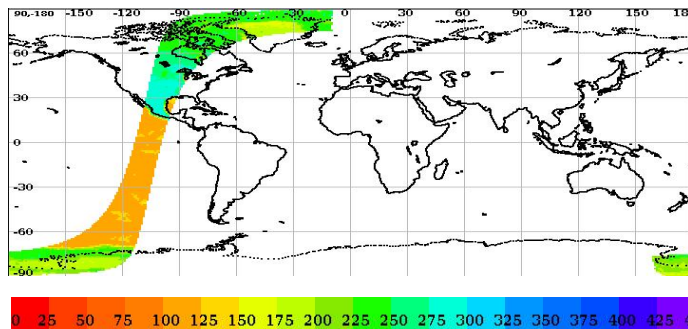


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

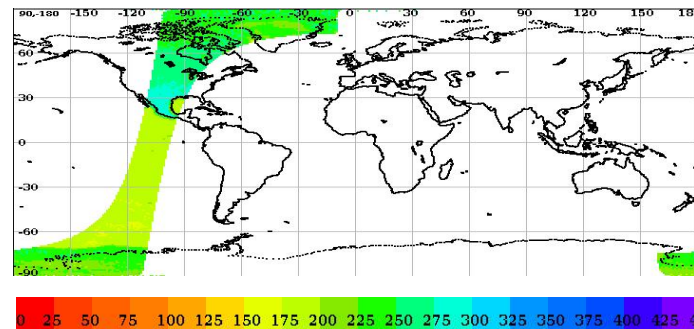
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 18682             | 18683           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 813            | 72              | 06-04-2020        | 06-04-2020      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 25              | v1.1.4            |                 |

## Brightness Temperature

Inner Beam (HH)

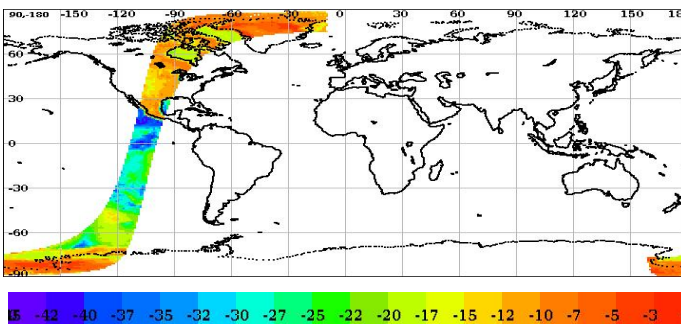


Outer Beam (VV)

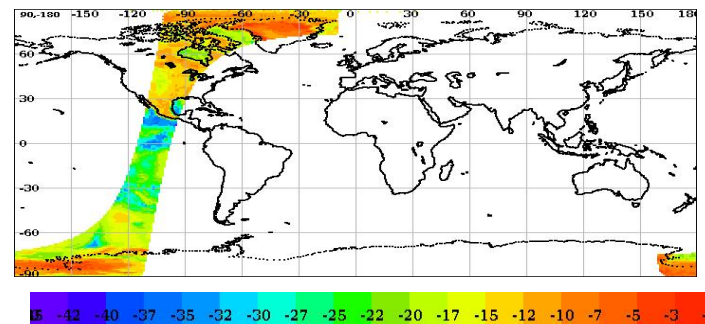


## Sigma0(dB)

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 |
|-------------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| GreenLand_2 | 77.50      | -41.50     | Inner | DSC  | Aft     | -7.36      | -4.53      | -5.65       | 0.89       | 171.04 | 186.20 | 177.11  | 5.22   |
| GreenLand_2 | 77.50      | -41.50     | Outer | DSC  | Aft     | -5.34      | -2.68      | -4.83       | 0.72       | 206.89 | 254.04 | 224.72  | 15.23  |
| GreenLand_2 | 77.50      | -41.50     | Inner | DSC  | Fore    | -10.29     | -2.55      | -5.50       | 1.94       | 139.17 | 247.12 | 184.44  | 32.74  |
| GreenLand_3 | 71.55      | -42.45     | Outer | DSC  | Aft     | -13.39     | -9.06      | -11.13      | 0.97       | 188.61 | 267.04 | 228.07  | 18.08  |
| GreenLand_3 | 71.55      | -42.45     | Outer | DSC  | Fore    | -14.27     | -8.87      | -11.22      | 0.98       | 200.40 | 263.71 | 234.96  | 15.78  |
| GreenLand_1 | 74.69      | -42.50     | Inner | DSC  | Aft     | -11.05     | -7.28      | -9.30       | 0.71       | 153.72 | 222.41 | 196.27  | 15.67  |
| GreenLand_1 | 74.69      | -42.50     | Outer | DSC  | Aft     | -11.36     | -7.19      | -9.53       | 1.02       | 200.56 | 259.77 | 233.71  | 17.32  |
| GreenLand_1 | 74.69      | -42.50     | Inner | DSC  | Fore    | -10.90     | -6.06      | -8.95       | 1.09       | 155.76 | 237.55 | 191.35  | 18.40  |
| GreenLand_1 | 74.69      | -42.50     | Outer | DSC  | Fore    | -16.98     | -7.14      | -9.45       | 1.86       | 207.05 | 278.64 | 245.07  | 19.93  |

## 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            | 26.92   | 6.36         | 0.00    | 24.65   | 7.59         | 0.00            | 338.35  | 3.15         | 0.00    | 68.05   | 3.84         |

| 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    | 39.91   | 1.58         | 0.00     | 37.64   | 2.25         | 0.00     | 45.69   | 0.48         | 0.00      | 41.19   | 0.68         |
|  | <b>Outer (VV)</b> | 0.00    | 35.77   | 1.90         | 0.00     | 41.80   | 2.44         | 0.00     | 36.88   | 0.30         | 0.00      | 40.05   | 0.39         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 38.95   | 1.66         | 0.00     | 39.79   | 2.23         | 0.00     | 45.88   | 0.48         | 0.00      | 40.89   | 0.66         |
|  | <b>Outer (VV)</b> | 0.00    | 36.58   | 1.80         | 0.00     | 40.68   | 2.30         | 0.00     | 35.97   | 0.30         | 0.00      | 37.89   | 0.36         |

| 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

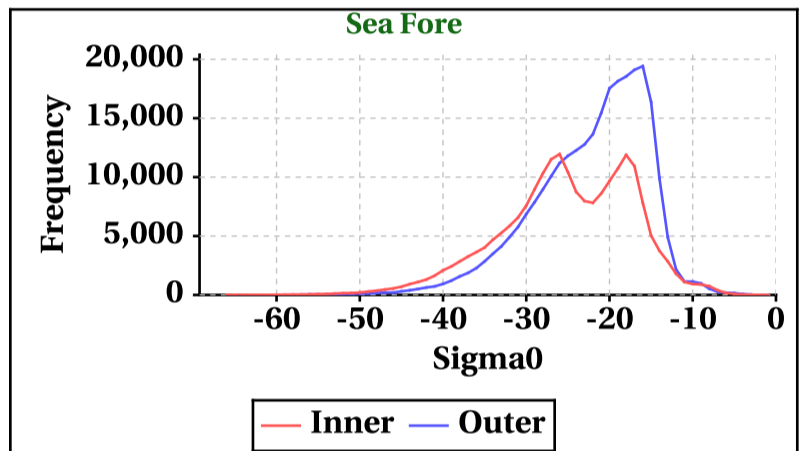
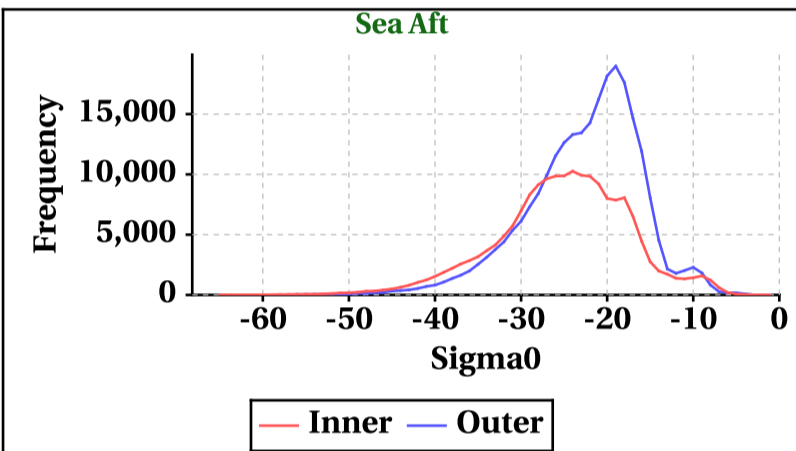
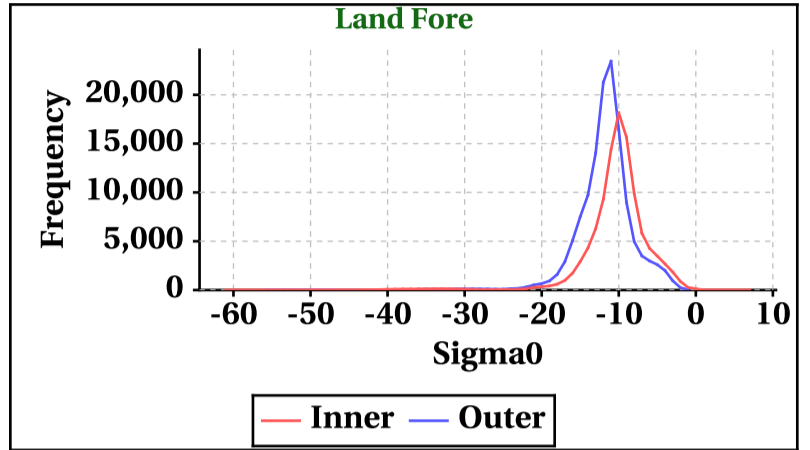
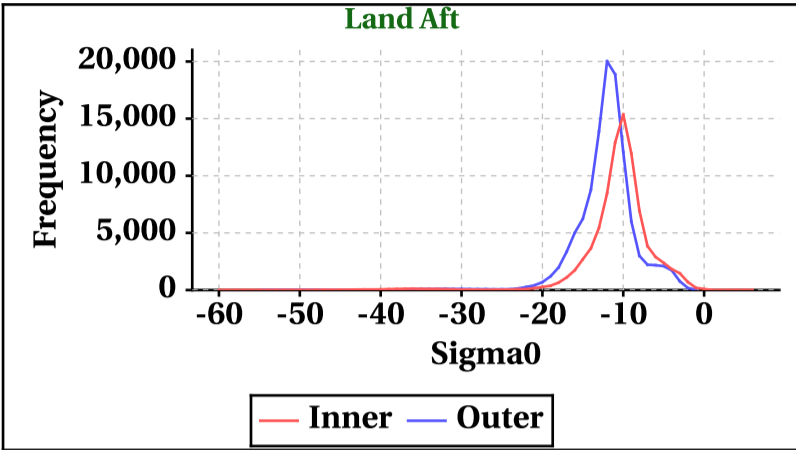
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -60      | -61       | -65     | -66      |
| Max             | 6        | 7         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -55      | -56       | -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            | 347      | 372       | 312     | 313      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 346      | 346       | 312     | 312      |

