mean	StdDev	Min	Max	Coverage(in %)
GCP Scan	919.8	277.6	642.0	1715.50	38.12 (N-S)
GCP Pix	1011.3	290.4	677.2	1737.25	37.79 (E-W)

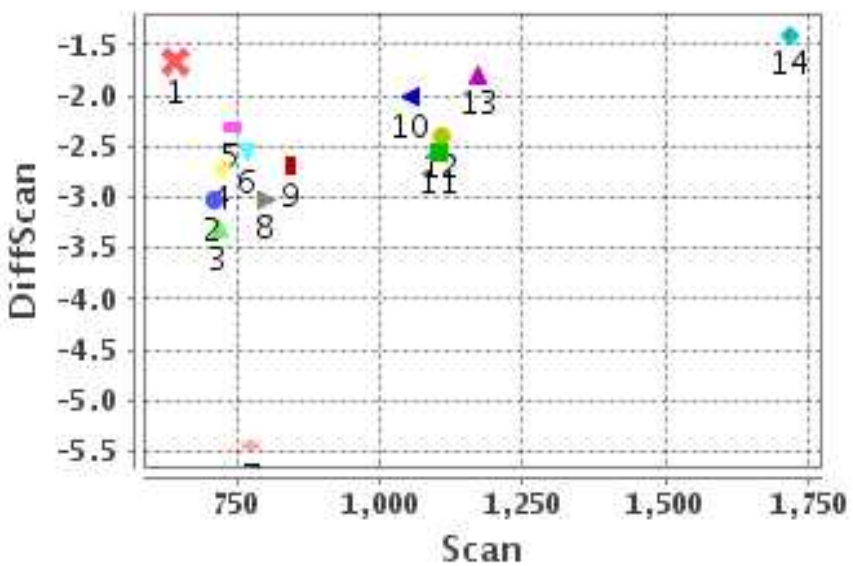
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	642.0	825.5	-1.7	-5.06	10.667	N	27.788	W	Accepted
2	718.2	877.0	-3.3	-7.27	17.194	N	39.814	W	Accepted
3	768.2	876.0	-2.6	-5.31	12.341	N	27.894	W	Accepted
4	710.0	992.2	-3.0	-8.18	16.094	N	39.642	W	Accepted
5	723.2	1010.2	-2.7	-7.08	13.659	N	33.501	W	Accepted
6	776.5	1035.2	-5.4	-11.01	25.145	N	51.859	W	Rejected
7	799.5	1055.5	-3.0	-6.45	11.960	N	27.222	W	Accepted
8	742.0	1228.0	-2.3	-6.64	11.944	N	30.115	W	Accepted
9	1108.0	677.2	-2.4	-5.05	9.561	N	24.789	W	Accepted
10	1102.5	689.5	-2.6	-5.84	8.312	N	27.198	W	Accepted
11	1052.2	880.0	-2.0	-6.04	7.653	N	27.014	W	Accepted
12	1715.5	770.5	-1.4	-6.51	3.410	N	27.513	W	Accepted
13	1173.0	1504.0	-1.8	-6.39	6.584	N	24.331	W	Accepted

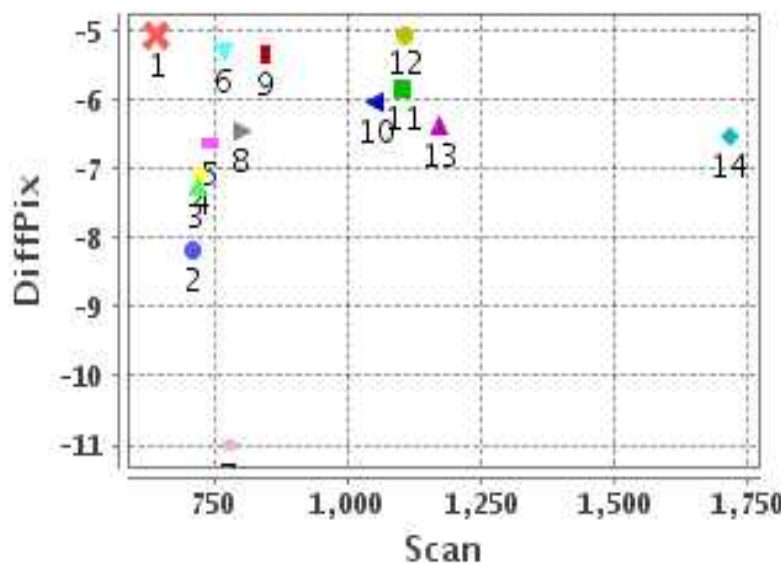
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
14	845.5	1737.2	-2.7	-5.34	9.959	N	21.040	W	Accepted

Error(Pixels) Vs. GCPScan



Error(Pixels) Vs. GCPScan



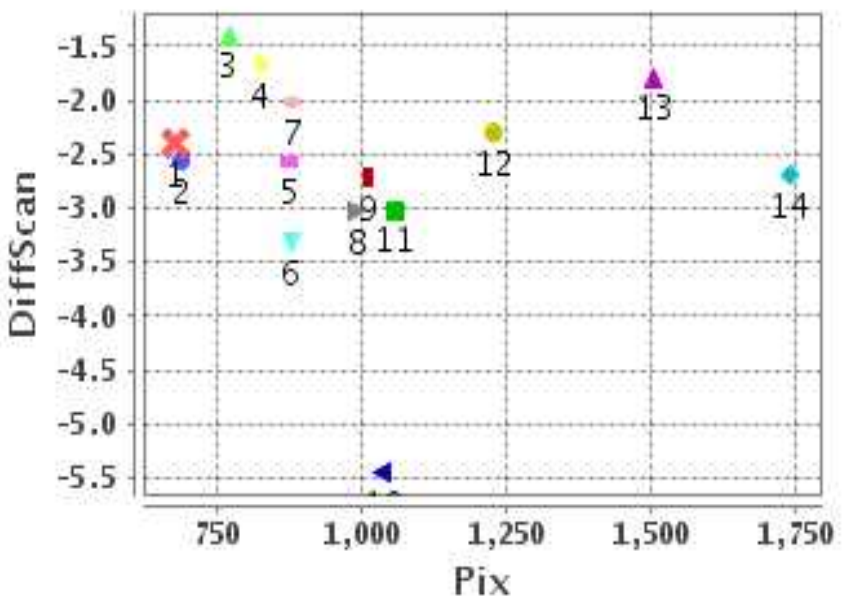
Number Of Points

North	13
South	0
East	0
West	13

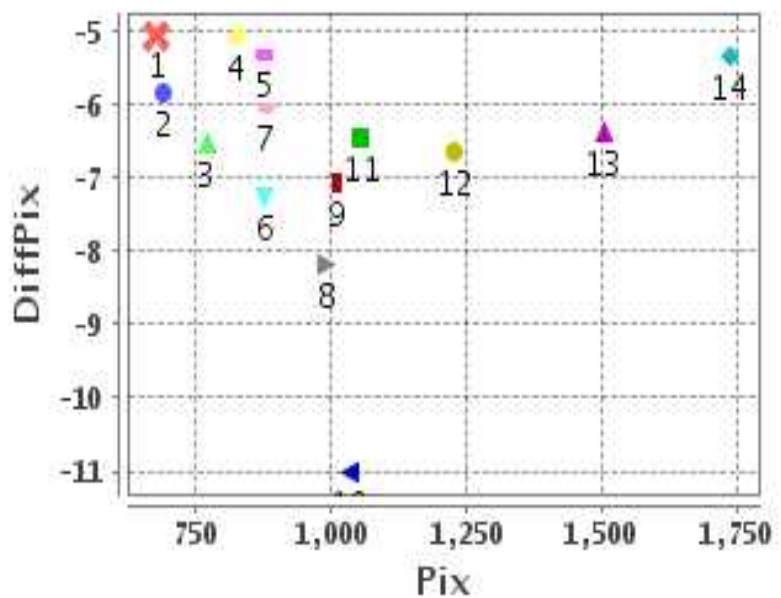
Radial Error (Km

Mean	7.770
Min	5.820
Max	10.842
CE90	9.045

Error(Pixels) Vs. GCPPix



Error(Pixels) Vs. GCPPix



Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	2.680	0.911	2.830	N	2.672	2.936
Across (Km)	-7.267	1.333	7.388	W	7.133	7.538

Block-Wise Geo location Error Statistics

Location Accuracy,Scale,ID

Scan Range-0-937; Pix Range-0-934			
Number of GCPs	3		
Location Error(Km)			
Along(Mean,Dir)	13.4	N	
Across(Mean,Dir)	-31.83	W	
Scale(Km)			
Average Scale (Mean,%Variation)	5.62	40.39	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	1.27	0.38	
Across(Mean,Stddev)	1.23	0.98	

Scan Range-0-937; Pix Range-934-1869			
Number of GCPs	5		
Location Error(Km)			
Along(Mean,Dir)	12.726	N	
Across(Mean,Dir)	-30.30	W	
Scale(Km)			
Average Scale (Mean,%Variation)	4.67	16.76	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	-0.34	0.25	
Across(Mean,Stddev)	-1.81	0.64	

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)	7.2325	N	
Across(Mean,Dir)	-26.63	W	
Scale(Km)			
Average Scale (Mean,%Variation)	4.15	3.82	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	0.11	0.51	
Across(Mean,Stddev)	1.08	0.28	

Scan Range-937-1876; Pix Range-934-1869			
Number of GCPs	1		
Location Error(Km)			
Along(Mean,Dir)	6.584	N	
Across(Mean,Dir)	-24.33	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-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