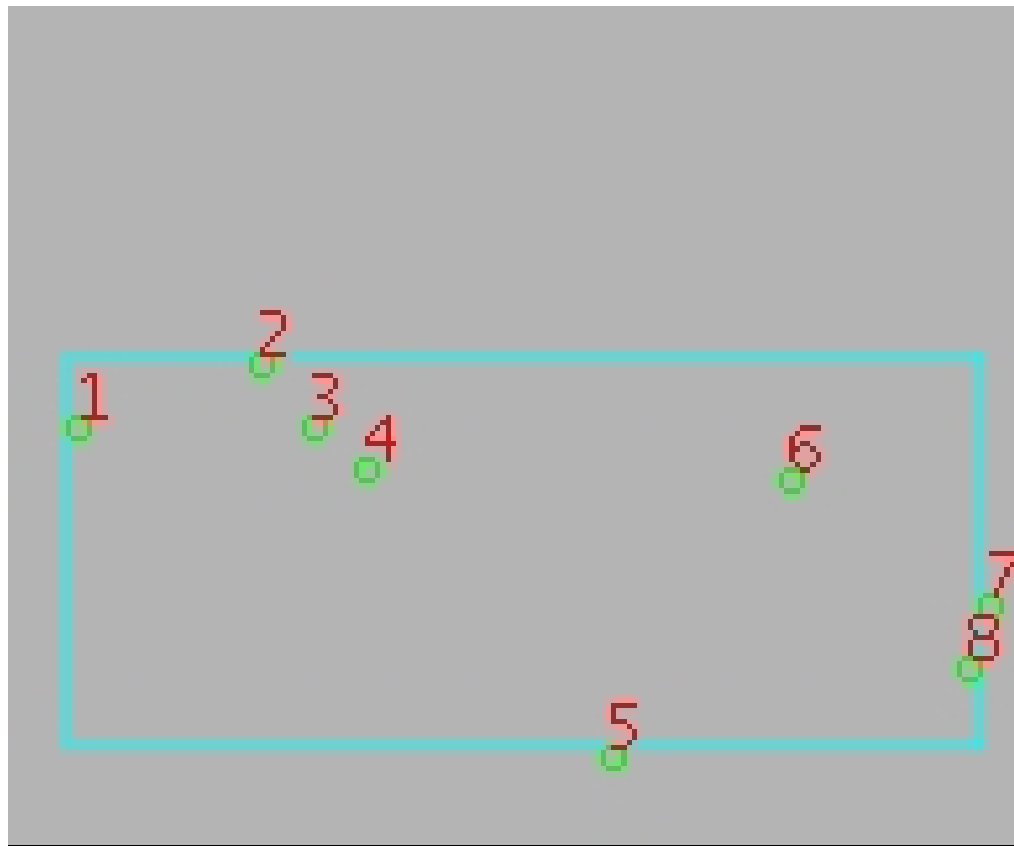


# DQE Report: GDQE - Location parameters for INSAT-3DR-SND STANDARD Product 3RSND\_28JAN2017\_0630

**Satellite** INSAT-3DR    **No Of Bands** 19    **Product Type** STANDARD  
**Sensor** SND    **LvlOfProcess** L1B    **Selected Band** 2-LWIR3  
**DOP/Time** 28-01-17/06:30    **Station ID** BES    **Field View(deg)** 6.136  
**Res(Y,X) [Km]** (10.0,10.0)    **Res(Y,X) [uRad]** (280.0,280.0)

(41.315N,53.169W)

(41.315N,103.223E)



(6.842S,53.169W)

(6.842S,103.223E)

GCP Distribution overview for 3RSND28JAN20170630L1BSA1

**Image Width:** 384    **Image Height:** 320    **No Of GCPs:** 8

**GCP Coverage(%)**    46.95    **(N-S)** 90.89    **(E-W)**

## Location Error(E)

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

## Location Error (Km)

	Mean	Direction	Stddev	RMS
Along	10.726	N	8.988	13.994
Across	-13.716	W	10.271	17.136

## Radial Error (Km)

<b>Mean</b>	21.613
<b>Min</b>	11.565
<b>Max</b>	28.428
<b>CE90</b>	26.788

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	10.628	0.418	6.278
Along	11.528	3.110	15.279
Across	10.813	1.408	8.128

## Internal Distortion (in Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	2.816	0.586	0.94	1.110
Across	2.855	-0.507	0.97	1.099

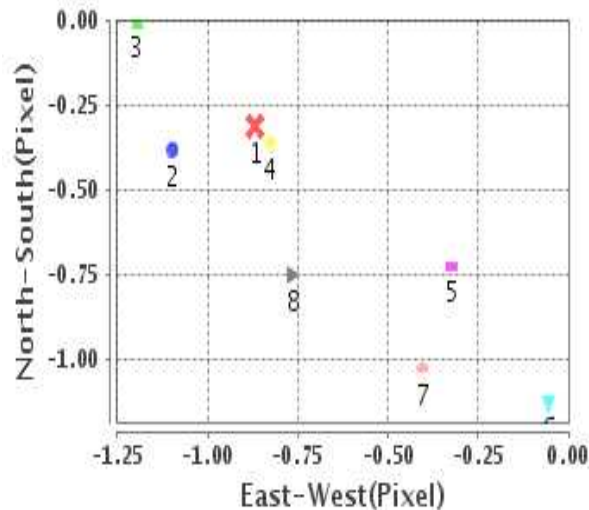
## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.02109	-0.01777	0.33443

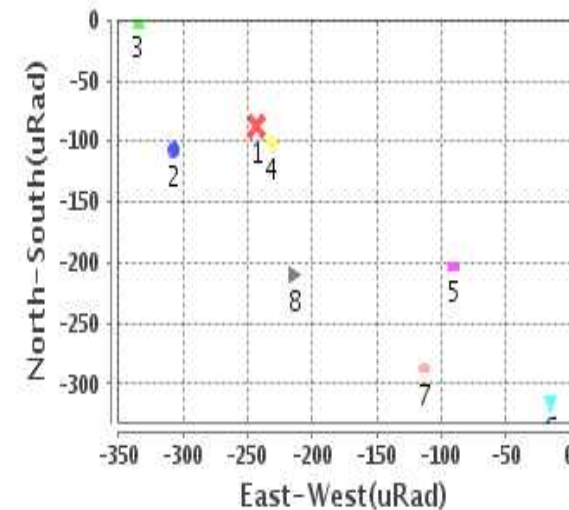
## Reference Used

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>	28-01-17
<b>Sensor</b>	SND	<b>DQE Date</b>	01-02-2017
<b>PassType</b>	NONE	<b>Aquisition Date</b>	28-01-17
<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_28JAN20	<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>	24.078
<b>Center Lon(deg)</b>	78.196
<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>	41.315
<b>NW_Lon(deg)</b>	53.169
<b>SW_Lat(deg)</b>	6.842
<b>SW_Lon(deg)</b>	53.169
<b>NE_Lat(deg)</b>	41.315
<b>NE_Lon(deg)</b>	103.223
<b>SE_Lat(deg)</b>	6.842
<b>SE_Lon(deg)</b>	103.223

### 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 : 3RSND28JAN20170630L1BSA1**

(-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

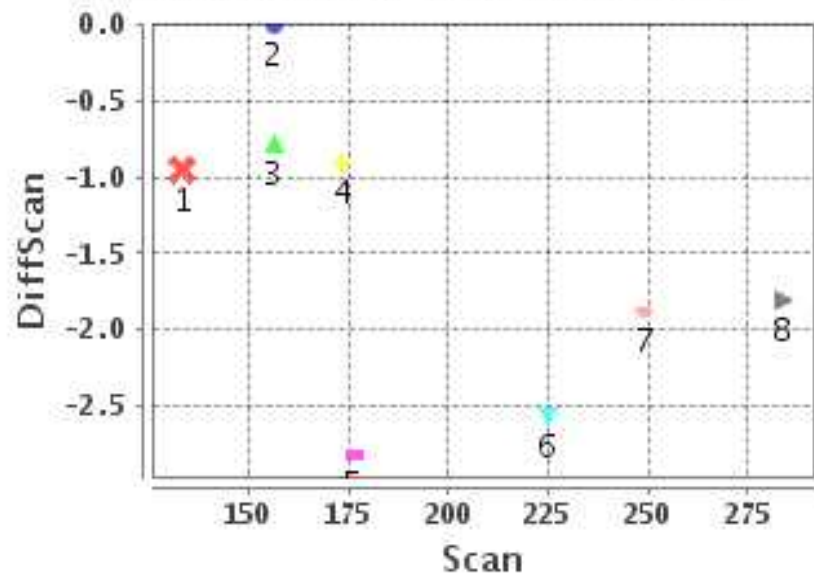
Image Width (pixels) : 384      Image Height (pixels) : 320      No of GCPs : 8

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	194.2	49.1	133.5	283.75	46.95 (N-S)
<b>GCP Pix</b>	202.2	123.1	22.2	371.25	90.89 (E-W)

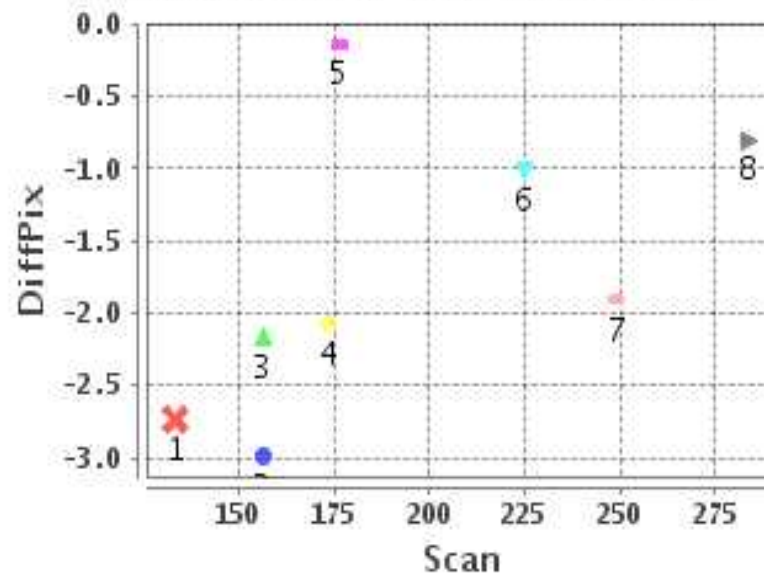
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	156.5	22.2	-0.8	-2.17	3.940	N	20.389	W	Accepted
2	133.5	92.2	-1.0	-2.74	6.113	N	27.763	W	Accepted
3	156.2	113.8	-0.0	-2.99	2.553	S	21.702	W	Accepted
4	173.5	132.0	-0.9	-2.07	4.870	N	22.065	W	Accepted
5	283.8	227.2	-1.8	-0.80	10.128	N	5.583	W	Accepted
6	176.5	295.2	-2.8	-0.13	26.442	N	4.295	E	Accepted
7	224.8	371.2	-2.6	-1.01	19.477	N	5.216	W	Accepted
8	249.2	363.8	-1.9	-1.91	17.389	N	11.308	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



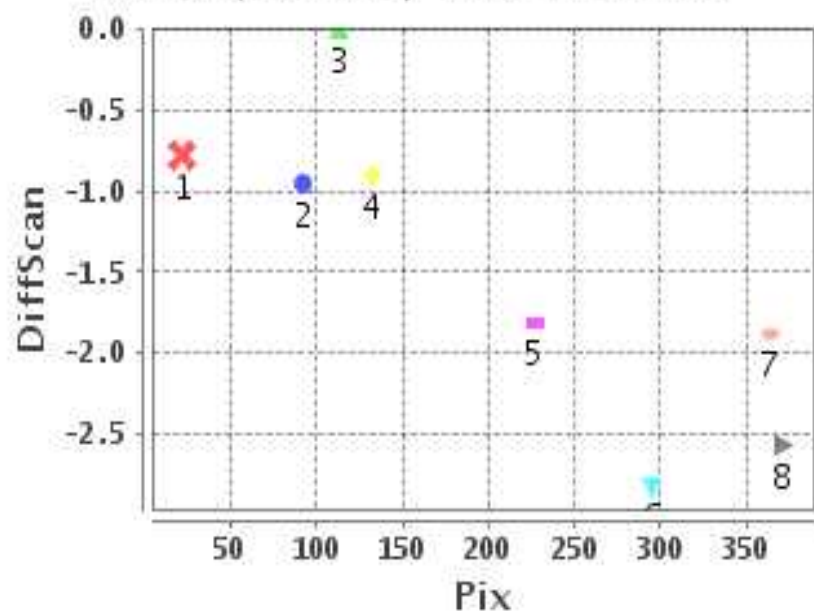
#### Number Of Points

North	7
South	1
East	1
West	7

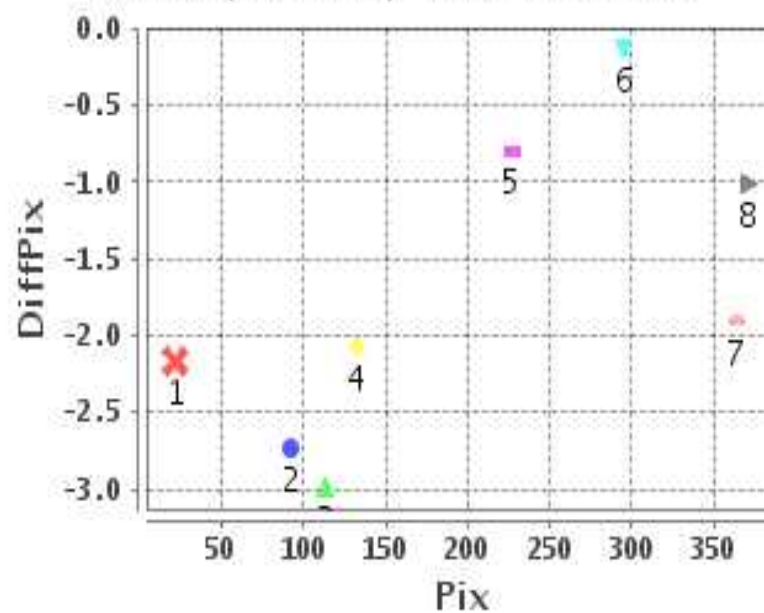
#### Radial Error ( Km )

Mean	21.613
Min	11.565
Max	28.428
CE90	26.788

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	10.726	8.988	13.994	N	11.132	14.929
Across ( Km )	-13.716	10.271	17.136	W	15.016	18.247

## Block-Wise Geo location Error Statistics

### Location Accuracy,Scale,ID

<b>Scan Range-0-105; Pix Range-0-127</b>		
Number of GCPs	<b>-999</b>	
<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

<b>Scan Range-0-105; Pix Range-127-255</b>		
Number of GCPs	<b>-999</b>	
<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

<b>Scan Range-0-105; Pix Range-255-384</b>		
Number of GCPs	<b>-999</b>	
<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

<b>Scan Range-105-212; Pix Range-0-127</b>		
Number of GCPs	3	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	2.50333	N
Across(Mean,Dir)	-23.29	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	11.06	10.57
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.56	0.39
Across(Mean,Stddev)	0.69	0.12

<b>Scan Range-105-212; Pix Range-127-255</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	4.87	N
Across(Mean,Dir)	-22.06	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

<b>Scan Range-105-212; Pix Range-255-384</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	26.44	N
Across(Mean,Dir)	4.30	E
<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

<b>Scan Range-212-320; Pix Range-0-127</b>		
Number of GCPs	<b>-999</b>	
<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

<b>Scan Range-212-320; Pix Range-105-255</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	10.13	N
Across(Mean,Dir)	-5.58	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

<b>Scan Range-212-320; Pix Range-255-384</b>		
Number of GCPs	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	18.435	N
Across(Mean,Dir)	-8.26	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	11.40	13.95
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.68	0.00
Across(Mean,Stddev)	-0.90	0.00

\*-999 : no gcp available

\* -999.99 : values are not computed