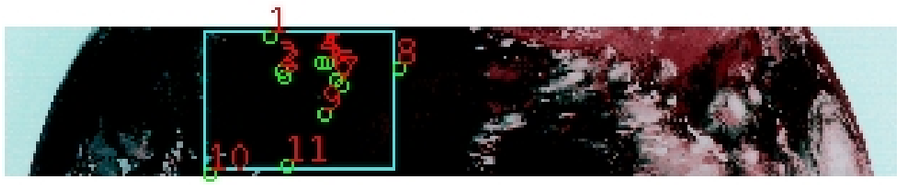
DQE Report: Location Accuracy of INSAT-3DR-IMG RAPID_SCAN Product 3RIMG_12SEP2018_1215

Satellite	INSAT-3DR	**No Of Bands**	6	**Product Type**	RAPID_SCAN
Sensor	IMG	**LvlOfProcess**	L1B	**Selected Band**	2-TIR1
DOP/Time	12-09-18/24:15	**Station ID**	BES	**Field View(deg)**	18.006
Res(Y,X) [Km]	(4.0,4.0)	**Res(Y,X) [uRad]**	(112.0,112.0)		

(81.161N,-7.233W) (81.161N,155.129E)



(-80.909S,-7.233W) (-80.909S,155.129E)

GCP Distribution overview for 3RIMG12SEP20181215L1BDQE

Image Width: 2805 **Image Height:** 2816 **No Of GCPs:** 11

GCP Coverage(%) 15.41 **(N-S)** 21.02 **(E-W)**

Location Error(E)

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

Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	10.968	N	1.427	11.060
Across	-28.516	W	2.366	28.614

Radial Error (in IR Pixels)

Mean	30.569
Min	26.853
Max	34.716
CE90	32.179

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.678	0.482	16.945
Along	4.826	0.413	20.659
Across	4.654	0.375	16.361

Internal Distortion (in IR Pixels)

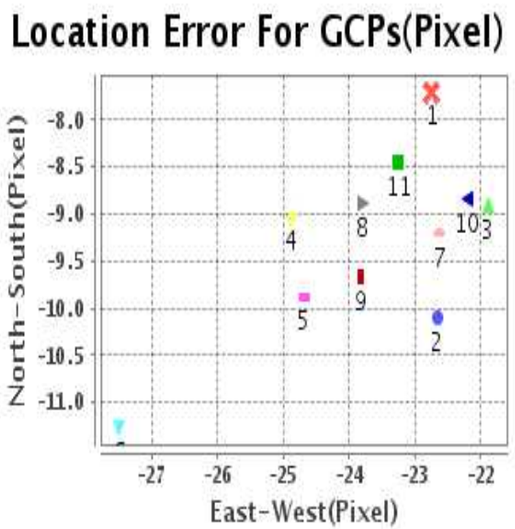
	PeakToPeak	Mean	Stddev	RMS
Along	2.818	1.716	0.78	1.886
Across	5.601	1.578	1.53	2.195

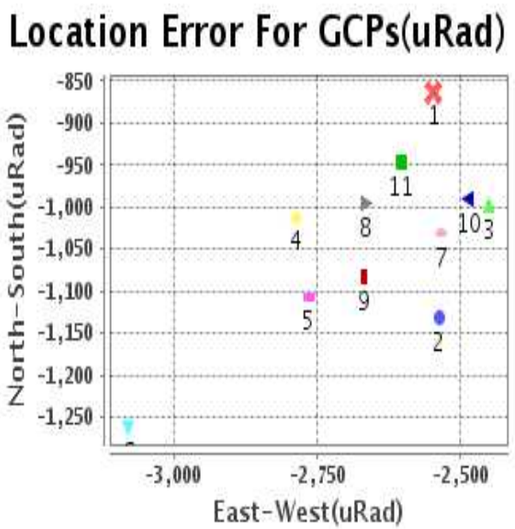
Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.16109	-0.07643	0.11783

Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP





Detailed Product Information

Ancillary Info

Satellite	INSAT-3DR	Generation Date	12-09-18
Sensor	IMG	DQE Date	14-09-2018
PassType	NONE	Aquisition Date	12-09-18
Imaging Mode	NORMAL_FRAM	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	RAPID_SCAN	Predicted Center Lat(deg)	-999.99
DP JobId	3RIMG_12SEP20	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)	0.126
Center Lon(deg)	73.948
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)	81.161
NW_Lon(deg)	-7.233
SW_Lat(deg)	-80.909
SW_Lon(deg)	-7.233
NE_Lat(deg)	81.161
NE_Lon(deg)	155.129
SE_Lat(deg)	-80.909
SE_Lon(deg)	155.129

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	meters	Standardparallel1(deg)	17.0		
Zone	Not Applicable			Standardparallel2(deg)	17.0		

* -999.99 : Not Applicable/Not Available

References

JobId : **3RIMG12SEP20181215L1BDQE**

(-999.99 - Not Available/Not Computed)

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

Location Accuracy

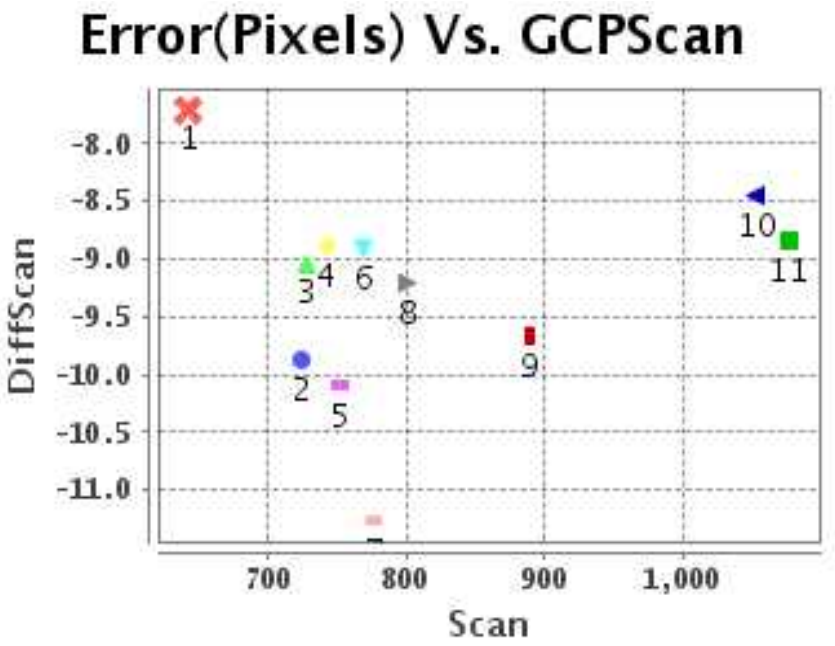
GCP Distribution Statistics

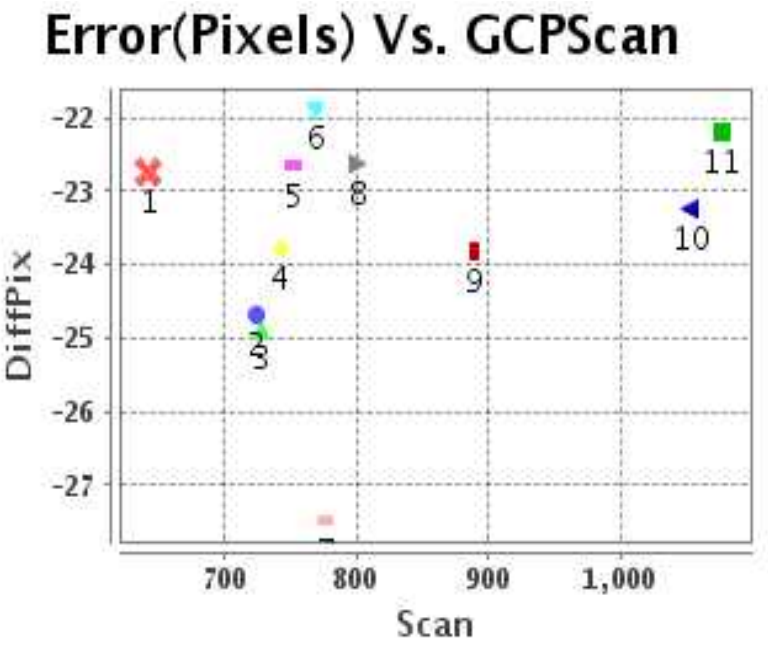
Image Width (pixels) : 2805 **Image Height (pixels) :** 2816 **No of GCPs :** 11

	Mean	StdDev	Min	Max	Coverage(in %)
GCP Scan	814.2	131.0	642.5	1076.50	15.41 (N-S)
GCP Pix	941.7	146.0	636.0	1225.75	21.02 (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	642.5	822.2	-7.7	-22.75	45.200	N	131.301	W	Accepted
2	752.8	855.2	-10.1	-22.66	49.269	N	118.913	W	Accepted
3	769.2	872.2	-8.9	-21.89	45.403	N	112.018	W	Accepted
4	728.2	984.5	-9.0	-24.88	46.353	N	119.905	W	Accepted
5	724.5	1007.8	-9.9	-24.69	49.107	N	117.403	W	Accepted
6	776.5	1031.8	-11.3	-27.49	53.291	N	126.399	W	Accepted
7	800.5	1052.5	-9.2	-22.63	42.140	N	102.074	W	Accepted
8	742.5	1225.8	-8.9	-23.79	42.225	N	103.146	W	Accepted
9	889.8	995.2	-9.7	-23.82	40.957	N	106.191	W	Accepted
10	1076.5	636.0	-8.8	-22.21	36.045	N	114.983	W	Accepted
11	1052.8	875.5	-8.4	-23.25	32.583	N	102.350	W	Accepted



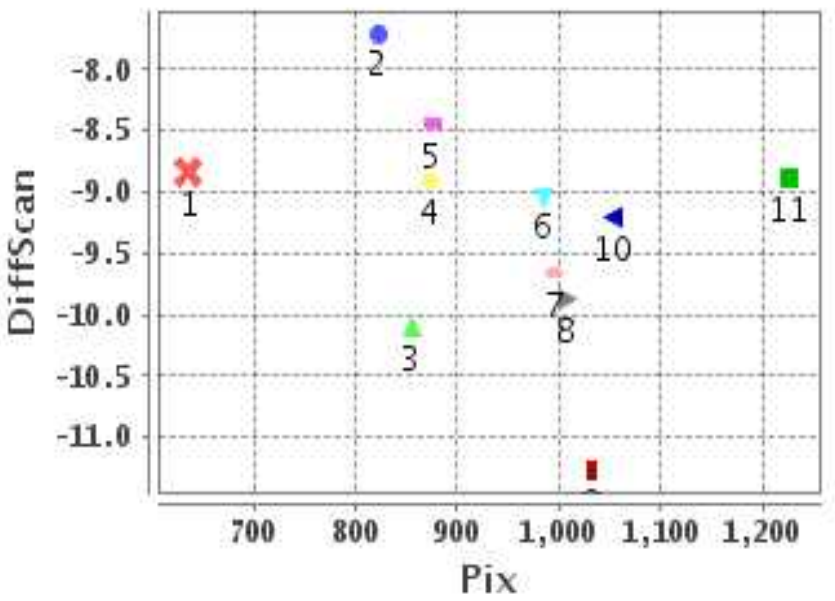


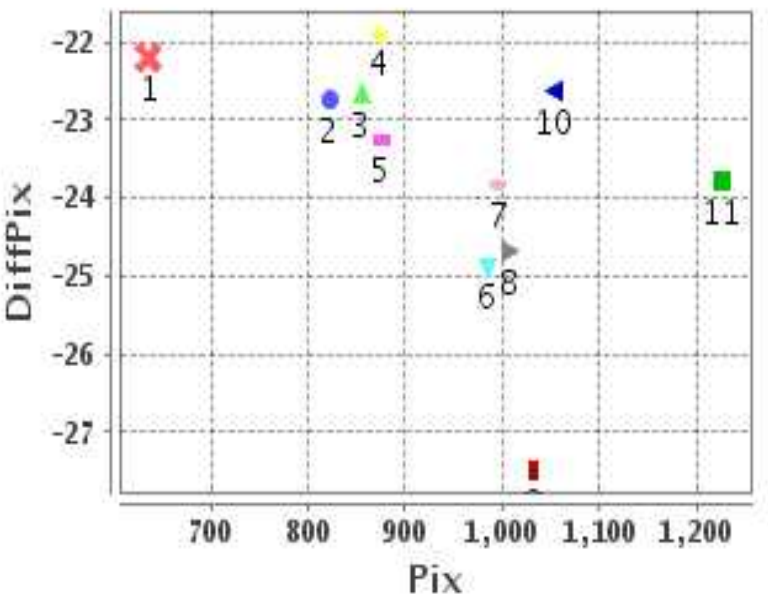
Number Of Points

North	11
South	0
East	0
West	11

Radial Error (Km

Mean	30.569
Min	26.853
Max	34.716
CE90	32.179





Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	10.968	1.427	11.060	N	10.808	11.310
Across (Km)	-28.516	2.366	28.614	W	28.158	28.905

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)	46.6267	N	
Across(Mean,Dir)	-120.75	W	
Scale(Km)			
Average Scale (Mean,%Variation)	5.73	43.26	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	1.80	0.59	
Across(Mean,Stddev)	-0.48	0.38	

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

Number of GCPs	6		
Location Error(Km)			
Along(Mean,Dir)	45.6783	N	
Across(Mean,Dir)	-112.52	W	
Scale(Km)			
Average Scale (Mean,%Variation)	4.72	17.92	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	-0.26	0.87	
Across(Mean,Stddev)	-0.40	1.64	

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	2		
Location Error(Km)			
Along(Mean,Dir)	34.315	N	
Across(Mean,Dir)	-108.66	W	
Scale(Km)			
Average Scale (Mean,%Variation)	4.56	13.99	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	0.39	0.00	
Across(Mean,Stddev)	1.05	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