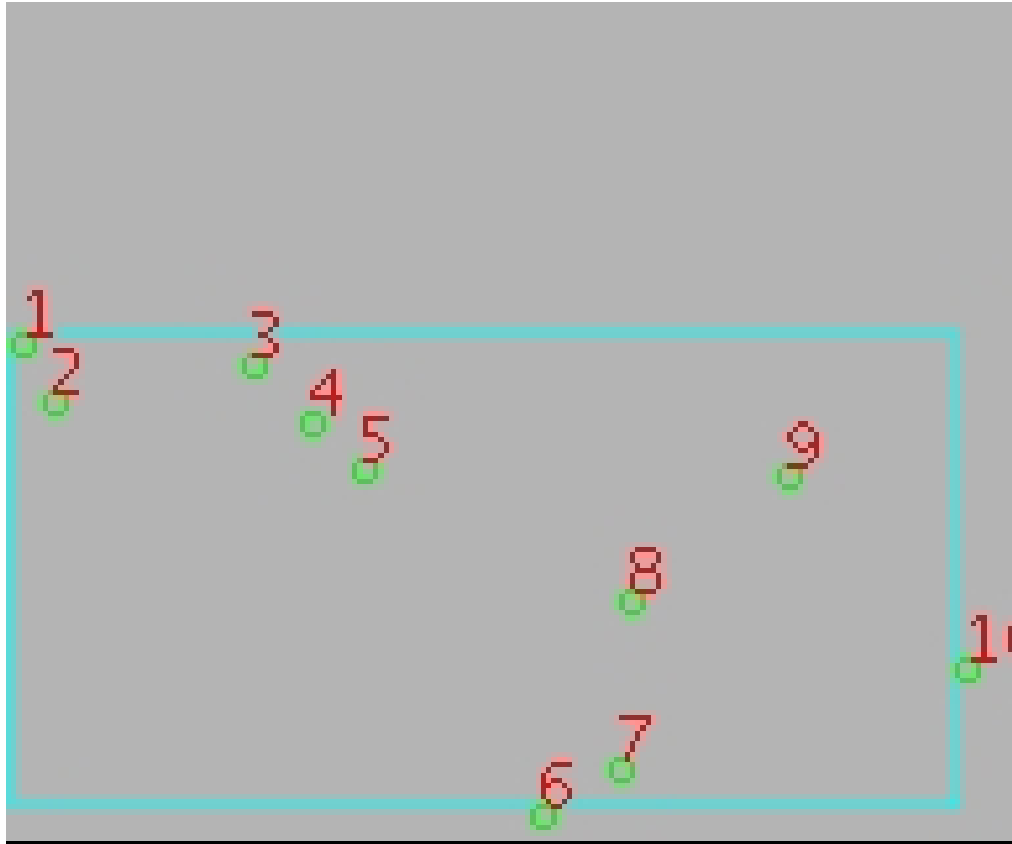


DQE Report: GDQE - Location parameters for INSAT-3DR-SND STANDARD Product 3RSND_07FEB2017_0630

Satellite INSAT-3DR **No Of Bands** 19 **Product Type** STANDARD
Sensor SND **LvlOfProcess** L1B **Selected Band** 2-LWIR3
DOP/Time 07-02-17/06:30 **Station ID** BES **Field View(deg)** 6.136
Res(Y,X) [Km] (10.0,10.0) **Res(Y,X) [uRad]** (280.0,280.0)

(41.395N,53.164W)

(41.395N,103.271E)



(6.916S,53.164W)

(6.916S,103.271E)

GCP Distribution overview for 3RSND07FEB20170630L1BSA1

Image Width: 384 **Image Height:** 320 **No Of GCPs:** 10

GCP Coverage(%) 56.56 **(N-S)** 93.75 **(E-W)**

Location Error(E)

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

Location Error (Km)

	Mean	Direction	Stddev	RMS
Along	9.700	N	5.512	11.157
Across	-14.805	W	7.873	16.768

Radial Error (Km)

Mean	19.398
Min	10.179
Max	27.029
CE90	23.987

Scale (Km)

	Pixel Size	Stddev	%variation
Average	10.619	0.473	6.192
Along	11.427	3.567	14.267
Across	10.475	1.238	4.748

Internal Distortion (in Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	1.241	0.276	0.42	0.499
Across	1.907	-0.414	0.66	0.782

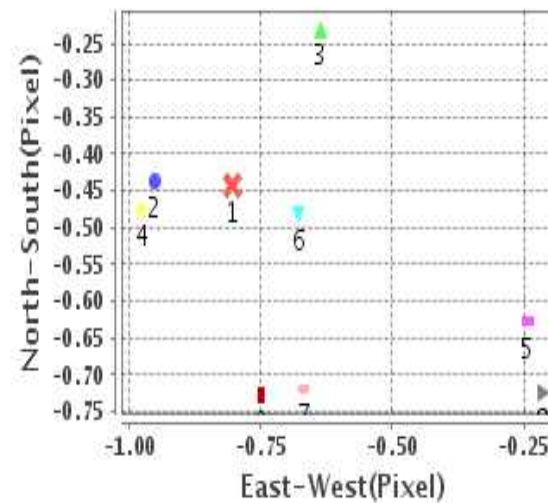
Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.02174	-0.01707	0.22596

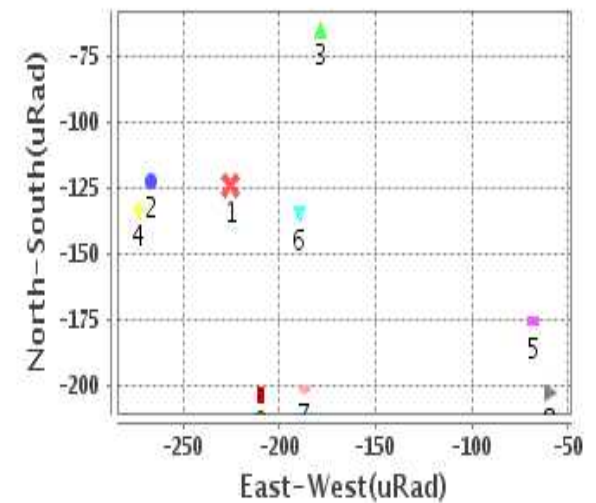
Reference Used

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	07-02-17
Sensor	SND	DQE Date	14-02-2017
PassType	NONE	Aquisition Date	07-02-17
Imaging Mode	FULL_FRAME	Aquisition Time(GMT)	06:30
Sat Altitude(m)	3.6E7	Nominal Altitude(Km)	3.6E7
Station	BES	Predicted Altitude(Km)	-1000.0
Sat Location(deg)	0.0 E	Nominal Center Lat(deg)	0.0
Format	hdf5-1.8.8	Nominal Center Lon(deg)	74.0
LvlOfProcessing	STANDARD	Predicted Center Lat(deg)	0.0
DP JobId	3RSND_07FEB20	Predicted Center Lon(deg)	0.0
ProductCode	NONE		
Field View(deg)	6.136		

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)	24.156
Center Lon(deg)	78.218
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)	41.395
NW_Lon(deg)	53.164
SW_Lat(deg)	6.916
SW_Lon(deg)	53.164
NE_Lat(deg)	41.395
NE_Lon(deg)	103.271
SE_Lat(deg)	6.916
SE_Lon(deg)	103.271

Band Wise Details

	Res_AL(Km)	Res_AX(Km)	Image Height	Image Width
LWIR1	10.0	10.0	320	384
LWIR2	10.0	10.0	320	384
LWIR3	10.0	10.0	320	384
LWIR4	10.0	10.0	320	384
LWIR5	10.0	10.0	320	384
LWIR6	10.0	10.0	320	384

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 : 3RSND07FEB20170630L1BSA1

(-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

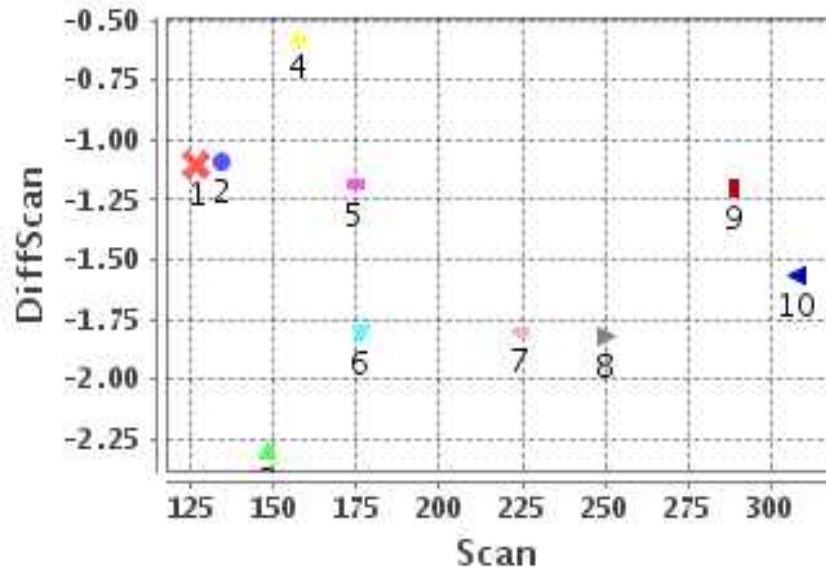
Image Width (pixels) : 384 Image Height (pixels) : 320 No of GCPs : 10

	Mean	StdDev	Min	Max	Coverage(in %)
GCP Scan	198.8	61.6	126.8	307.75	56.56 (N-S)
GCP Pix	167.9	111.8	3.2	363.25	93.75 (E-W)

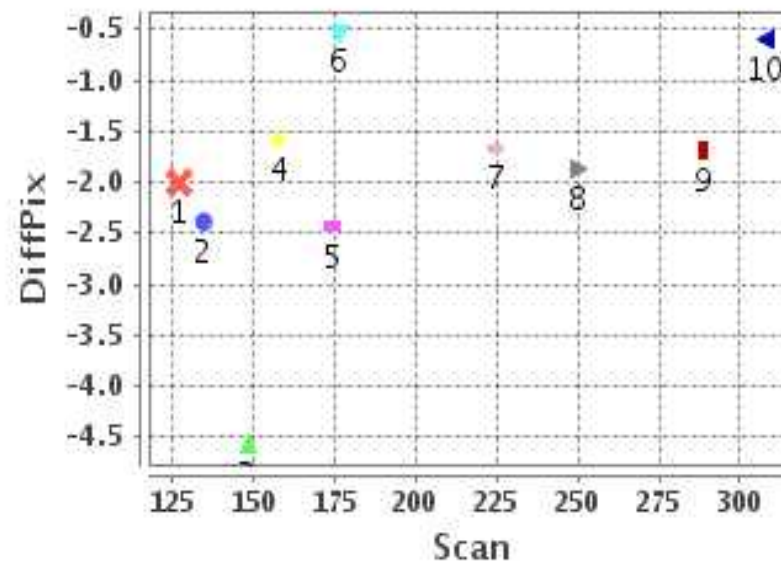
Identified Control Point details : (Differences are Reference - Product)

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	126.8	3.2	-1.1	-2.01	4.256	N	22.009	W	Accepted
2	148.2	14.2	-2.3	-4.57	25.145	N	49.951	W	Rejected
3	134.2	91.5	-1.1	-2.38	10.341	N	21.374	W	Accepted
4	157.5	112.0	-0.6	-1.59	0.882	N	17.044	W	Accepted
5	174.5	132.0	-1.2	-2.44	7.793	N	25.881	W	Accepted
6	307.8	201.0	-1.6	-0.61	7.875	N	6.450	W	Accepted
7	288.5	231.8	-1.2	-1.69	6.803	N	9.364	W	Accepted
8	224.5	235.0	-1.8	-1.67	13.464	N	16.033	W	Accepted
9	176.2	295.2	-1.8	-0.53	17.637	N	0.479	E	Accepted
10	250.0	363.2	-1.8	-1.87	18.250	N	15.567	W	Accepted

Error(Pixels) Vs. GCPScan



Error(Pixels) Vs. GCPScan



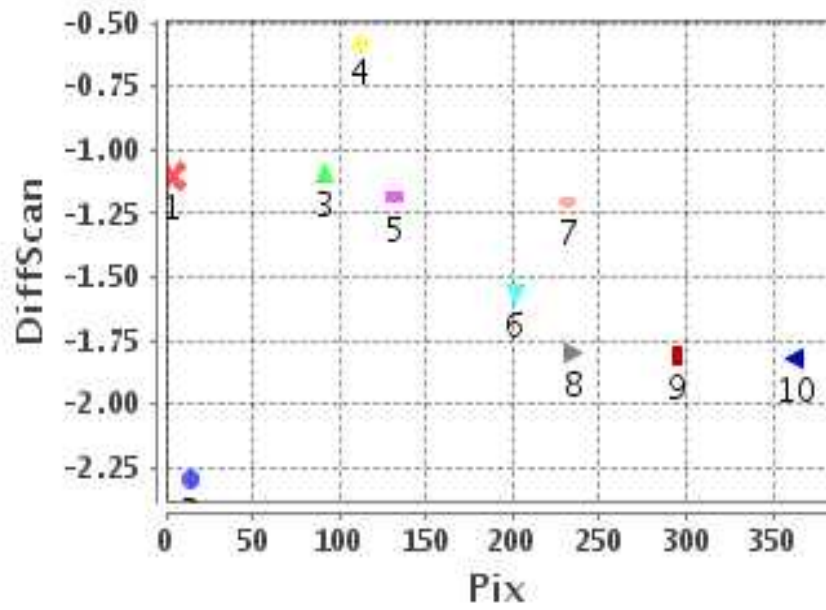
Number Of Points

North	9
South	0
East	1
West	8

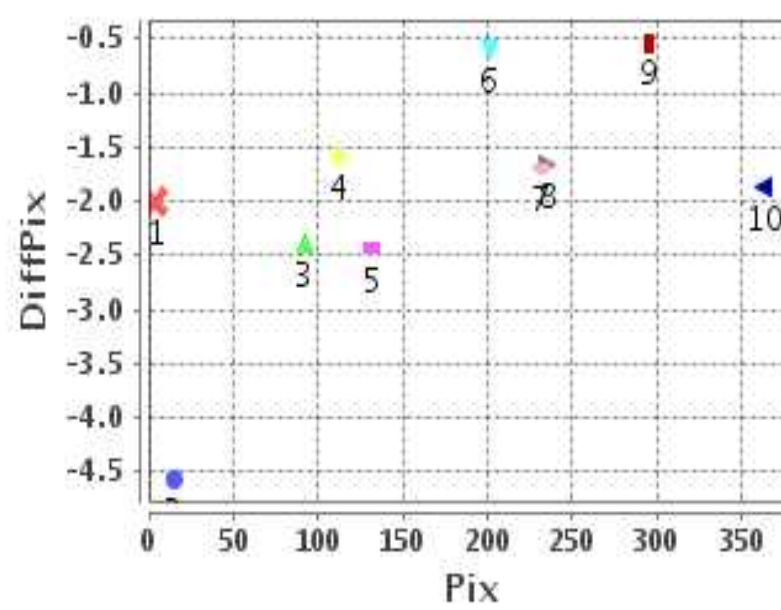
Radial Error (Km)

Mean	19.398
Min	10.179
Max	27.029
CE90	23.987

Error(Pixels) Vs. GCPPix



Error(Pixels) Vs. GCPPix



Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along(Km)	9.700	5.512	11.157	N	9.920	11.829
Across (Km)	-14.805	7.873	16.768	W	15.251	17.784

Block-Wise Geo location Error Statistics

Location Accuracy,Scale,ID

Scan Range-0-105; Pix Range-0-127		
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-0-105; Pix Range-127-255		
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-0-105; Pix Range-255-384		
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-105-212; Pix Range-0-127		
Number of GCPs	3	
Location Error(Km)		
Along(Mean,Dir)	5.16	N
Across(Mean,Dir)	-20.14	W
Scale(Km)		
Average Scale (Mean,%Variation)	11.60	16.05
Internal Distortion(Pixel)		
Along(Mean,Stddev)	-0.27	0.26
Across(Mean,Stddev)	-0.03	0.39

Scan Range-105-212; Pix Range-127-255		
Number of GCPs	1	
Location Error(Km)		
Along(Mean,Dir)	7.8	N
Across(Mean,Dir)	-25.88	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-105-212; Pix Range-255-384		
Number of GCPs	1	
Location Error(Km)		
Along(Mean,Dir)	17.63	N
Across(Mean,Dir)	0.48	E
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-212-320; Pix Range-0-127		
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-212-320; Pix Range-105-255		
Number of GCPs	3	
Location Error(Km)		
Along(Mean,Dir)	9.38167	N
Across(Mean,Dir)	-10.62	W
Scale(Km)		
Average Scale (Mean,%Variation)	9.99	0.05
Internal Distortion(Pixel)		
Along(Mean,Stddev)	-0.41	0.18
Across(Mean,Stddev)	1.08	0.01

Scan Range-212-320; Pix Range-255-384		
Number of GCPs	1	
Location Error(Km)		
Along(Mean,Dir)	18.25	N
Across(Mean,Dir)	-15.57	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

*-999 : no gcp available

* -999.99 : values are not computed