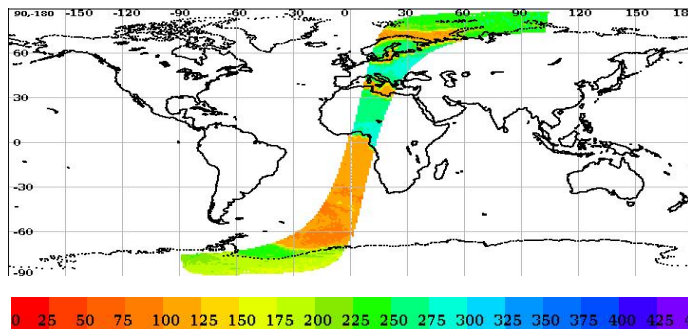


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

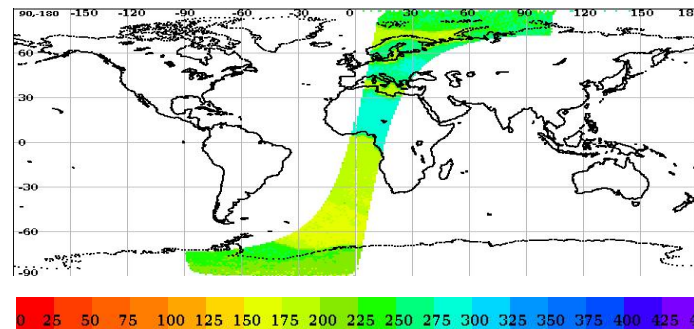
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 13617             | 13618           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 405            | 36              | 23-04-2019        | 23-04-2019      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 50              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

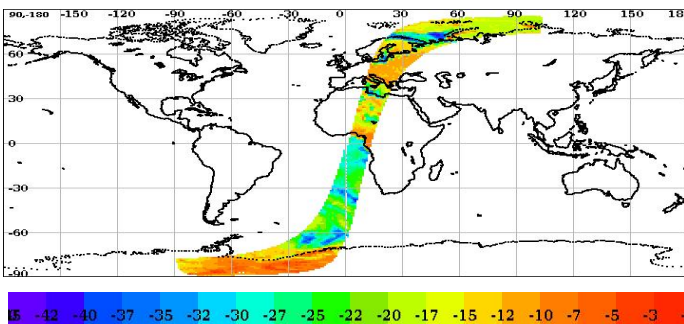


Outer Beam (VV)

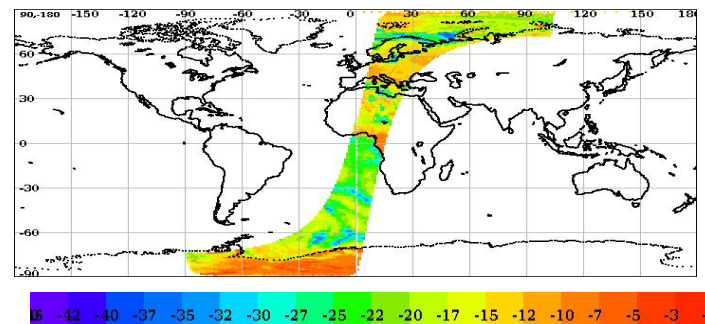


## Sigma0(dB)

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 |
|-----------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| Sahara    | 19.10      | 14.30      | Inner | DSC  | Aft     | -32.50     | -20.70     | -26.83      | 3.13       | 236.92 | 296.13 | 266.69  | 13.83  |
| Sahara    | 19.10      | 14.30      | Outer | DSC  | Aft     | -42.26     | -19.28     | -27.09      | 4.03       | 257.91 | 328.29 | 294.41  | 16.62  |
| Sahara    | 19.10      | 14.30      | Inner | DSC  | Fore    | -29.35     | -18.59     | -24.07      | 1.96       | 243.55 | 302.56 | 269.68  | 14.09  |
| Sahara    | 19.10      | 14.30      | Outer | DSC  | Fore    | -36.02     | -18.44     | -25.80      | 3.62       | 254.64 | 315.94 | 295.28  | 14.30  |

## 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            | 90.29   | 10.35        | 0.00    | 31.88   | 15.53        | 0.00            | 135.19  | 12.97        | 0.00    | 76.40   | 14.72        |

| 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    | 44.12   | 5.31         | 0.00     | 43.44   | 5.69         | 0.00     | 40.71   | 0.65         | 0.00      | 38.99   | 1.26         |
|  | Outer (VV) | 0.00    | 46.76   | 4.60         | 0.00     | 39.09   | 5.69         | 0.00     | 40.36   | 0.67         | 0.00      | 42.05   | 1.68         |
| Sigma0(dB)   | Inner (HH) | 0.00    | 44.16   | 5.20         | 0.00     | 43.00   | 5.17         | 0.00     | 41.94   | 0.60         | 0.00      | 39.30   | 1.07         |
|  | Outer (VV) | 0.00    | 46.56   | 4.36         | 0.00     | 39.14   | 4.39         | 0.00     | 39.67   | 0.53         | 0.00      | 38.54   | 1.12         |

| 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

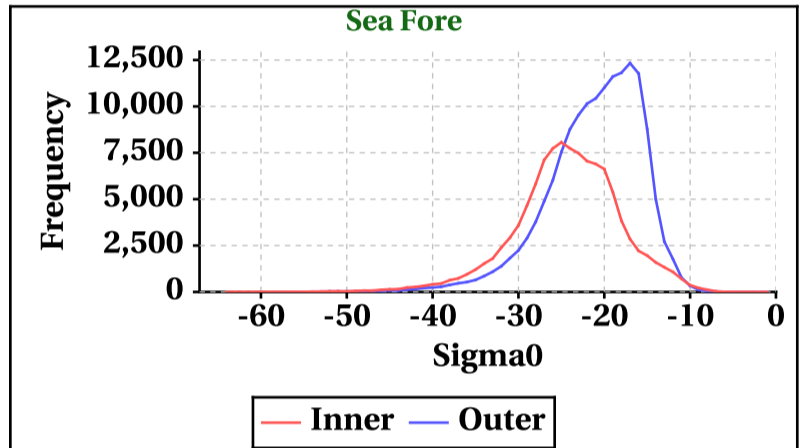
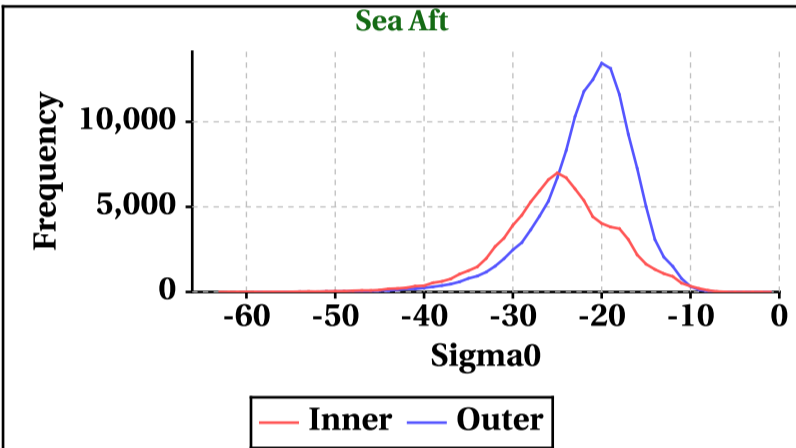
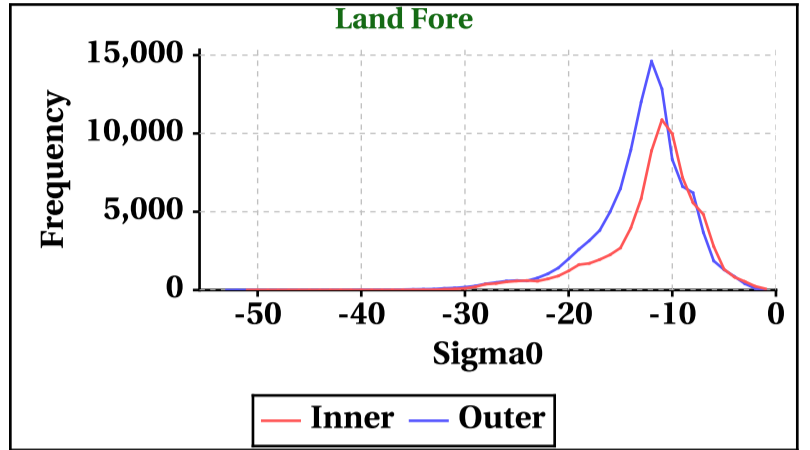
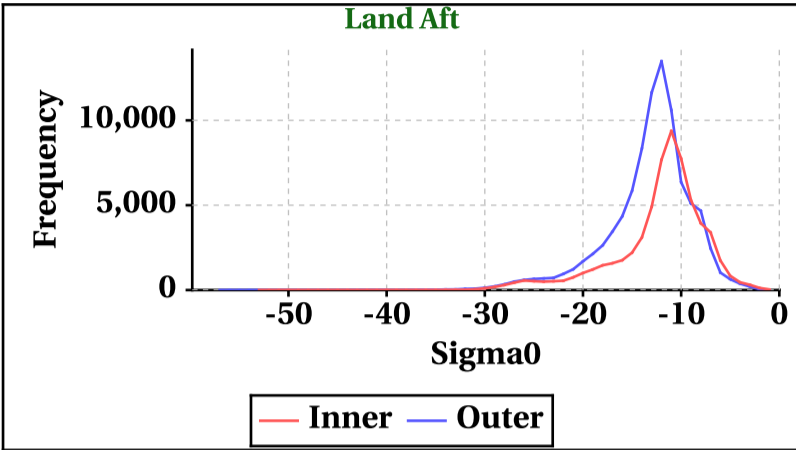
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -53      | -51       | -63     | -64      |
| Max             | -1       | -1        | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -57      | -53       | -59     | -59      |
| 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            | 350      | 356       | 307     | 296      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 353      | 356       | 322     | 308      |

