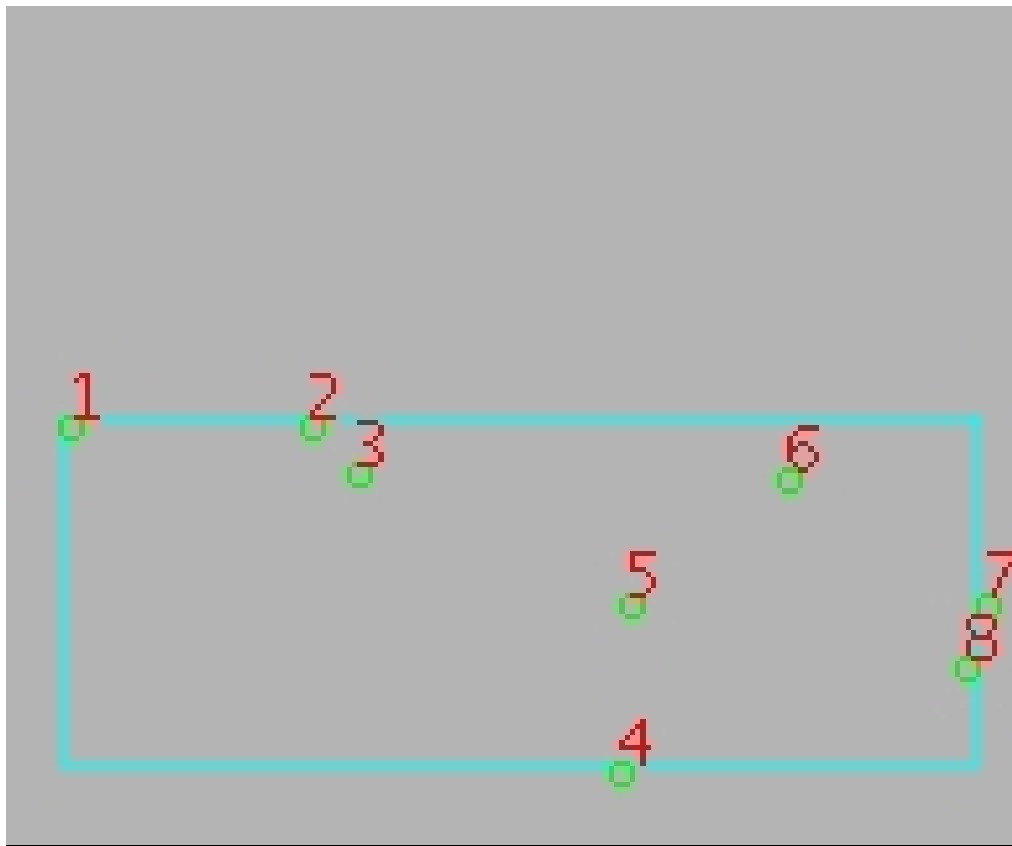


# DQE Report: GDQE - Location parameters for INSAT-3DR-SND STANDARD Product 3RSND\_18FEB2017\_0630

**Satellite** INSAT-3DR      **No Of Bands** 19      **Product Type** STANDARD  
**Sensor** SND              **LvlOfProcess** L1B      **Selected Band** 2-LWIR3  
**DOP/Time** 18-02-17/06:30      **Station ID** BES      **Field View(deg)** 6.136  
**Res(Y,X) [Km]** (10.0,10.0)      **Res(Y,X) [uRad]** (280.0,280.0)

(41.399N,53.182W)

(41.399N,103.323E)



(6.916S,53.182W)

(6.916S,103.323E)

GCP Distribution overview for 3RSND18FEB20170630L1BSA1

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

**GCP Coverage(%)** 40.86      **(N-S)** 91.15      **(E-W)**

## Location Error(E)

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

## Location Error (Km)

	Mean	Direction	Stddev	RMS
Along	11.608	N	6.908	13.508
Across	-12.407	W	5.530	13.583

## Radial Error (Km)

<b>Mean</b>	18.507
<b>Min</b>	11.575
<b>Max</b>	25.202
<b>CE90</b>	24.960

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	10.510	0.274	5.097
Along	11.010	0.660	10.096
Across	10.504	0.231	5.044

## Internal Distortion (in Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	2.140	0.508	0.70	0.864
Across	1.726	-0.266	0.56	0.624

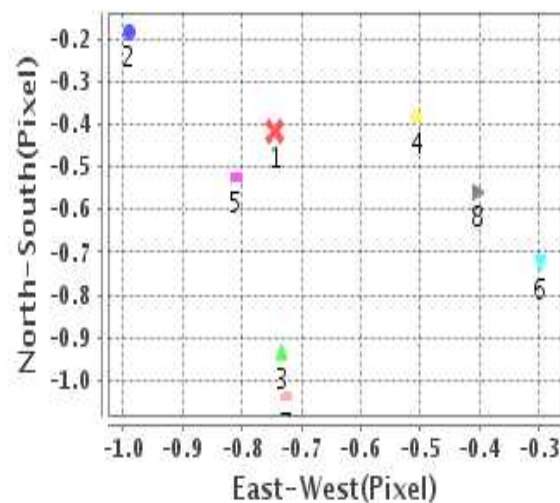
## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.02027	-0.01791	0.18480

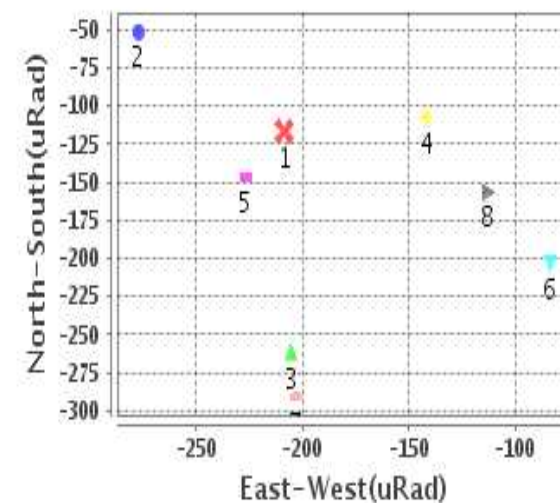
## Reference Used

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>	18-02-17
<b>Sensor</b>	SND	<b>DQE Date</b>	20-02-2017
<b>PassType</b>	NONE	<b>Aquisition Date</b>	18-02-17
<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_18FEB20	<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>	24.158
<b>Center Lon(deg)</b>	78.253
<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>	41.399
<b>NW_Lon(deg)</b>	53.182
<b>SW_Lat(deg)</b>	6.916
<b>SW_Lon(deg)</b>	53.182
<b>NE_Lat(deg)</b>	41.399
<b>NE_Lon(deg)</b>	103.323
<b>SE_Lat(deg)</b>	6.916
<b>SE_Lon(deg)</b>	103.323

### 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 : 3RSND18FEB20170630L1BSA1**

(-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

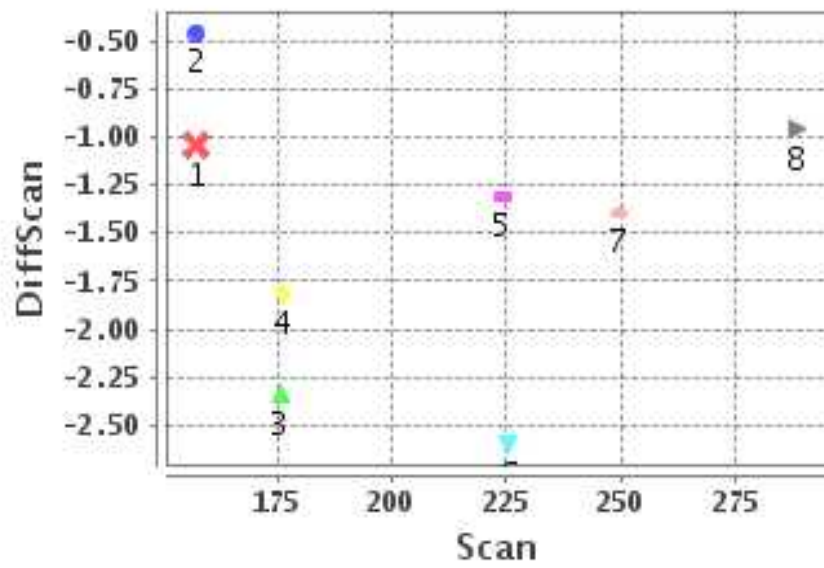
Image Width (pixels) : 384      Image Height (pixels) : 320      No of GCPs : 8

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	206.8	44.5	157.5	288.25	40.86 (N-S)
<b>GCP Pix</b>	220.1	116.2	21.5	371.50	91.15 (E-W)

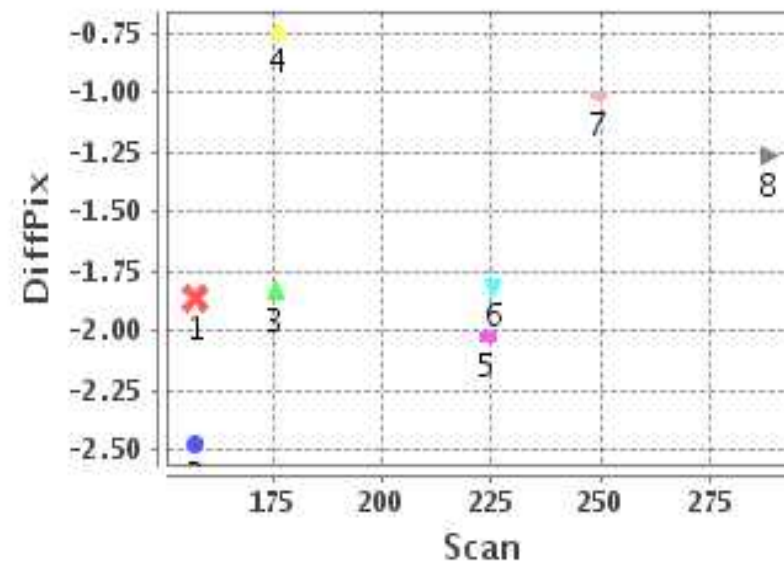
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	157.5	21.5	-1.0	-1.86	6.471	N	15.509	W	Accepted
2	157.5	112.8	-0.5	-2.47	0.502	S	18.108	W	Accepted
3	175.8	131.2	-2.3	-1.83	17.075	N	18.205	W	Accepted
4	288.2	231.2	-1.0	-1.27	6.803	N	9.364	W	Accepted
5	224.0	235.2	-1.3	-2.03	13.693	N	17.098	W	Accepted
6	176.2	295.2	-1.8	-0.75	17.637	N	2.094	W	Accepted
7	225.5	371.5	-2.6	-1.82	22.136	N	12.048	W	Accepted
8	249.5	362.2	-1.4	-1.01	9.546	N	6.827	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



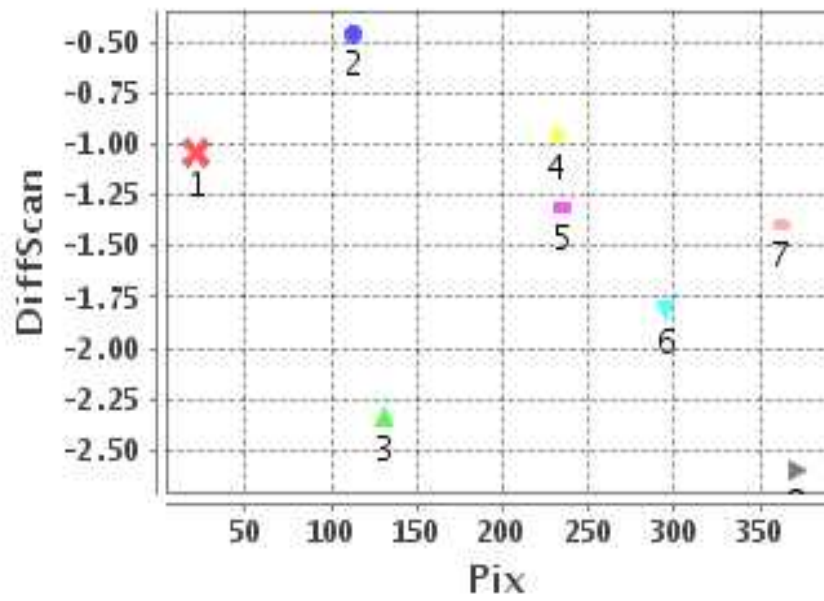
#### Number Of Points

North	7
South	1
East	0
West	8

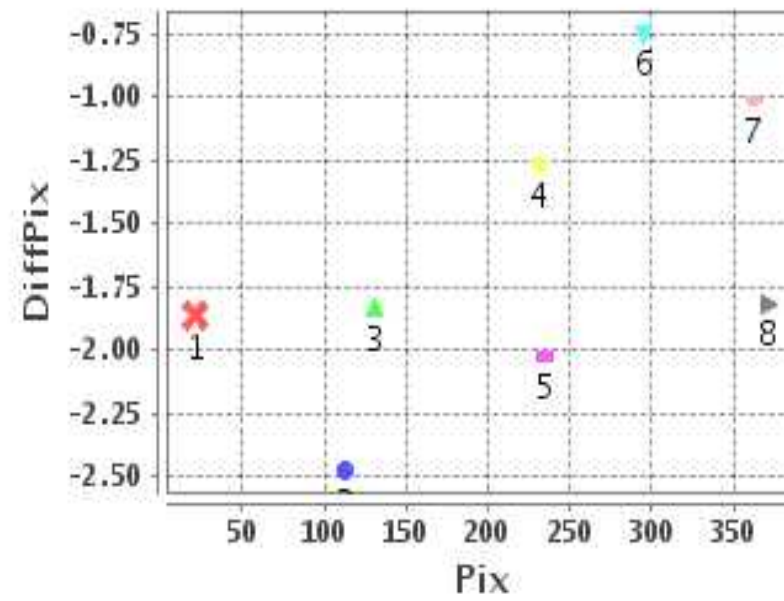
#### Radial Error ( Km )

Mean	18.507
Min	11.575
Max	25.202
CE90	24.960

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	11.608	6.908	13.508	N	11.770	14.439
Across ( Km )	-12.407	5.530	13.583	W	12.787	14.500

## Block-Wise Geo location Error Statistics

### Location Accuracy,Scale,ID

<b>Scan Range-0-105; Pix Range-0-127</b>		
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

<b>Scan Range-0-105; Pix Range-127-255</b>		
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

<b>Scan Range-0-105; Pix Range-255-384</b>		
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

<b>Scan Range-105-212; Pix Range-0-127</b>		
Number of GCPs	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	2.985	N
Across(Mean,Dir)	-16.81	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	10.67	6.75
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.59	0.00
Across(Mean,Stddev)	0.61	0.00

<b>Scan Range-105-212; Pix Range-127-255</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	17.07	N
Across(Mean,Dir)	-18.20	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)	17.63	N
Across(Mean,Dir)	-2.09	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-0-127</b>		
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

<b>Scan Range-212-320; Pix Range-105-255</b>		
Number of GCPs	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	10.25	N
Across(Mean,Dir)	-13.23	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	10.27	2.73
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.36	0.00
Across(Mean,Stddev)	0.76	0.00

<b>Scan Range-212-320; Pix Range-255-384</b>		
Number of GCPs	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	15.845	N
Across(Mean,Dir)	-9.44	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	11.37	13.65
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-1.20	0.00
Across(Mean,Stddev)	0.81	0.00

\*-999 : no gcp available

\* -999.99 : values are not computed