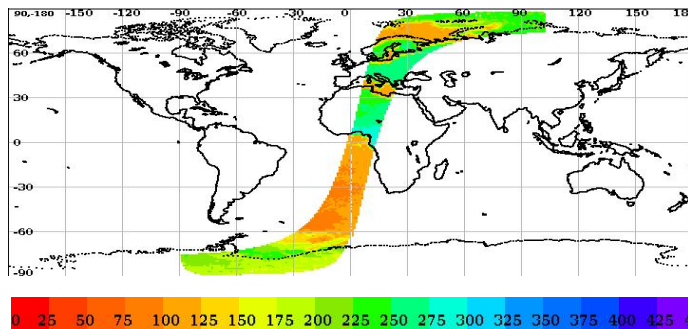


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

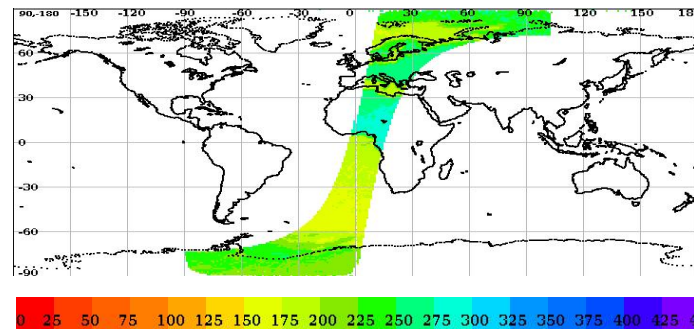
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 11703             | 11704           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 812            | 72              | 12-12-2018        | 12-12-2018      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 25              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

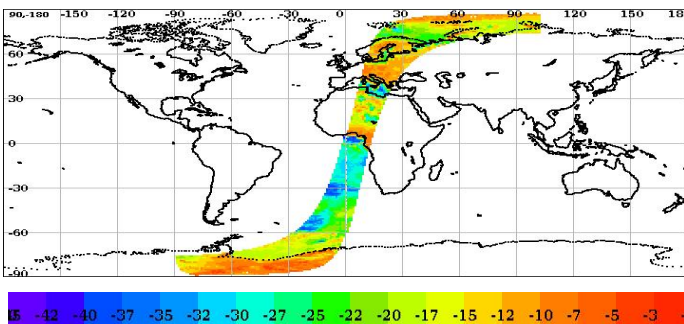


Outer Beam (VV)

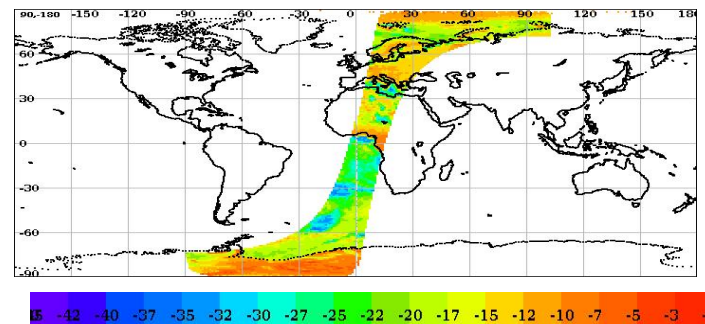


## Sigma0(dB)

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 |
|-----------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| Sahara    | 19.10      | 14.30      | Inner | DSC  | Aft     | -39.95     | -20.51     | -28.26      | 3.34       | 224.67 | 285.75 | 253.96  | 14.78  |
| Sahara    | 19.10      | 14.30      | Outer | DSC  | Aft     | -50.49     | -20.08     | -28.24      | 4.64       | 245.93 | 313.68 | 283.32  | 14.15  |
| Sahara    | 19.10      | 14.30      | Inner | DSC  | Fore    | -32.18     | -20.39     | -25.46      | 2.47       | 221.46 | 302.85 | 256.31  | 16.01  |
| Sahara    | 19.10      | 14.30      | Outer | DSC  | Fore    | -37.39     | -20.36     | -27.09      | 3.66       | 240.39 | 315.43 | 281.08  | 17.63  |

## 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            | 235.36  | 5.92         | 0.00    | 24.21   | 7.24         | 0.00            | 327.05  | 2.40         | 0.00    | 59.96   | 3.57         |

| 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    | 43.23   | 1.55         | 0.00     | 45.74   | 1.89         | 0.00     | 31.46   | 0.03         | 0.00      | 28.05   | 0.12         |
|  | <b>Outer (VV)</b> | 0.00    | 39.88   | 1.67         | 0.00     | 40.41   | 2.23         | 0.00     | 35.46   | 0.14         | 0.00      | 35.00   | 0.26         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 42.85   | 1.52         | 0.00     | 46.62   | 1.68         | 0.00     | 31.57   | 0.04         | 0.00      | 26.19   | 0.08         |
|  | <b>Outer (VV)</b> | 0.00    | 37.71   | 1.49         | 0.00     | 39.08   | 1.80         | 0.00     | 35.42   | 0.13         | 0.00      | 32.22   | 0.22         |

| 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

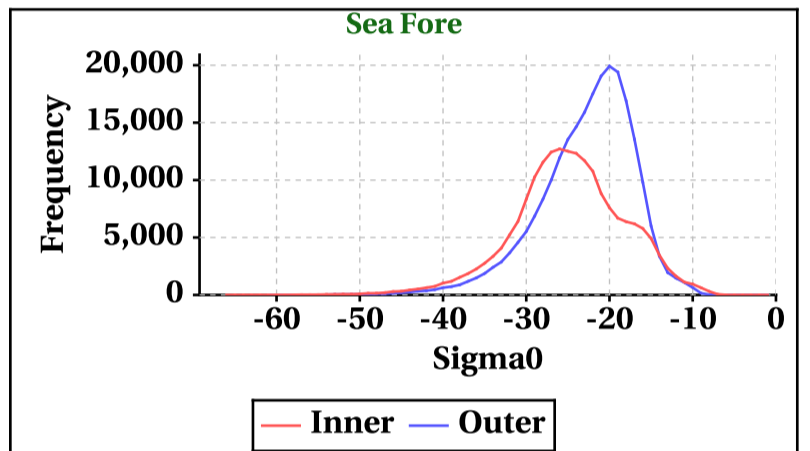
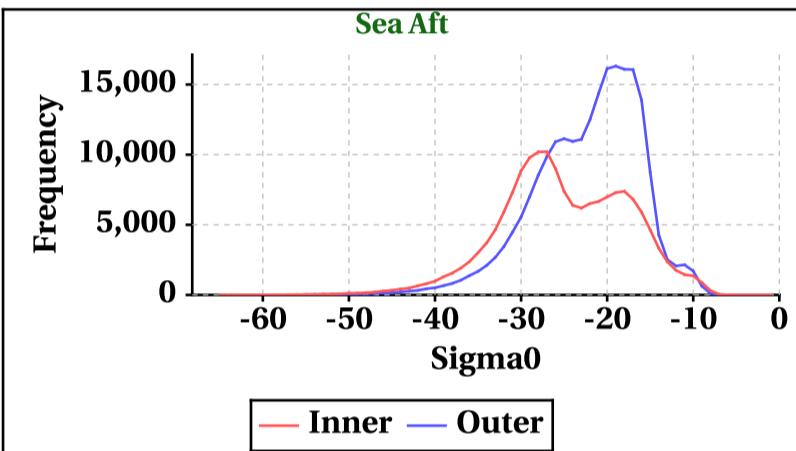
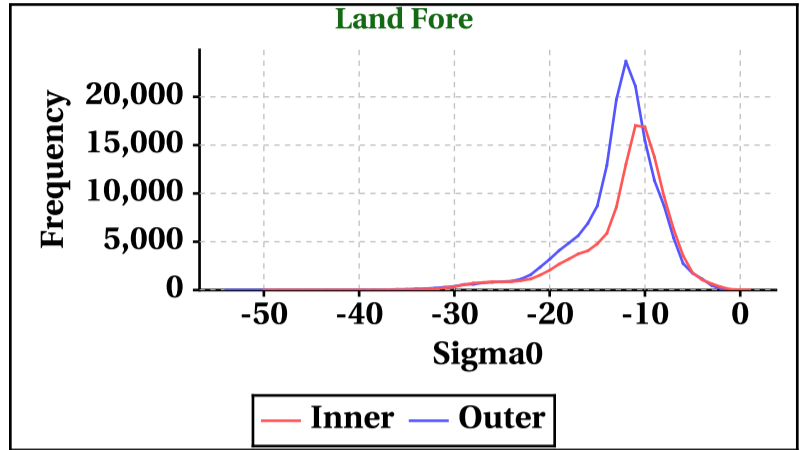
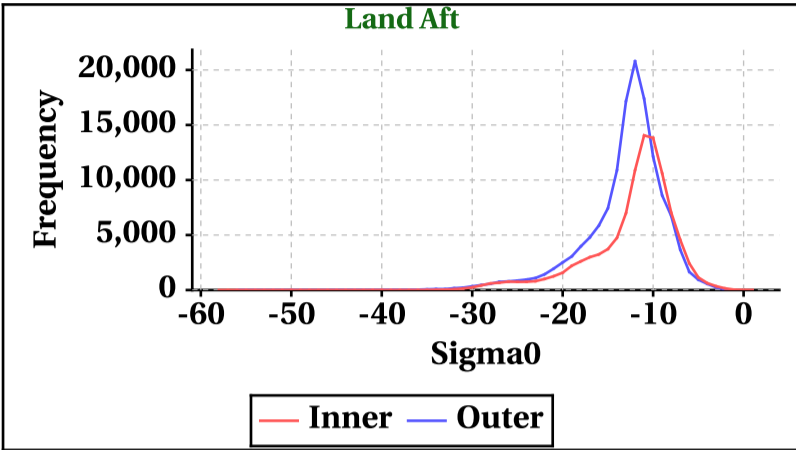
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -58      | -50       | -65     | -66      |
| Max             | 1        | 1         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -56      | -54       | -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            | 356      | 350       | 298     | 294      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 346      | 347       | 314     | 308      |

