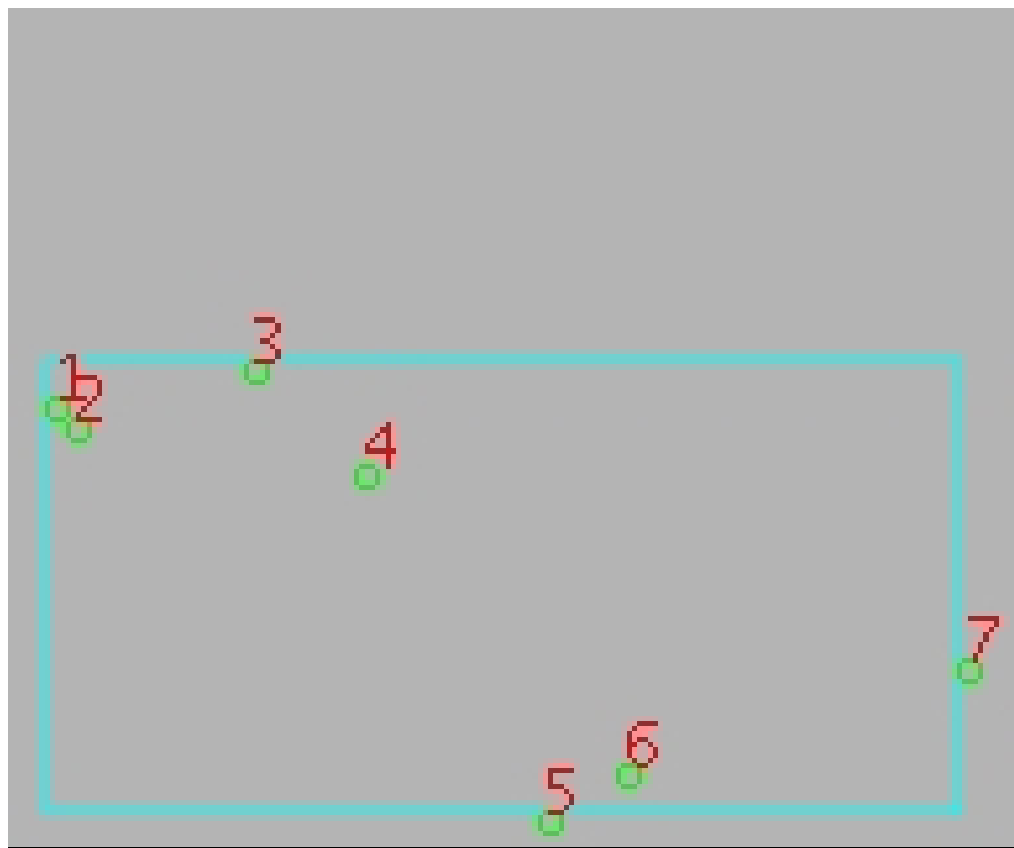


# DQE Report: GDQE - Location parameters for INSAT-3DR-SND STANDARD Product 3RSND\_23FEB2017\_0330

**Satellite** INSAT-3DR      **No Of Bands** 19      **Product Type** STANDARD  
**Sensor** SND      **LvlOfProcess** L1B      **Selected Band** 2-LWIR3  
**DOP/Time** 23-02-17/03:30      **Station ID** BES      **Field View(deg)** 6.136  
**Res(Y,X) [Km]** (10.0,10.0)      **Res(Y,X) [uRad]** (280.0,280.0)

(41.355N,53.079W)

(41.355N,103.153E)



(6.884S,53.079W)

(6.884S,103.153E)

GCP Distribution overview for 3RSND23FEB20170330L1BSA1

**Image Width:** 384      **Image Height:** 320      **No Of GCPs:** 7

**GCP Coverage(%)** 54.06      **(N-S)** 91.02      **(E-W)**

## Location Error(E)

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

## Location Error (Km)

	Mean	Direction	Stddev	RMS
Along	9.939	N	4.466	10.896
Across	-9.161	W	4.405	10.165

## Radial Error (Km)

<b>Mean</b>	14.634
<b>Min</b>	11.892
<b>Max</b>	19.217
<b>CE90</b>	17.723

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	10.468	0.379	4.678
Along	10.627	0.455	6.274
Across	10.474	0.239	4.740

## Internal Distortion (in Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	1.270	-0.329	0.47	0.575
Across	1.228	-0.613	0.46	0.769

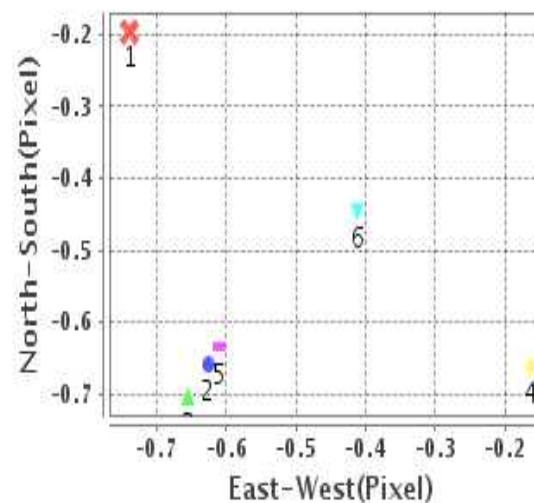
## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.01275	-0.01698	0.11324

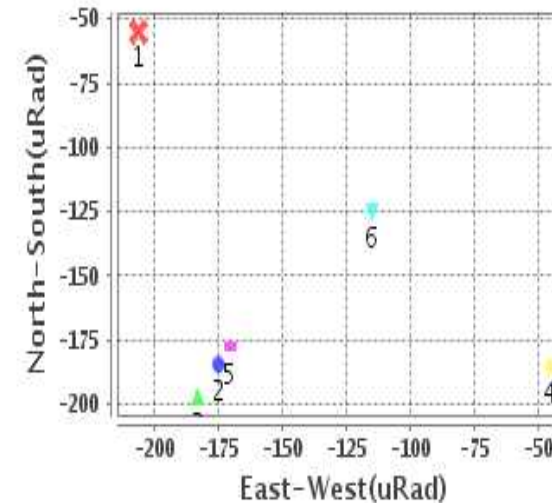
## Reference Used

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>	23-02-17
<b>Sensor</b>	SND	<b>DQE Date</b>	28-02-2017
<b>PassType</b>	NONE	<b>Aquisition Date</b>	23-02-17
<b>Imaging Mode</b>	FULL_FRAME	<b>Aquisition Time(GMT)</b>	03:30
<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_23FEB20	<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>	24.119
<b>Center Lon(deg)</b>	78.116
<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>	41.355
<b>NW_Lon(deg)</b>	53.079
<b>SW_Lat(deg)</b>	6.884
<b>SW_Lon(deg)</b>	53.079
<b>NE_Lat(deg)</b>	41.355
<b>NE_Lon(deg)</b>	103.153
<b>SE_Lat(deg)</b>	6.884
<b>SE_Lon(deg)</b>	103.153

### 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 : 3RSND23FEB20170330L1BSA1**

(-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

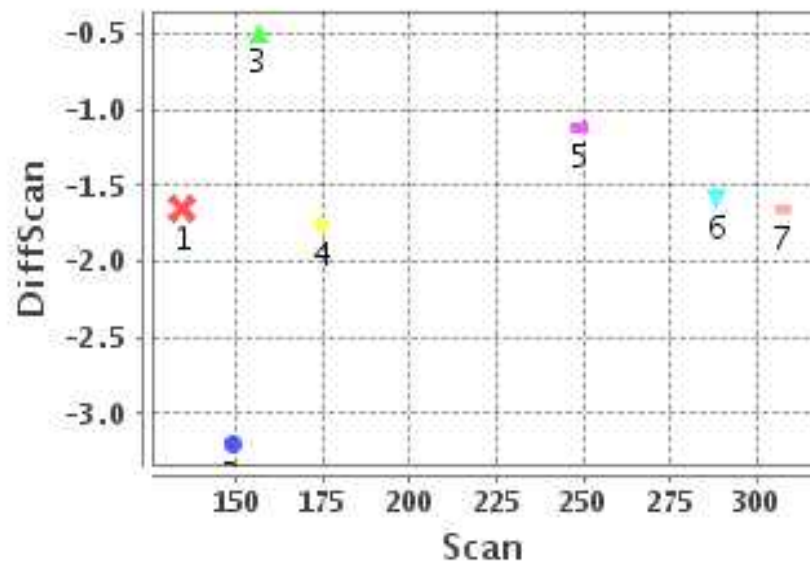
Image Width (pixels) : 384      Image Height (pixels) : 320      No of GCPs : 7

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	208.5	66.3	134.5	307.50	54.06 (N-S)
<b>GCP Pix</b>	151.2	115.6	14.0	363.50	91.02 (E-W)

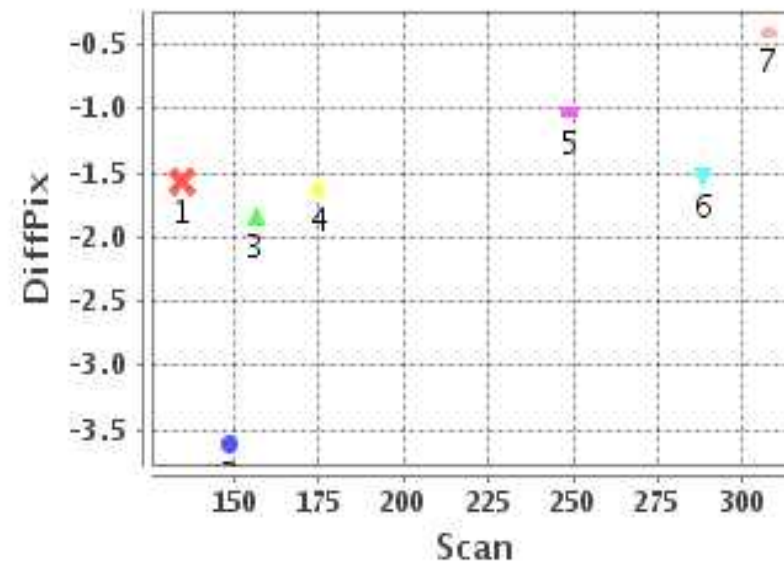
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	148.8	14.0	-3.2	-3.61	30.291	N	43.694	W	Rejected
2	156.5	22.5	-0.5	-1.84	0.263	N	13.601	W	Accepted
3	134.5	91.8	-1.6	-1.56	14.275	N	10.504	W	Accepted
4	174.8	132.2	-1.8	-1.63	11.421	N	15.454	W	Accepted
5	307.5	202.0	-1.7	-0.41	11.080	N	4.321	W	Accepted
6	288.5	232.8	-1.6	-1.52	11.097	N	7.234	W	Accepted
7	249.0	363.5	-1.1	-1.03	11.495	N	3.854	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



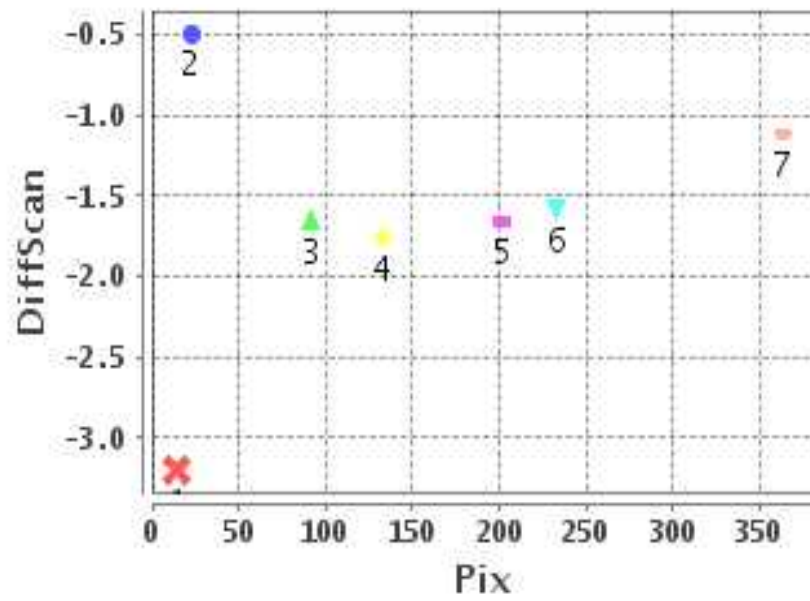
#### Number Of Points

North	6
South	0
East	0
West	6

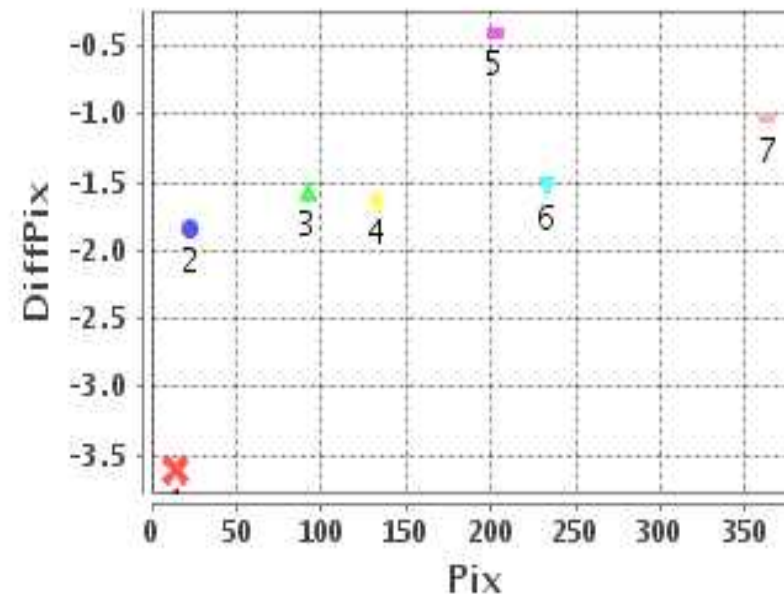
#### Radial Error ( Km )

Mean	14.634
Min	11.892
Max	19.217
CE90	17.723

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	9.939	4.466	10.896	N	10.085	11.936
Across ( Km )	-9.161	4.405	10.165	W	8.731	11.001

## 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	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	7.27	N
Across(Mean,Dir)	-12.06	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	10.71	7.12
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-1.16	0.00
Across(Mean,Stddev)	-0.28	0.00

Scan Range-105-212; Pix Range-127-255		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	11.42	N
Across(Mean,Dir)	-15.46	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	-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-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	2	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	11.085	N
Across(Mean,Dir)	-5.78	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	9.56	4.41
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	0.06	0.00
Across(Mean,Stddev)	1.12	0.00

Scan Range-212-320; Pix Range-255-384		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	11.49	N
Across(Mean,Dir)	-3.85	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