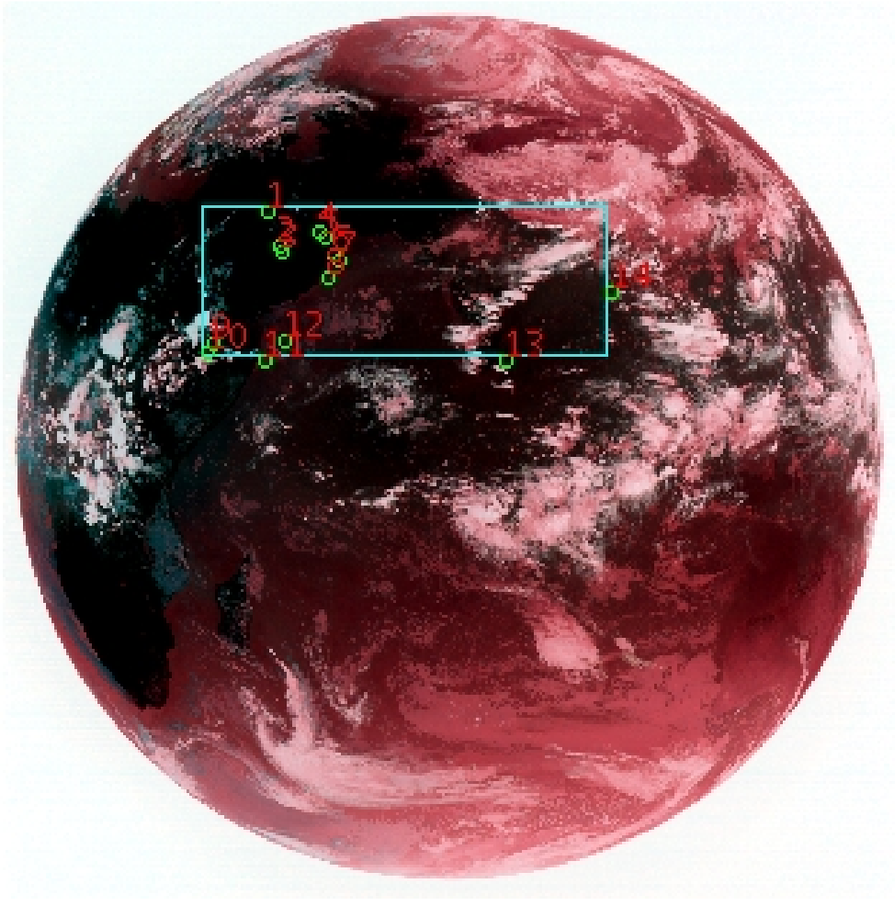
DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG_11SEP2018_1215

Satellite	INSAT-3DR	**No Of Bands**	6	**Product Type**	STANDARD
Sensor	IMG	**LvlOfProcess**	L1B	**Selected Band**	2-TIR1
DOP/Time	11-09-18/24:15	**Station ID**	BES	**Field View(deg)**	17.99
Res(Y,X) [Km]	(4.0,4.0)	**Res(Y,X) [uRad]**	(112.0,112.0)		

(81.269N,-7.333W) (81.269N,155.139E)



(-80.905S,-7.333W) (-80.905S,155.139E)

GCP Distribution overview for 3RIMG11SEP20181215L1BDQE

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

GCP Coverage(%) 16.76 **(N-S)** 45.46 **(E-W)**

Location Error(E)

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

Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	9.772	N	1.835	9.943
Across	-29.251	W	2.388	29.349

Radial Error (in IR Pixels)

Mean	30.868
Min	25.286
Max	35.420
CE90	33.812

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.498	0.438	12.446
Along	4.625	0.300	15.618
Across	4.502	0.313	12.560

Internal Distortion (in IR Pixels)

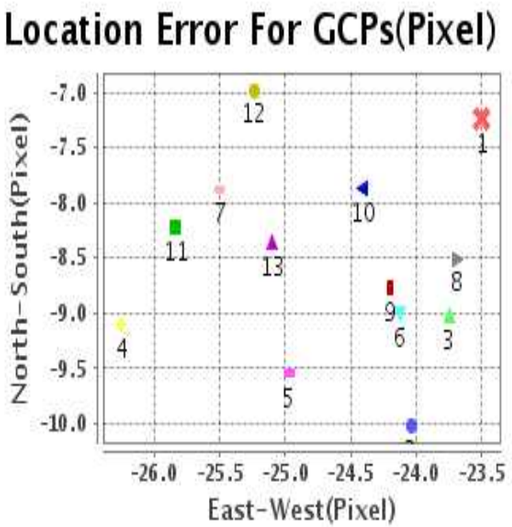
	PeakToPeak	Mean	Stddev	RMS
Along	3.041	1.372	0.79	1.582
Across	2.752	0.506	0.87	1.007

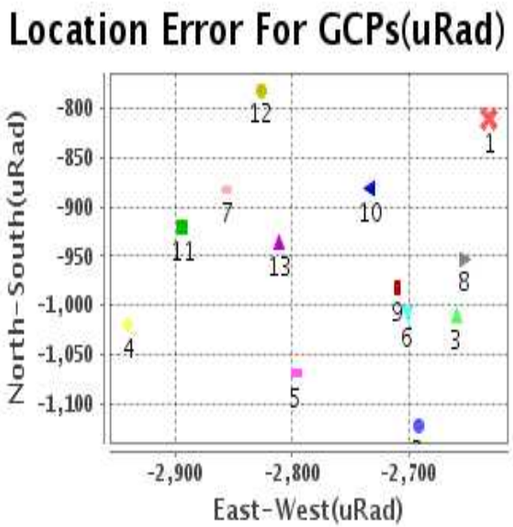
Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.17411	-0.05694	-0.10911

Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP





Detailed Product Information

Ancillary Info

Satellite	INSAT-3DR	Generation Date	11-09-18
Sensor	IMG	DQE Date	14-09-2018
PassType	NONE	Aquisition Date	11-09-18
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_11SEP20	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)	0.182
Center Lon(deg)	73.903
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)	81.269
NW_Lon(deg)	-7.333
SW_Lat(deg)	-80.905
SW_Lon(deg)	-7.333
NE_Lat(deg)	81.269
NE_Lon(deg)	155.139
SE_Lat(deg)	-80.905
SE_Lon(deg)	155.139

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 -sigma	SemiMajorAxis(m)	6378137.00	Mode Of Computation	grid
Ellipsoid	WGS_84			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 : **3RIMG11SEP20181215L1BDQE**

(-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

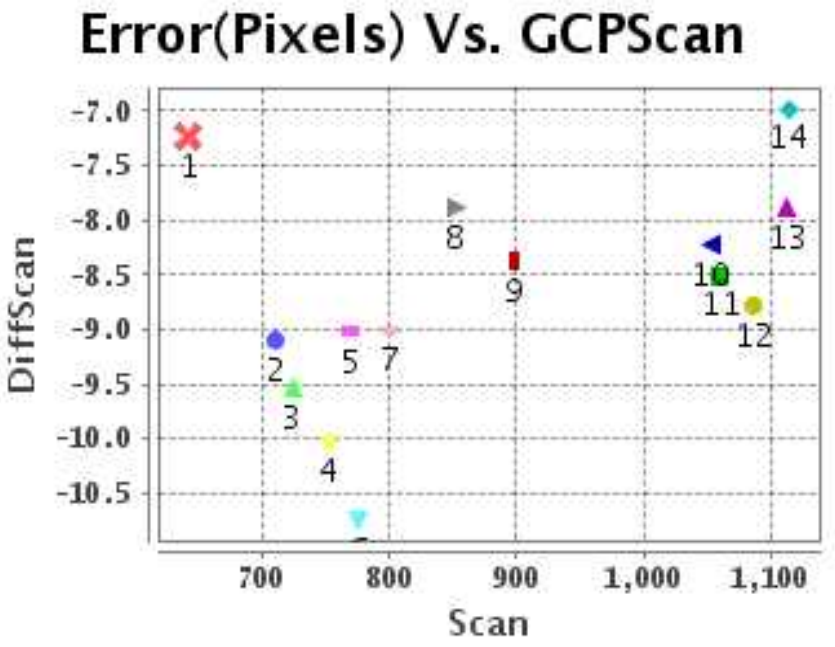
	Mean	StdDev	Min	Max	Coverage(in %)
GCP Scan	882.1	162.5	642.0	1114.00	16.76 (N-S)
GCP Pix	1005.7	329.9	630.0	1905.25	45.46 (E-W)

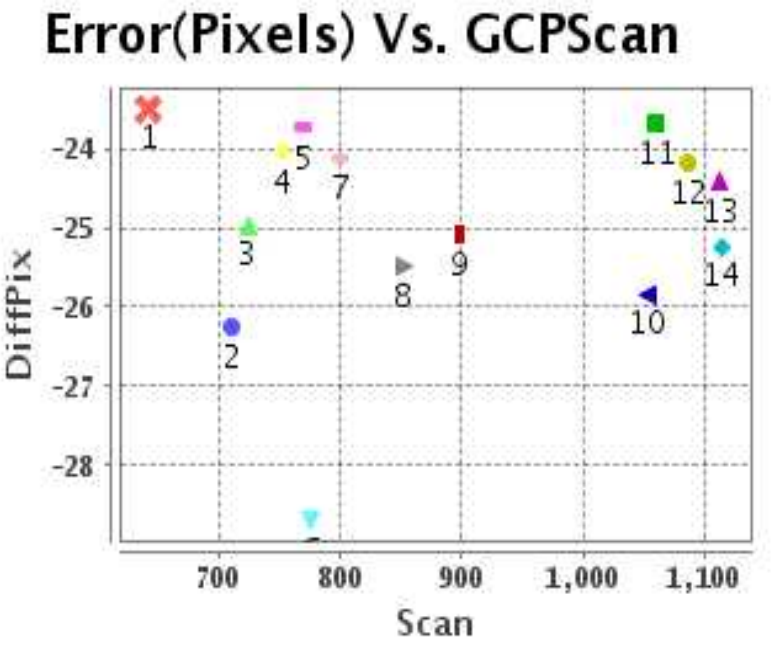
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	642.0	821.2	-7.2	-23.50	45.200	N	134.274	W	Accepted
2	752.8	855.0	-10.0	-24.04	48.783	N	126.145	W	Accepted
3	769.2	872.5	-9.0	-23.75	45.645	N	119.250	W	Accepted
4	710.2	988.5	-9.1	-26.25	48.185	N	128.026	W	Accepted
5	724.2	1006.5	-9.5	-24.97	48.862	N	119.533	W	Accepted
6	776.0	1031.5	-10.7	-28.68	53.291	N	132.788	W	Rejected
7	800.2	1052.5	-9.0	-24.12	42.378	N	108.463	W	Accepted
8	852.2	1008.2	-7.9	-25.50	36.681	N	114.275	W	Accepted
9	1059.8	649.2	-8.5	-23.68	33.606	N	119.080	W	Accepted
10	1086.8	630.0	-8.8	-24.19	35.183	N	124.028	W	Accepted
11	1112.2	815.0	-7.9	-24.41	31.730	N	110.631	W	Accepted
12	1052.5	876.5	-8.2	-25.84	32.809	N	112.555	W	Accepted
13	1114.0	1567.2	-7.0	-25.24	27.320	N	97.382	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	897.8	1905.2	-8.4	-25.10	31.776	N	107.430	W	Accepted



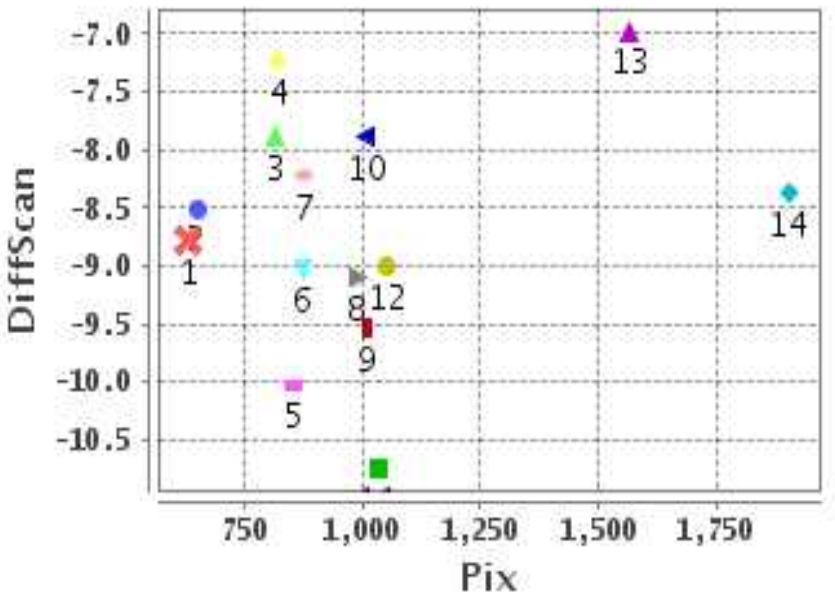


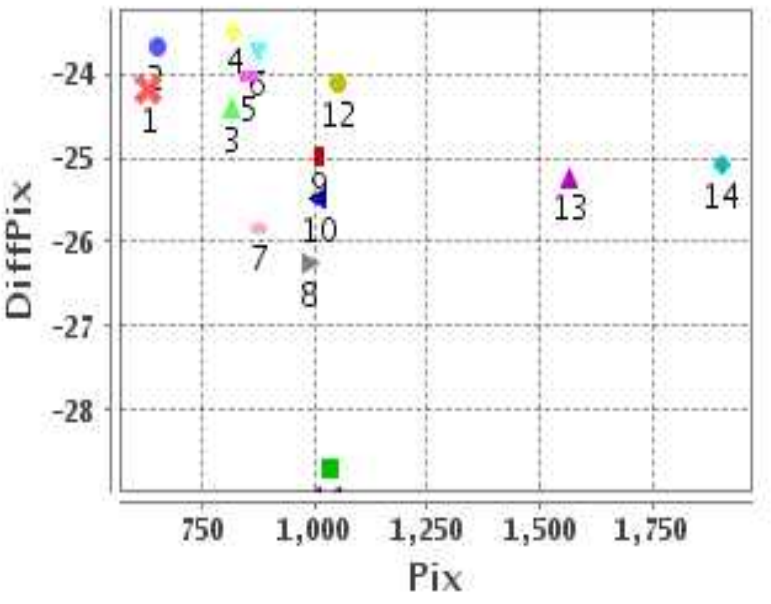
Number Of Points

North	13
South	0
East	0
West	13

Radial Error (Km

Mean	30.868
Min	25.286
Max	35.420
CE90	33.812





Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	9.772	1.835	9.943	N	9.730	10.159
Across (Km)	-29.251	2.388	29.349	W	28.969	29.728

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)	46.54669999	N	
Across(Mean,Dir)	-126.56	W	
Scale(Km)			
Average Scale (Mean,%Variation)	5.67	41.79	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	2.28	0.50	
Across(Mean,Stddev)	0.39	0.15	

Scan Range-0-937; Pix Range-934-1869

Number of GCPs	4		
Location Error(Km)			
Along(Mean,Dir)	44.0225	N	
Across(Mean,Dir)	-117.57	W	
Scale(Km)			
Average Scale (Mean,%Variation)	5.01	25.15	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	-0.29	0.69	
Across(Mean,Stddev)	-1.39	0.57	

Scan Range-0-937; Pix Range-1869-2805

Number of GCPs	1		
Location Error(Km)			
Along(Mean,Dir)	31.78	N	
Across(Mean,Dir)	-107.43	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-0-934

Number of GCPs	4		
Location Error(Km)			
Along(Mean,Dir)	33.33	N	
Across(Mean,Dir)	-116.58	W	
Scale(Km)			
Average Scale (Mean,%Variation)	4.45	11.15	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	0.17	0.38	
Across(Mean,Stddev)	0.45	0.89	

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

Number of GCPs	1		
Location Error(Km)			
Along(Mean,Dir)	27.32	N	
Across(Mean,Dir)	-97.38	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