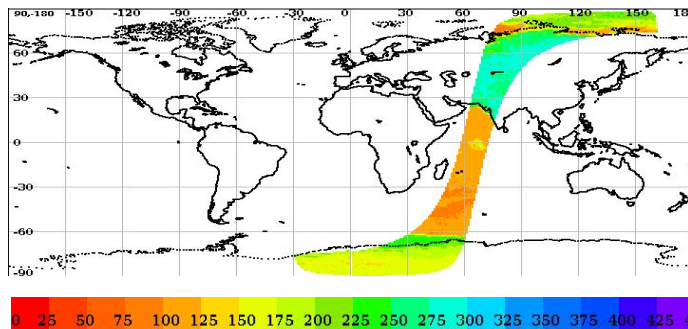


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

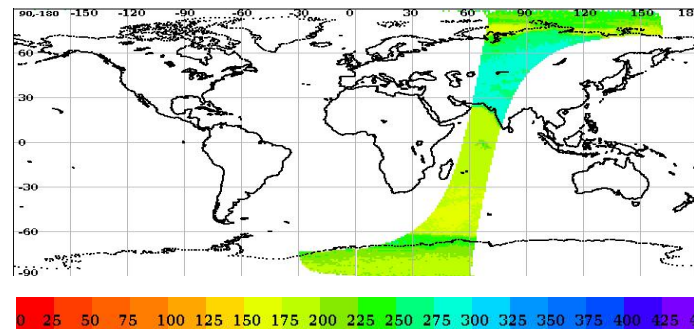
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 4552              | 4553            |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 404            | 36              | 06-08-2017        | 06-08-2017      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 50              | v1.1.2            |                 |

## Brightness Temperature

Inner Beam (HH)

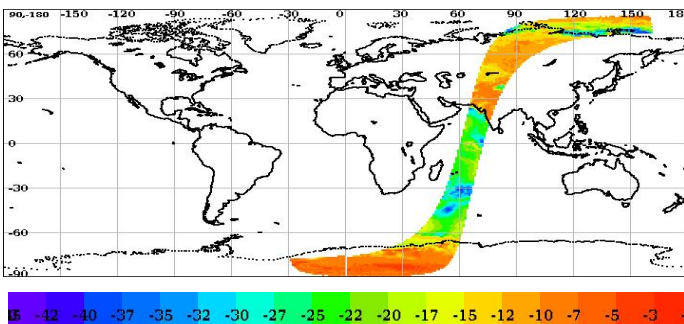


Outer Beam (VV)

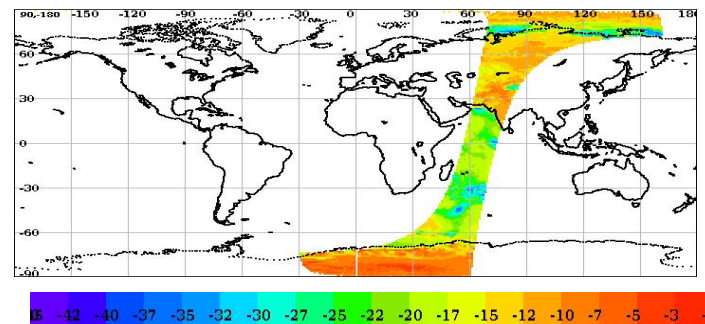


## Sigma0(dB)

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 | DSC  | Aft     | -14.79     | -6.60      | -9.29       | 1.47       | 224.65 | 294.48 | 262.53  | 17.36  |
| ROK       | 23.00      | 73.60      | Outer | DSC  | Aft     | -12.34     | -7.94      | -10.36      | 0.81       | 228.77 | 325.92 | 291.33  | 21.13  |
| ROK       | 23.00      | 73.60      | Inner | DSC  | Fore    | -12.83     | -6.76      | -9.00       | 1.23       | 228.05 | 305.51 | 268.08  | 13.39  |
| ROK       | 23.00      | 73.60      | Outer | DSC  | Fore    | -13.87     | -8.56      | -10.76      | 0.95       | 240.98 | 307.33 | 277.55  | 16.21  |

## 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            | 27.22   | 14.93        | 0.00    | 31.92   | 14.15        | 0.00            | 355.63  | 10.57        | 0.00    | 51.79   | 9.93         |

| 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    | 50.54   | 6.00         | 0.00     | 43.95   | 4.60         | 0.00     | 42.45   | 1.11         | 0.00      | 42.66   | 0.96         |
|  | <b>Outer (VV)</b> | 0.00    | 36.64   | 3.85         | 0.00     | 38.63   | 3.54         | 0.00     | 43.04   | 0.74         | 0.00      | 37.81   | 0.77         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 48.69   | 5.14         | 0.00     | 41.52   | 4.35         | 0.00     | 41.78   | 0.87         | 0.00      | 40.38   | 0.85         |
|  | <b>Outer (VV)</b> | 0.00    | 35.15   | 3.22         | 0.00     | 38.77   | 3.09         | 0.00     | 39.78   | 0.53         | 0.00      | 36.02   | 0.55         |

| 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        |
| <span style="display: inline-block; width: 15px; height: 15px; background-color: green; margin-right: 5px;"></span> Normal <span style="display: inline-block; width: 15px; height: 15px; background-color: yellow; margin-right: 5px; margin-left: 20px;"></span> Deviation <span style="display: inline-block; width: 15px; height: 15px; background-color: orange; margin-right: 5px; margin-left: 20px;"></span> Alarming <span style="display: inline-block; width: 15px; height: 15px; background-color: red; margin-right: 5px; margin-left: 20px;"></span> High |     |     |     |            |          |                  |             |

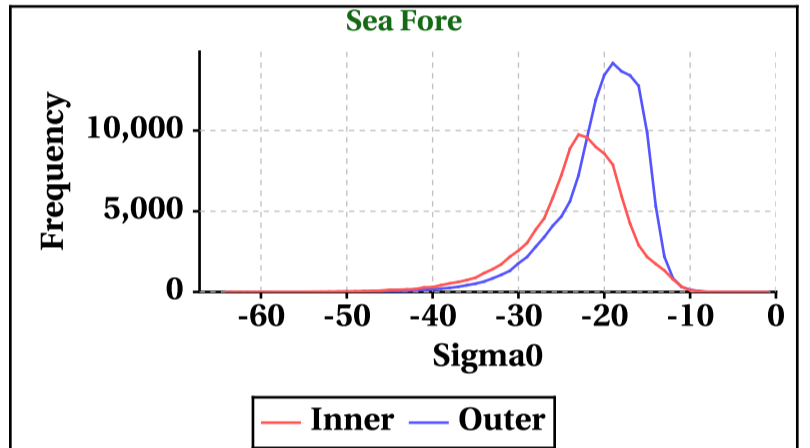
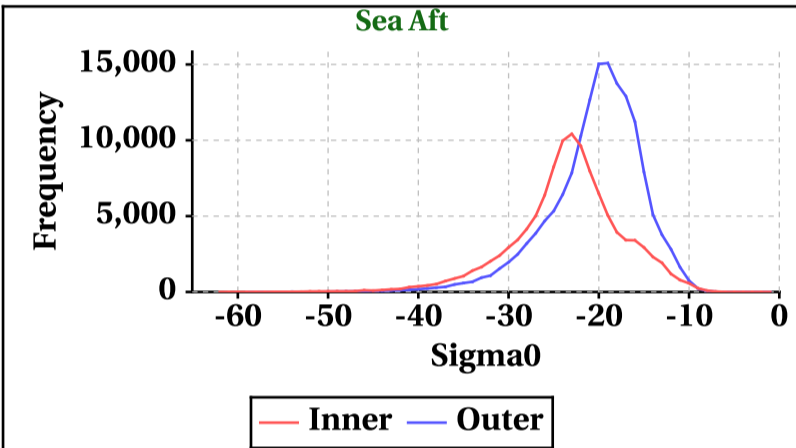
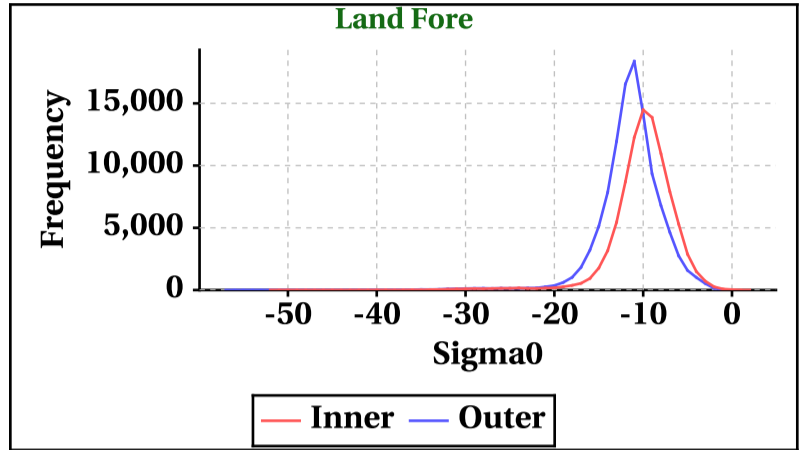
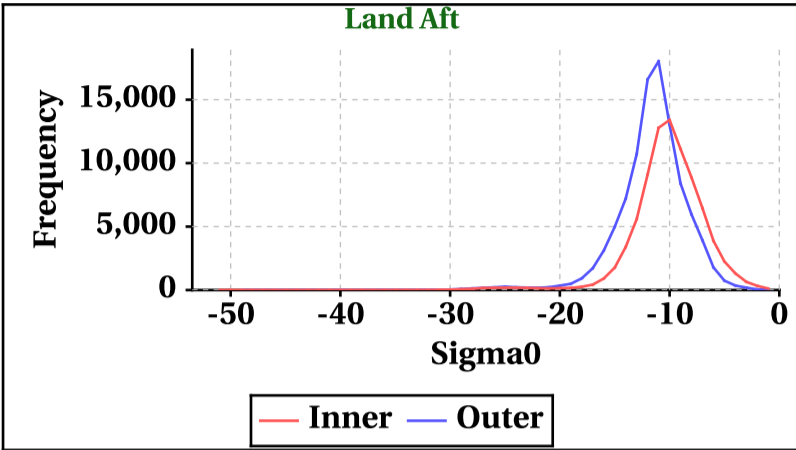
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -51      | -52       | -62     | -64      |
| Max             | -1       | 2         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -49      | -57       | -59     | -59      |
| 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            | 351      | 380       | 297     | 299      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 360      | 500       | 311     | 313      |

