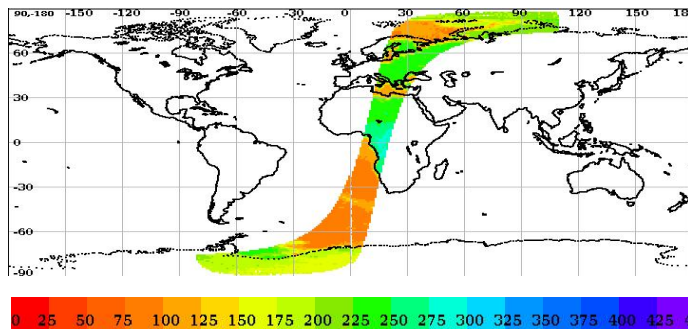


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

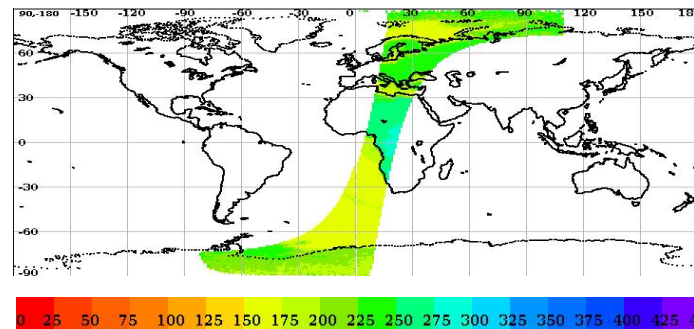
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 1366              | 1367            |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 404            | 36              | 29-12-2016        | 29-12-2016      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 50              | 1.1.0             |                 |

## Brightness Temperature

Inner Beam (HH)

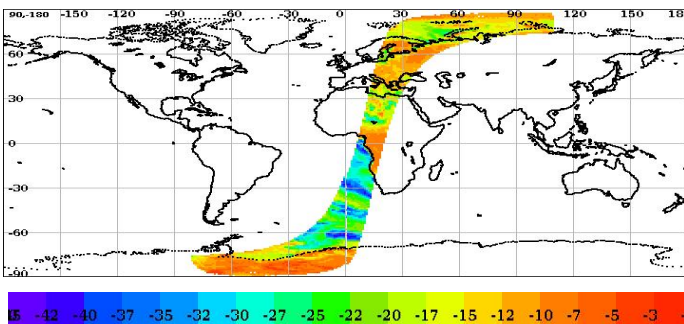


Outer Beam (VV)

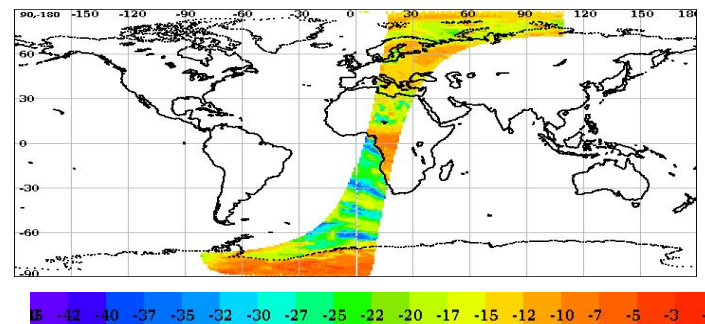


## Sigma0(dB)

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 | ASC  | Aft     | -29.46     | -19.66     | -24.73      | 1.82       | 208.95 | 289.80 | 234.73  | 16.10  |
| Sahara    | 19.10      | 14.30      | Outer | ASC  | Aft     | -33.52     | -19.70     | -25.32      | 2.74       | 226.93 | 298.96 | 269.56  | 18.50  |
| Sahara    | 19.10      | 14.30      | Inner | ASC  | Fore    | -40.20     | -17.52     | -27.08      | 4.09       | 201.76 | 268.71 | 232.70  | 15.25  |
| Sahara    | 19.10      | 14.30      | Outer | ASC  | Fore    | -45.14     | -19.64     | -26.71      | 4.30       | 233.93 | 301.90 | 265.86  | 18.80  |

## 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            | 41.39   | 25.26        | 0.00    | 40.77   | 24.99        | 0.00            | 25.73   | 13.71        | 0.00    | 25.84   | 13.29        |

| 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    | 51.12   | 7.11         | 0.00     | 52.61   | 8.92         | 0.00     | 37.57   | 0.75         | 0.00      | 36.98   | 1.32         |
|  | <b>Outer (VV)</b> | 0.00    | 51.25   | 6.25         | 0.00     | 52.73   | 9.59         | 0.00     | 49.92   | 1.36         | 0.00      | 46.68   | 2.20         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 52.31   | 7.17         | 0.00     | 55.58   | 8.10         | 0.00     | 36.57   | 0.51         | 0.00      | 34.03   | 0.70         |
|  | <b>Outer (VV)</b> | 0.00    | 51.94   | 7.01         | 0.00     | 53.42   | 7.63         | 0.00     | 43.60   | 1.21         | 0.00      | 42.97   | 1.14         |

| 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

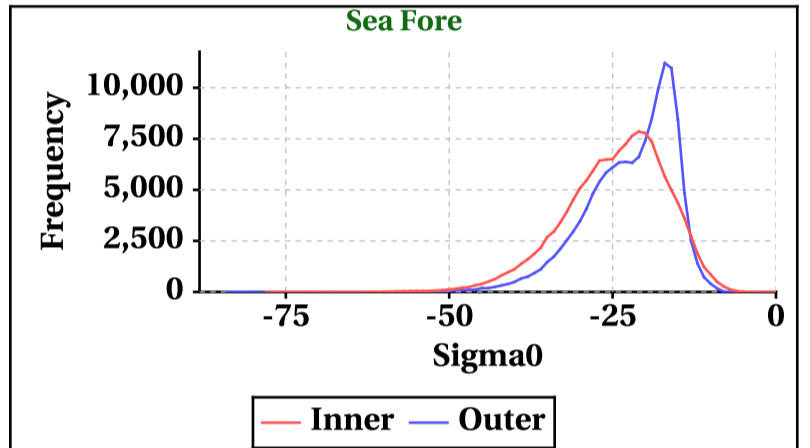
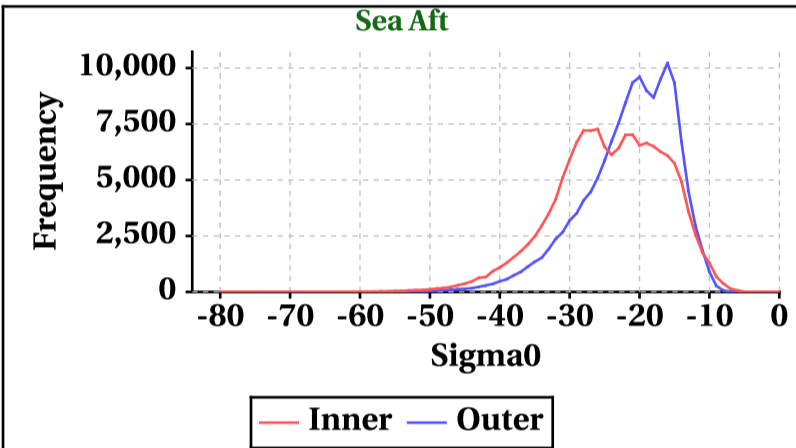
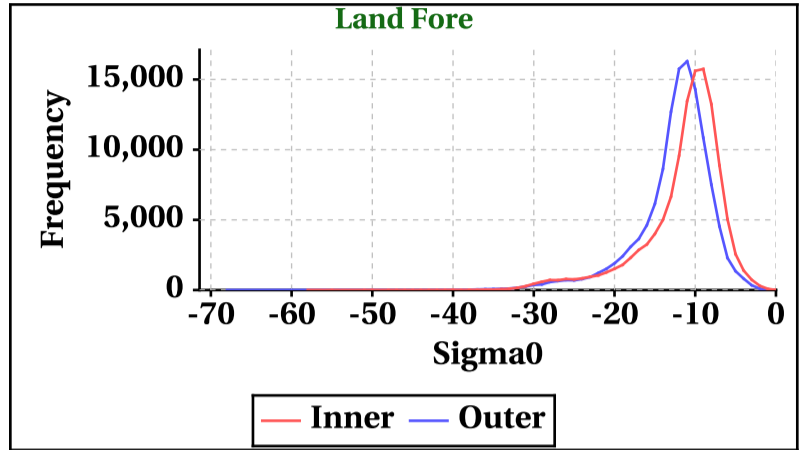
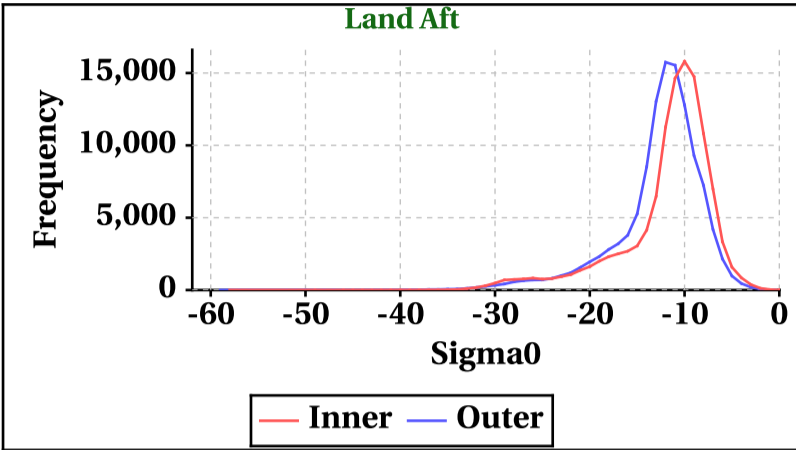
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -58      | -58       | -80     | -78      |
| Max             | -1       | -1        | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -59      | -68       | -73     | -84      |
| 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            | 340      | 343       | 284     | 287      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 346      | 336       | 300     | 285      |

