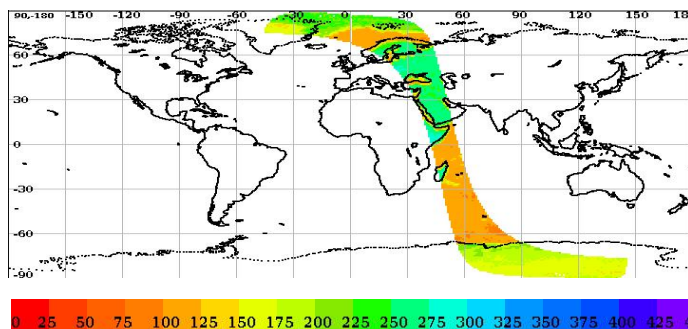


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

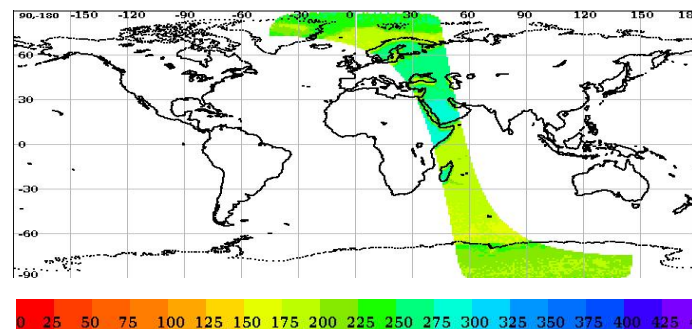
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 13564             | 13565           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 404            | 36              | 19-04-2019        | 19-04-2019      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 50              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

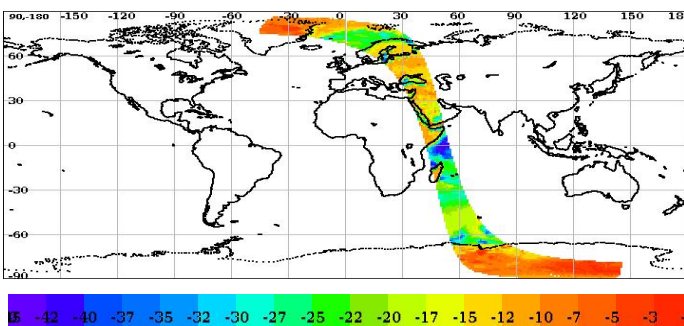


Outer Beam (VV)

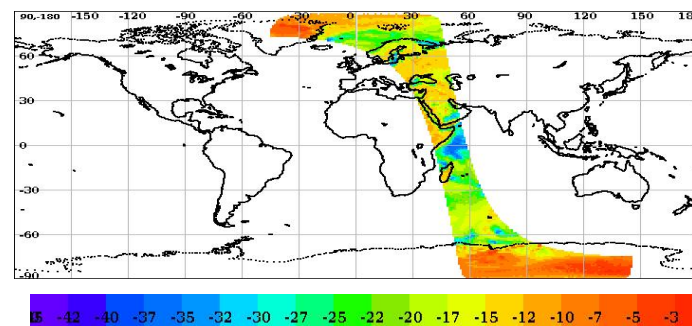


## Sigma0(dB)

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 |
|-------------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| ANT_1       | -75.00     | 121.00     | Outer | ASC  | Aft     | -10.10     | -5.83      | -7.96       | 0.92       | 173.78 | 219.22 | 198.78  | 12.91  |
| ANT_1       | -75.00     | 121.00     | Outer | ASC  | Fore    | -10.58     | -9.65      | -10.11      | 0.46       | 198.27 | 215.64 | 206.95  | 8.69   |
| GreenLand_2 | 77.50      | -41.50     | Inner | ASC  | Fore    | -8.18      | -4.88      | -6.05       | 1.01       | 140.77 | 177.95 | 163.32  | 12.71  |
| GreenLand_2 | 77.50      | -41.50     | Outer | ASC  | Fore    | -6.47      | -4.91      | -5.47       | 0.45       | 169.96 | 239.79 | 215.00  | 17.98  |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Fore    | -11.03     | -7.34      | -9.17       | 0.94       | 197.92 | 282.26 | 231.61  | 16.14  |

## 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. (%) |
| Kpa  | 0.00            | 0.07    | 0.00         | 0.00    | 0.07    | 0.00         | 0.00            | 0.07    | 0.00         | 0.00    | 0.07    | 0.00         |
| Kpb  | 0.00            | 0.09    | 0.00         | 0.00    | 0.09    | 0.00         | 0.00            | 0.09    | 0.00         | 0.00    | 0.09    | 0.00         |
| Kpc  | 0.00            | 0.00    | 0.00         | 0.00    | 0.00    | 0.00         | 0.00            | 0.00    | 0.00         | 0.00    | 0.00    | 0.00         |
| Inc. Angle(deg)  | 0.00            | 0.00    | 0.00         | 0.00    | 0.00    | 0.00         | 0.00            | 0.00    | 0.00         | 0.00    | 0.00    | 0.00         |
| Delta Azi.Angle(deg)   | 0.00            | 31.63   | 12.19        | 0.00    | 33.68   | 13.32        | 0.00            | 118.95  | 8.23         | 0.00    | 38.53   | 10.50        |

| 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. (%) |
| SNR(dB)  | Inner (HH) | 0.00    | 48.15   | 7.55         | 0.00     | 46.71   | 7.69         | 0.00     | 34.62   | 0.25         | 0.00      | 39.74   | 0.47         |
|  | Outer (VV) | 0.00    | 41.75   | 6.03         | 0.00     | 41.60   | 7.21         | 0.00     | 34.74   | 0.83         | 0.00      | 42.41   | 0.71         |
| Sigma0(dB)   | Inner (HH) | 0.00    | 47.78   | 7.58         | 0.00     | 46.62   | 7.79         | 0.00     | 33.67   | 0.25         | 0.00      | 38.36   | 0.34         |
|  | Outer (VV) | 0.00    | 42.39   | 6.01         | 0.00     | 43.18   | 7.50         | 0.00     | 33.80   | 0.73         | 0.00      | 38.49   | 0.51         |

| 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

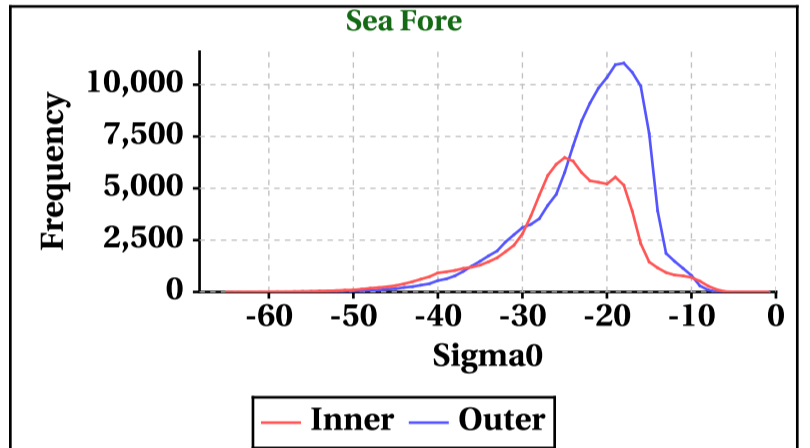
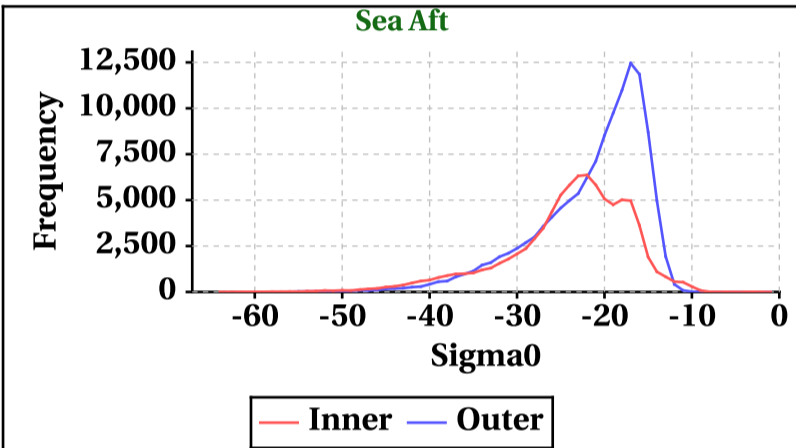
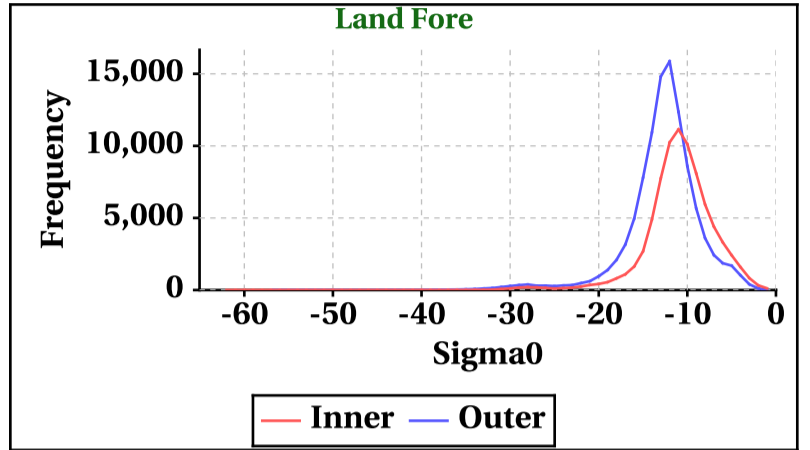
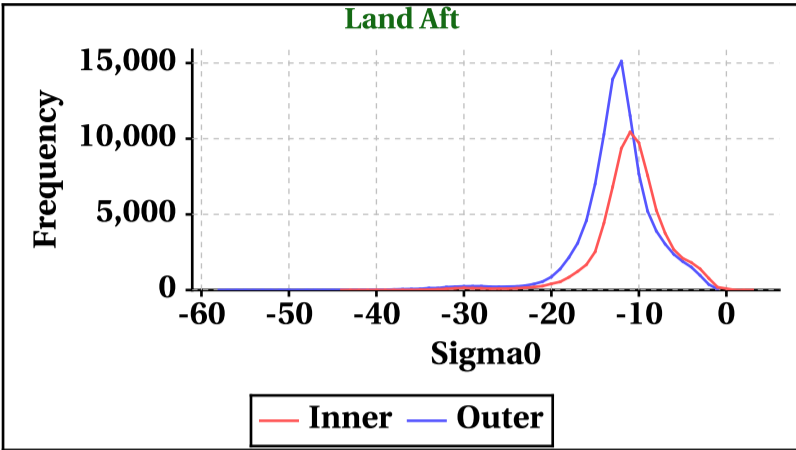
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -44      | -62       | -64     | -65      |
| Max             | 3        | -1        | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -58      | -57       | -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            | 355      | 349       | 288     | 288      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 368      | 350       | 313     | 297      |

