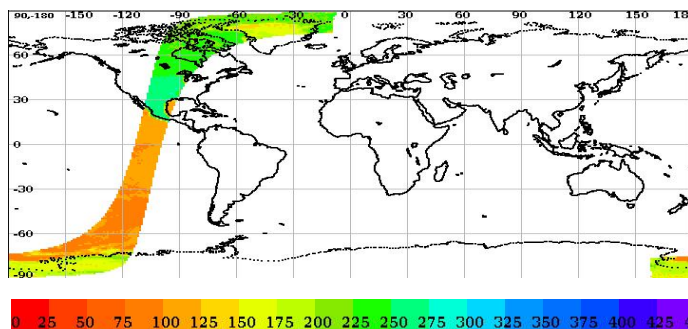


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

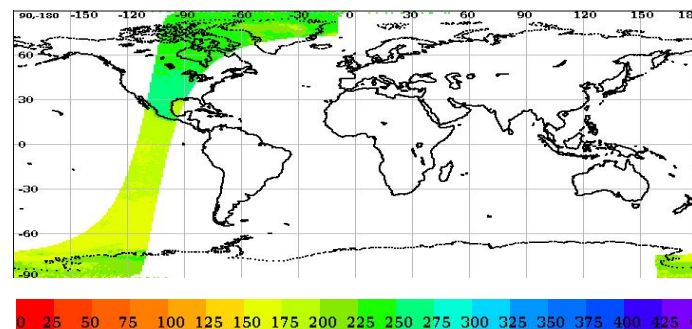
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 6995              | 6996            |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 406            | 36              | 21-01-2018        | 21-01-2018      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 50              | v1.1.2            |                 |

## Brightness Temperature

Inner Beam (HH)

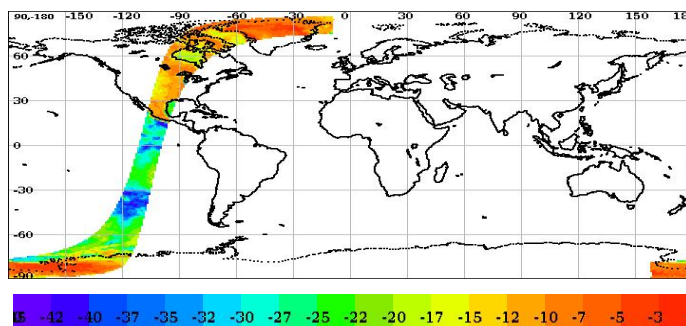


Outer Beam (VV)

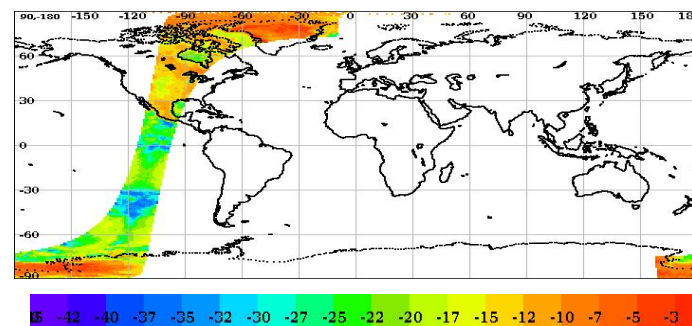


## Sigma0(dB)

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 |
|-------------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| GreenLand_2 | 77.50      | -41.50     | Inner | DSC  | Aft     | -8.04      | -1.95      | -5.09       | 1.90       | 117.66 | 189.96 | 160.88  | 21.52  |
| GreenLand_2 | 77.50      | -41.50     | Outer | DSC  | Aft     | -4.96      | -3.20      | -4.19       | 0.63       | 202.90 | 234.28 | 218.00  | 11.09  |
| GreenLand_2 | 77.50      | -41.50     | Inner | ASC  | Fore    | -4.02      | -4.02      | -4.02       | 0.00       | 167.25 | 167.25 | 167.25  | 0.00   |
| GreenLand_2 | 77.50      | -41.50     | Inner | DSC  | Fore    | -7.33      | -3.69      | -5.27       | 1.13       | 149.32 | 180.41 | 168.12  | 11.93  |
| GreenLand_3 | 71.55      | -42.45     | Outer | DSC  | Aft     | -14.47     | -9.38      | -11.92      | 1.11       | 199.24 | 259.25 | 230.78  | 14.49  |
| GreenLand_3 | 71.55      | -42.45     | Outer | DSC  | Fore    | -14.36     | -8.26      | -11.30      | 1.41       | 193.37 | 255.46 | 224.36  | 15.03  |
| GreenLand_1 | 74.69      | -42.50     | Inner | DSC  | Aft     | -11.12     | -5.31      | -8.78       | 1.41       | 151.88 | 208.13 | 179.25  | 13.12  |
| GreenLand_1 | 74.69      | -42.50     | Outer | DSC  | Aft     | -10.89     | -7.24      | -8.74       | 0.91       | 197.67 | 273.78 | 229.09  | 14.59  |
| GreenLand_1 | 74.69      | -42.50     | Inner | DSC  | Fore    | -11.11     | -6.08      | -8.55       | 1.20       | 153.99 | 215.98 | 178.49  | 13.75  |
| GreenLand_1 | 74.69      | -42.50     | Outer | DSC  | Fore    | -10.31     | -5.79      | -8.55       | 0.98       | 200.11 | 262.96 | 234.21  | 16.06  |

## 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            | 27.17   | 14.10        | 0.00    | 30.55   | 16.71        | 0.00            | 148.15  | 14.63        | 0.00    | 142.17  | 15.09        |

| 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    | 41.31   | 8.93         | 0.00     | 49.91   | 7.35         | 0.00     | 54.28   | 1.64         | 0.00      | 52.85   | 1.92         |
|  | <b>Outer (VV)</b> | 0.00    | 44.21   | 5.83         | 0.00     | 41.17   | 6.89         | 0.00     | 41.55   | 0.89         | 0.00      | 42.59   | 1.13         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 40.95   | 8.31         | 0.00     | 52.53   | 7.23         | 0.00     | 54.71   | 1.53         | 0.00      | 52.31   | 1.62         |
|  | <b>Outer (VV)</b> | 0.00    | 44.94   | 5.83         | 0.00     | 38.76   | 6.38         | 0.00     | 38.28   | 0.87         | 0.00      | 40.79   | 1.03         |

| 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

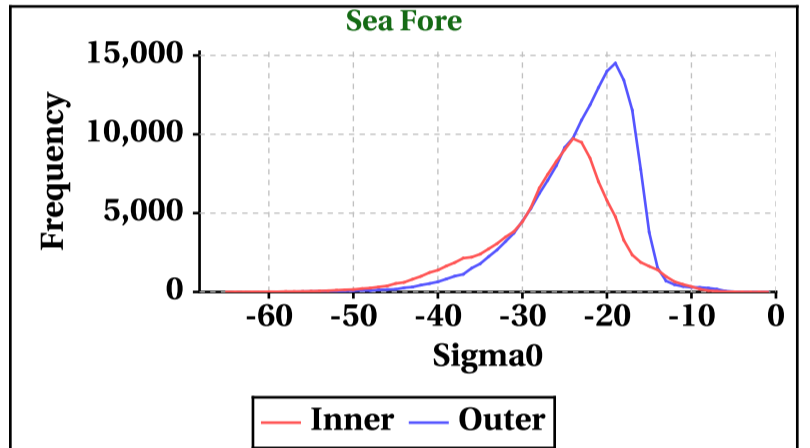
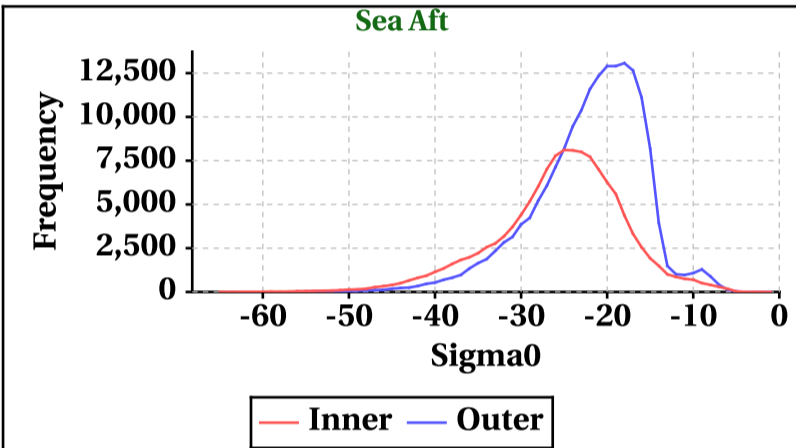
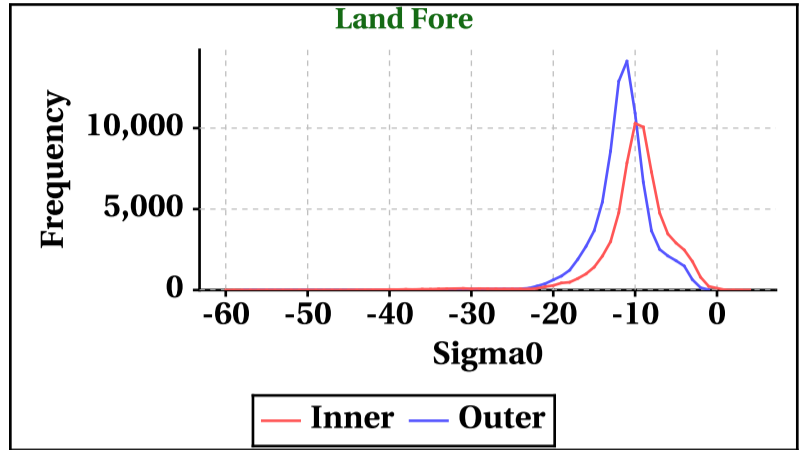
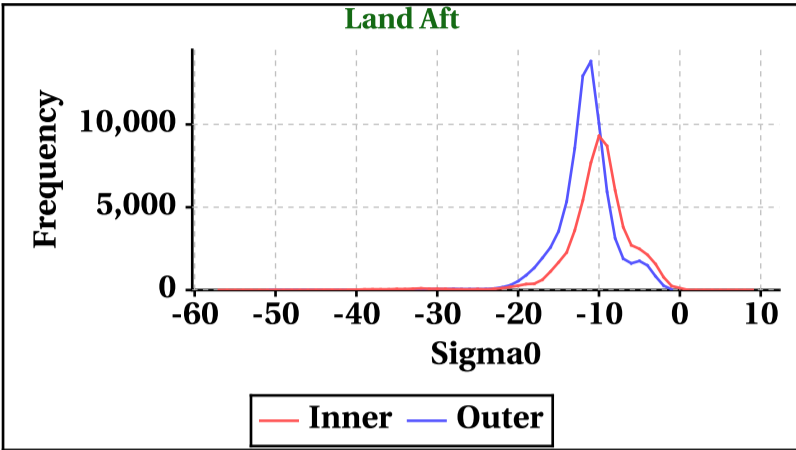
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -57      | -60       | -65     | -65      |
| Max             | 9        | 4         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -51      | -58       | -59     | -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            | 390      | 341       | 299     | 315      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 332      | 348       | 313     | 302      |

