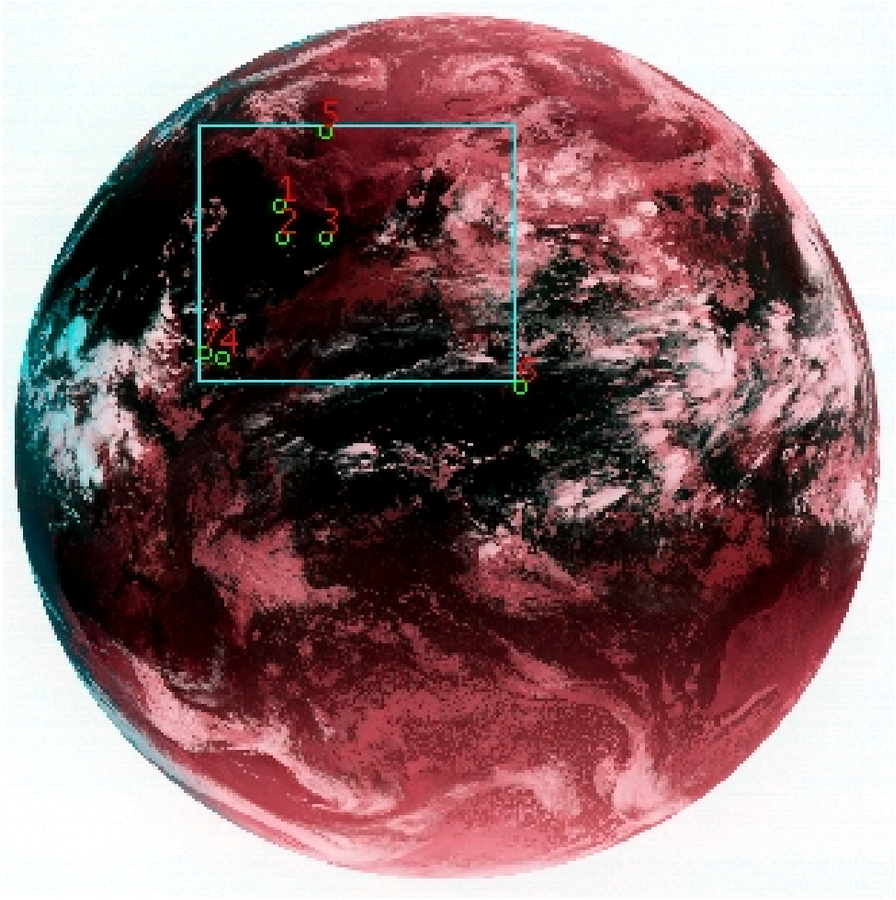
DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG_02SEP2018_1545

Satellite	INSAT-3DR	**No Of Bands**	6	**Product Type**	STANDARD
Sensor	IMG	**LvlOfProcess**	L1B	**Selected Band**	2-TIR1
DOP/Time	02-09-18/15:45	**Station ID**	BES	**Field View(deg)**	18.006
Res(Y,X) [Km]	(4.0,4.0)	**Res(Y,X) [uRad]**	(112.0,112.0)		

(81.226N,-7.236W) (81.226N,155.148E)



(-80.804S,-7.236W) (-80.804S,155.148E)

GCP Distribution overview for 3RIMG02SEP20181545L1BDQE

Image Width: 2805 **Image Height:** 2816 **No Of GCPs:** 7

GCP Coverage(%) 28.52 **(N-S)** 35.35 **(E-W)**

Location Error(E)

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

Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	12.725	N	3.096	13.096
Across	-39.148	W	4.023	39.354

Radial Error (in IR Pixels)

Mean	41.206
Min	36.586
Max	51.045
CE90	42.418

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.944	0.701	23.608
Along	7.334	3.524	83.338
Across	11.126	8.079	178.138

Internal Distortion (in IR Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	1.310	1.071	0.42	1.149
Across	2.271	-0.781	0.82	1.133

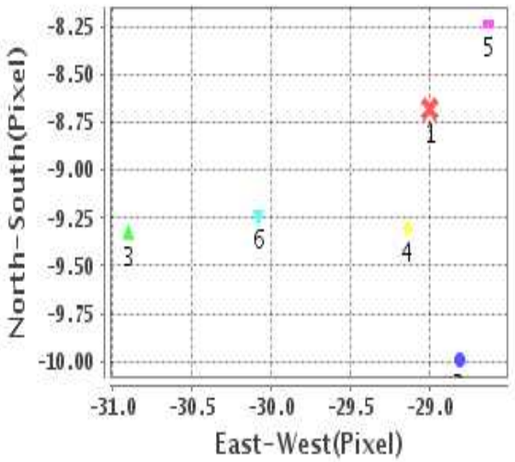
Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.28887	-0.14292	0.86922

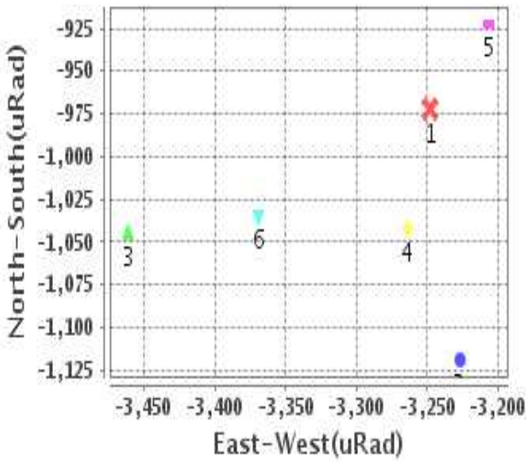
Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

Location Error For GCPs(Pixel)



Location Error For GCPs(uRad)



Detailed Product Information

Ancillary Info

Satellite	INSAT-3DR	Generation Date	02-09-18
Sensor	IMG	DQE Date	12-09-2018
PassType	NONE	Aquisition Date	02-09-18
Imaging Mode	FULL_FRAME	Aquisition Time(GMT)	15:45
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_02SEP20	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)	0.211
Center Lon(deg)	73.956
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)	81.226
NW_Lon(deg)	-7.236
SW_Lat(deg)	-80.804
SW_Lon(deg)	-7.236
NE_Lat(deg)	81.226
NE_Lon(deg)	155.148
SE_Lat(deg)	-80.804
SE_Lon(deg)	155.148

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 : **3RIMG02SEP20181545L1BDQE**

(-999.99 - Not Available/Not Computed)

Ref.No	Source	File Name	Resolution (m)	Projection
1	ETM	world_Band1.img	500.0	GGP

Location Accuracy

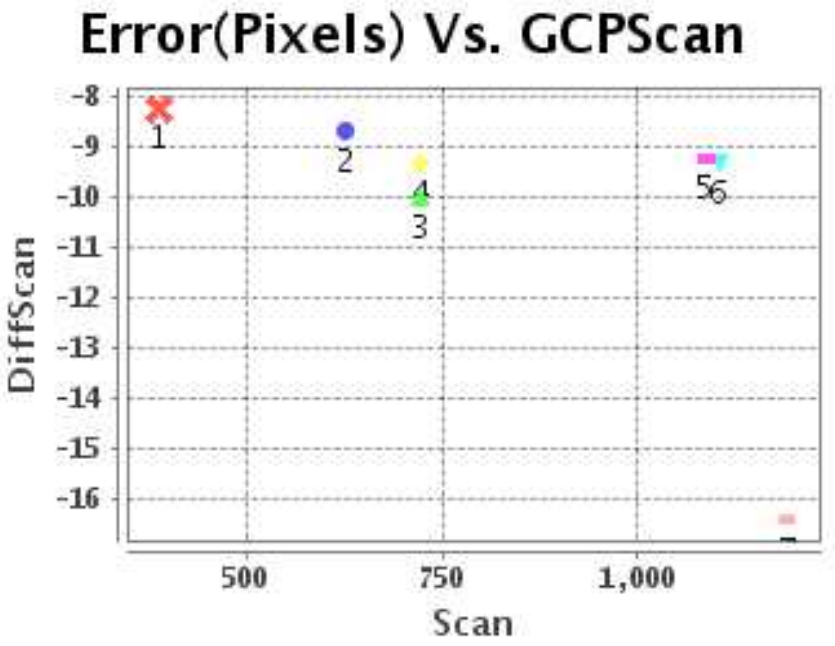
GCP Distribution Statistics

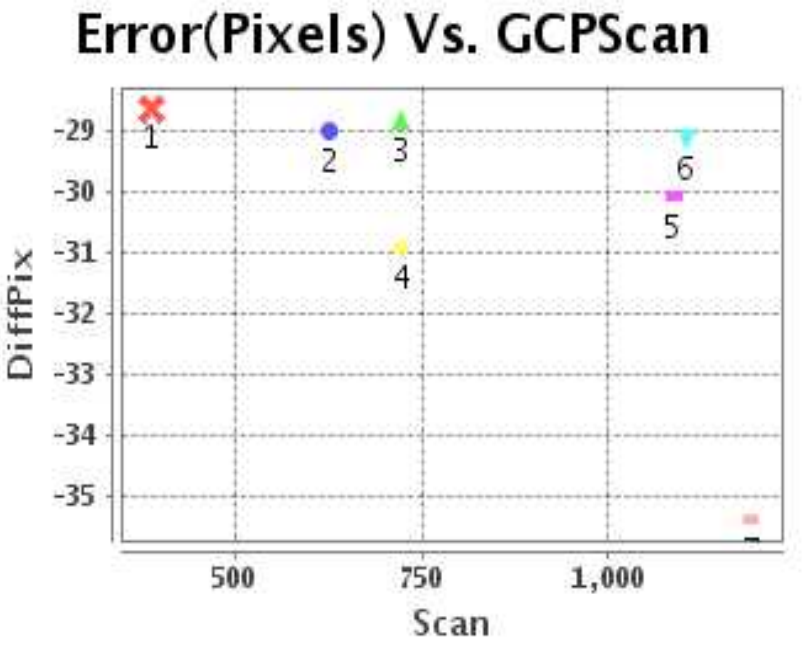
Image Width (pixels) : 2805 **Image Height (pixels) :** 2816 **No of GCPs :** 7

	Mean	StdDev	Min	Max	Coverage(in %)
GCP Scan	834.8	275.3	388.2	1191.25	28.52 (N-S)
GCP Pix	949.6	302.9	623.5	1615.00	35.35 (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	626.8	861.2	-8.7	-29.00	50.385	N	162.017	W	Accepted
2	723.2	868.2	-10.0	-28.81	53.288	N	149.901	W	Accepted
3	723.2	999.8	-9.3	-30.90	49.107	N	146.154	W	Accepted
4	1104.2	678.2	-9.3	-29.14	38.679	N	141.138	W	Accepted
5	388.2	1001.2	-8.2	-28.63	75.519	N	189.699	W	Accepted
6	1191.2	1615.0	-16.4	-35.39	63.068	N	137.542	W	Rejected
7	1086.5	623.5	-9.2	-30.08	38.419	N	150.650	W	Accepted



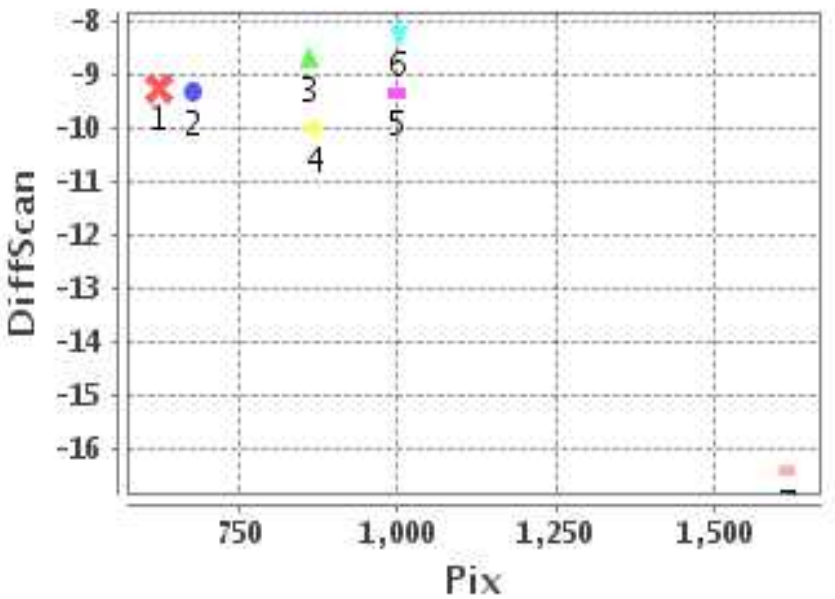


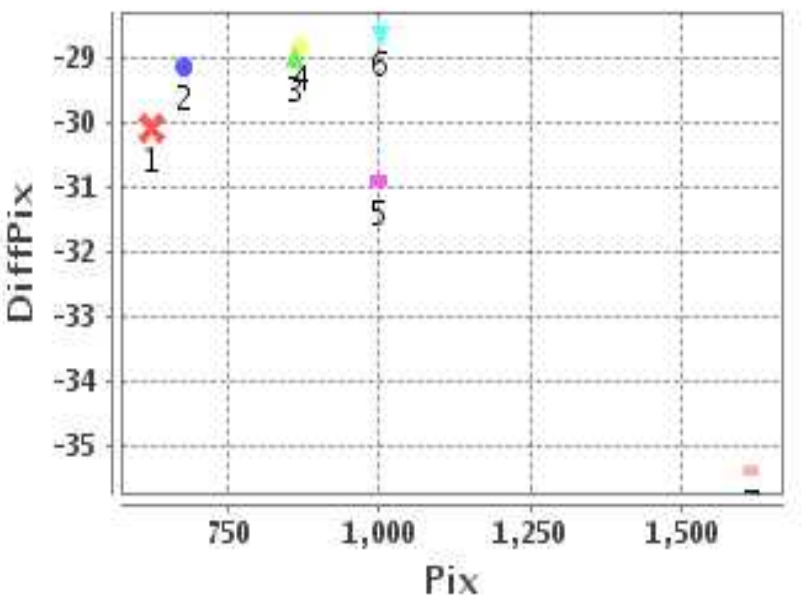
Number Of Points

North	6
South	0
East	0
West	6

Radial Error (Km

Mean	41.206
Min	36.586
Max	51.045
CE90	42.418





Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	12.725	3.096	13.096	N	11.598	13.688
Across (Km)	-39.148	4.023	39.354	W	37.533	40.119

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)	51.84	N	
Across(Mean,Dir)	-155.96	W	
Scale(Km)			
Average Scale (Mean,%Variation)	5.54	38.49	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	1.31	0.00	
Across(Mean,Stddev)	-0.19	0.00	

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

Number of GCPs	2		
Location Error(Km)			
Along(Mean,Dir)	62.31	N	
Across(Mean,Dir)	-167.92	W	
Scale(Km)			
Average Scale (Mean,%Variation)	6.41	60.26	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	1.09	0.00	
Across(Mean,Stddev)	-2.27	0.00	

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	2		
Location Error(Km)			
Along(Mean,Dir)	38.55	N	
Across(Mean,Dir)	-145.89	W	
Scale(Km)			
Average Scale (Mean,%Variation)	5.08	27.06	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	0.06	0.00	
Across(Mean,Stddev)	-0.94	0.00	

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