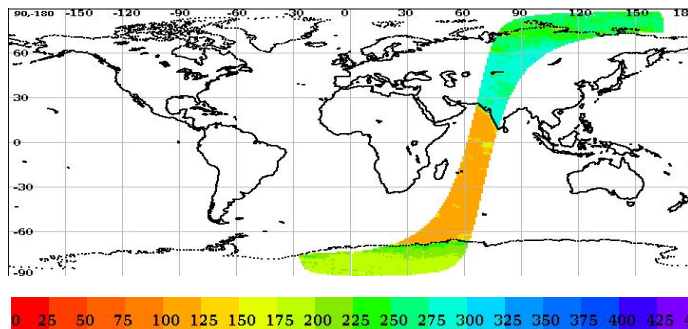


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

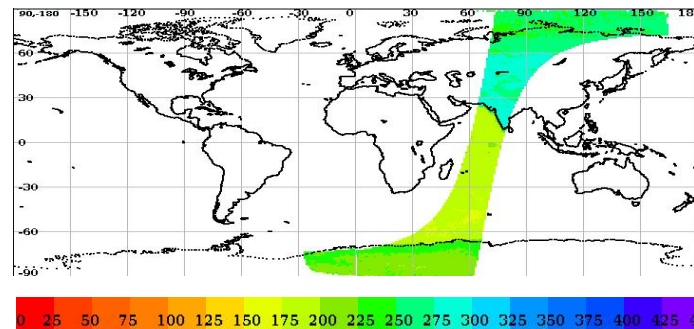
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 19197             | 19198           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 811            | 72              | 12-05-2020        | 12-05-2020      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 25              | v1.1.4            |                 |

## Brightness Temperature

Inner Beam (HH)

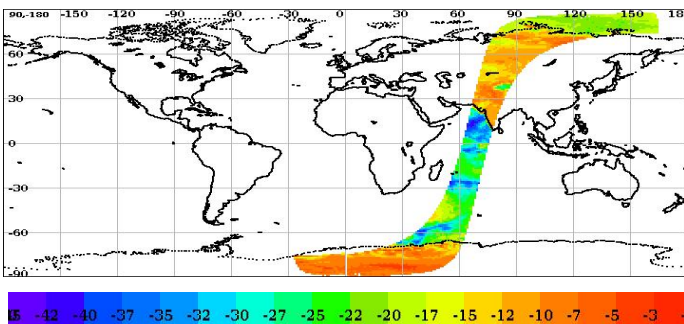


Outer Beam (VV)

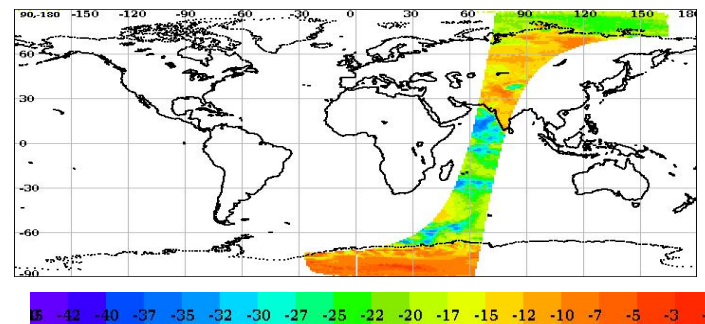


## Sigma0(dB)

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     | -13.93     | -8.12      | -10.73      | 1.20       | 255.40 | 322.13 | 289.71  | 20.14  |
| ROK       | 23.00      | 73.60      | Outer | DSC  | Aft     | -14.80     | -9.02      | -11.93      | 1.00       | 244.34 | 318.83 | 287.38  | 18.34  |
| ROK       | 23.00      | 73.60      | Inner | DSC  | Fore    | -12.84     | -7.11      | -10.17      | 1.14       | 270.24 | 333.23 | 295.88  | 15.33  |
| ROK       | 23.00      | 73.60      | Outer | DSC  | Fore    | -15.79     | -9.62      | -11.98      | 1.11       | 247.51 | 328.09 | 293.27  | 18.55  |

## 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            | 26.99   | 5.79         | 0.00    | 24.55   | 6.68         | 0.00            | 264.52  | 2.19         | 0.00    | 45.06   | 2.85         |

| 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    | 42.47   | 1.60         | 0.00     | 43.73   | 2.20         | 0.00     | 39.60   | 0.10         | 0.00      | 31.07   | 0.11         |
|  | <b>Outer (VV)</b> | 0.00    | 35.40   | 1.78         | 0.00     | 43.76   | 2.49         | 0.00     | 37.26   | 0.07         | 0.00      | 43.87   | 0.19         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 41.29   | 1.61         | 0.00     | 46.79   | 2.11         | 0.00     | 39.76   | 0.10         | 0.00      | 31.71   | 0.10         |
|  | <b>Outer (VV)</b> | 0.00    | 36.09   | 1.70         | 0.00     | 42.02   | 2.15         | 0.00     | 34.34   | 0.06         | 0.00      | 37.64   | 0.17         |

| 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

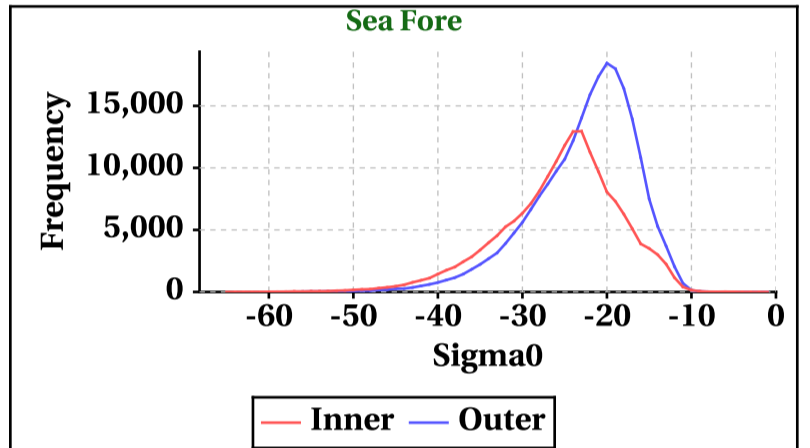
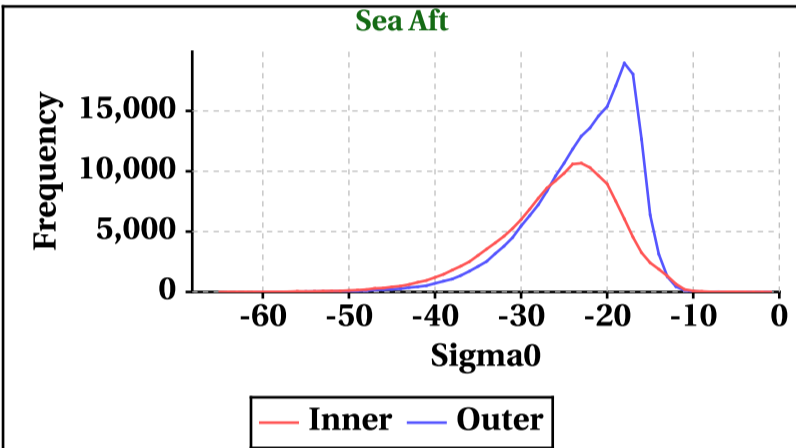
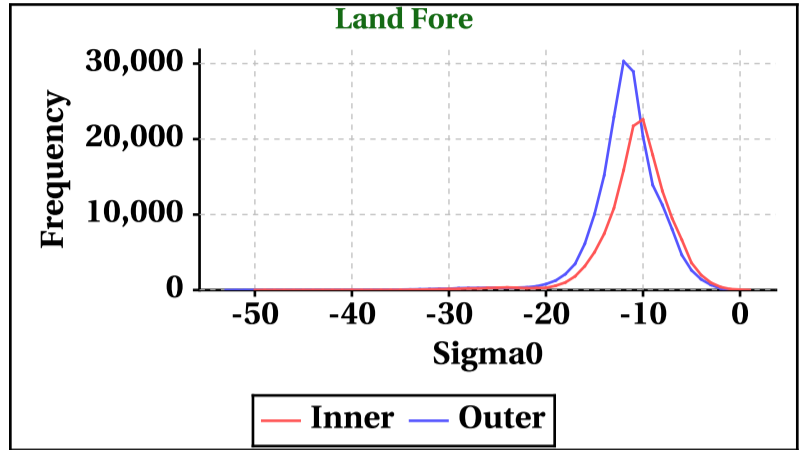
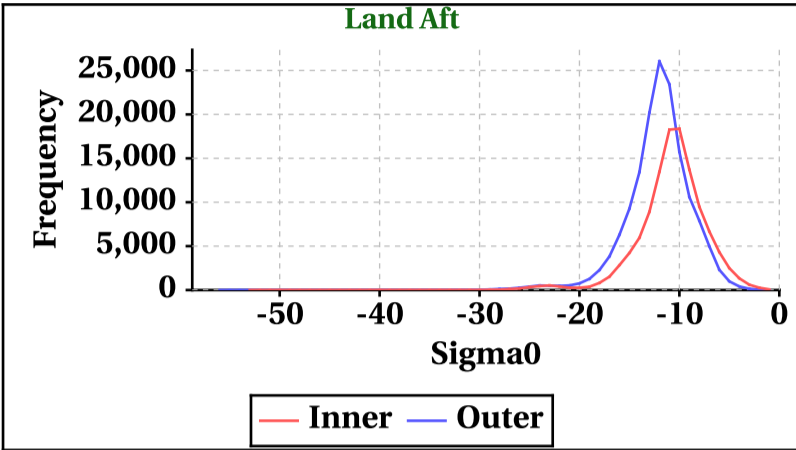
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -53      | -50       | -65     | -65      |
| Max             | -1       | 1         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -56      | -53       | -61     | -61      |
| 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            | 478      | 358       | 329     | 308      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 355      | 347       | 324     | 320      |

