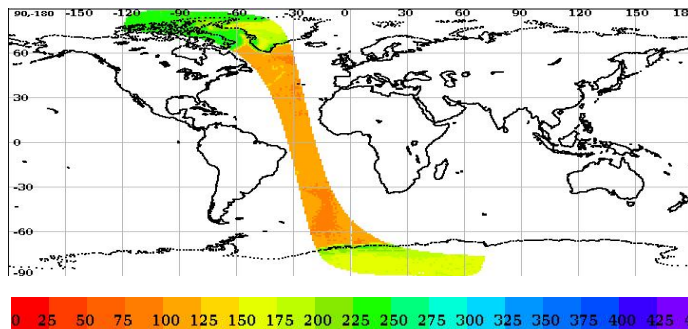


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

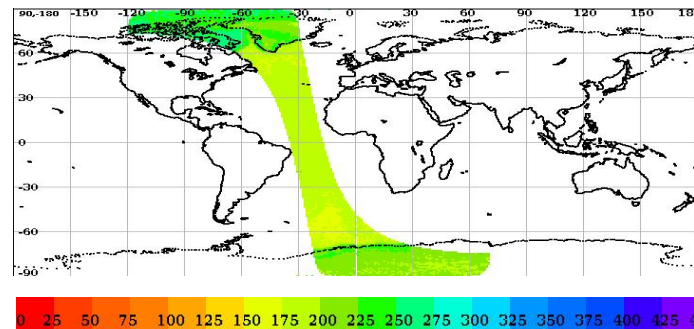
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 13741             | 13742           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 810            | 72              | 01-05-2019        | 02-05-2019      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 25              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

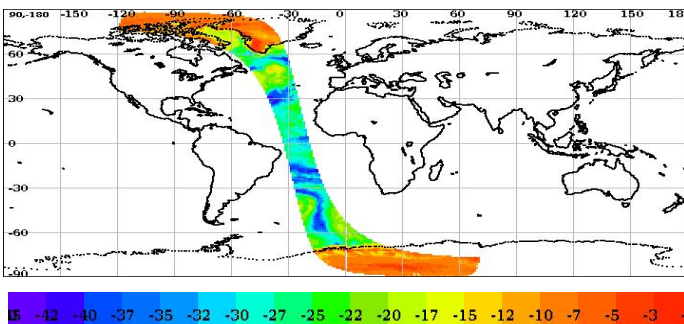


Outer Beam (VV)

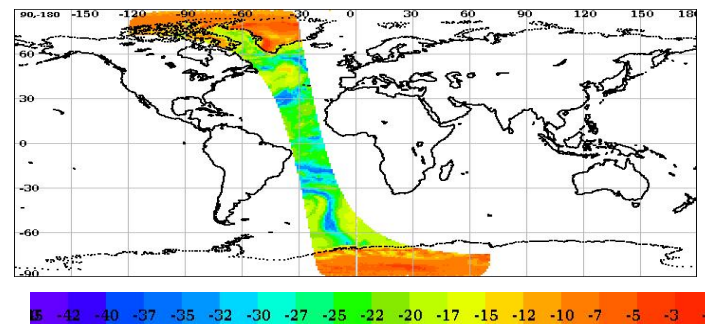


## Sigma0(dB)

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 | ASC  | Aft     | -8.78      | -4.73      | -6.39       | 0.90       | 141.10 | 202.06 | 156.86  | 13.83  |
| GreenLand_2 | 77.50      | -41.50     | Outer | ASC  | Aft     | -7.59      | -4.57      | -5.83       | 0.77       | 195.02 | 237.57 | 216.77  | 12.02  |
| GreenLand_2 | 77.50      | -41.50     | Inner | ASC  | Fore    | -8.90      | -3.90      | -5.88       | 1.29       | 133.98 | 195.90 | 161.62  | 13.75  |
| GreenLand_2 | 77.50      | -41.50     | Outer | ASC  | Fore    | -7.50      | -3.53      | -5.43       | 0.87       | 173.81 | 234.99 | 203.58  | 18.56  |
| GreenLand_3 | 71.55      | -42.45     | Inner | ASC  | Aft     | -15.58     | -10.54     | -12.61      | 1.04       | 158.04 | 229.16 | 198.63  | 16.38  |
| GreenLand_3 | 71.55      | -42.45     | Outer | ASC  | Aft     | -17.25     | -10.31     | -12.76      | 1.29       | 204.76 | 260.78 | 232.62  | 15.04  |
| GreenLand_3 | 71.55      | -42.45     | Inner | ASC  | Fore    | -13.96     | -9.22      | -11.66      | 1.05       | 171.93 | 216.73 | 196.19  | 13.65  |
| GreenLand_3 | 71.55      | -42.45     | Outer | ASC  | Fore    | -14.50     | -9.68      | -12.18      | 1.13       | 201.18 | 261.95 | 237.02  | 16.92  |
| GreenLand_1 | 74.69      | -42.50     | Inner | ASC  | Aft     | -13.05     | -8.07      | -9.96       | 0.97       | 161.57 | 204.79 | 186.35  | 11.50  |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Aft     | -11.35     | -7.39      | -9.79       | 1.01       | 199.31 | 270.67 | 228.76  | 18.14  |
| GreenLand_1 | 74.69      | -42.50     | Inner | ASC  | Fore    | -12.28     | -8.19      | -9.87       | 0.97       | 149.05 | 211.45 | 178.45  | 14.97  |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Fore    | -13.63     | -5.66      | -9.22       | 1.40       | 197.07 | 244.14 | 223.94  | 15.77  |

## 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            | 22.98   | 4.58         | 0.00    | 21.57   | 6.21         | 0.00            | 75.00   | 0.82         | 0.00    | 60.38   | 1.69         |

| 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    | 37.99   | 1.17         | 0.00     | 42.08   | 1.77         | 0.00     | 16.67   | 0.00         | 0.00      | 22.75   | 0.01         |
|  | <b>Outer (VV)</b> | 0.00    | 35.79   | 1.51         | 0.00     | 39.34   | 2.29         | 0.00     | 20.41   | 0.01         | 0.00      | 29.85   | 0.02         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 38.94   | 1.17         | 0.00     | 40.92   | 1.63         | 0.00     | 17.09   | 0.00         | 0.00      | 20.90   | 0.01         |
|  | <b>Outer (VV)</b> | 0.00    | 35.11   | 1.50         | 0.00     | 38.66   | 2.01         | 0.00     | 19.58   | 0.00         | 0.00      | 27.74   | 0.01         |

| 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

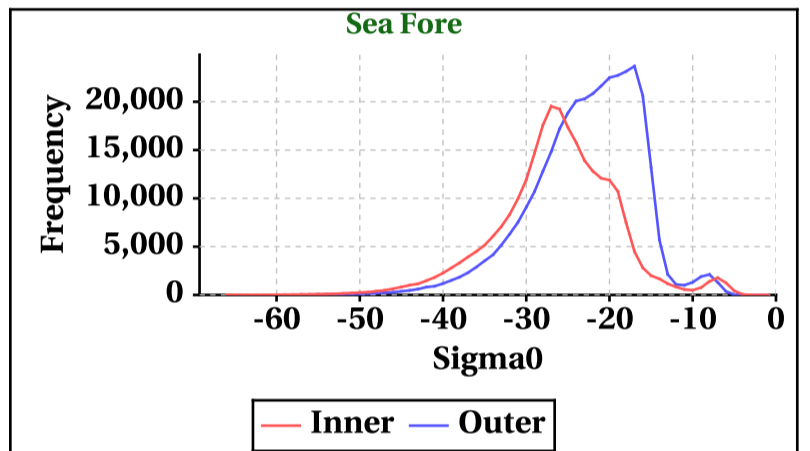
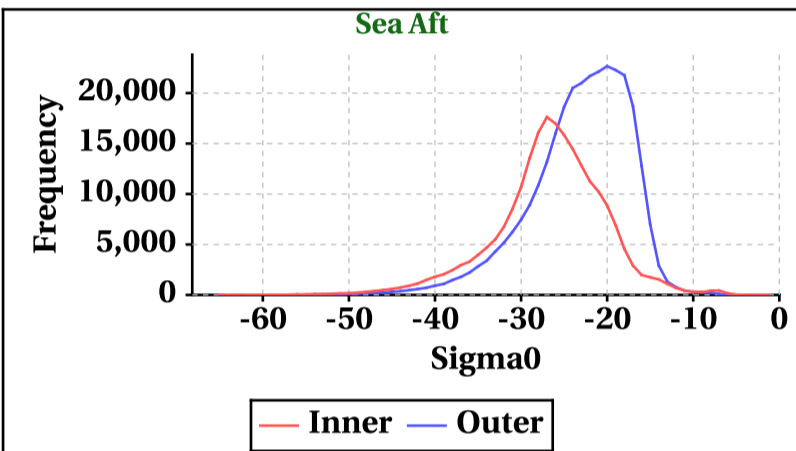
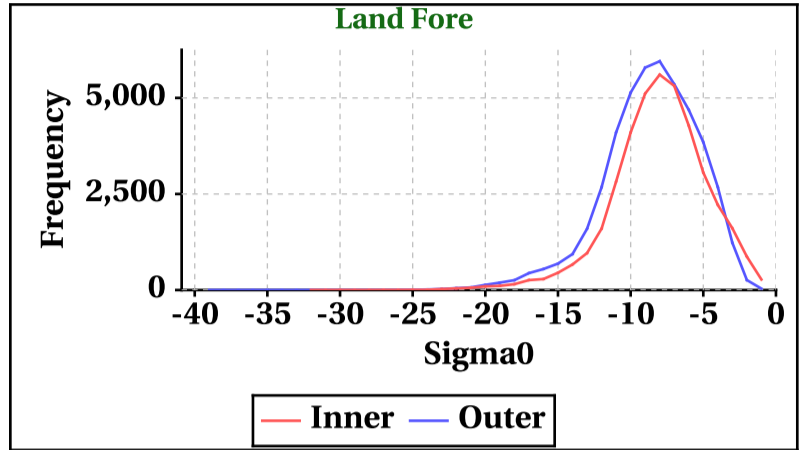
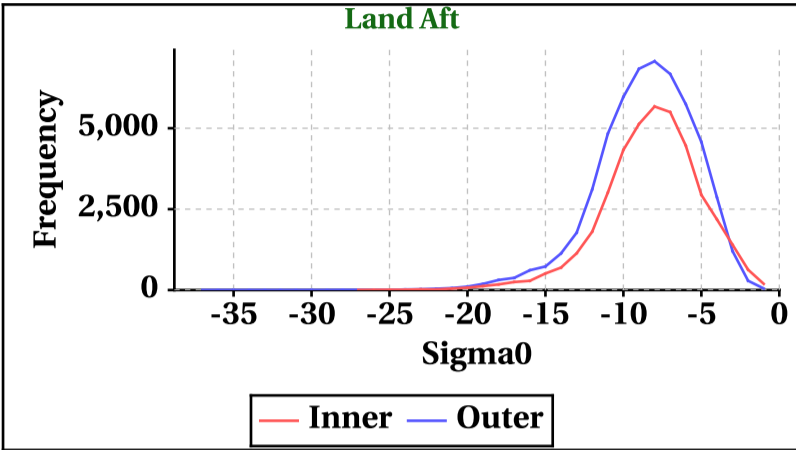
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -27      | -32       | -65     | -66      |
| Max             | -1       | -1        | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -37      | -39       | -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            | 291      | 296       | 301     | 304      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 312      | 309       | 319     | 307      |

