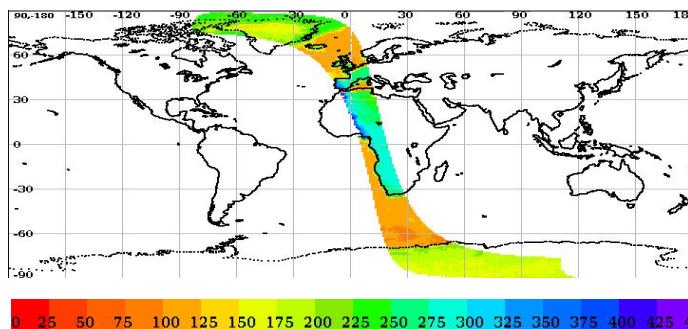


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

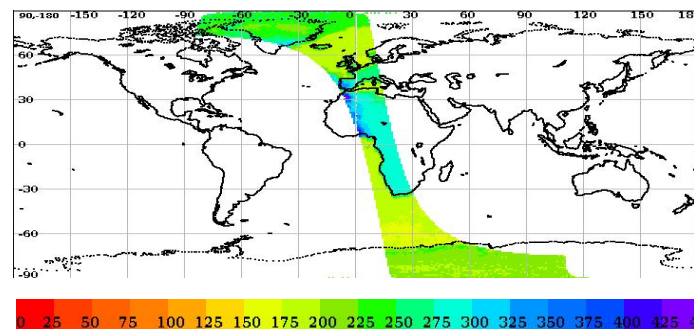
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 12884             | 12885           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 814            | 72              | 03-03-2019        | 04-03-2019      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 25              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

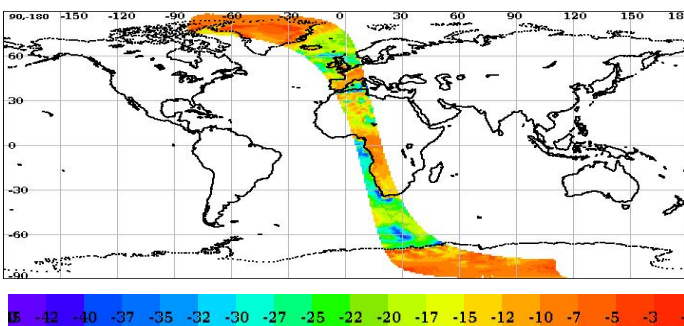


Outer Beam (VV)

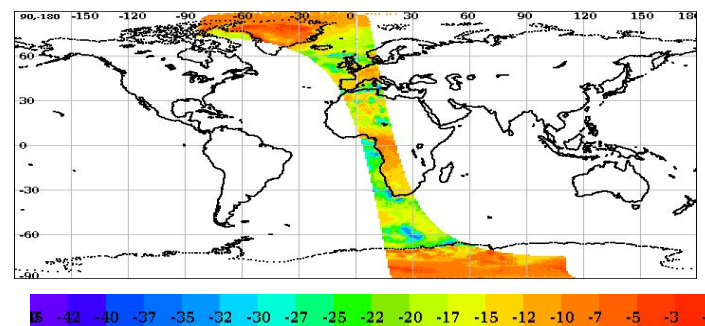


## Sigma0(dB)

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     | -7.02      | -4.01      | -5.80       | 1.05       | 139.96 | 177.33 | 159.21  | 11.54  |
| GreenLand_2 | 77.50      | -41.50     | Outer | ASC  | Aft     | -6.51      | -4.74      | -5.80       | 0.59       | 188.61 | 248.01 | 220.13  | 17.61  |
| GreenLand_2 | 77.50      | -41.50     | Inner | ASC  | Fore    | -8.78      | -4.12      | -5.63       | 1.19       | 133.53 | 183.76 | 162.39  | 13.79  |
| GreenLand_2 | 77.50      | -41.50     | Outer | ASC  | Fore    | -7.32      | -4.34      | -5.41       | 0.78       | 203.71 | 262.18 | 238.31  | 16.27  |
| GreenLand_3 | 71.55      | -42.45     | Inner | ASC  | Aft     | -14.04     | -9.61      | -11.87      | 0.95       | 169.71 | 243.47 | 197.97  | 16.50  |
| GreenLand_3 | 71.55      | -42.45     | Outer | ASC  | Aft     | -13.50     | -10.17     | -12.37      | 0.73       | 214.40 | 266.67 | 246.48  | 13.56  |
| GreenLand_3 | 71.55      | -42.45     | Inner | ASC  | Fore    | -14.66     | -9.40      | -11.96      | 1.13       | 166.49 | 246.21 | 203.96  | 15.73  |
| GreenLand_3 | 71.55      | -42.45     | Outer | ASC  | Fore    | -14.23     | -9.50      | -11.92      | 1.00       | 226.40 | 297.12 | 262.34  | 17.69  |
| GreenLand_1 | 74.69      | -42.50     | Inner | ASC  | Aft     | -12.43     | -7.70      | -9.92       | 1.06       | 148.46 | 215.80 | 176.06  | 17.52  |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Aft     | -11.03     | -6.95      | -9.63       | 0.87       | 200.91 | 251.92 | 236.36  | 12.63  |
| GreenLand_1 | 74.69      | -42.50     | Inner | ASC  | Fore    | -11.94     | -5.87      | -9.18       | 1.24       | 145.27 | 226.47 | 175.68  | 18.07  |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Fore    | -11.55     | -6.47      | -9.03       | 1.14       | 226.42 | 297.06 | 256.92  | 18.42  |
| Sahara      | 19.10      | 14.30      | Inner | ASC  | Aft     | -36.88     | -20.63     | -26.40      | 2.86       | 210.09 | 286.46 | 255.40  | 16.02  |
| Sahara      | 19.10      | 14.30      | Outer | ASC  | Aft     | -49.98     | -20.36     | -26.37      | 4.09       | 244.47 | 344.58 | 290.10  | 16.11  |
| Sahara      | 19.10      | 14.30      | Inner | ASC  | Fore    | -38.02     | -19.56     | -27.33      | 3.41       | 197.99 | 294.57 | 251.82  | 13.90  |
| Sahara      | 19.10      | 14.30      | Outer | ASC  | Fore    | -47.35     | -19.76     | -28.01      | 4.45       | 252.62 | 329.02 | 284.33  | 15.73  |

## 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            | 24.33   | 7.25         | 0.00    | 67.39   | 8.83         | 0.00            | 193.94  | 4.27         | 0.00    | 76.49   | 5.24         |

| 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    | 49.31   | 1.57         | 0.00     | 52.71   | 2.27         | 0.00     | 31.51   | 0.07         | 0.00      | 50.02   | 0.45         |
|  | <b>Outer (VV)</b> | 0.00    | 36.97   | 1.34         | 0.00     | 43.53   | 1.97         | 0.00     | 33.93   | 0.15         | 0.00      | 34.17   | 0.46         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 49.53   | 1.54         | 0.00     | 51.22   | 2.10         | 0.00     | 30.77   | 0.07         | 0.00      | 53.18   | 0.41         |
|  | <b>Outer (VV)</b> | 0.00    | 36.10   | 1.25         | 0.00     | 43.51   | 1.63         | 0.00     | 34.73   | 0.13         | 0.00      | 33.18   | 0.36         |

| 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

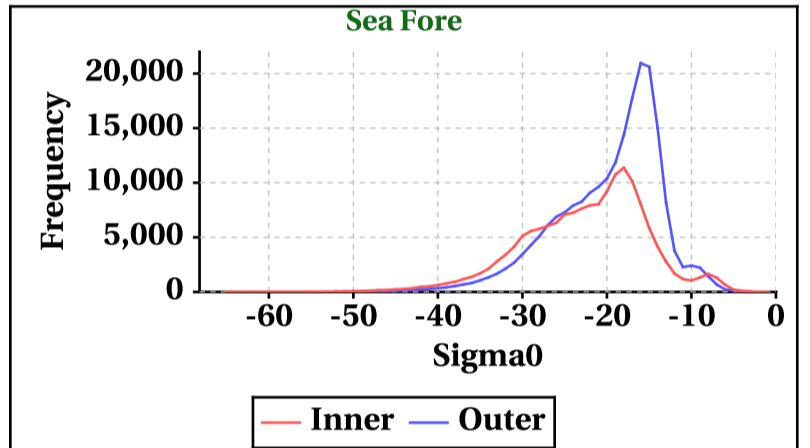
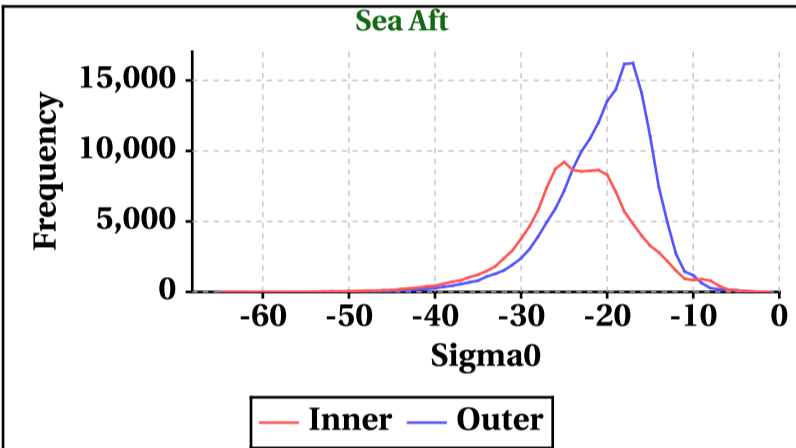
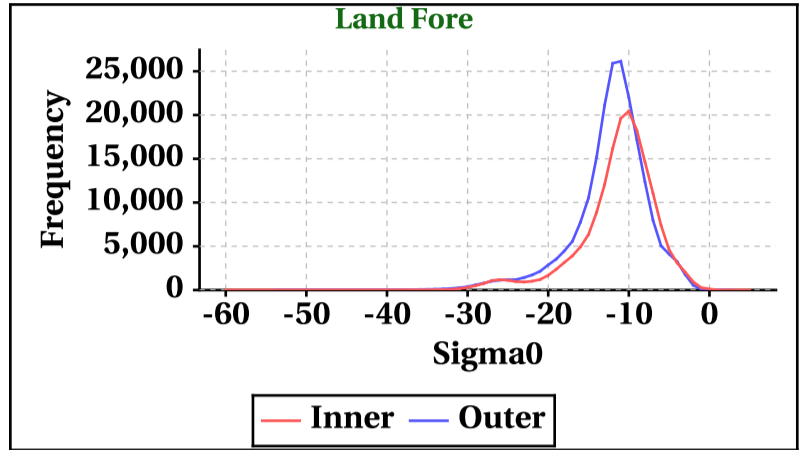
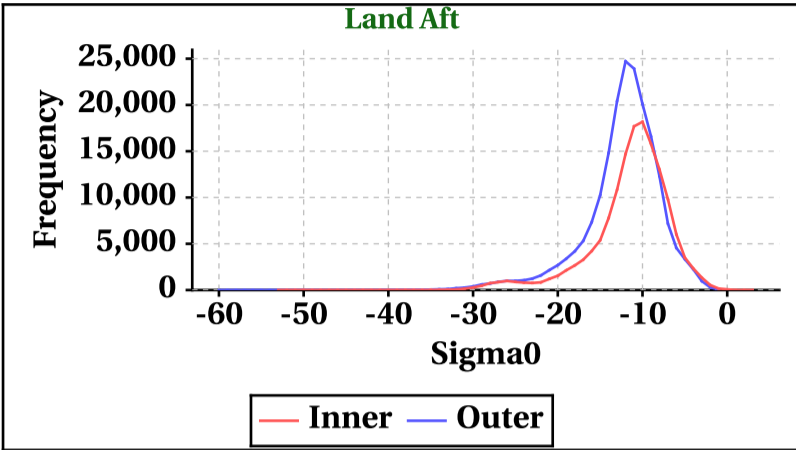
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -53      | -60       | -65     | -65      |
| Max             | 3        | 5         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -60      | -54       | -61     | -61      |
| Max             | -1       | 3         | -1      | -1       |



## Brightness Temperature(K)

| Inner Beam(HH) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 500      | 500       | 500     | 500      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 500      | 500       | 500     | 472      |

