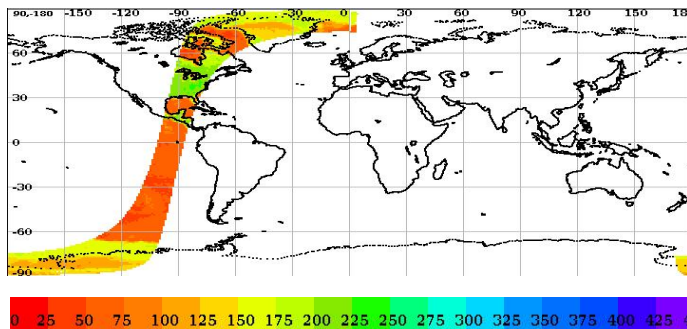


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

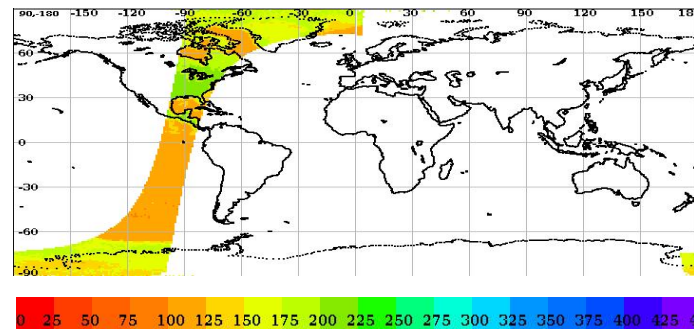
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 14984             | 14985           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 813            | 72              | 26-07-2019        | 26-07-2019      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 25              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

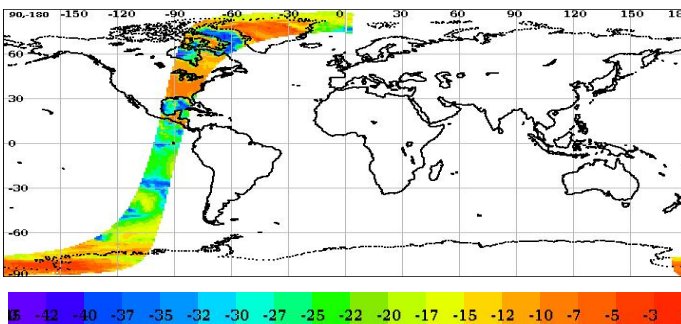


Outer Beam (VV)

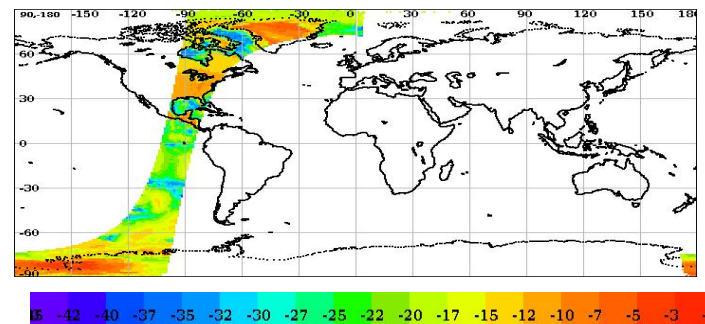


## Sigma0(dB)

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 |
|-------------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| GreenLand_2 | 77.50      | -41.50     | Inner | DSC  | Aft     | -7.51      | -4.28      | -5.47       | 0.89       | 92.29  | 144.36 | 120.24  | 14.20  |
| GreenLand_2 | 77.50      | -41.50     | Outer | DSC  | Aft     | -6.73      | -4.43      | -5.49       | 0.75       | 136.48 | 190.56 | 162.31  | 16.87  |
| GreenLand_2 | 77.50      | -41.50     | Inner | DSC  | Fore    | -6.87      | -2.54      | -5.09       | 1.27       | 109.90 | 163.15 | 127.29  | 19.26  |
| GreenLand_2 | 77.50      | -41.50     | Outer | DSC  | Fore    | -21.44     | -3.92      | -9.41       | 7.19       | 116.09 | 177.11 | 152.22  | 20.93  |
| GreenLand_3 | 71.55      | -42.45     | Inner | DSC  | Aft     | -14.61     | -9.63      | -11.78      | 1.01       | 110.89 | 160.73 | 137.32  | 14.16  |
| GreenLand_3 | 71.55      | -42.45     | Outer | DSC  | Aft     | -15.24     | -9.51      | -11.99      | 1.07       | 130.05 | 185.69 | 163.34  | 16.14  |
| GreenLand_3 | 71.55      | -42.45     | Inner | DSC  | Fore    | -13.81     | -9.50      | -11.69      | 0.98       | 114.25 | 172.55 | 143.07  | 13.25  |
| GreenLand_3 | 71.55      | -42.45     | Outer | DSC  | Fore    | -14.27     | -9.25      | -12.23      | 0.97       | 128.13 | 198.25 | 173.64  | 19.62  |
| GreenLand_1 | 74.69      | -42.50     | Inner | DSC  | Aft     | -11.80     | -6.96      | -9.51       | 1.09       | 108.41 | 161.00 | 132.18  | 14.52  |
| GreenLand_1 | 74.69      | -42.50     | Outer | DSC  | Aft     | -11.51     | -7.30      | -9.29       | 1.08       | 148.67 | 186.76 | 169.09  | 12.74  |
| GreenLand_1 | 74.69      | -42.50     | Inner | DSC  | Fore    | -10.92     | -6.62      | -8.69       | 1.02       | 98.77  | 152.04 | 131.94  | 14.08  |
| GreenLand_1 | 74.69      | -42.50     | Outer | DSC  | Fore    | -11.06     | -6.93      | -8.97       | 1.00       | 132.59 | 216.19 | 175.16  | 21.05  |

## 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            | 105.70  | 6.39         | 0.00    | 24.71   | 7.64         | 0.00            | 350.89  | 2.70         | 0.00    | 131.78  | 3.59         |

| 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    | 47.11   | 2.42         | 0.00     | 47.24   | 3.00         | 0.00     | 43.13   | 0.65         | 0.00      | 39.13   | 0.67         |
|  | <b>Outer (VV)</b> | 0.00    | 42.70   | 2.25         | 0.00     | 47.28   | 2.95         | 0.00     | 37.05   | 0.18         | 0.00      | 49.79   | 0.57         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 47.07   | 2.35         | 0.00     | 43.92   | 3.05         | 0.00     | 43.55   | 0.63         | 0.00      | 40.58   | 0.62         |
|  | <b>Outer (VV)</b> | 0.00    | 43.41   | 2.20         | 0.00     | 47.73   | 2.78         | 0.00     | 35.63   | 0.17         | 0.00      | 50.74   | 0.44         |

| 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

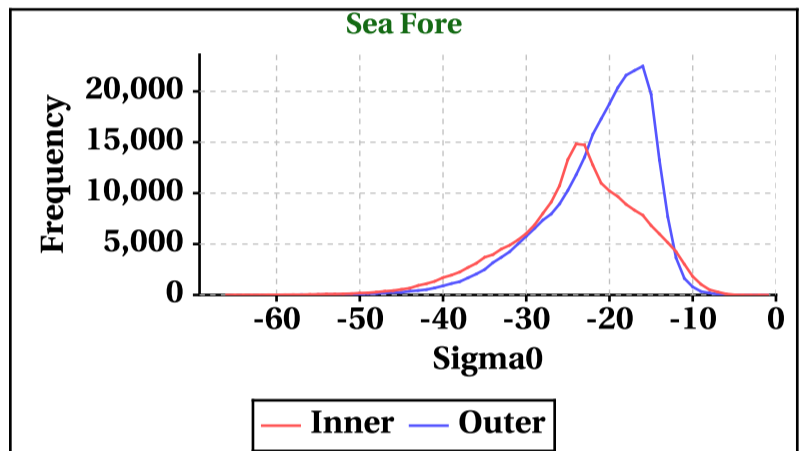
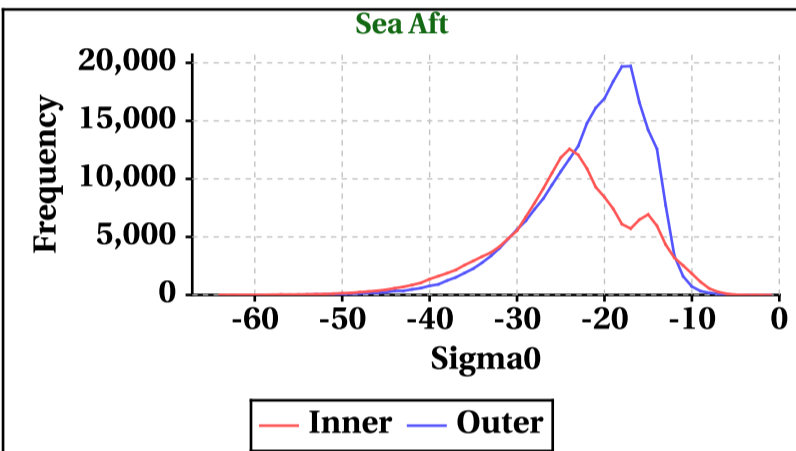
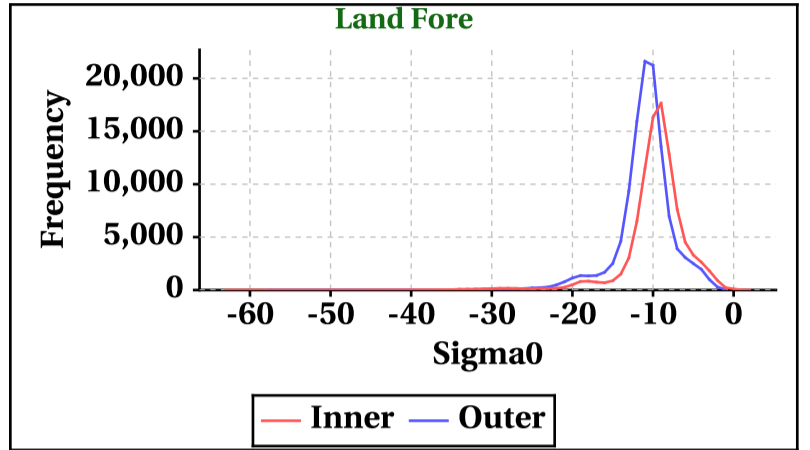
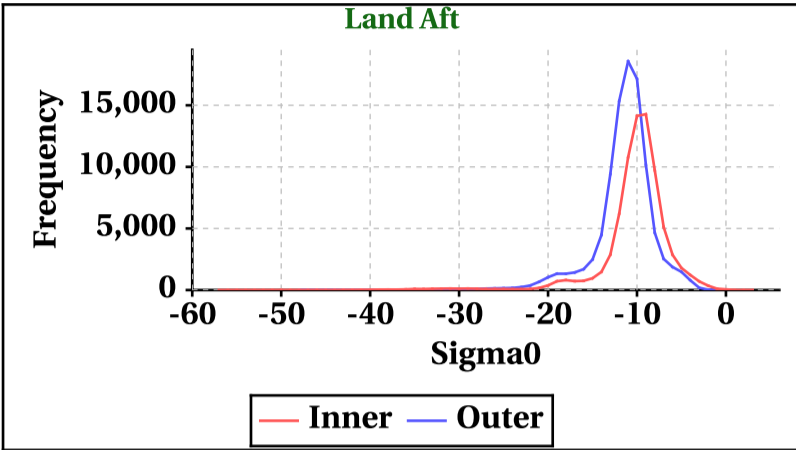
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -57      | -63       | -64     | -66      |
| Max             | 3        | 2         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -48      | -58       | -60     | -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            | 281      | 279       | 235     | 231      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 280      | 273       | 236     | 238      |

