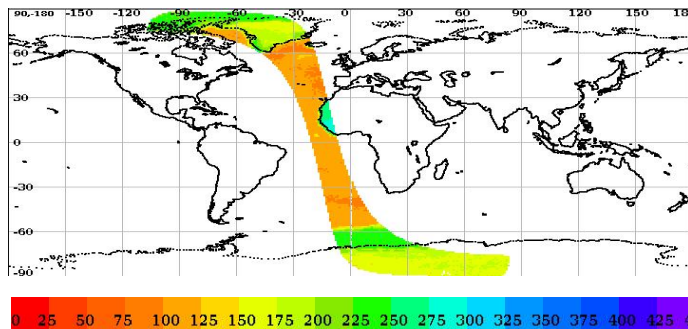


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

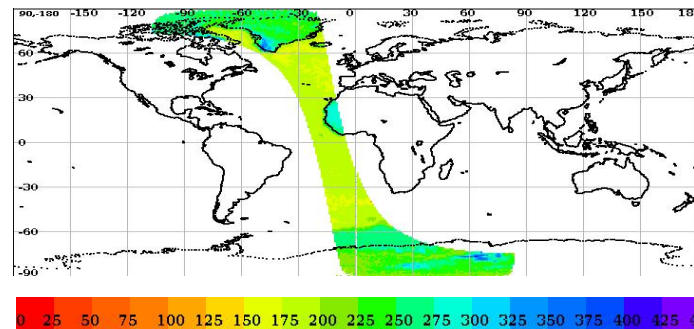
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 10681             | 10682           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 404            | 36              | 02-10-2018        | 02-10-2018      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 50              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

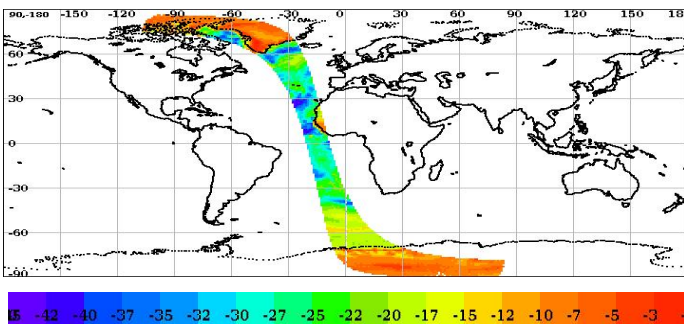


Outer Beam (VV)

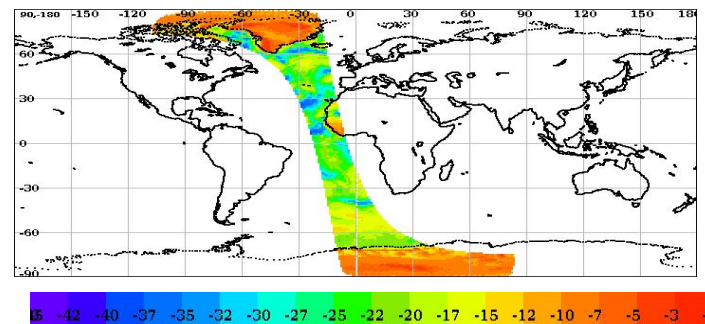


## Sigma0(dB)

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 | ASC  | Aft     | -6.79      | -3.92      | -5.59       | 1.00       | 131.69 | 187.21 | 160.09  | 15.95  |
| GreenLand_2 | 77.50      | -41.50     | Outer | ASC  | Aft     | -6.60      | -3.50      | -5.57       | 0.93       | 247.74 | 304.60 | 276.50  | 19.89  |
| GreenLand_2 | 77.50      | -41.50     | Inner | ASC  | Fore    | -6.83      | -4.48      | -5.33       | 0.71       | 143.88 | 192.58 | 164.05  | 15.85  |
| GreenLand_2 | 77.50      | -41.50     | Outer | ASC  | Fore    | -5.82      | -2.81      | -4.87       | 0.94       | 193.33 | 248.74 | 230.00  | 20.08  |
| GreenLand_3 | 71.55      | -42.45     | Inner | ASC  | Aft     | -13.03     | -9.37      | -11.50      | 0.89       | 164.33 | 226.00 | 198.26  | 18.88  |
| GreenLand_3 | 71.55      | -42.45     | Outer | ASC  | Aft     | -13.62     | -10.54     | -12.14      | 0.76       | 223.21 | 292.49 | 260.37  | 16.71  |
| GreenLand_3 | 71.55      | -42.45     | Inner | ASC  | Fore    | -12.94     | -9.41      | -11.11      | 0.86       | 174.63 | 218.86 | 192.73  | 9.99   |
| GreenLand_3 | 71.55      | -42.45     | Outer | ASC  | Fore    | -14.72     | -10.56     | -11.64      | 1.00       | 209.67 | 269.88 | 233.81  | 19.43  |
| GreenLand_1 | 74.69      | -42.50     | Inner | ASC  | Aft     | -10.20     | -8.42      | -9.42       | 0.52       | 159.17 | 219.13 | 190.52  | 17.44  |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Aft     | -10.98     | -8.23      | -9.64       | 0.88       | 241.76 | 286.76 | 257.85  | 13.55  |
| GreenLand_1 | 74.69      | -42.50     | Inner | ASC  | Fore    | -10.96     | -7.15      | -8.75       | 0.92       | 147.21 | 188.84 | 171.77  | 11.29  |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Fore    | -13.02     | -6.52      | -8.81       | 1.26       | 210.66 | 260.41 | 228.25  | 15.31  |

## 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            | 32.32   | 12.14        | 0.00    | 182.22  | 12.74        | 0.00            | 115.09  | 9.09         | 0.00    | 206.49  | 11.39        |

| 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    | 43.66   | 4.43         | 0.00     | 50.83   | 5.78         | 0.00     | 17.36   | 0.00         | 0.00      | 17.63   | 0.00         |
|  | <b>Outer (VV)</b> | 0.00    | 44.00   | 4.45         | 0.00     | 41.15   | 5.32         | 0.00     | 30.71   | 0.54         | 0.00      | 33.22   | 0.76         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 45.19   | 4.62         | 0.00     | 51.90   | 5.38         | 0.00     | 17.09   | 0.00         | 0.00      | 16.24   | 0.00         |
|  | <b>Outer (VV)</b> | 0.00    | 41.39   | 4.26         | 0.00     | 42.18   | 5.01         | 0.00     | 30.98   | 0.45         | 0.00      | 31.14   | 0.69         |

| 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

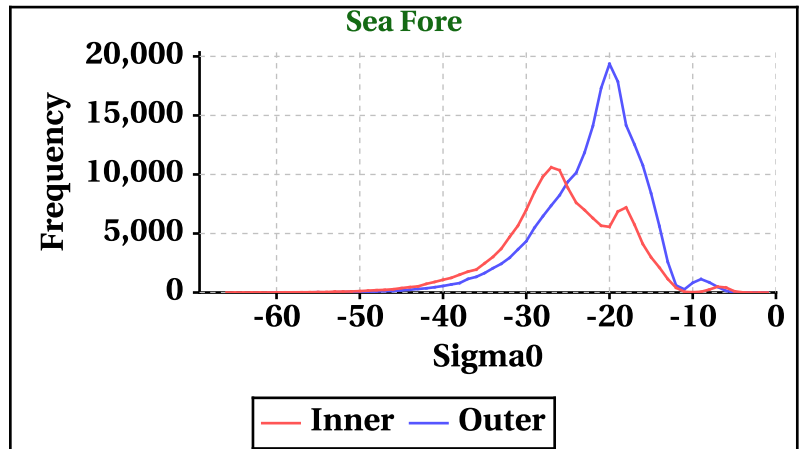
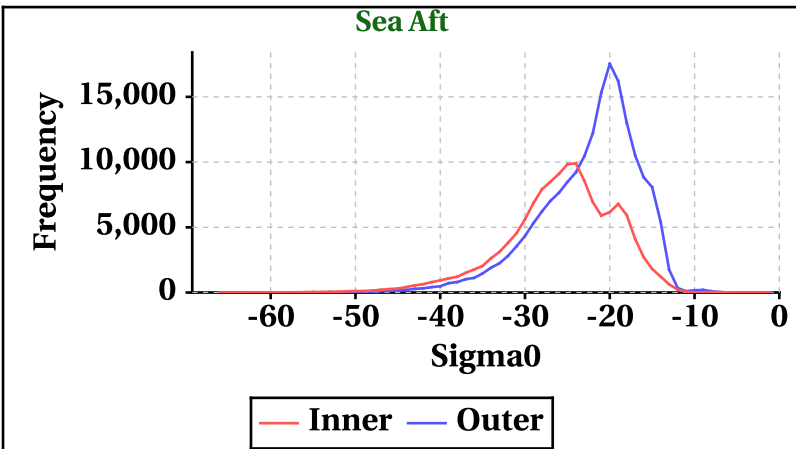
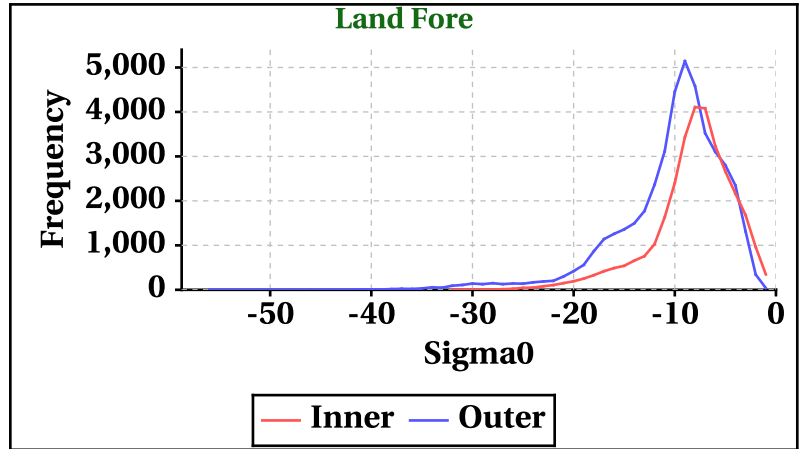
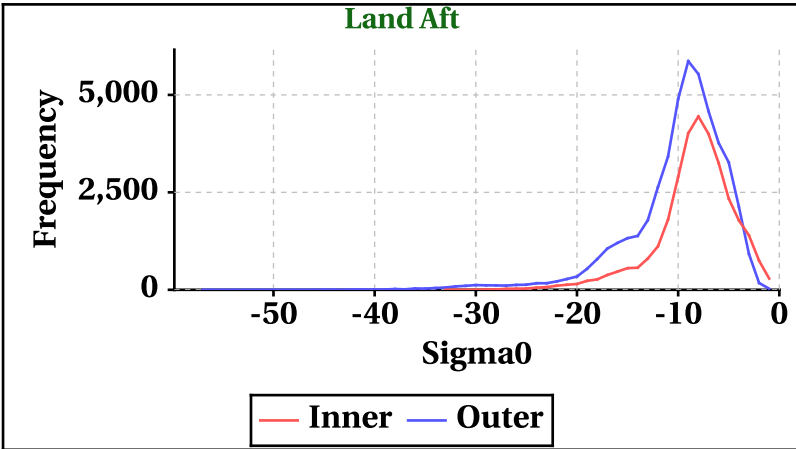
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -33      | -32       | -66     | -66      |
| Max             | -1       | -1        | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -57      | -56       | -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            | 364      | 345       | 311     | 316      |

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

