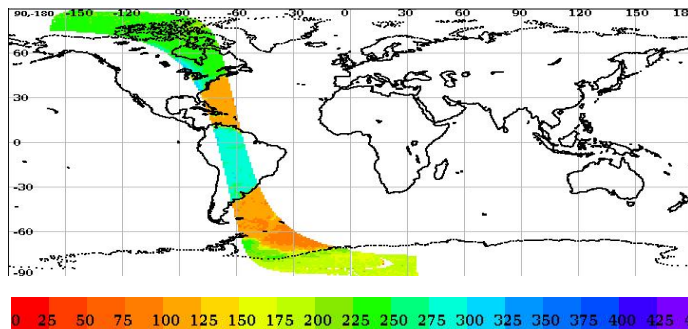


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

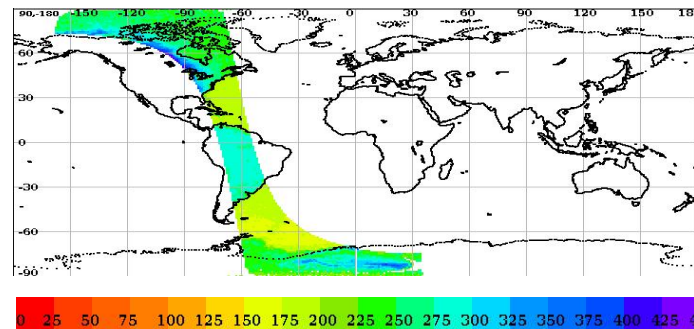
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 12568             | 12569           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 405            | 36              | 10-02-2019        | 10-02-2019      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 50              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

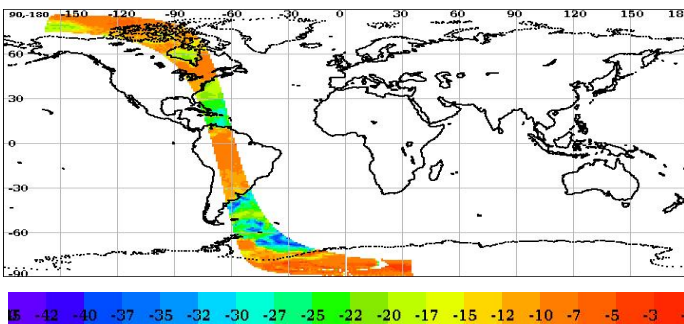


Outer Beam (VV)

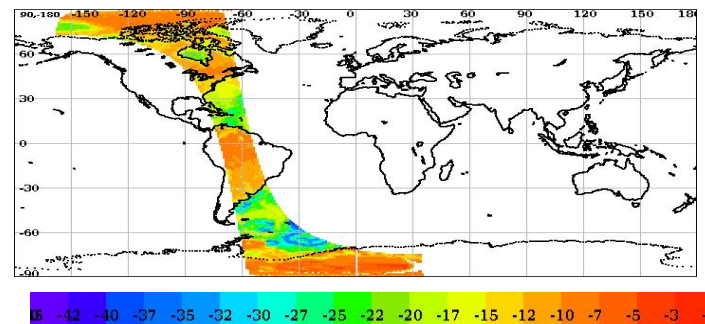


## Sigma0(dB)

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 |
|-----------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| Amazon_3  | -6.00      | -61.00     | Inner | ASC  | Aft     | -11.55     | -6.68      | -8.94       | 0.80       | 251.18 | 309.75 | 282.95  | 14.88  |
| Amazon_3  | -6.00      | -61.00     | Outer | ASC  | Aft     | -12.12     | -8.33      | -9.82       | 0.81       | 251.05 | 321.69 | 281.54  | 15.68  |
| Amazon_3  | -6.00      | -61.00     | Inner | ASC  | Fore    | -12.21     | -7.09      | -8.69       | 0.91       | 237.13 | 329.66 | 285.18  | 22.24  |
| Amazon_3  | -6.00      | -61.00     | Outer | ASC  | Fore    | -12.18     | -7.61      | -9.64       | 0.86       | 246.31 | 329.25 | 284.28  | 21.28  |
| Amazon_2  | -3.00      | -61.00     | Inner | ASC  | Aft     | -14.65     | -5.43      | -8.88       | 1.41       | 206.50 | 324.49 | 263.79  | 26.06  |
| Amazon_2  | -3.00      | -61.00     | Outer | ASC  | Aft     | -13.49     | -7.58      | -10.26      | 1.39       | 237.90 | 302.33 | 269.50  | 16.26  |
| Amazon_2  | -3.00      | -61.00     | Inner | ASC  | Fore    | -14.50     | -6.29      | -9.01       | 1.59       | 210.98 | 307.81 | 261.37  | 22.49  |
| Amazon_2  | -3.00      | -61.00     | Outer | ASC  | Fore    | -17.45     | -8.25      | -10.15      | 1.50       | 234.70 | 306.06 | 268.04  | 16.53  |
| Amazon_1  | 0.00       | -67.00     | Inner | ASC  | Aft     | -11.00     | -5.54      | -8.02       | 0.98       | 261.86 | 341.24 | 297.39  | 18.00  |
| Amazon_1  | 0.00       | -67.00     | Outer | ASC  | Aft     | -11.27     | -6.53      | -8.89       | 0.84       | 256.19 | 313.52 | 286.34  | 13.98  |
| Amazon_1  | 0.00       | -67.00     | Inner | ASC  | Fore    | -11.32     | -6.03      | -8.08       | 0.86       | 251.69 | 327.52 | 292.84  | 17.11  |
| Amazon_1  | 0.00       | -67.00     | Outer | ASC  | Fore    | -11.87     | -7.17      | -8.69       | 0.81       | 256.81 | 330.95 | 288.96  | 17.05  |

## 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            | 30.87   | 12.29        | 0.00    | 24.59   | 12.40        | 0.00            | 145.39  | 9.81         | 0.00    | 76.19   | 12.67        |

| 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    | 43.59   | 2.99         | 0.00     | 48.41   | 3.82         | 0.00     | 37.29   | 0.45         | 0.00      | 37.39   | 0.14         |
|  | <b>Outer (VV)</b> | 0.00    | 47.33   | 3.71         | 0.00     | 49.65   | 4.15         | 0.00     | 29.31   | 0.23         | 0.00      | 32.30   | 0.16         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 43.09   | 3.09         | 0.00     | 47.64   | 3.50         | 0.00     | 36.92   | 0.56         | 0.00      | 39.69   | 0.14         |
|  | <b>Outer (VV)</b> | 0.00    | 44.70   | 3.36         | 0.00     | 50.08   | 3.89         | 0.00     | 29.63   | 0.24         | 0.00      | 30.07   | 0.15         |

| 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

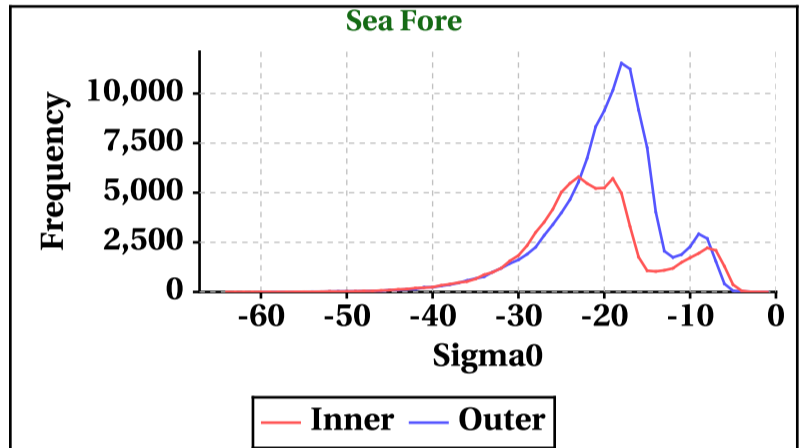
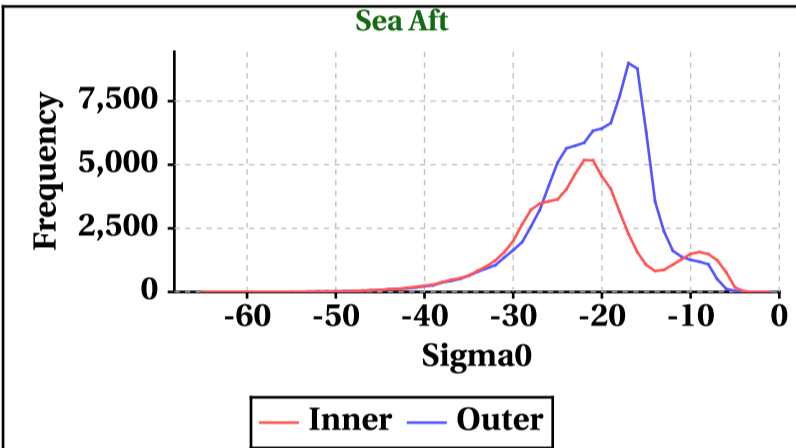
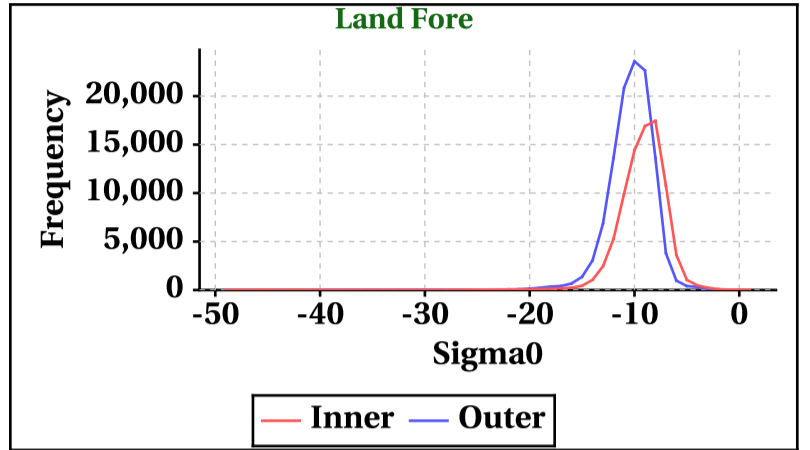
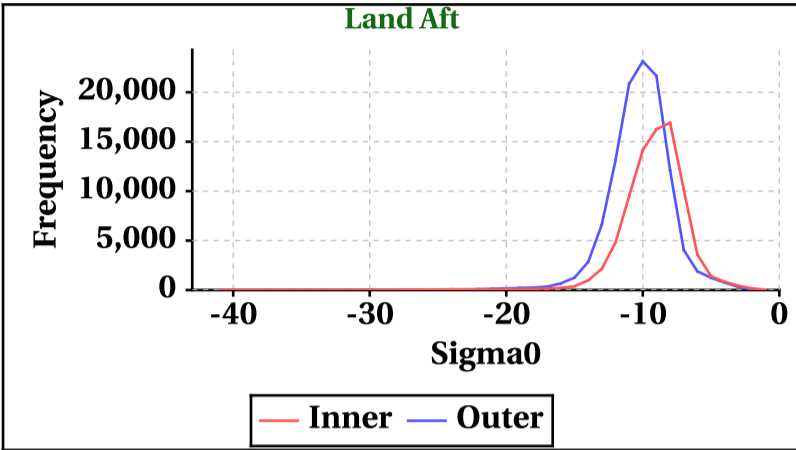
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -41      | -49       | -65     | -64      |
| Max             | -1       | 1         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -38      | -41       | -59     | -60      |
| 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            | 491      | 462       | 306     | 299      |

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

