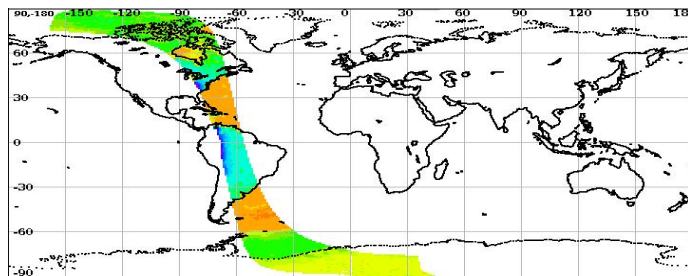


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

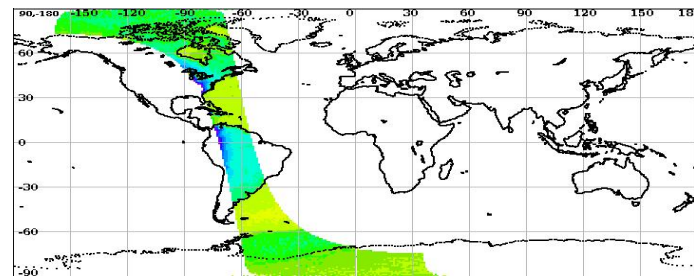
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 9523              | 9524            |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 814            | 72              | 15-07-2018        | 15-07-2018      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 25              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

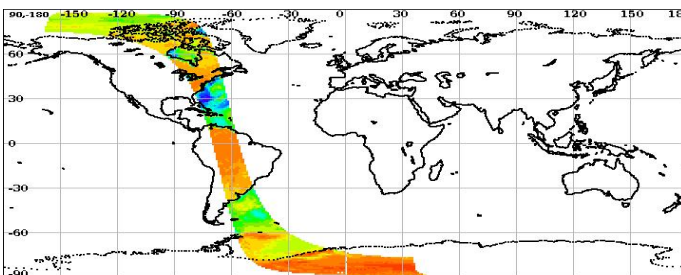


Outer Beam (VV)

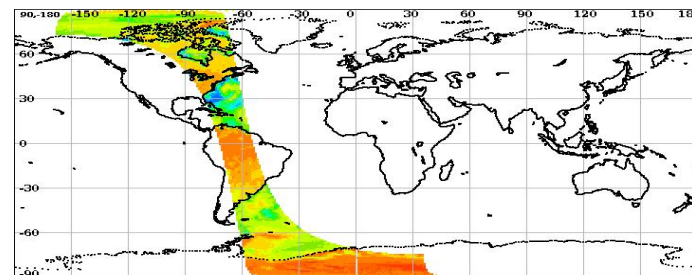


## Sigma0(dB)

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 |
|-----------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| Amazon_3  | -6.00      | -61.00     | Inner | ASC  | Aft     | -11.95     | -6.10      | -8.61       | 0.94       | 260.56 | 326.95 | 295.72  | 16.94  |
| Amazon_3  | -6.00      | -61.00     | Outer | ASC  | Aft     | -11.37     | -7.83      | -9.66       | 0.76       | 260.31 | 345.01 | 293.44  | 18.13  |
| Amazon_3  | -6.00      | -61.00     | Inner | ASC  | Fore    | -11.55     | -5.67      | -8.30       | 1.04       | 261.21 | 327.36 | 297.63  | 15.01  |
| Amazon_3  | -6.00      | -61.00     | Outer | ASC  | Fore    | -12.62     | -6.51      | -9.04       | 1.00       | 261.06 | 338.01 | 296.73  | 20.50  |
| Amazon_2  | -3.00      | -61.00     | Inner | ASC  | Aft     | -13.97     | -6.36      | -9.32       | 1.35       | 213.83 | 333.31 | 270.97  | 26.40  |
| Amazon_2  | -3.00      | -61.00     | Outer | ASC  | Aft     | -15.68     | -6.75      | -10.52      | 1.48       | 248.88 | 310.10 | 280.62  | 15.33  |
| Amazon_2  | -3.00      | -61.00     | Inner | ASC  | Fore    | -17.55     | -6.30      | -9.20       | 1.83       | 200.04 | 302.92 | 261.17  | 23.36  |
| Amazon_2  | -3.00      | -61.00     | Outer | ASC  | Fore    | -15.78     | -7.60      | -10.53      | 1.74       | 240.45 | 313.83 | 275.67  | 16.49  |
| Amazon_1  | 0.00       | -67.00     | Inner | ASC  | Aft     | -11.25     | -5.24      | -8.12       | 0.92       | 335.98 | 500.00 | 433.30  | 34.80  |
| Amazon_1  | 0.00       | -67.00     | Outer | ASC  | Aft     | -12.32     | -6.84      | -8.86       | 0.95       | 287.50 | 369.37 | 330.54  | 19.72  |
| Amazon_1  | 0.00       | -67.00     | Inner | ASC  | Fore    | -10.47     | -5.35      | -7.72       | 0.91       | 277.70 | 406.05 | 331.21  | 25.21  |
| Amazon_1  | 0.00       | -67.00     | Outer | ASC  | Fore    | -13.25     | -6.54      | -8.67       | 0.93       | 266.92 | 346.38 | 307.23  | 16.42  |

## 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            | 24.34   | 7.31         | 0.00    | 182.01  | 8.58         | 0.00            | 165.44  | 4.26         | 0.00    | 69.57   | 5.55         |

| 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    | 41.32   | 1.65         | 0.00     | 38.58   | 1.80         | 0.00     | 43.20   | 0.40         | 0.00      | 43.39   | 0.37         |
|  | <b>Outer (VV)</b> | 0.00    | 37.96   | 1.46         | 0.00     | 38.74   | 1.76         | 0.00     | 39.56   | 0.26         | 0.00      | 40.03   | 0.35         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 41.22   | 1.65         | 0.00     | 40.54   | 1.73         | 0.00     | 43.66   | 0.41         | 0.00      | 42.02   | 0.37         |
|  | <b>Outer (VV)</b> | 0.00    | 39.37   | 1.38         | 0.00     | 36.72   | 1.53         | 0.00     | 41.65   | 0.25         | 0.00      | 38.18   | 0.34         |

| 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        |
| <span style="display: inline-block; width: 15px; height: 15px; background-color: green; margin-right: 5px;"></span> Normal <span style="display: inline-block; width: 15px; height: 15px; background-color: yellow; margin-right: 5px; margin-left: 20px;"></span> Deviation <span style="display: inline-block; width: 15px; height: 15px; background-color: orange; margin-right: 5px; margin-left: 20px;"></span> Alarming <span style="display: inline-block; width: 15px; height: 15px; background-color: red; margin-right: 5px; margin-left: 20px;"></span> High |     |     |     |            |          |                  |             |

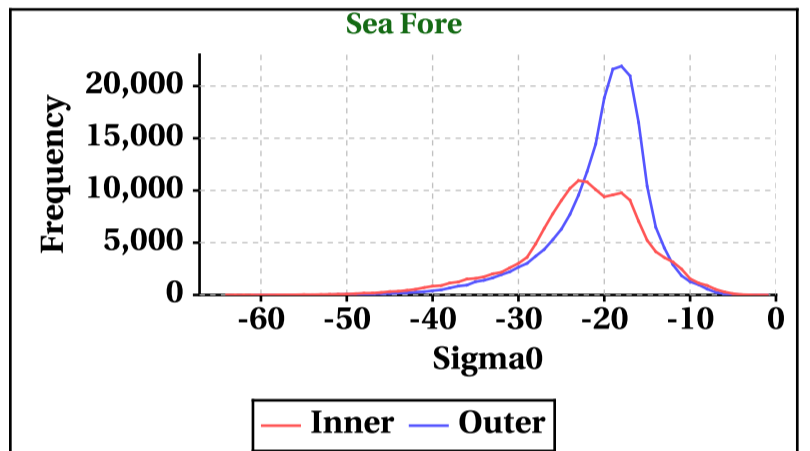
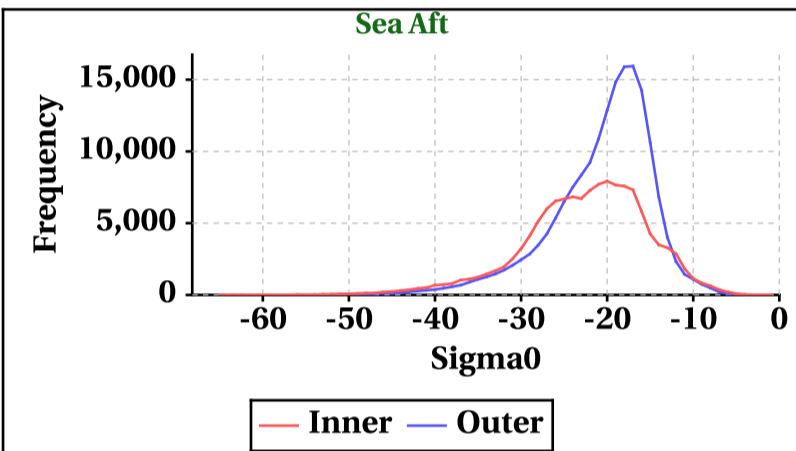
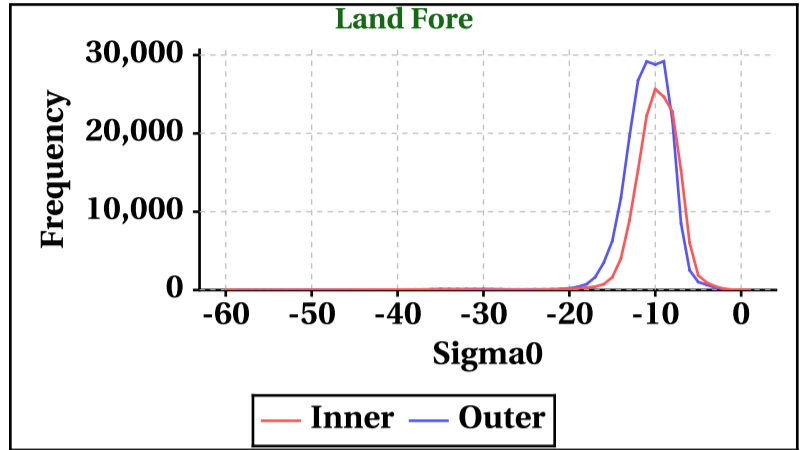
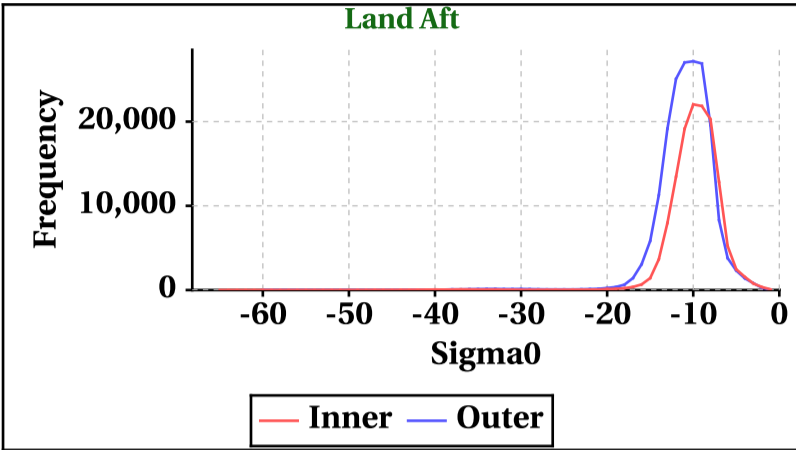
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -65      | -60       | -65     | -64      |
| Max             | -1       | 1         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -60      | -59       | -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            | 500      | 500       | 500     | 500      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 500      | 500       | 500     | 481      |

