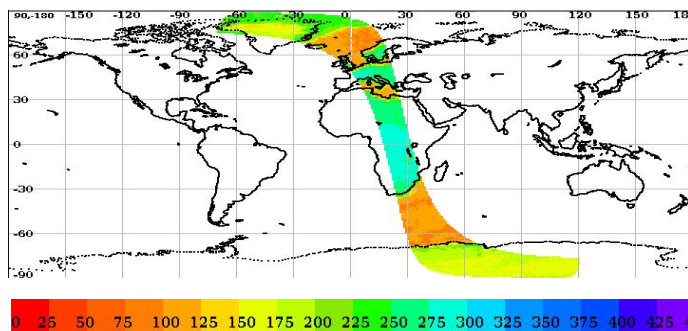


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

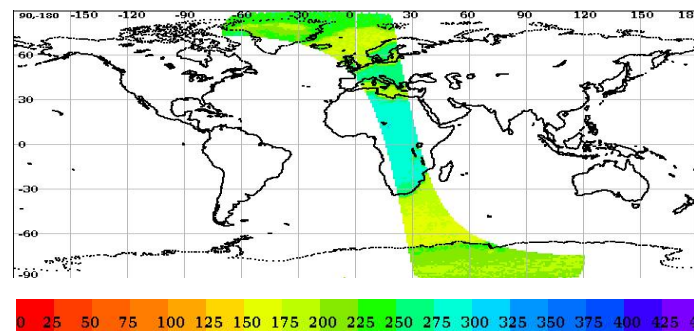
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 13623             | 13624           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 810            | 72              | 23-04-2019        | 24-04-2019      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 25              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

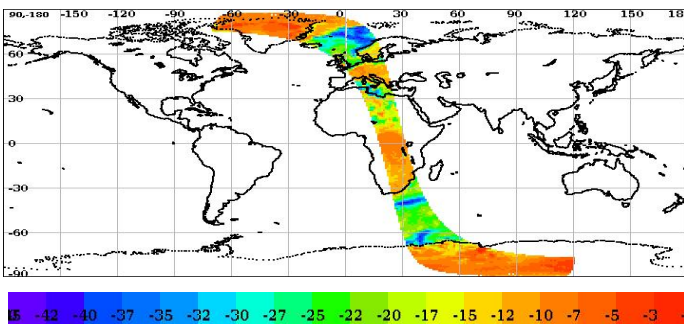


Outer Beam (VV)

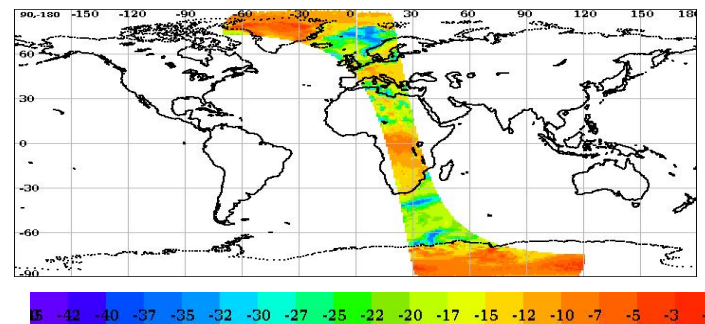


## Sigma0(dB)

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 |
|-------------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| GreenLand_2 | 77.50      | -41.50     | Inner | ASC  | Aft     | -7.14      | -4.44      | -5.71       | 0.87       | 151.03 | 182.04 | 163.48  | 10.31  |
| GreenLand_2 | 77.50      | -41.50     | Inner | ASC  | Fore    | -6.85      | -4.46      | -5.79       | 0.72       | 133.24 | 179.27 | 163.03  | 14.94  |
| GreenLand_2 | 77.50      | -41.50     | Outer | ASC  | Fore    | -6.10      | -3.42      | -4.96       | 0.76       | 171.31 | 238.71 | 215.87  | 20.72  |
| GreenLand_3 | 71.55      | -42.45     | Outer | ASC  | Aft     | -15.76     | -11.26     | -12.92      | 0.89       | 204.21 | 251.26 | 229.77  | 15.08  |
| GreenLand_3 | 71.55      | -42.45     | Outer | ASC  | Fore    | -14.69     | -11.01     | -12.65      | 0.80       | 185.51 | 272.48 | 238.55  | 13.85  |
| GreenLand_1 | 74.69      | -42.50     | Inner | ASC  | Aft     | -13.79     | -8.17      | -10.34      | 1.29       | 166.23 | 237.27 | 200.83  | 17.71  |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Aft     | -12.76     | -7.57      | -10.16      | 1.22       | 204.63 | 260.29 | 228.37  | 11.68  |
| GreenLand_1 | 74.69      | -42.50     | Inner | ASC  | Fore    | -13.30     | -7.90      | -10.00      | 1.14       | 153.81 | 211.97 | 182.35  | 14.79  |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Fore    | -13.21     | -7.67      | -9.30       | 1.09       | 202.82 | 259.46 | 231.42  | 15.68  |
| Sahara      | 19.10      | 14.30      | Inner | ASC  | Aft     | -48.69     | -19.04     | -26.86      | 4.06       | 218.04 | 300.57 | 261.67  | 17.49  |
| Sahara      | 19.10      | 14.30      | Outer | ASC  | Aft     | -40.18     | -19.03     | -26.47      | 4.41       | 180.65 | 322.42 | 290.39  | 18.72  |
| Sahara      | 19.10      | 14.30      | Inner | ASC  | Fore    | -34.50     | -17.33     | -25.50      | 3.54       | 210.65 | 299.62 | 262.45  | 17.60  |
| Sahara      | 19.10      | 14.30      | Outer | ASC  | Fore    | -45.72     | -18.55     | -26.25      | 4.48       | 256.74 | 333.89 | 294.92  | 13.75  |

## 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            | 23.18   | 5.27         | 0.00    | 18.42   | 6.28         | 0.00            | 99.62   | 0.96         | 0.00    | 47.83   | 1.18         |

| 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    | 43.79   | 1.59         | 0.00     | 42.69   | 2.01         | 0.00     | 34.89   | 0.16         | 0.00      | 42.24   | 0.31         |
|  | <b>Outer (VV)</b> | 0.00    | 40.68   | 1.60         | 0.00     | 48.72   | 2.09         | 0.00     | 40.01   | 0.30         | 0.00      | 38.96   | 0.44         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 43.83   | 1.58         | 0.00     | 42.14   | 1.95         | 0.00     | 35.80   | 0.17         | 0.00      | 45.15   | 0.26         |
|  | <b>Outer (VV)</b> | 0.00    | 39.71   | 1.58         | 0.00     | 46.34   | 1.86         | 0.00     | 39.13   | 0.27         | 0.00      | 35.05   | 0.34         |

| 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

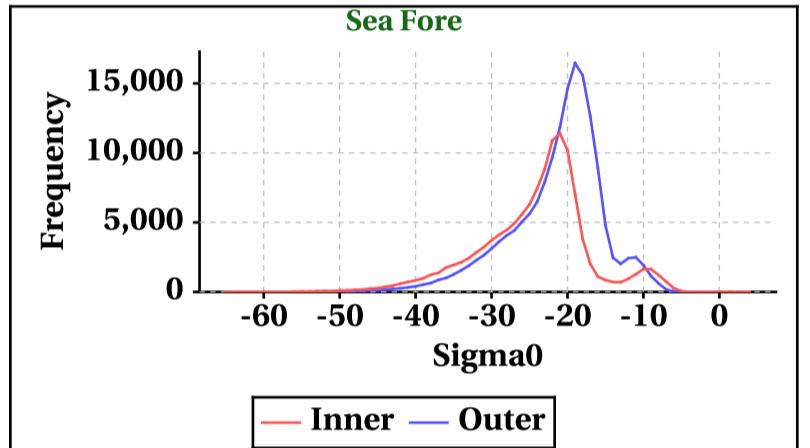
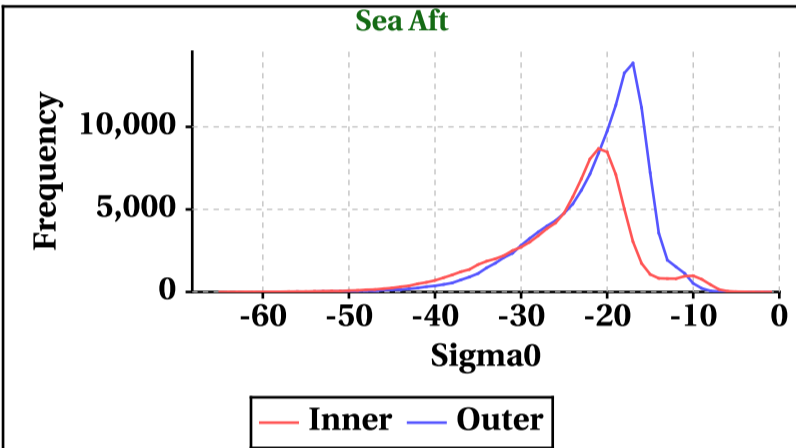
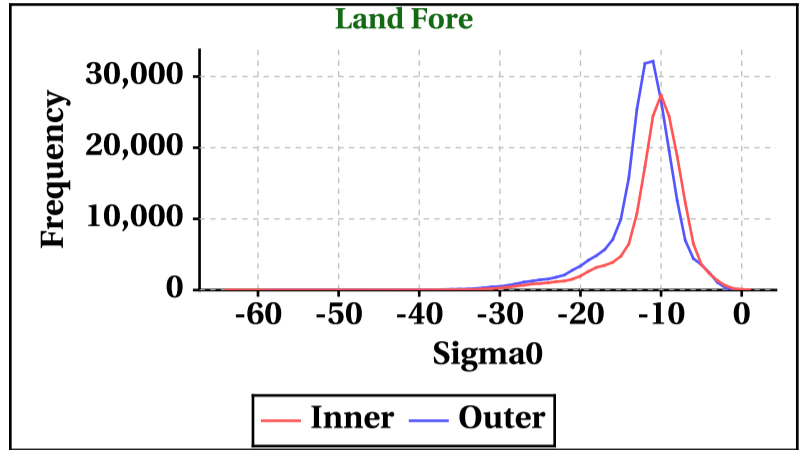
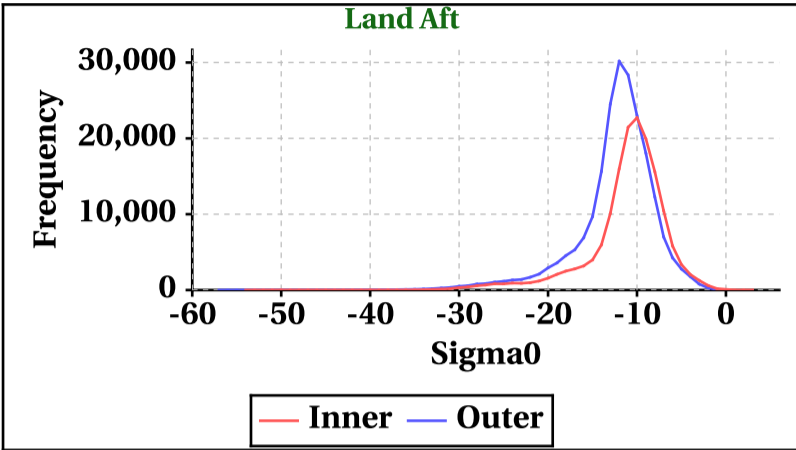
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -54      | -64       | -65     | -65      |
| Max             | 3        | 1         | -1      | 4        |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -57      | -59       | -59     | -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            | 365      | 378       | 285     | 294      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 367      | 500       | 303     | 323      |

