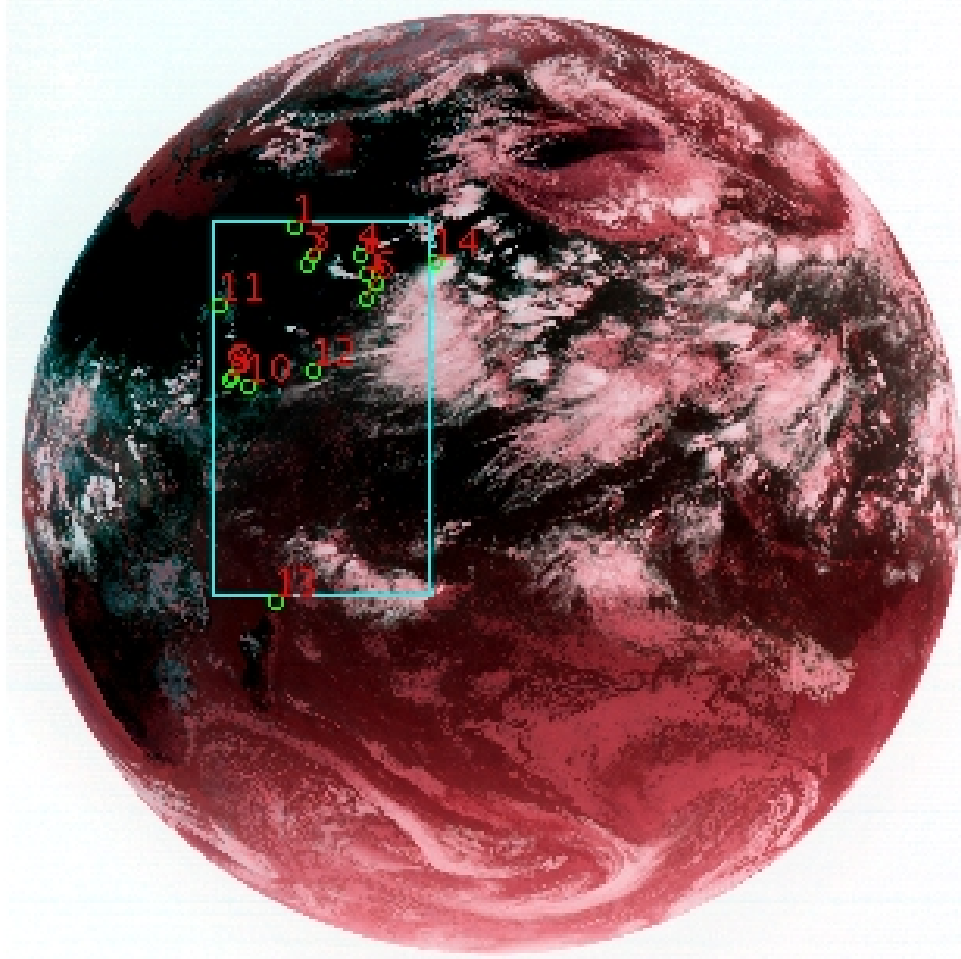


DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG_30JUN2020_1215

Satellite	INSAT-3DR	No Of Bands	6	Product Type	STANDARD
Sensor	IMG	LvlOfProcess	L1B	Selected Band	2-TIR1
DOP/Time	30-06-20/24:15	Station ID	BES	Field View(deg)	17.99
Res(Y,X) [Km]	(4.0,4.0)	Res(Y,X) [uRad]	(112.0,112.0)		

(81.342N,-7.248W)

(81.342N,155.056E)



(-80.997S,-7.248W)

(-80.997S,155.056E)

GCP Distribution overview for 3RIMG30JUN20201215L1BDQE

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

GCP Coverage(%) 38.14 (N-S) 22.24 (E-W)

Location Error(E)

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

Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	1.250	N	0.652	1.409
Across	-2.328	W	0.836	2.474

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.436	0.345	10.890
Along	4.482	0.344	12.047
Across	4.571	0.331	14.287

Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	2.100	-0.361	0.57	0.672
Across	2.587	1.360	0.72	1.541

Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.02152	-0.01227	0.06691

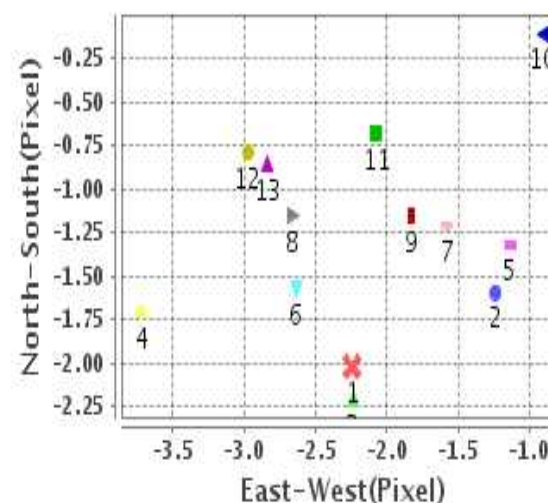
Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

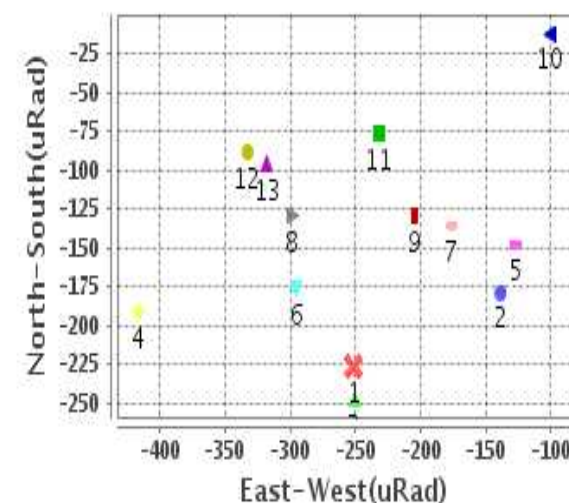
Radial Error (in IR Pixels)

Mean	2.706
Min	.955
Max	4.466
CE90	3.452

Location Error For GCPs(Pixel)



Location Error For GCPs(uRad)



Detailed Product Information

Ancillary Info

Satellite	INSAT-3DR	Generation Date	30-06-20
Sensor	IMG	DQE Date	01-07-2020
PassType	NONE	Aquisition Date	30-06-20
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_30JUN20	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)	0.173
Center Lon(deg)	73.904
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)	81.342
NW_Lon(deg)	-7.248
SW_Lat(deg)	-80.997
SW_Lon(deg)	-7.248
NE_Lat(deg)	81.342
NE_Lon(deg)	155.056
SE_Lat(deg)	-80.997
SE_Lon(deg)	155.056

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 : 3RIMG30JUN20201215L1BDQE

(-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	924.3	266.9	646.2	1720.25	38.14 (N-S)
GCP Pix	867.0	180.8	605.2	1229.00	22.24 (E-W)

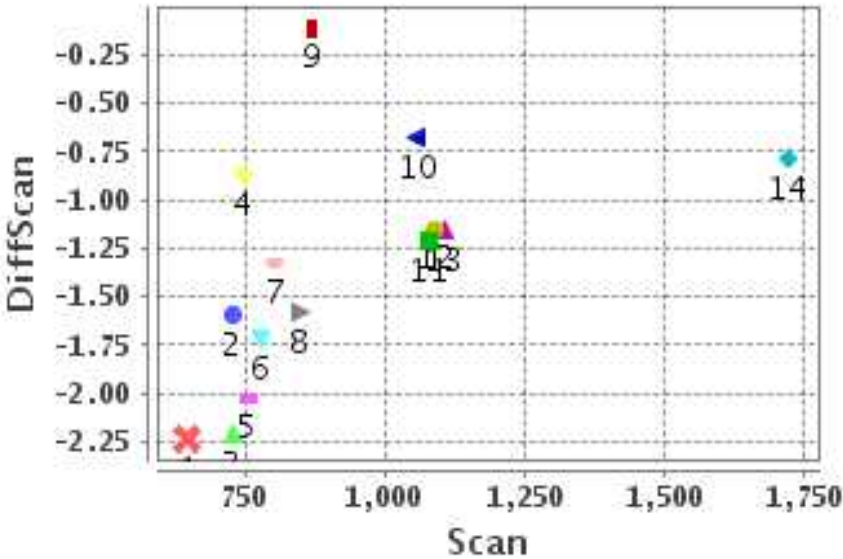
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	646.2	822.2	-2.2	1.43	10.667	N	5.223	E	Rejected
2	754.5	858.2	-2.0	-2.24	7.565	N	11.716	W	Accepted
3	726.0	880.0	-1.6	-1.24	7.744	N	8.276	W	Accepted
4	726.5	1009.5	-2.2	-2.24	9.203	N	10.296	W	Accepted
5	776.2	1031.5	-1.7	-3.72	7.926	N	16.008	W	Accepted
6	802.2	1055.2	-1.3	-1.13	5.515	N	4.328	W	Accepted
7	847.5	1029.2	-1.6	-2.64	5.294	N	10.737	W	Accepted
8	1078.0	639.5	-1.2	-1.58	4.927	N	6.367	W	Accepted
9	1088.2	634.5	-1.1	-2.66	3.883	N	11.375	W	Accepted
10	1106.0	689.5	-1.2	-1.82	5.306	N	6.966	W	Accepted
11	868.0	605.2	-0.1	-0.90	0.482	N	3.787	W	Accepted
12	1056.5	881.2	-0.7	-2.07	0.786	N	7.493	W	Accepted
13	1720.2	772.5	-0.8	-2.97	2.328	N	11.319	W	Accepted

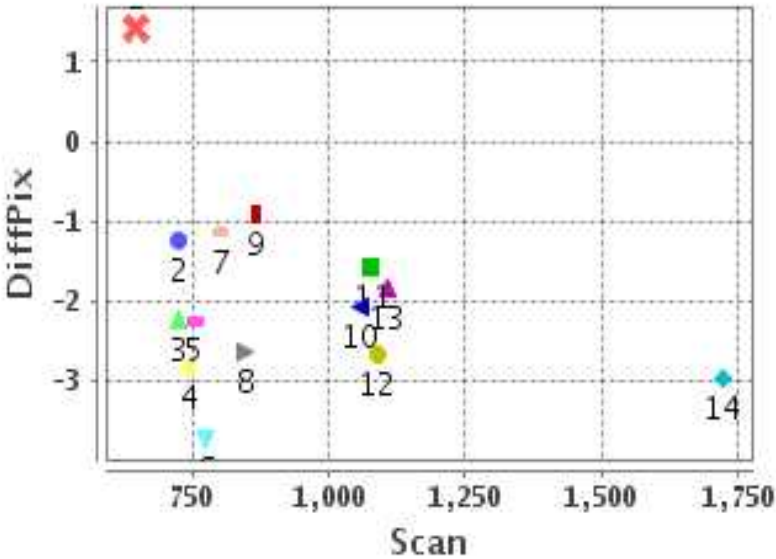
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
14	744.2	1229.0	-0.9	-2.84	4.023	N	12.412	W	Accepted

Error(Pixels) Vs. GCPScan



Error(Pixels) Vs. GCPScan



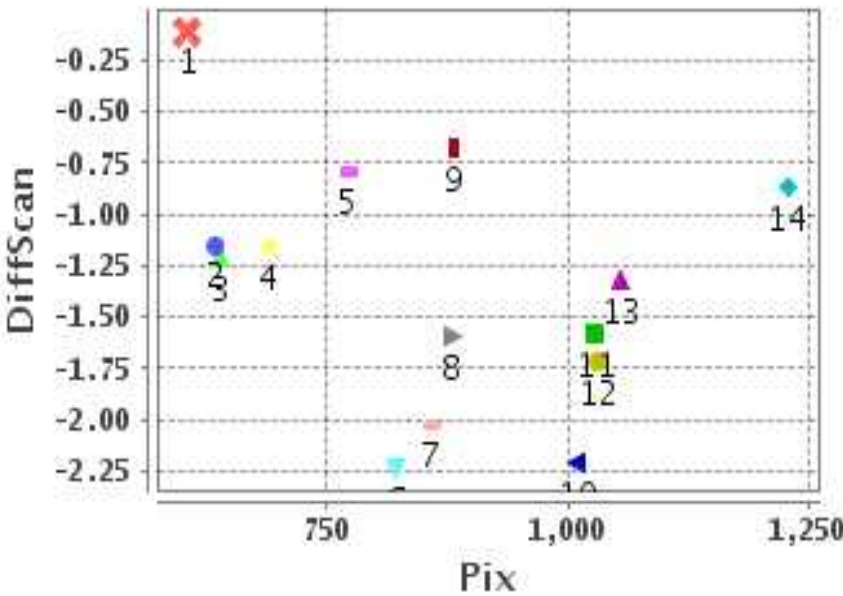
Number Of Points

North	13
South	0
East	0
West	13

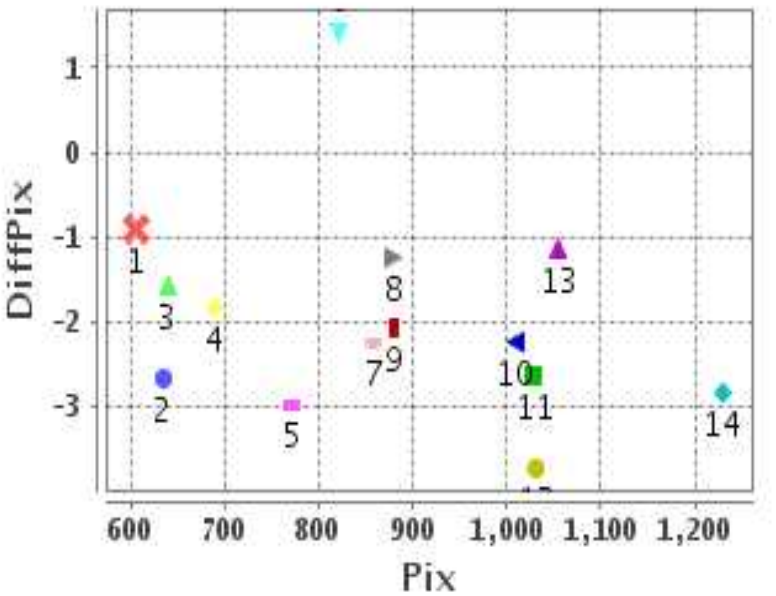
Radial Error (Km

Mean	2.706
Min	.955
Max	4.466
CE90	3.452

Error(Pixels) Vs. GCPPix



Error(Pixels) Vs. GCPPix



Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	1.250	0.652	1.409	N	1.308	1.466
Across (Km)	-2.328	0.836	2.474	W	2.301	2.560

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)	5.26	N	
Across(Mean,Dir)	-7.92	W	
Scale(Km)			
Average Scale (Mean,%Variation)	4.53	13.22	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	-0.53	0.96	
Across(Mean,Stddev)	0.84	0.50	

Scan Range-0-937; Pix Range-934-1869			
Number of GCPs	5		
Location Error(Km)			
Along(Mean,Dir)	6.392	N	
Across(Mean,Dir)	-10.76	W	
Scale(Km)			
Average Scale (Mean,%Variation)	4.71	17.71	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	-0.84	0.33	
Across(Mean,Stddev)	0.34	0.93	

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	5		
Location Error(Km)			
Along(Mean,Dir)	3.446	N	
Across(Mean,Dir)	-8.70	W	
Scale(Km)			
Average Scale (Mean,%Variation)	4.38	9.38	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	0.40	0.17	
Across(Mean,Stddev)	-0.55	0.53	

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