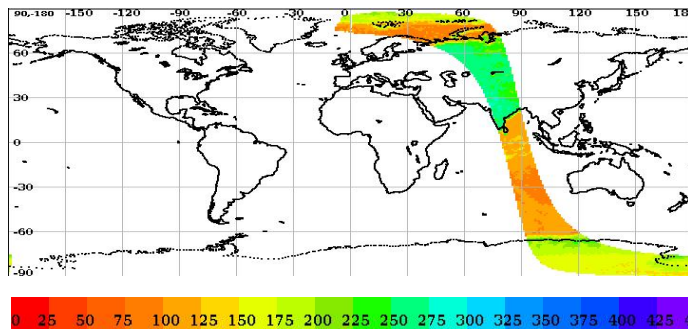


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

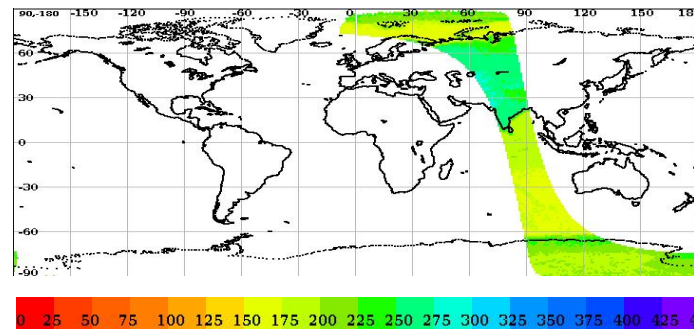
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 5022              | 5023            |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 404            | 36              | 07-09-2017        | 07-09-2017      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 50              | v1.1.2            |                 |

## Brightness Temperature

Inner Beam (HH)

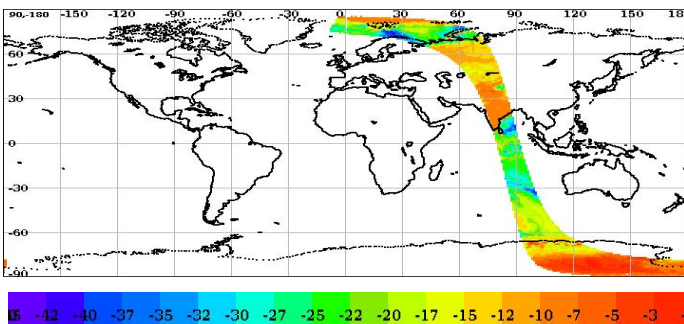


Outer Beam (VV)

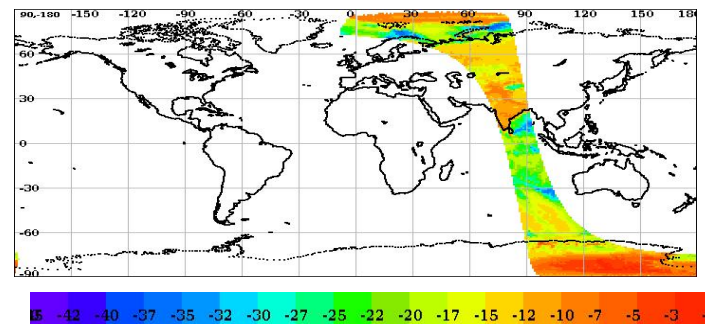


## Sigma0(dB)

Inner Beam (HH)



Outer Beam (VV)



## Invariant Site Sigma-0 Statistics for Ascending/Descending, Fore/Aft in HH/VV beams

| Site Name | Center Lat | Center Lon | Beam  | Node | ScanDir | Sigma0 Min | Sigma0 Max | Sigma0 Mean | Sigma0 Std | BT Min | BT Max | BT Mean | BT Std |
|-----------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| ROK       | 23.00      | 73.60      | Inner | ASC  | Aft     | -13.02     | -6.52      | -9.14       | 1.06       | 231.66 | 314.52 | 268.99  | 16.30  |
| ROK       | 23.00      | 73.60      | Outer | ASC  | Aft     | -14.26     | -8.38      | -10.85      | 0.97       | 223.65 | 322.38 | 271.71  | 19.40  |
| ROK       | 23.00      | 73.60      | Inner | ASC  | Fore    | -10.77     | -7.03      | -8.90       | 0.81       | 237.56 | 321.75 | 273.39  | 18.27  |
| ROK       | 23.00      | 73.60      | Outer | ASC  | Fore    | -13.28     | -8.39      | -10.75      | 0.85       | 238.46 | 307.59 | 268.97  | 13.81  |
| ANT_1     | -75.00     | 121.00     | Inner | ASC  | Aft     | -9.57      | -4.70      | -6.66       | 1.23       | 140.66 | 184.02 | 163.84  | 12.00  |
| ANT_1     | -75.00     | 121.00     | Outer | ASC  | Aft     | -11.39     | -6.41      | -7.91       | 1.25       | 167.33 | 226.22 | 192.58  | 14.80  |
| ANT_1     | -75.00     | 121.00     | Inner | ASC  | Fore    | -9.26      | -4.00      | -6.35       | 1.23       | 141.92 | 179.51 | 164.33  | 12.03  |
| ANT_1     | -75.00     | 121.00     | Outer | ASC  | Fore    | -9.54      | -5.80      | -7.34       | 1.10       | 174.40 | 228.95 | 204.13  | 16.02  |

## Level-2A Cell-wise Deviations\*

| Static Parameter Statistics (variations over the cell grid) for the Inner and Outer Beam |                 |         |              |         |         |              |                 |         |              |         |         |              |
|--|-----------------|---------|--------------|---------|---------|--------------|-----------------|---------|--------------|---------|---------|--------------|
| Parameter  | Inner Beam (HH) |         |              |         |         |              | Outer Beam (VV) |         |              |         |         |              |
|  | Aft             |         |              | Fore    |         |              | Aft             |         |              | Fore    |         |              |
|  | Min Rng         | Max Rng | Bad Occ. (%) | Min Rng | Max Rng | Bad Occ. (%) | Min Rng         | Max Rng | Bad Occ. (%) | Min Rng | Max Rng | Bad Occ. (%) |
| <b>Kpa</b>   | 0.00            | 0.07    | 0.00         | 0.00    | 0.07    | 0.00         | 0.00            | 0.07    | 0.00         | 0.00    | 0.07    | 0.00         |
| <b>Kpb</b>   | 0.00            | 0.09    | 0.00         | 0.00    | 0.09    | 0.00         | 0.00            | 0.09    | 0.00         | 0.00    | 0.09    | 0.00         |
| <b>Kpc</b>   | 0.00            | 0.00    | 0.00         | 0.00    | 0.00    | 0.00         | 0.00            | 0.00    | 0.00         | 0.00    | 0.00    | 0.00         |
| <b>Inc. Angle(deg)</b>   | 0.00            | 0.00    | 0.00         | 0.00    | 0.00    | 0.00         | 0.00            | 0.00    | 0.00         | 0.00    | 0.00    | 0.00         |
| <b>Delta Azi.Angle(deg)</b>  | 0.00            | 33.61   | 15.18        | 0.00    | 24.77   | 14.90        | 0.00            | 126.72  | 11.93        | 0.00    | 42.23   | 12.36        |

| Category wise Dynamic Parameter Statistics (Variations over the Cell grid) |                   |         |         |              |          |         |              |          |         |              |           |         |              |
|--|-------------------|---------|---------|--------------|----------|---------|--------------|----------|---------|--------------|-----------|---------|--------------|
| Parameter  | Beam              | Sea Aft |         |              | Sea Fore |         |              | Land Aft |         |              | Land Fore |         |              |
|  |                   | Min Rng | Max Rng | Bad Occ. (%) | Min Rng  | Max Rng | Bad Occ. (%) | Min Rng  | Max Rng | Bad Occ. (%) | Min Rng   | Max Rng | Bad Occ. (%) |
| <b>SNR(dB)</b>   | <b>Inner (HH)</b> | 0.00    | 43.30   | 5.79         | 0.00     | 45.31   | 4.51         | 0.00     | 32.03   | 0.46         | 0.00      | 34.90   | 0.44         |
|  | <b>Outer (VV)</b> | 0.00    | 41.09   | 5.23         | 0.00     | 42.11   | 4.73         | 0.00     | 34.51   | 0.67         | 0.00      | 37.74   | 0.37         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 42.81   | 4.68         | 0.00     | 43.35   | 3.83         | 0.00     | 31.14   | 0.39         | 0.00      | 35.81   | 0.35         |
|  | <b>Outer (VV)</b> | 0.00    | 43.43   | 4.96         | 0.00     | 42.59   | 4.52         | 0.00     | 33.65   | 0.53         | 0.00      | 37.27   | 0.25         |

| Parameter Specifications with in a cell |     |     |     |            |          |                  |             |
|---|-----|-----|-----|------------|----------|------------------|-------------|
| Parameter                               | Kpa | Kpb | Kpc | Inci (deg) | SNR (dB) | Delta Azi. (deg) | Sigma0 (dB) |
| Range                                   | 1.0 | 1.0 | 1.0 | 3.0        | 20.0     | 10.0             | 20.0        |

■ Normal    
 ■ Deviation    
 ■ Alarming    
 ■ High

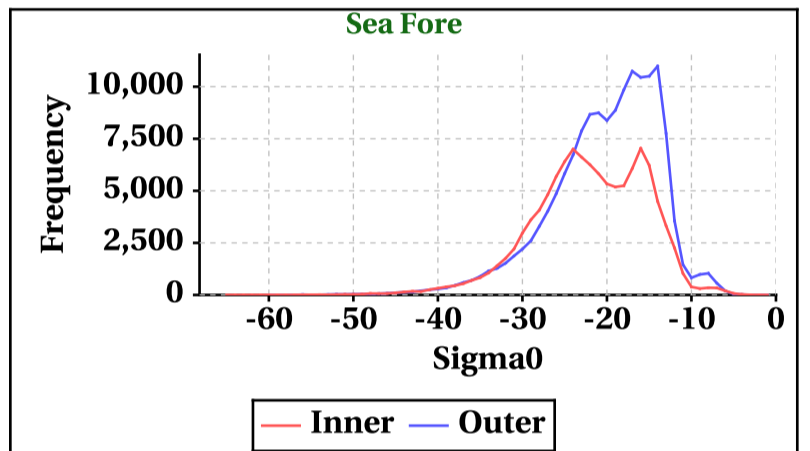
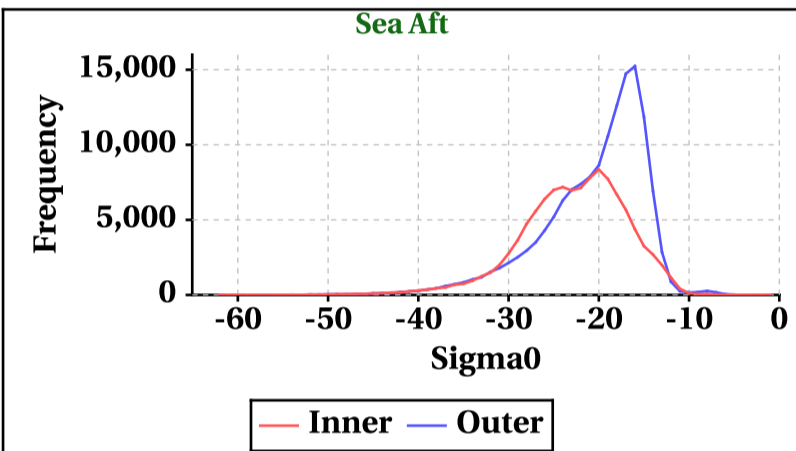
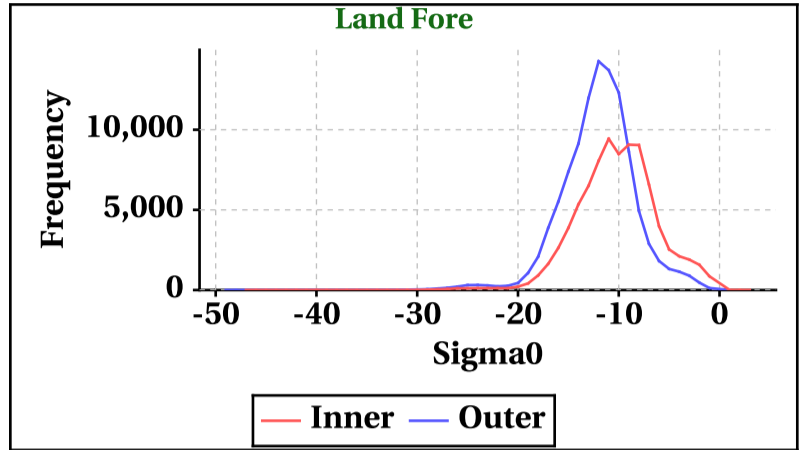
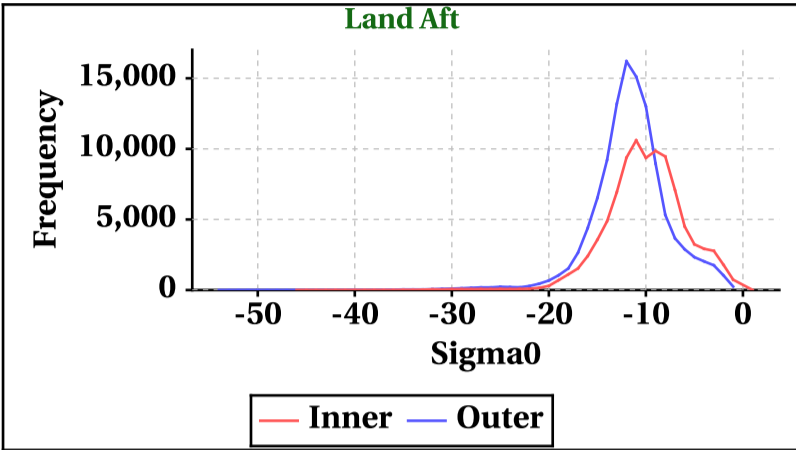
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -46      | -47       | -62     | -65      |
| Max             | 1        | 3         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -54      | -49       | -59     | -60      |
| Max             | -1       | 1         | -1      | -1       |



## Brightness Temperature(K)

| Inner Beam(HH) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 337      | 341       | 279     | 289      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 500      | 352       | 294     | 299      |

