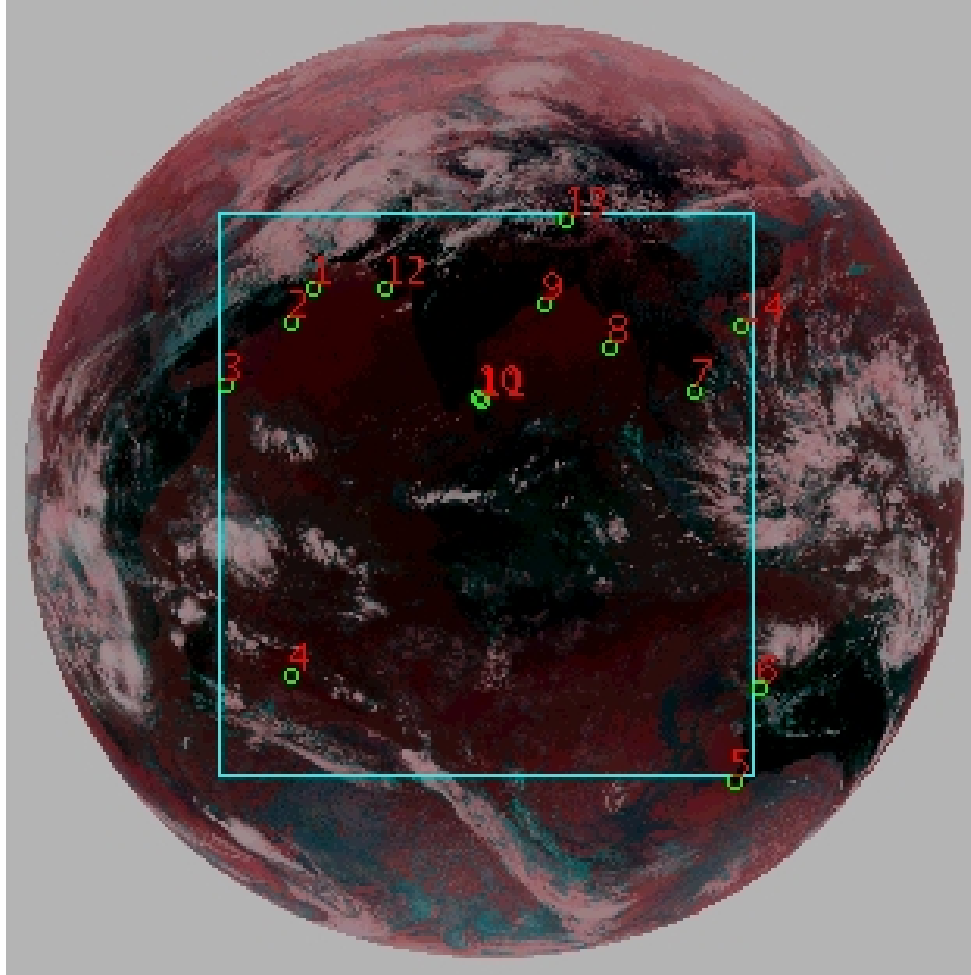


DQE Report: GDQE - Location parameters for INSAT-3D-IMG STANDARD(FULL DISK) Product

Satellite	INSAT-3D	No Of Bands	6	Product Type	STANDARD
Sensor	IMG	LvlOfProcess	L1B	Selected Band	2-TIR1
DOP/Time	17-02-17/06:00	Station ID	BES	Field View(deg)	17.974
Res(Y,X) [Km]	(4.0,4.0)	Res(Y,X) [uRad]	(112.0,112.0)		

(81.042N,0.843W)

(81.042N,163.157E)



(-81.042S,0.843W)

(-81.042S,163.157E)

GCP Distribution overview for 3DIMG17FEB20170600L1BSTD

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

GCP Coverage(%) 57.35 **(N-S)** 55.00 **(E-W)**

Location Error(E)

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

Location Error (Km)

	Mean	Direction	Stddev	RMS
Along	2.186	N	10.705	10.926
Across	-9.773	W	8.867	13.196

Scale (Km)

	Pixel Size	Stddev	%variation
Average	4.333	0.207	8.335
Along	4.445	1.095	11.113
Across	4.292	0.322	7.289

Internal Distortion (in Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	8.758	1.620	2.43	2.917
Across	6.372	4.016	1.68	4.352

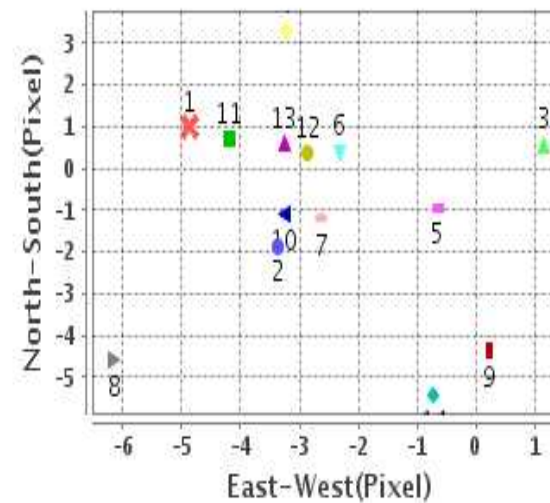
Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.01570	-0.00299	0.11170

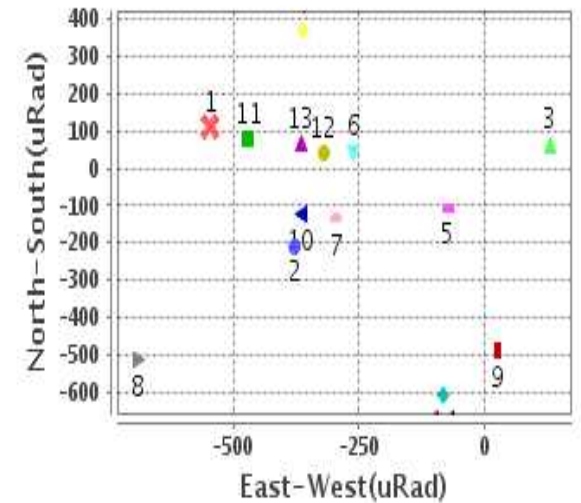
Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

Location Error For GCPs(Pixel)



Location Error For GCPs(uRad)



Detailed Product Information

Ancillary Info

Satellite	INSAT-3D	Generation Date	17-02-17
Sensor	IMG	DQE Date	21-02-2017
PassType	NONE	Aquisition Date	17-02-17
Imaging Mode	FULL_FRAME	Aquisition Time(GMT)	06:00
Sat Altitude(m)	3.6E7	Nominal Altitude(Km)	3.6E7
Station	BES	Predicted Altitude(Km)	0.0
Sat Location(deg)	0.0 E	Nominal Center Lat(deg)	0.0
Format	hdf5-1.8.8	Nominal Center Lon(deg)	82.0
LvlOfProcessing	STANDARD(FULL	Predicted Center Lat(deg)	0.0
DP JobId	3DIMG_17FEB20	Predicted Center Lon(deg)	0.0
ProductCode	NONE		
Field View(deg)	17.974		

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)	0.0
Center Lon(deg)	82.0
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)	81.042
NW_Lon(deg)	0.843
SW_Lat(deg)	-81.042
SW_Lon(deg)	0.843
NE_Lat(deg)	81.042
NE_Lon(deg)	163.157
SE_Lat(deg)	-81.042
SE_Lon(deg)	163.157

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

* -999.99 : Not Applicable/Not Available

References

JobId : 3DIMG17FEB20170600L1BSTD

(-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	1181.0	476.1	618.8	2233.75	57.35 (N-S)
GCP Pix	1430.5	515.7	616.2	2159.00	55.00 (E-W)

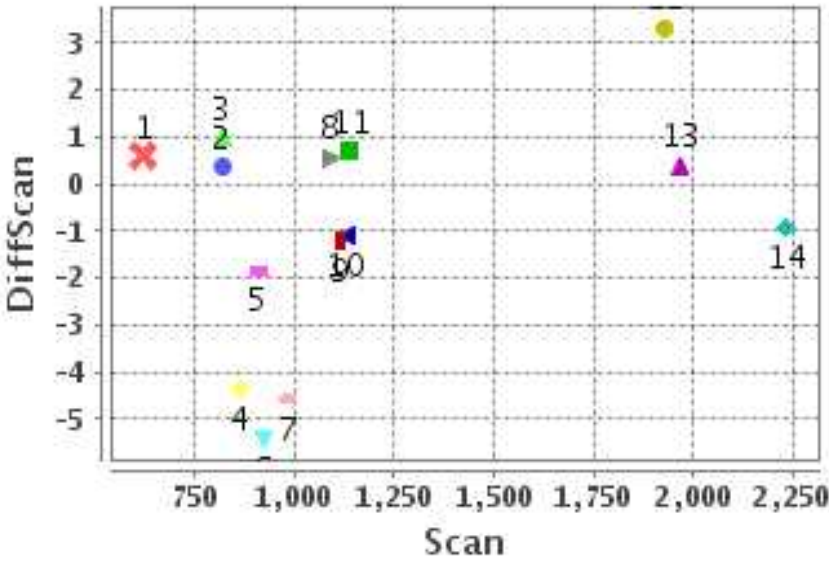
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	818.0	864.2	1.0	-4.87	3.845	S	21.055	W	Accepted
2	909.2	803.5	-1.9	-3.37	7.186	N	14.391	W	Accepted
3	1090.2	616.2	0.6	1.15	3.545	S	7.454	E	Accepted
4	1930.0	803.8	3.3	-3.24	15.820	S	14.697	W	Accepted
5	2233.8	2086.5	-0.9	-0.66	1.233	N	0.989	W	Accepted
6	1970.5	2159.0	0.4	-2.33	3.488	S	12.014	W	Accepted
7	1115.5	1964.2	-1.2	-2.63	2.613	N	10.835	W	Accepted
8	981.5	1725.5	-4.6	-6.15	16.865	N	22.253	W	Accepted
9	861.2	1530.0	-4.3	0.23	18.532	N	1.544	E	Accepted
10	1128.8	1346.2	-1.1	-3.26	1.529	N	11.750	W	Accepted
11	1138.2	1357.0	0.7	-4.20	3.709	S	16.818	W	Accepted
12	817.5	1076.5	0.4	-2.86	3.937	S	9.589	W	Accepted
13	618.8	1595.2	0.6	-3.26	7.594	S	15.137	W	Accepted

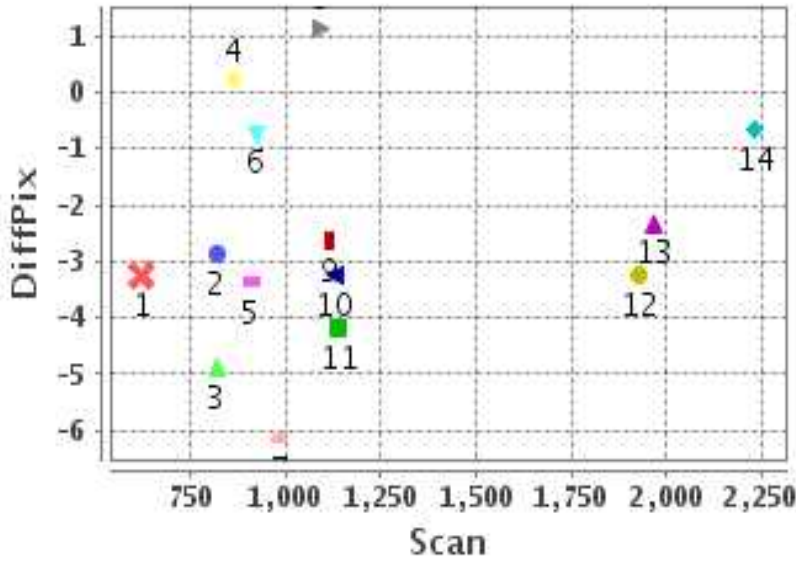
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
14	921.0	2098.5	-5.4	-0.73	24.584	N	3.703	E	Accepted

Error(Pixels) Vs. GCPScan



Error(Pixels) Vs. GCPScan



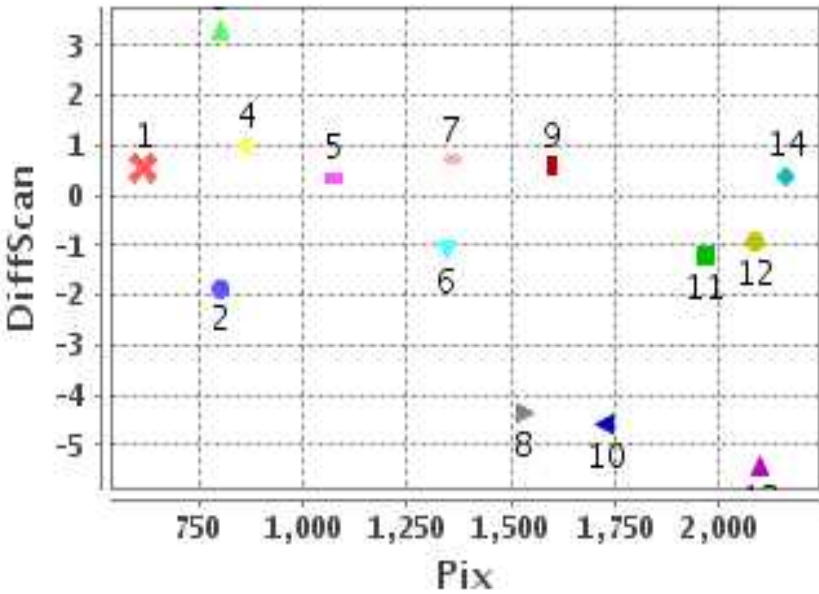
Number Of Points

North	7
South	7
East	3
West	11

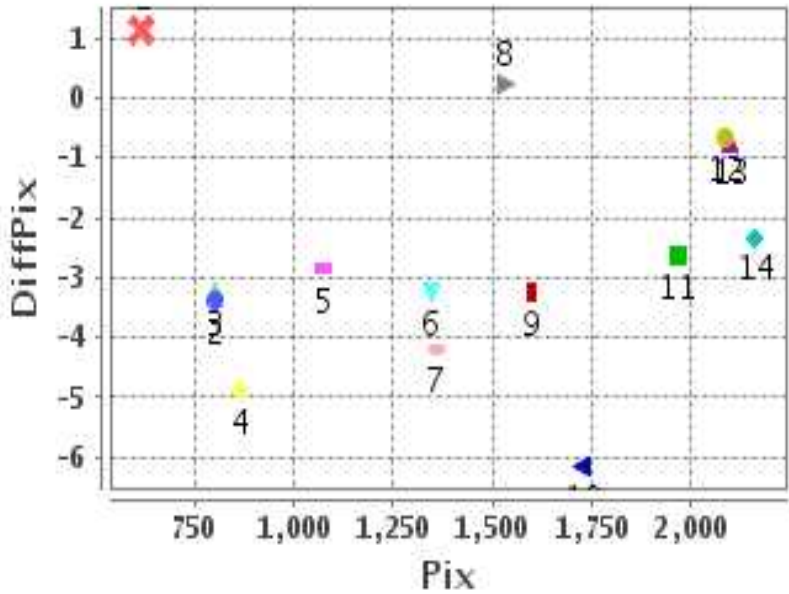
Radial Error (Km)

Mean	15.737
Min	1.580
Max	27.922
CE90	21.593

Error(Pixels) Vs. GCPPix



Error(Pixels) Vs. GCPPix



Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	2.186	10.705	10.926	N	9.059	11.333
Across (Km)	-9.773	8.867	13.196	W	12.225	13.692

Block-Wise Geo location Error Statistics

Location Accuracy,Scale,ID

Scan Range-0-937; Pix Range-0-934 Number of GCPs2 Location Error(Km) Along(Mean,Dir)1.67N Across(Mean,Dir)-17.72W Scale(Km) Average Scale (Mean,%Variation)4.133.21 Internal Distortion(Pixel) Along(Mean,Stddev)2.860.00 Across(Mean,Stddev)1.500.00	Scan Range-0-937; Pix Range-934-1869 Number of GCPs3 Location Error(Km) Along(Mean,Dir)2.33N Across(Mean,Dir)-7.72W Scale(Km) Average Scale (Mean,%Variation)4.5714.24 Internal Distortion(Pixel) Along(Mean,Stddev)2.612.35 Across(Mean,Stddev)-1.341.74	Scan Range-0-937; Pix Range-1869-2805 Number of GCPs1 Location Error(Km) Along(Mean,Dir)24.59N Across(Mean,Dir)3.71E 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 GCPs1 Location Error(Km) Along(Mean,Dir)-3.54S Across(Mean,Dir)7.45E 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-934-1869 Number of GCPs3 Location Error(Km) Along(Mean,Dir)4.89667N Across(Mean,Dir)-16.94W Scale(Km) Average Scale (Mean,%Variation)4.081.95 Internal Distortion(Pixel) Along(Mean,Stddev)-4.400.92 Across(Mean,Stddev)1.920.98	Scan Range-937-1876; Pix Range-1869-2805 Number of GCPs1 Location Error(Km) Along(Mean,Dir)2.62N Across(Mean,Dir)-10.84W 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 GCPs1 Location Error(Km) Along(Mean,Dir)-15.82S Across(Mean,Dir)-14.69W 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)-999.99NotAvail Across(Mean,Dir)-999.99NotAvail 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 GCPs2 Location Error(Km) Along(Mean,Dir)-1.125S Across(Mean,Dir)-6.50W Scale(Km) Average Scale (Mean,%Variation)5.1629.05 Internal Distortion(Pixel) Along(Mean,Stddev)1.340.00 Across(Mean,Stddev)1.670.00

*-999 : no gcp available
* -999.99 : values are not computed