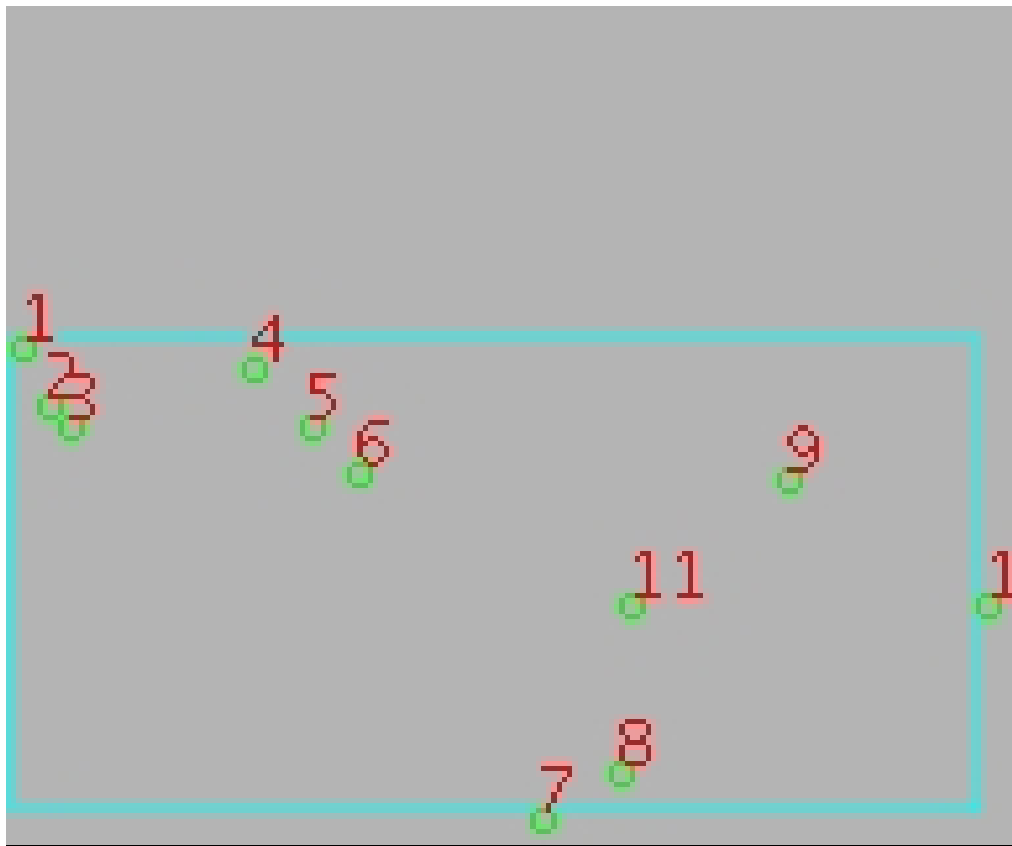


# DQE Report: GDQE - Location parameters for INSAT-3DR-SND STANDARD Product 3RSND\_09FEB2017\_0630

**Satellite** INSAT-3DR    **No Of Bands** 19    **Product Type** STANDARD  
**Sensor** SND    **LvlOfProcess** L1B    **Selected Band** 2-LWIR3  
**DOP/Time** 09-02-17/06:30    **Station ID** BES    **Field View(deg)** 6.136  
**Res(Y,X) [Km]** (10.0,10.0)    **Res(Y,X) [uRad]** (280.0,280.0)

(41.393N,53.177W)

(41.393N,103.286E)



(6.914S,53.177W)

(6.914S,103.286E)

GCP Distribution overview for 3RSND09FEB20170630L1BSA1

**Image Width:** 384    **Image Height:** 320    **No Of GCPs:** 11

**GCP Coverage(%)** 56.56    **(N-S)** 96.16    **(E-W)**

## Location Error(E)

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

## Location Error (Km)

	Mean	Direction	Stddev	RMS
Along	9.209	N	4.405	10.208
Across	-12.243	W	5.171	13.290

## Radial Error (Km)

<b>Mean</b>	16.395
<b>Min</b>	10.725
<b>Max</b>	22.799
<b>CE90</b>	19.331

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	10.682	0.451	6.816
Along	10.923	1.170	9.229
Across	10.736	0.752	7.364

## Internal Distortion (in Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	1.100	0.642	0.36	0.738
Across	1.356	0.418	0.48	0.633

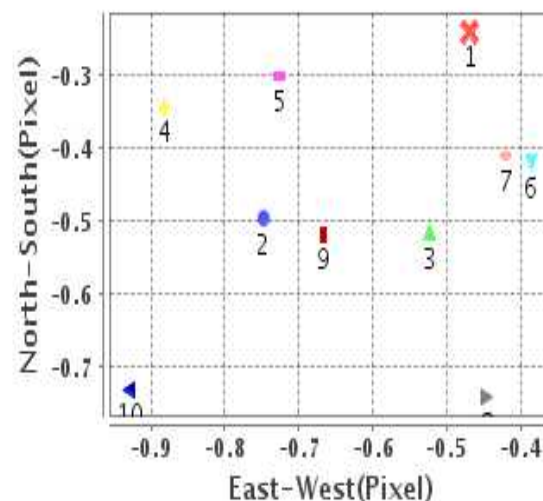
## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.01822	-0.01617	0.12970

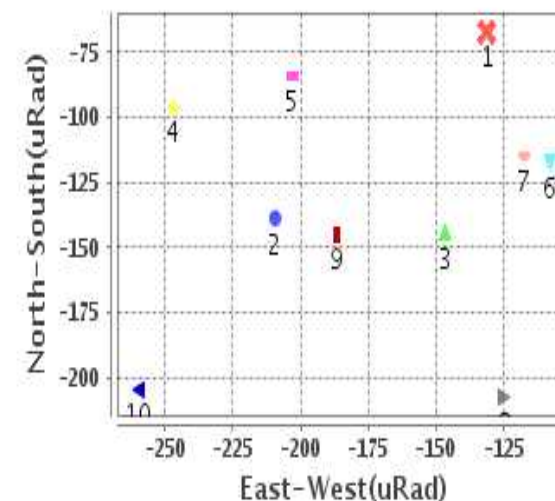
## Reference Used

Sensor	Resolution	Projection
ETM	500.00	GGP

## Location Error For GCPs(Pixel)



## Location Error For GCPs(uRad)



## Detailed Product Information

### Ancillary Info

<b>Satellite</b>	INSAT-3DR	<b>Generation Date</b>	09-02-17
<b>Sensor</b>	SND	<b>DQE Date</b>	14-02-2017
<b>PassType</b>	NONE	<b>Aquisition Date</b>	09-02-17
<b>Imaging Mode</b>	FULL_FRAME	<b>Aquisition Time(GMT)</b>	06:30
<b>Sat Altitude(m)</b>	3.6E7	<b>Nominal Altitude(Km)</b>	3.6E7
<b>Station</b>	BES	<b>Predicted Altitude(Km)</b>	-1000.0
<b>Sat Location(deg)</b>	0.0 E	<b>Nominal Center Lat(deg)</b>	0.0
<b>Format</b>	hdf5-1.8.8	<b>Nominal Center Lon(deg)</b>	74.0
<b>LvlOfProcessing</b>	STANDARD	<b>Predicted Center Lat(deg)</b>	0.0
<b>DP JobId</b>	3RSND_09FEB20	<b>Predicted Center Lon(deg)</b>	0.0
<b>ProductCode</b>	NONE		
<b>Field View(deg)</b>	6.136		

### Projection Parameters

<b>Projection</b>	None
<b>Ellipsoid</b>	WGS_84
<b>Datum</b>	WGS_84
<b>Zone</b>	NotAvail
<b>Semi_Major_Axis(Km)</b>	6378.14
<b>Semi_Minor_Axis(Km)</b>	6356.75
<b>Standard_Parallel1(deg)</b>	-999.99
<b>Standard_Parallel2(deg)</b>	-999.99
<b>Projection_Origin_Lon(deg)</b>	-999.99
<b>Projection_Origin_Lat(deg)</b>	-999.99
<b>Projection_False_Easting(Km)</b>	-999.99
<b>Projection_False_Northing(Km)</b>	-999.99

### Scene Center Desc

<b>Centre Lat(deg)</b>	24.154
<b>Center Lon(deg)</b>	78.232
<b>Centre Roll(deg)</b>	-999.0
<b>Centre Pitch(deg)</b>	-999.0
<b>Center Yaw(deg)</b>	-999.0
<b>SunElevation(deg)</b>	-999.99
<b>SunAzimuth(deg)</b>	-999.99
<b>SatElevation(deg)</b>	-999.99
<b>SatAzimuth(deg)</b>	-999.99

### Scene Corner Desc

<b>NW_Lat(deg)</b>	41.393
<b>NW_Lon(deg)</b>	53.177
<b>SW_Lat(deg)</b>	6.914
<b>SW_Lon(deg)</b>	53.177
<b>NE_Lat(deg)</b>	41.393
<b>NE_Lon(deg)</b>	103.286
<b>SE_Lat(deg)</b>	6.914
<b>SE_Lon(deg)</b>	103.286

### Band Wise Details

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

## GDQE Computation Base

<b>Projection</b>	MER	<b>Wildpoint Rejection Threshold</b>	2.60	<b>SemiMajorAxis(m)</b>	6378137.00	<b>Mode Of Computation</b>	grid
<b>Ellipsoid</b>	WGS_84		-sigma	<b>SemiMinorAxis(m)</b>	6356752.31	<b>Used Reference Type</b>	REFINSREF
<b>Datum</b>	WGS_84	<b>Unit</b>	pixels	<b>Standardparallel1(deg)</b>	17.0		
<b>Zone</b>	Not Applicable			<b>Standardparallel2(deg)</b>	17.0		

\* -999.99 : Not Applicable/Not Available

## References

**JobId : 3RSND09FEB20170630L1BSA1**

(-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

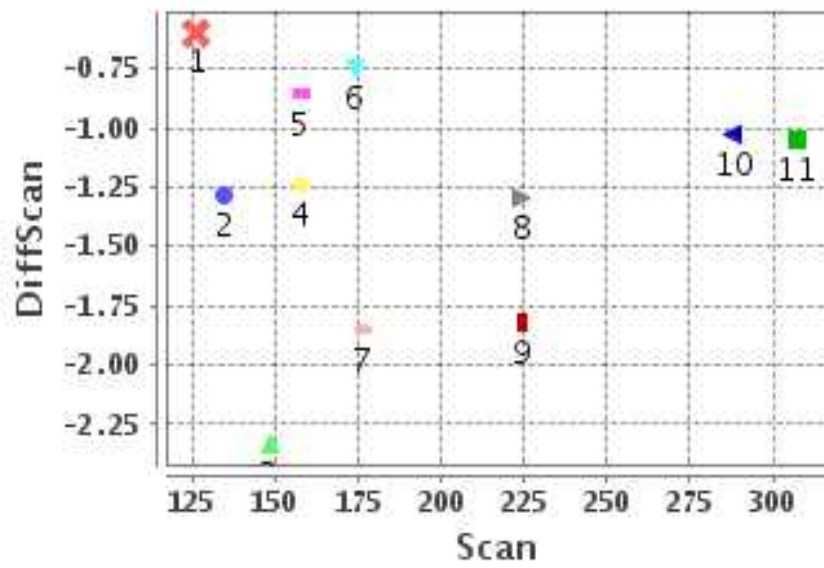
Image Width (pixels) : 384      Image Height (pixels) : 320      No of GCPs : 11

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	192.6	58.1	126.2	307.25	56.56 (N-S)
<b>GCP Pix</b>	155.1	116.3	2.2	371.50	96.16 (E-W)

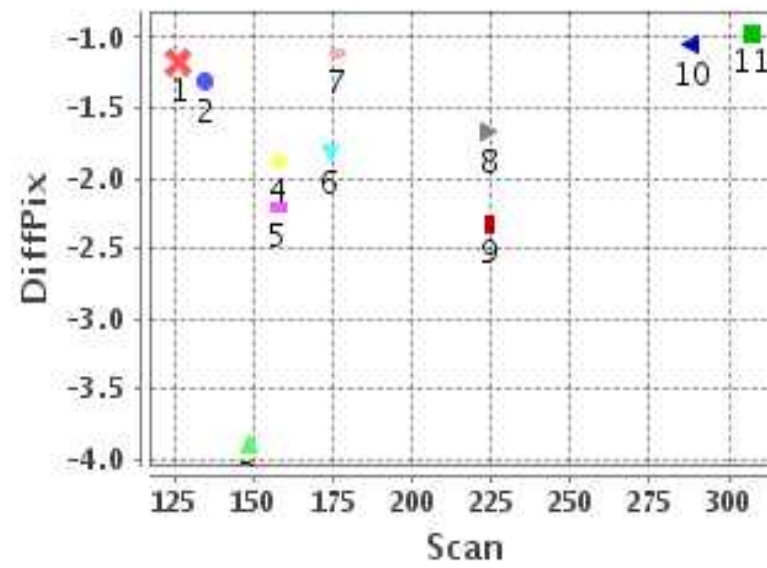
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	126.2	2.2	-0.6	-1.17	4.256	N	11.582	W	Accepted
2	148.2	13.5	-2.3	-3.89	25.626	N	39.702	W	Rejected
3	157.5	21.5	-1.2	-1.87	8.762	N	15.287	W	Accepted
4	134.5	90.2	-1.3	-1.31	9.612	N	13.077	W	Accepted
5	157.8	112.5	-0.9	-2.21	2.027	N	18.108	W	Accepted
6	174.0	131.2	-0.8	-1.81	8.500	N	17.362	W	Accepted
7	307.2	201.2	-1.0	-0.96	7.652	N	7.515	W	Accepted
8	288.2	231.0	-1.0	-1.05	7.474	N	10.207	W	Accepted
9	176.2	295.8	-1.9	-1.11	18.109	N	0.364	W	Accepted
10	224.2	371.5	-1.3	-1.67	11.134	N	11.383	W	Accepted
11	224.5	235.5	-1.8	-2.32	14.564	N	17.541	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



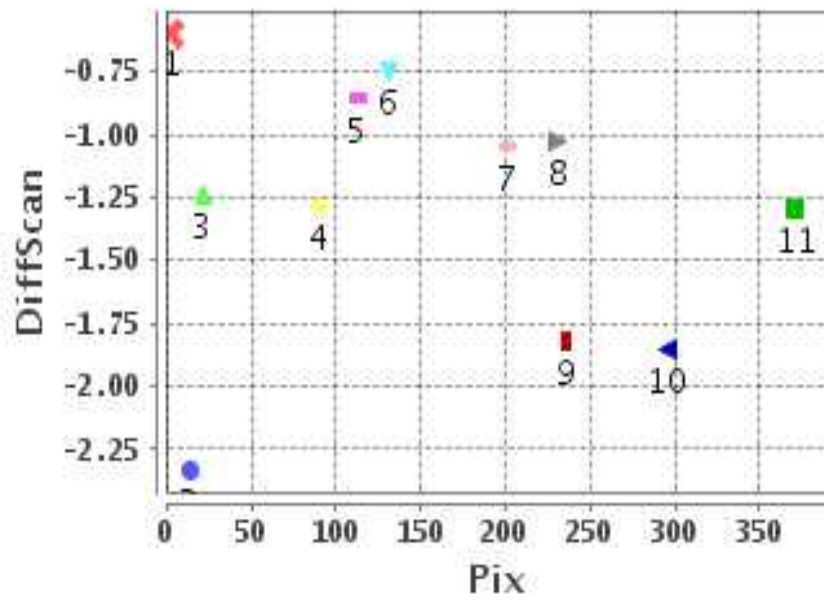
#### Number Of Points

North	10
South	0
East	0
West	10

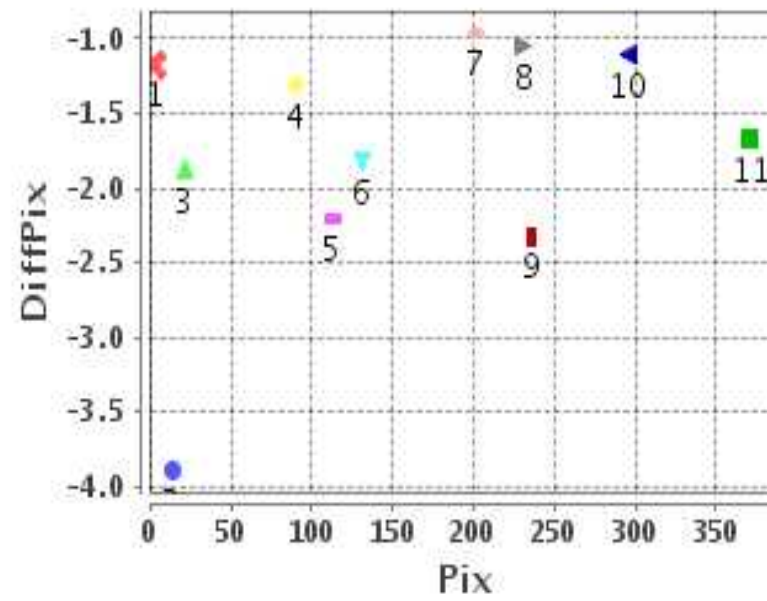
#### Radial Error ( Km )

Mean	16.395
Min	10.725
Max	22.799
CE90	19.331

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	9.209	4.405	10.208	N	8.908	10.739
Across ( Km )	-12.243	5.171	13.290	W	12.642	14.008

## Block-Wise Geo location Error Statistics

### Location Accuracy,Scale,ID

Scan Range-0-105; Pix Range-0-127		
Number of GCPs	-999	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-999.99	NotAvail
Across(Mean,Dir)	-999.99	NotAvail
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	-999.99	-999.9
<b>Internal Distortion(Pixel)</b>		
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	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-999.99	NotAvail
Across(Mean,Dir)	-999.99	NotAvail
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	-999.99	-999.9
<b>Internal Distortion(Pixel)</b>		
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	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-999.99	NotAvail
Across(Mean,Dir)	-999.99	NotAvail
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	-999.99	-999.9
<b>Internal Distortion(Pixel)</b>		
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	4	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	6.165	N
Across(Mean,Dir)	-14.51	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	11.35	13.51
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	0.53	0.19
Across(Mean,Stddev)	0.62	0.37

Scan Range-105-212; Pix Range-127-255		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	8.5	N
Across(Mean,Dir)	-17.36	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	-999.99	-999.9
<b>Internal Distortion(Pixel)</b>		
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	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	18.1	N
Across(Mean,Dir)	-0.36	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	-999.99	-999.9
<b>Internal Distortion(Pixel)</b>		
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	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	-999.99	NotAvail
Across(Mean,Dir)	-999.99	NotAvail
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	-999.99	-999.9
<b>Internal Distortion(Pixel)</b>		
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	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	9.89733	N
Across(Mean,Dir)	-11.75	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	10.11	1.09
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.79	0.01
Across(Mean,Stddev)	0.72	0.64

Scan Range-212-320; Pix Range-255-384		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	11.14	N
Across(Mean,Dir)	-11.38	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	-999.99	-999.9
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-999.99	-999.99
Across(Mean,Stddev)	-999.99	-999.99

\*-999 : no gcp available

\* -999.99 : values are not computed