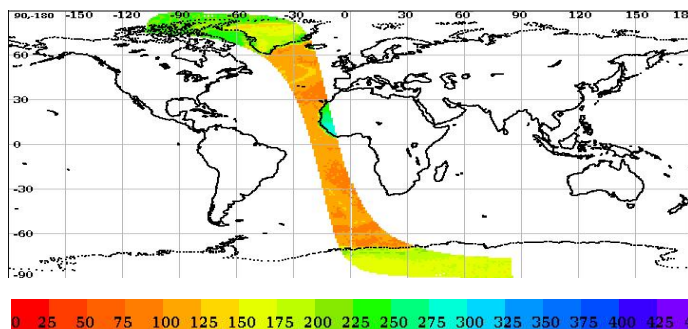


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

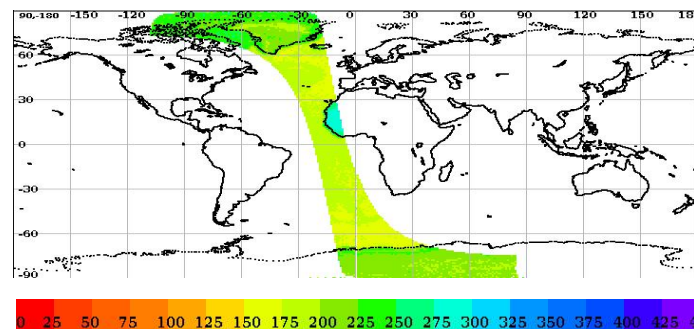
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 8216              | 8217            |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 405            | 36              | 15-04-2018        | 16-04-2018      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 50              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

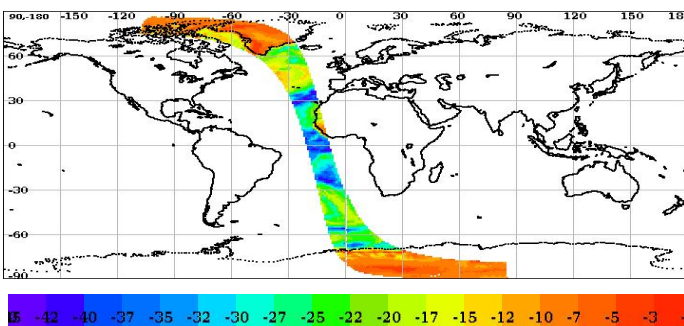


Outer Beam (VV)

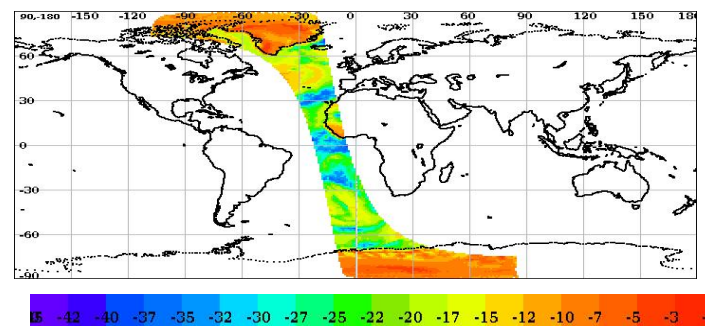


## Sigma0(dB)

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     | -6.97      | -3.98      | -5.54       | 1.05       | 159.55 | 181.18 | 166.34  | 7.27   |
| GreenLand_2 | 77.50      | -41.50     | Outer | ASC  | Aft     | -7.24      | -4.55      | -5.66       | 0.93       | 185.49 | 229.75 | 216.81  | 16.00  |
| GreenLand_2 | 77.50      | -41.50     | Inner | ASC  | Fore    | -6.96      | -4.23      | -5.55       | 0.86       | 137.05 | 179.36 | 160.80  | 15.65  |
| GreenLand_2 | 77.50      | -41.50     | Outer | ASC  | Fore    | -7.24      | -4.75      | -5.61       | 0.78       | 174.73 | 221.48 | 195.59  | 15.12  |
| GreenLand_3 | 71.55      | -42.45     | Inner | ASC  | Aft     | -13.12     | -9.51      | -11.43      | 0.91       | 174.22 | 218.48 | 192.53  | 11.95  |
| GreenLand_3 | 71.55      | -42.45     | Outer | ASC  | Aft     | -14.38     | -10.73     | -12.13      | 0.81       | 190.63 | 242.28 | 218.36  | 14.70  |
| GreenLand_3 | 71.55      | -42.45     | Inner | ASC  | Fore    | -12.77     | -9.26      | -10.97      | 0.86       | 164.80 | 210.99 | 190.05  | 12.13  |
| GreenLand_3 | 71.55      | -42.45     | Outer | ASC  | Fore    | -13.01     | -9.43      | -11.32      | 0.89       | 198.10 | 249.61 | 226.05  | 13.86  |
| GreenLand_1 | 74.69      | -42.50     | Inner | ASC  | Aft     | -11.66     | -7.38      | -9.38       | 1.07       | 158.85 | 204.59 | 177.91  | 9.20   |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Aft     | -12.44     | -8.33      | -9.78       | 0.97       | 172.62 | 245.28 | 218.90  | 14.71  |
| GreenLand_1 | 74.69      | -42.50     | Inner | ASC  | Fore    | -10.76     | -6.80      | -8.88       | 1.05       | 145.16 | 202.76 | 172.15  | 15.43  |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Fore    | -11.84     | -7.39      | -8.76       | 1.01       | 198.32 | 270.93 | 225.64  | 19.36  |

## 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            | 30.83   | 13.13        | 0.00    | 23.80   | 12.85        | 0.00            | 158.80  | 11.66        | 0.00    | 62.83   | 13.76        |

| 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    | 44.49   | 5.38         | 0.00     | 51.65   | 6.39         | 0.00     | 16.89   | 0.00         | 0.00      | 20.01   | 0.05         |
|  | <b>Outer (VV)</b> | 0.00    | 40.61   | 4.66         | 0.00     | 40.29   | 6.16         | 0.00     | 37.20   | 0.48         | 0.00      | 30.15   | 0.58         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 45.21   | 5.42         | 0.00     | 54.81   | 6.28         | 0.00     | 16.34   | 0.00         | 0.00      | 18.25   | 0.00         |
|  | <b>Outer (VV)</b> | 0.00    | 40.75   | 4.86         | 0.00     | 43.44   | 5.73         | 0.00     | 34.17   | 0.45         | 0.00      | 28.72   | 0.32         |

| 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

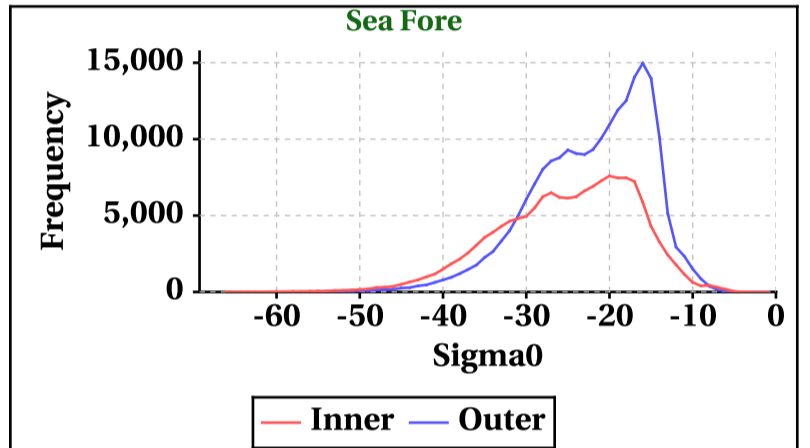
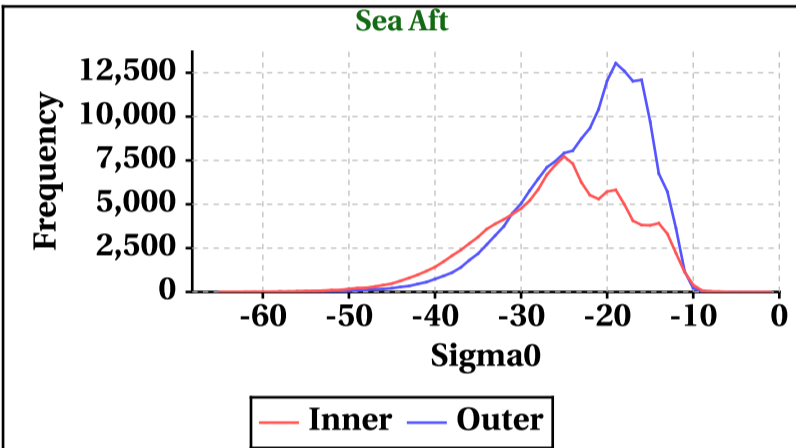
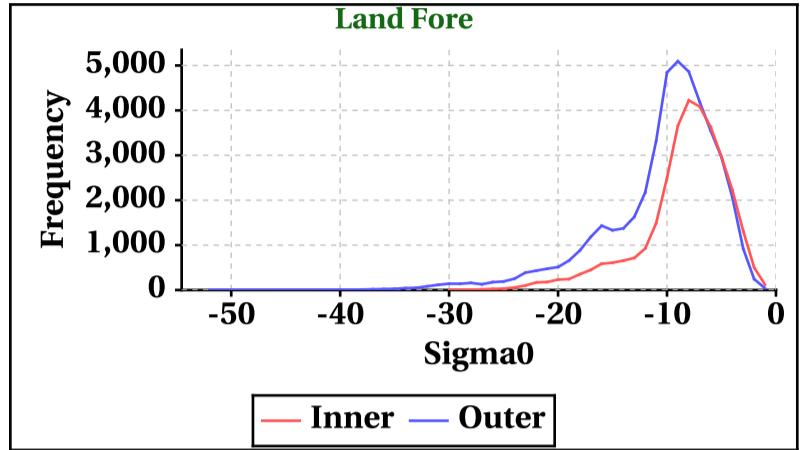
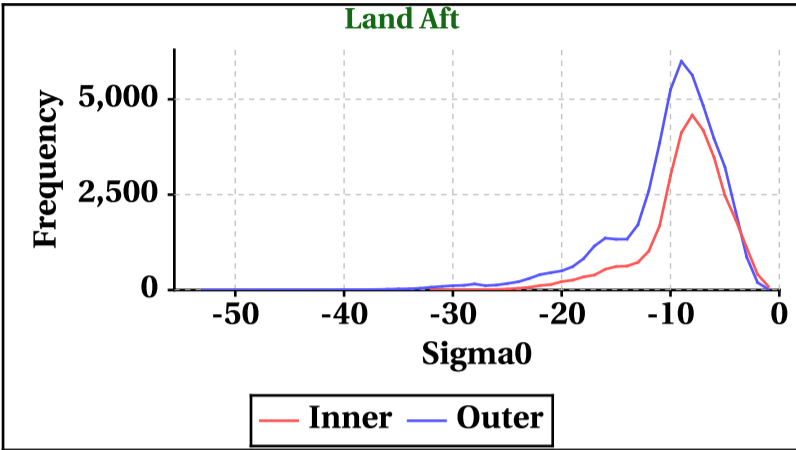
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -32      | -30       | -65     | -66      |
| Max             | -1       | -1        | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -53      | -52       | -60     | -62      |
| 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            | 350      | 340       | 302     | 301      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 339      | 347       | 301     | 308      |

