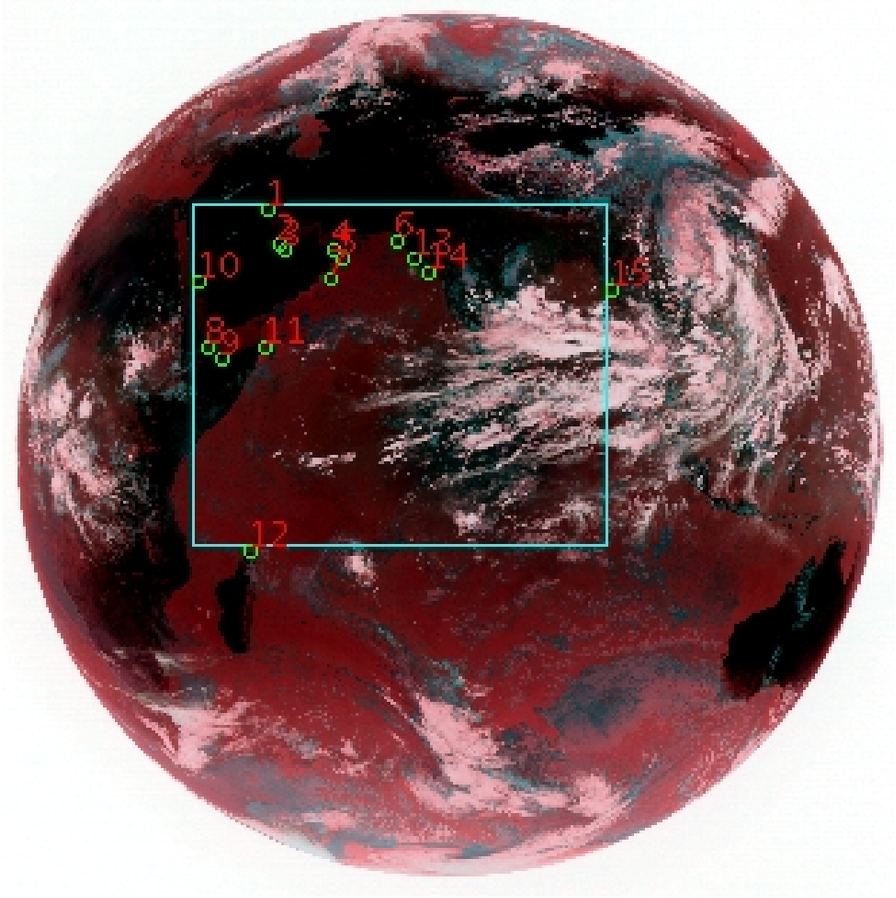
DQE Report: Location Accuracy of INSAT-3DR-IMG STANDARD (FULL DISK) Product 3RIMG_17SEP2018_0615

Satellite	INSAT-3DR	**No Of Bands**	6	**Product Type**	STANDARD
Sensor	IMG	**LvlOfProcess**	L1B	**Selected Band**	2-TIR1
DOP/Time	17-09-18/06:15	**Station ID**	BES	**Field View(deg)**	18.006
Res(Y,X) [Km]	(4.0,4.0)	**Res(Y,X) [uRad]**	(112.0,112.0)		

(81.227N,-7.367W) (81.227N,154.919E)



(-80.885S,-7.367W) (-80.885S,154.919E)

GCP Distribution overview for 3RIMG17SEP20180615L1BDQE

Image Width: 2805 **Image Height:** 2816 **No Of GCPs:** 15

GCP Coverage(%) 38.14 **(N-S)** 46.43 **(E-W)**

Location Error(E)

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

Location Error (In IR Pixels)

	Mean	Direction	Stddev	RMS
Along	10.217	N	1.573	10.337
Across	-27.470	W	1.937	27.539

Radial Error (in IR Pixels)

Mean	29.341
Min	26.397
Max	33.251
CE90	31.476

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.381	0.314	9.520
Along	4.807	2.365	20.164
Across	4.477	0.664	11.929

Internal Distortion (in IR Pixels)

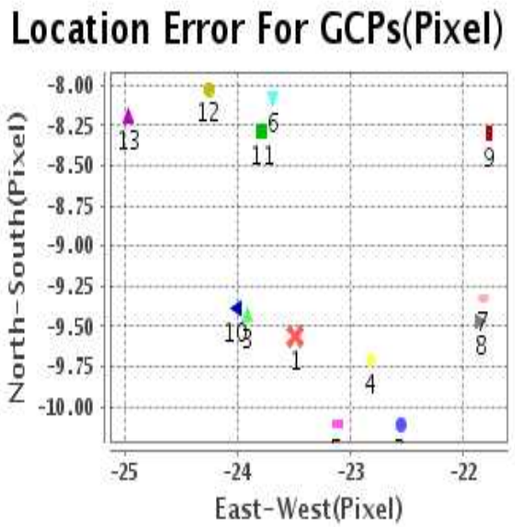
	PeakToPeak	Mean	Stddev	RMS
Along	2.087	-1.121	0.72	1.330
Across	3.142	1.581	0.92	1.827

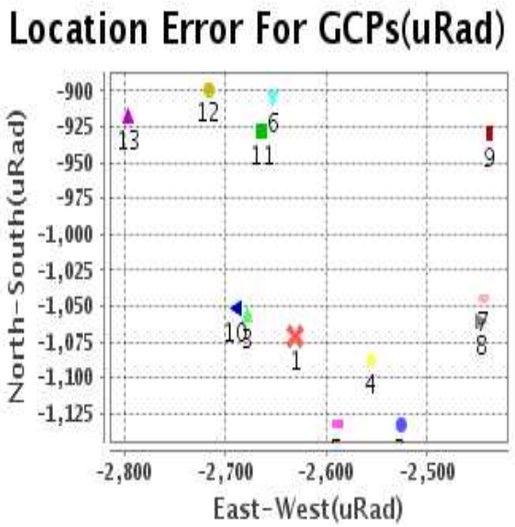
Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.16736	-0.06264	-0.04804

Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP





Detailed Product Information

Ancillary Info

Satellite	INSAT-3DR	Generation Date	17-09-18
Sensor	IMG	DQE Date	20-09-2018
PassType	NONE	Aquisition Date	17-09-18
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_17SEP20	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)	0.171
Center Lon(deg)	73.776
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)	81.227
NW_Lon(deg)	-7.367
SW_Lat(deg)	-80.885
SW_Lon(deg)	-7.367
NE_Lat(deg)	81.227
NE_Lon(deg)	154.919
SE_Lat(deg)	-80.885
SE_Lon(deg)	154.919

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 : **3RIMG17SEP20180615L1BDQE**

(-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 :** 15

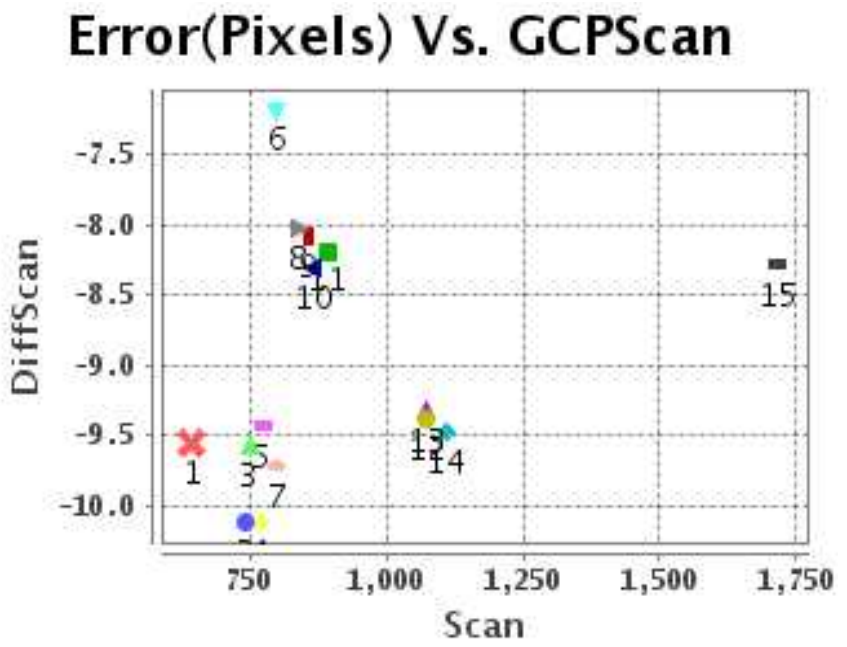
	Mean	StdDev	Min	Max	Coverage(in %)
GCP Scan	913.1	250.6	642.2	1716.25	38.14 (N-S)
GCP Pix	994.0	327.9	604.8	1907.25	46.43 (E-W)

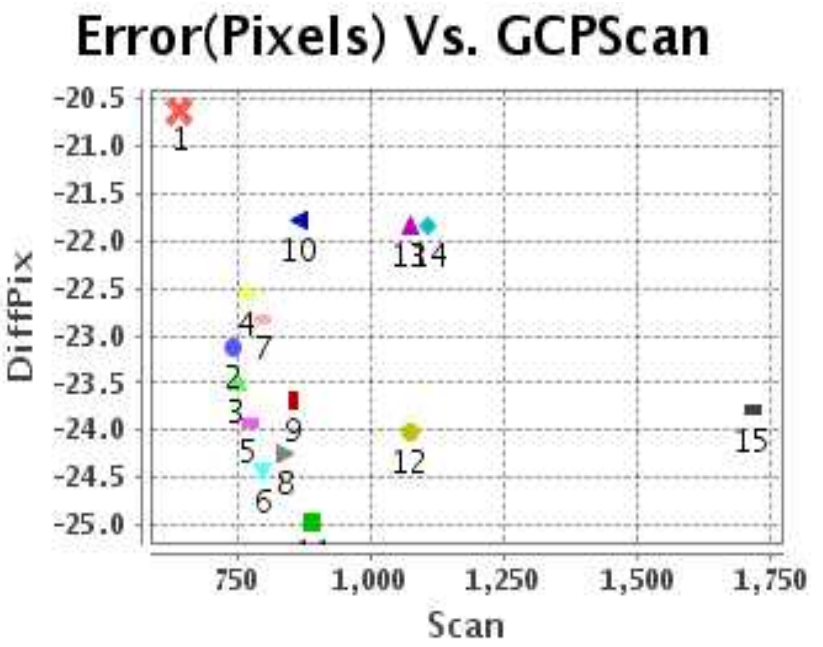
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	642.2	822.8	-9.6	-20.62	56.117	N	119.588	W	Rejected
2	750.0	858.8	-9.6	-23.49	50.674	N	121.264	W	Accepted
3	768.2	875.5	-10.1	-22.55	50.266	N	115.434	W	Accepted
4	772.5	1030.0	-9.4	-23.91	44.367	N	112.688	W	Accepted
5	798.8	1054.5	-9.7	-22.82	43.334	N	103.049	W	Accepted
6	742.0	1227.5	-10.1	-23.12	50.610	N	101.860	W	Accepted
7	856.2	1020.5	-8.1	-23.69	36.435	N	105.591	W	Accepted
8	1074.2	638.0	-9.3	-21.83	39.736	N	113.918	W	Accepted
9	1108.2	676.2	-9.5	-21.84	38.607	N	107.848	W	Accepted
10	864.5	604.8	-8.3	-21.78	39.936	N	126.867	W	Accepted
11	1072.8	812.0	-9.4	-24.02	37.343	N	111.151	W	Accepted
12	1716.2	770.8	-8.3	-23.79	31.545	N	100.767	W	Accepted
13	798.2	1281.8	-7.2	-24.45	32.905	N	100.945	W	Rejected

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

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
14	840.2	1329.2	-8.0	-24.26	35.154	N	100.865	W	Accepted
15	892.0	1907.2	-8.2	-24.97	33.252	N	107.164	W	Accepted



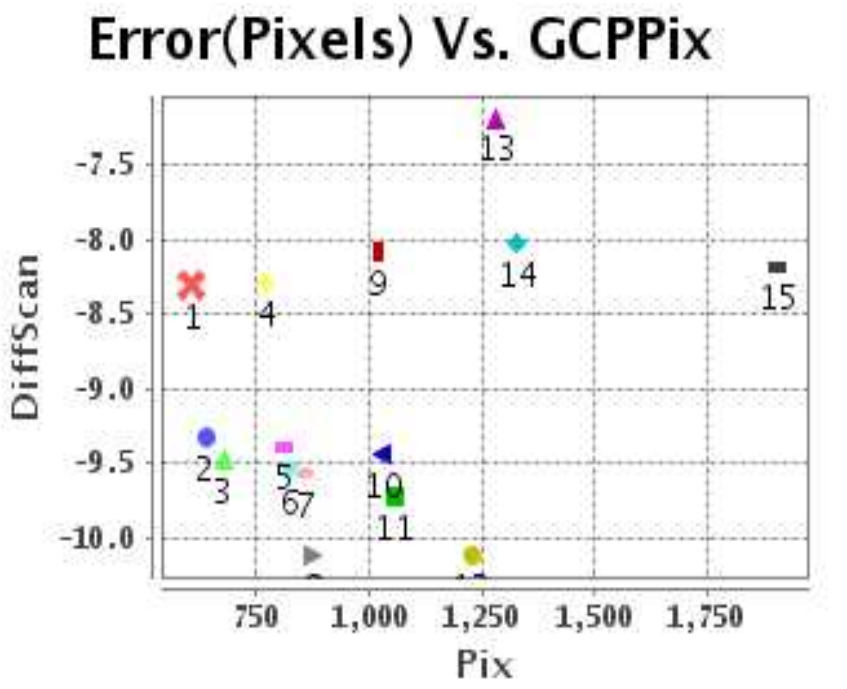


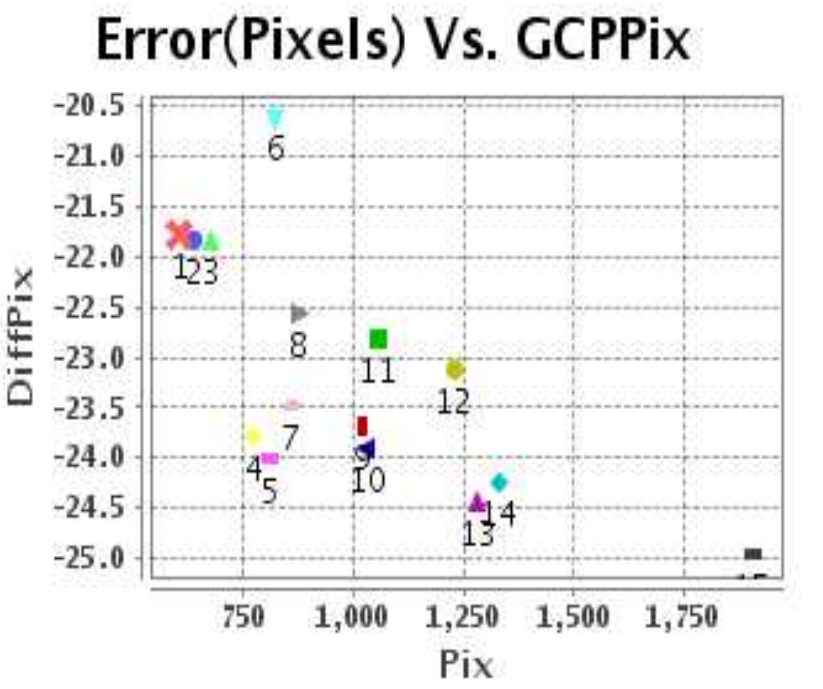
Number Of Points

North	13
South	0
East	0
West	13

Radial Error (Km

Mean	29.341
Min	26.397
Max	33.251
CE90	31.476





Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	10.217	1.573	10.337	N	10.118	10.515
Across (Km)	-27.470	1.937	27.539	W	27.162	27.725

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)	46.9567	N	
Across(Mean,Dir)	-121.19	W	
Scale(Km)			
Average Scale (Mean,%Variation)	4.93	23.23	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	-0.36	0.90	
Across(Mean,Stddev)	1.24	0.47	

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

Number of GCPs	5		
Location Error(Km)			
Along(Mean,Dir)	41.98	N	
Across(Mean,Dir)	-104.81	W	
Scale(Km)			
Average Scale (Mean,%Variation)	4.46	11.62	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	-1.30	0.77	
Across(Mean,Stddev)	-0.16	0.58	

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

Number of GCPs	1		
Location Error(Km)			
Along(Mean,Dir)	33.25	N	
Across(Mean,Dir)	-107.16	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)	36.8025	N	
Across(Mean,Dir)	-108.42	W	
Scale(Km)			
Average Scale (Mean,%Variation)	4.31	7.83	
Internal Distortion(Pixel)			
Along(Mean,Stddev)	-0.36	0.53	
Across(Mean,Stddev)	1.39	0.97	

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