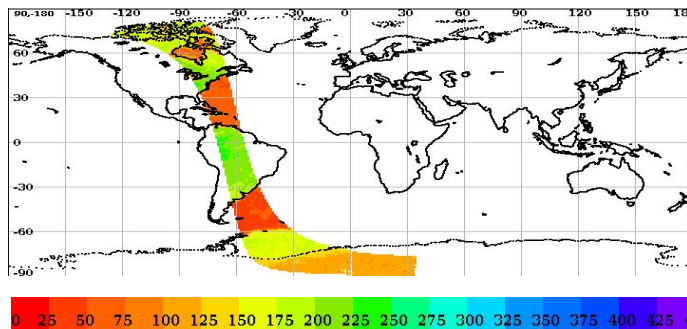


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

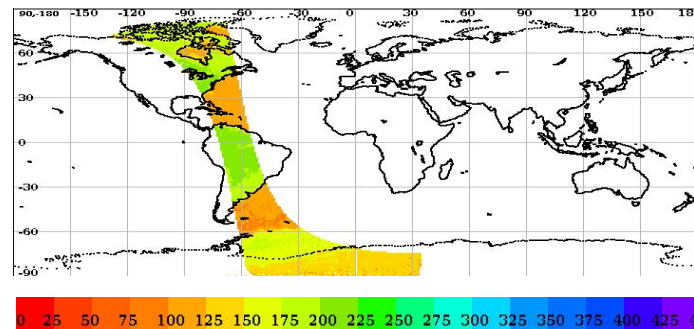
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 14743             | 14744           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 385            | 36              | 10-07-2019        | 10-07-2019      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 50              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

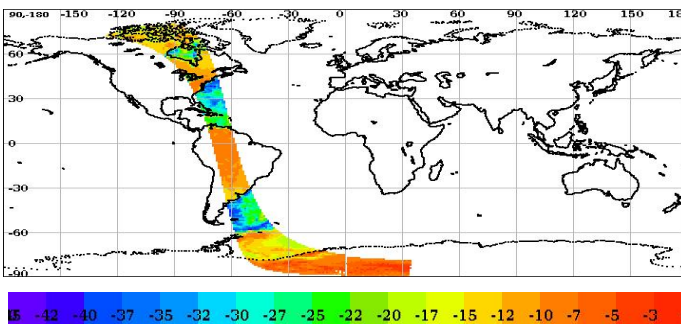


Outer Beam (VV)

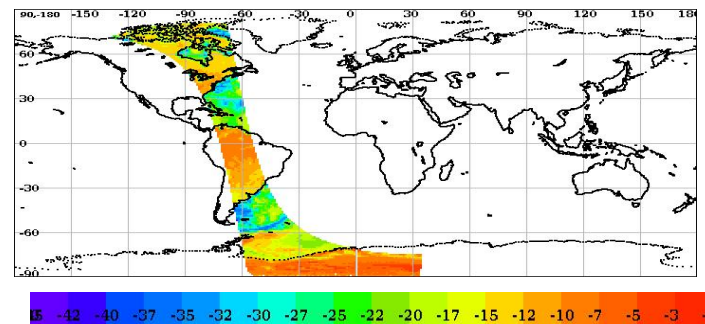


## Sigma0(dB)

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     | -10.76     | -6.76      | -8.46       | 0.76       | 172.08 | 262.05 | 221.00  | 17.55  |
| Amazon_3  | -6.00      | -61.00     | Outer | ASC  | Aft     | -11.44     | -7.93      | -9.57       | 0.74       | 156.57 | 280.80 | 214.69  | 21.25  |
| Amazon_3  | -6.00      | -61.00     | Inner | ASC  | Fore    | -13.91     | -6.46      | -8.55       | 1.07       | 189.72 | 262.55 | 224.34  | 18.03  |
| Amazon_3  | -6.00      | -61.00     | Outer | ASC  | Fore    | -11.75     | -8.03      | -9.57       | 0.75       | 183.49 | 246.87 | 210.76  | 16.41  |
| Amazon_2  | -3.00      | -61.00     | Inner | ASC  | Aft     | -13.07     | -6.09      | -8.82       | 1.22       | 148.29 | 241.52 | 199.46  | 23.74  |
| Amazon_2  | -3.00      | -61.00     | Outer | ASC  | Aft     | -13.81     | -8.40      | -10.22      | 1.26       | 160.64 | 230.70 | 200.92  | 17.50  |
| Amazon_2  | -3.00      | -61.00     | Inner | ASC  | Fore    | -11.86     | -4.80      | -9.05       | 1.35       | 143.89 | 242.63 | 190.85  | 21.57  |
| Amazon_2  | -3.00      | -61.00     | Outer | ASC  | Fore    | -13.60     | -5.97      | -10.33      | 1.34       | 144.62 | 227.96 | 193.91  | 21.31  |
| Amazon_1  | 0.00       | -67.00     | Inner | ASC  | Aft     | -12.37     | -5.90      | -7.59       | 0.97       | 189.22 | 265.63 | 225.15  | 16.05  |
| Amazon_1  | 0.00       | -67.00     | Outer | ASC  | Aft     | -10.23     | -6.58      | -8.58       | 0.74       | 174.61 | 267.99 | 212.80  | 18.39  |
| Amazon_1  | 0.00       | -67.00     | Inner | ASC  | Fore    | -10.43     | -4.71      | -7.52       | 0.94       | 185.47 | 265.09 | 225.37  | 17.14  |
| Amazon_1  | 0.00       | -67.00     | Outer | ASC  | Fore    | -11.96     | -5.95      | -8.58       | 0.97       | 177.69 | 253.52 | 214.82  | 18.65  |

## 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            | 28.19   | 12.95        | 0.00    | 25.24   | 12.46        | 0.00            | 148.23  | 10.52        | 0.00    | 15.66   | 12.58        |

| 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    | 46.71   | 9.31         | 0.00     | 48.43   | 11.05        | 0.00     | 50.90   | 1.10         | 0.00      | 46.20   | 1.02         |
|  | <b>Outer (VV)</b> | 0.00    | 37.17   | 8.69         | 0.00     | 45.91   | 9.32         | 0.00     | 44.49   | 0.97         | 0.00      | 45.40   | 0.93         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 46.76   | 9.33         | 0.00     | 49.70   | 10.59        | 0.00     | 49.91   | 1.12         | 0.00      | 45.79   | 1.00         |
|  | <b>Outer (VV)</b> | 0.00    | 37.71   | 8.28         | 0.00     | 43.62   | 8.99         | 0.00     | 42.87   | 0.91         | 0.00      | 48.34   | 0.84         |

| 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

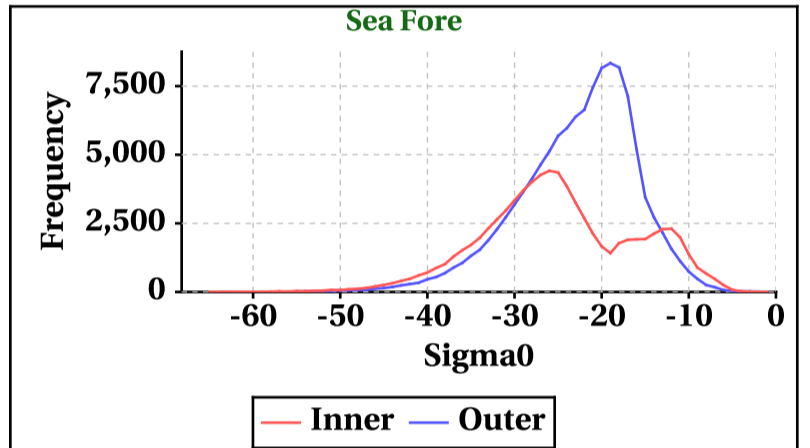
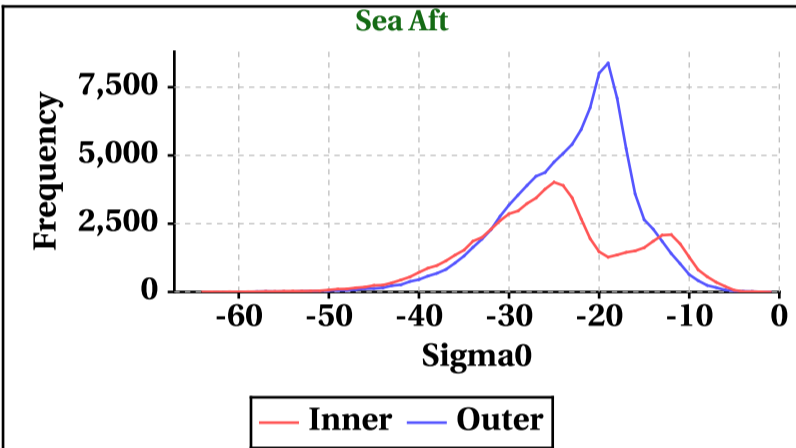
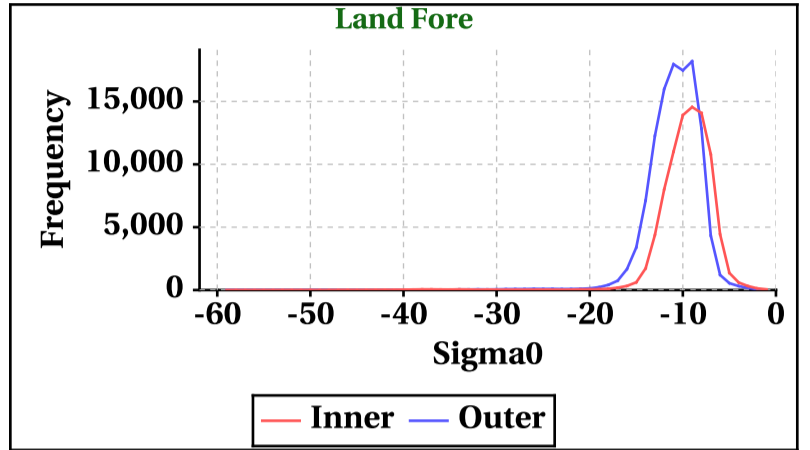
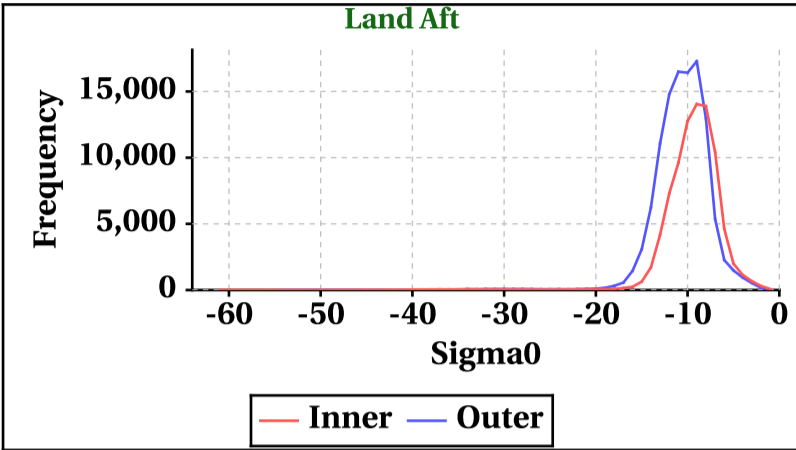
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -61      | -59       | -64     | -65      |
| Max             | -1       | -1        | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -54      | -59       | -59     | -58      |
| 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            | 298      | 288       | 244     | 241      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 288      | 278       | 236     | 235      |

