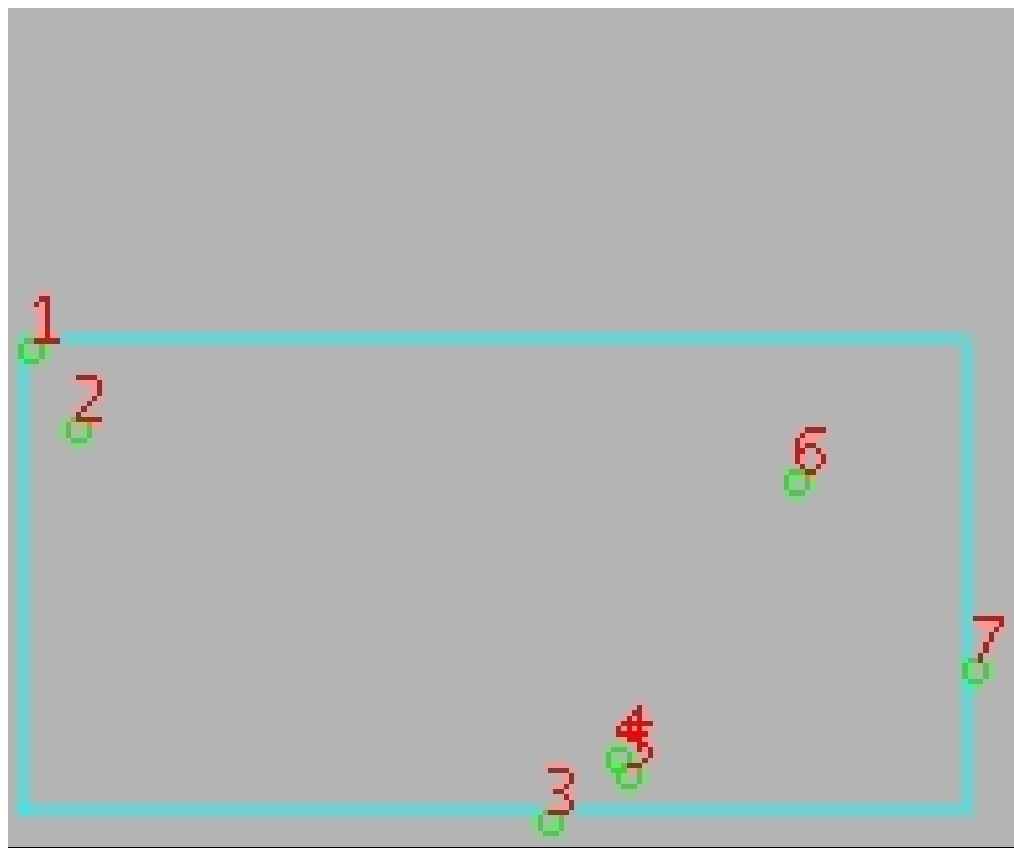


# DQE Report: GDQE - Location parameters for INSAT-3DR-SND STANDARD Product 3RSND\_06FEB2017\_0330

Satellite	INSAT-3DR	No Of Bands	19	Product Type	STANDARD
Sensor	SND	LvlOfProcess	L1B	Selected Band	2-LWIR3
DOP/Time	06-02-17/03:30	Station ID	BES	Field View(deg)	6.136
Res(Y,X) [Km]	(10.0,10.0)	Res(Y,X) [uRad]	(280.0,280.0)		

(41.338N,53.028W)

(41.338N,103.067E)



(6.855S,53.028W)

(6.855S,103.067E)

GCP Distribution overview for 3RSND06FEB20170330L1BSA1

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

GCP Coverage(%) 56.72 (N-S) 93.68 (E-W)

## Location Error(E)

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

## Location Error (Km)

	Mean	Direction	Stddev	RMS
Along	13.940	N	5.294	14.911
Across	-9.653	W	6.764	11.787

## Scale (Km)

	Pixel Size	Stddev	%variation
Average	10.519	0.662	5.194
Along	10.654	0.109	6.541
Across	10.408	0.209	4.075

## Internal Distortion (in Pixels)

	PeakToPeak	Mean	Stddev	RMS
Along	1.643	0.635	0.50	0.805
Across	1.449	-0.428	0.47	0.638

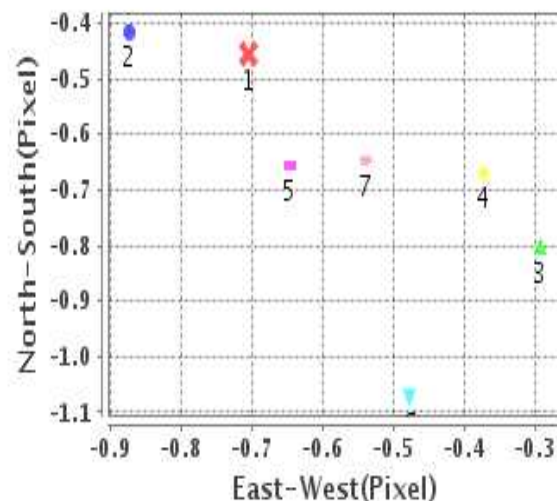
## Attitude Residuals (Deg)

Pitch	Roll	Yaw
-0.01439	-0.02270	0.10312

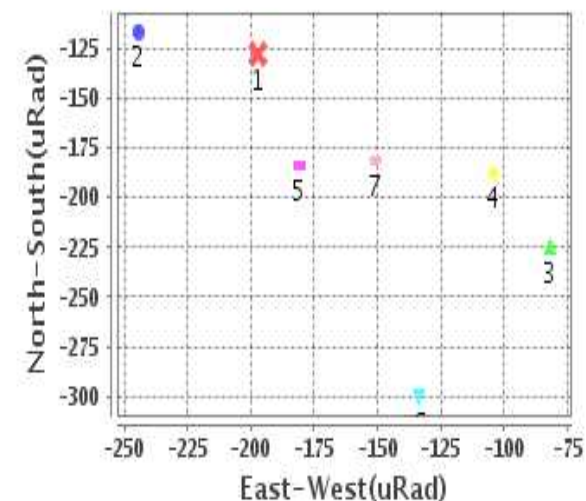
## Reference Used

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>	06-02-17
<b>Sensor</b>	SND	<b>DQE Date</b>	14-02-2017
<b>PassType</b>	NONE	<b>Aquisition Date</b>	06-02-17
<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_06FEB20	<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>	24.096
<b>Center Lon(deg)</b>	78.048
<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>	41.338
<b>NW_Lon(deg)</b>	53.028
<b>SW_Lat(deg)</b>	6.855
<b>SW_Lon(deg)</b>	53.028
<b>NE_Lat(deg)</b>	41.338
<b>NE_Lon(deg)</b>	103.067
<b>SE_Lat(deg)</b>	6.855
<b>SE_Lon(deg)</b>	103.067

### 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 : 3RSND06FEB20170330L1BSA1**

(-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

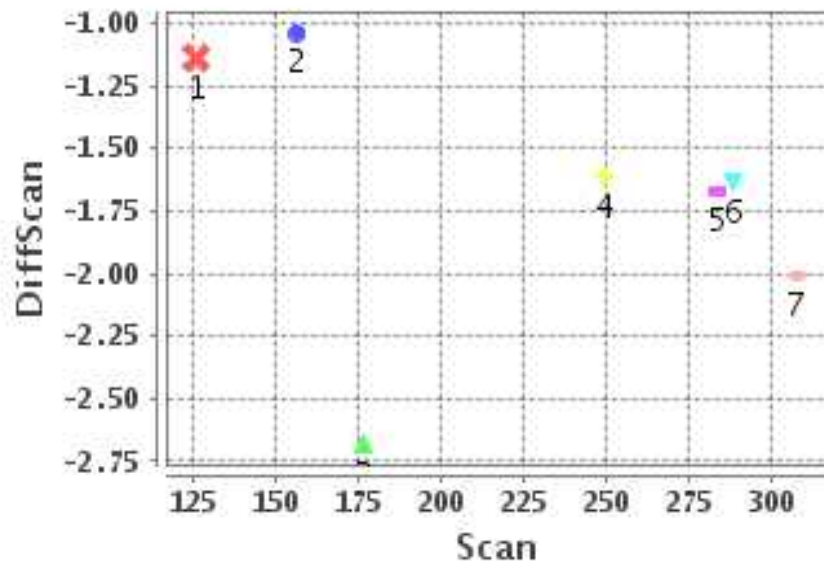
Image Width (pixels) : 384      Image Height (pixels) : 320      No of GCPs : 7

	Mean	StdDev	Min	Max	Coverage(in %)
<b>GCP Scan</b>	226.8	67.3	126.0	307.50	56.72 (N-S)
<b>GCP Pix</b>	193.5	123.9	4.5	364.25	93.68 (E-W)

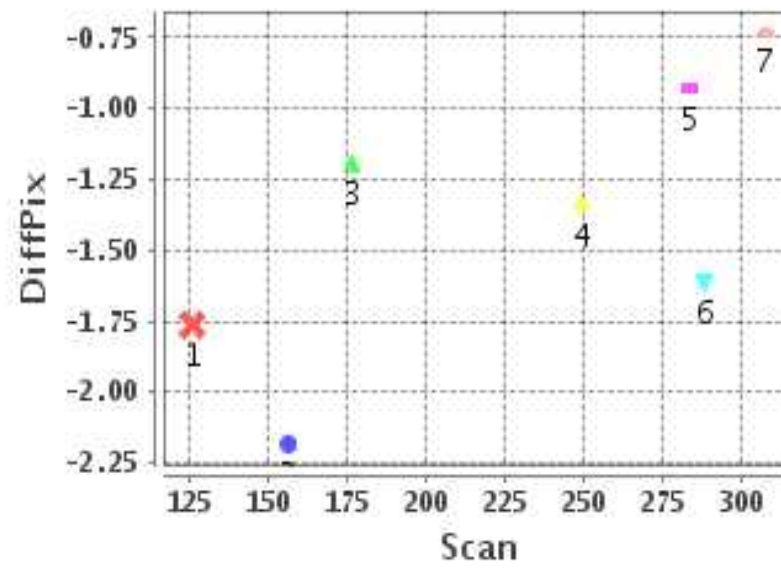
### Identified Control Point details : ( Differences are Reference - Product )

No	Scan	Pix	DiffScan (line)	DiffPix (pixel)	DifLat (Km)	Dir	DifLon (Km)	Dir	Status
1	126.0	4.5	-1.1	-1.76	15.079	N	17.528	W	Accepted
2	156.5	23.5	-1.0	-2.18	6.471	N	19.325	W	Accepted
3	307.5	202.8	-2.0	-0.73	14.507	N	0.161	E	Accepted
4	283.8	228.5	-1.7	-0.93	9.054	N	4.518	W	Accepted
5	288.2	233.2	-1.6	-1.61	13.691	N	12.337	W	Accepted
6	176.5	297.5	-2.7	-1.19	24.654	N	3.781	W	Accepted
7	249.2	364.2	-1.6	-1.35	14.125	N	10.243	W	Accepted

### Error(Pixels) Vs. GCPScan



### Error(Pixels) Vs. GCPScan



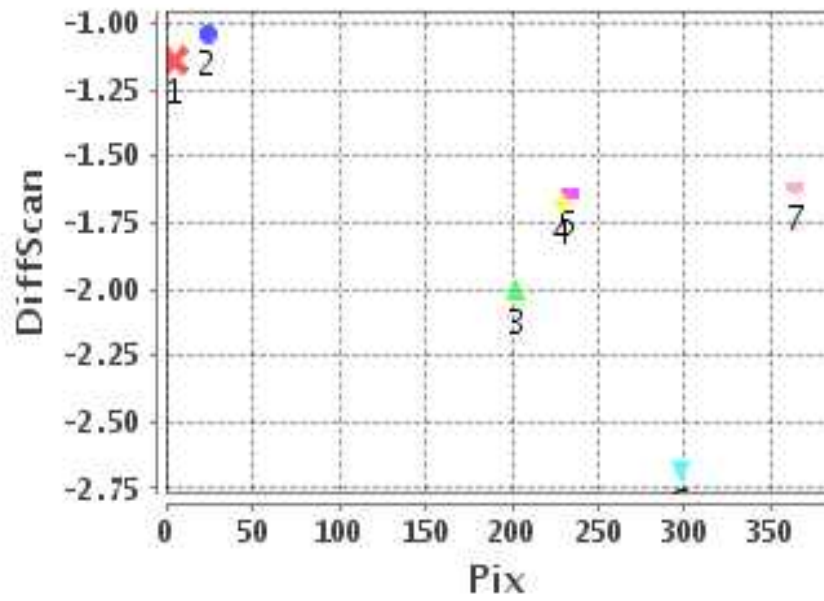
#### Number Of Points

North	7
South	0
East	1
West	6

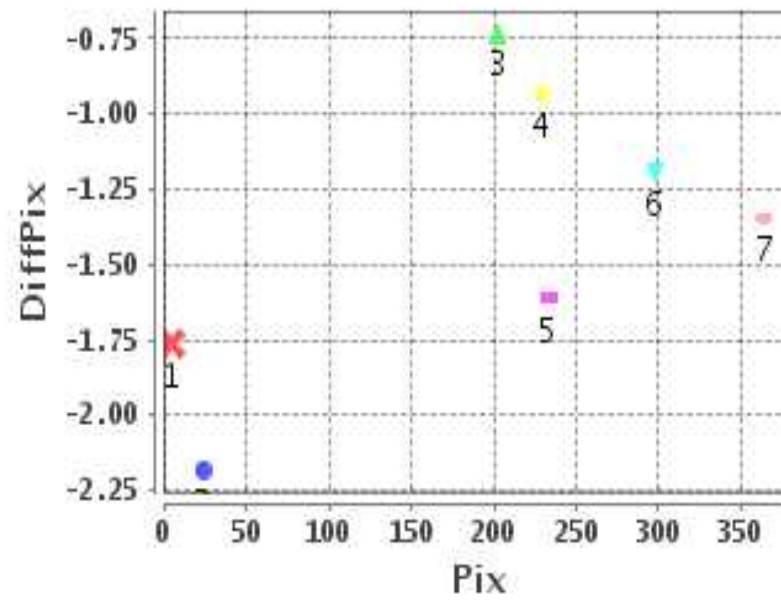
#### Radial Error ( Km )

Mean	18.421
Min	10.118
Max	24.942
CE90	23.121

### Error(Pixels) Vs. GCPPix



### Error(Pixels) Vs. GCPPix



#### Location Accuracy

	Mean	StdDev	RMS	Dir	* MinRMS	* MaxRMS
Along( Km )	13.940	5.294	14.911	N	12.574	15.888
Across ( Km )	-9.653	6.764	11.787	W	9.992	12.731

## 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)	10.775	N
Across(Mean,Dir)	-18.42	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	12.73	27.31
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	-0.10	0.00
Across(Mean,Stddev)	0.42	0.00

<b>Scan Range-105-212; 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-105-212; Pix Range-255-384</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	24.65	N
Across(Mean,Dir)	-3.78	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	3	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	12.41529999	N
Across(Mean,Dir)	-5.56	W
<b>Scale(Km)</b>		
Average Scale (Mean,%Variation)	9.48	5.25
<b>Internal Distortion(Pixel)</b>		
Along(Mean,Stddev)	0.15	0.19
Across(Mean,Stddev)	0.54	0.34

<b>Scan Range-212-320; Pix Range-255-384</b>		
Number of GCPs	1	
<b>Location Error(Km)</b>		
Along(Mean,Dir)	14.13	N
Across(Mean,Dir)	-10.24	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