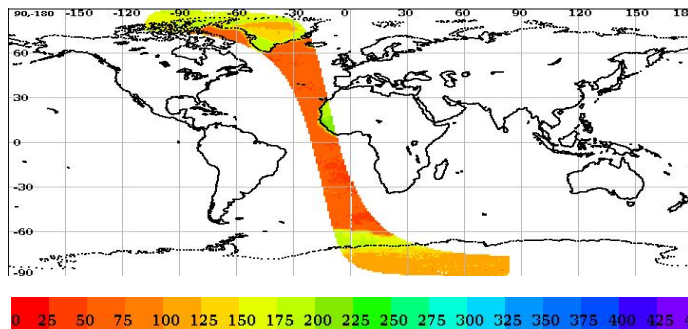


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

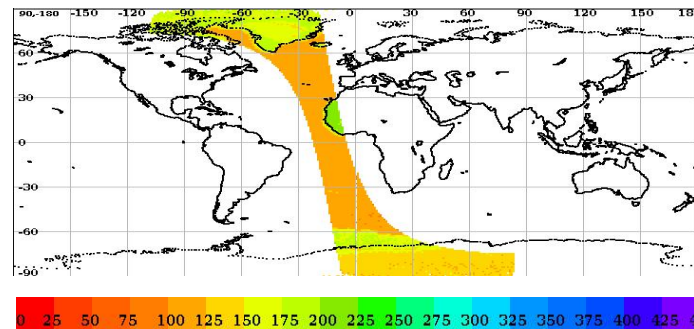
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 14857             | 14858           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 405            | 36              | 17-07-2019        | 17-07-2019      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 50              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

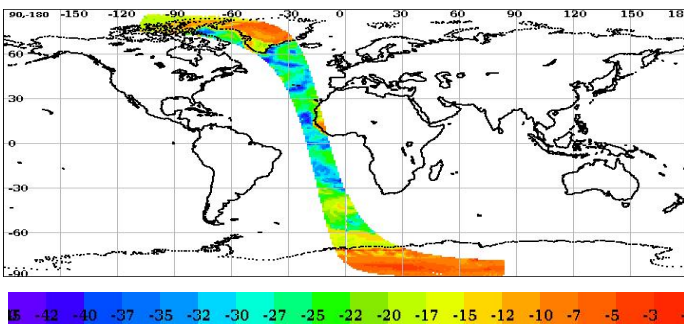


Outer Beam (VV)

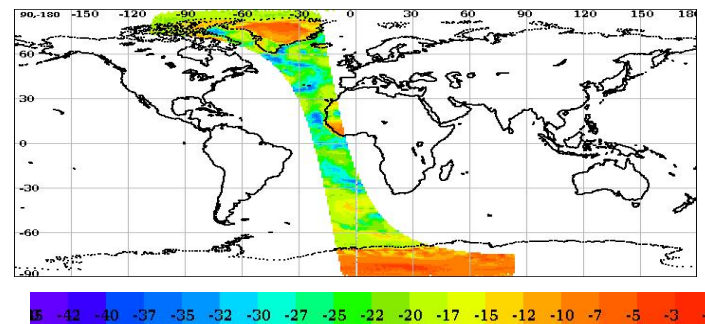


## Sigma0(dB)

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 |
|-------------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| GreenLand_2 | 77.50      | -41.50     | Inner | ASC  | Aft     | -5.37      | -4.22      | -4.77       | 0.41       | 99.35  | 123.89 | 114.50  | 10.08  |
| GreenLand_2 | 77.50      | -41.50     | Outer | ASC  | Aft     | -6.00      | -3.87      | -5.42       | 0.61       | 145.66 | 184.44 | 168.40  | 13.35  |
| GreenLand_2 | 77.50      | -41.50     | Inner | ASC  | Fore    | -5.84      | -3.42      | -4.64       | 0.70       | 96.21  | 163.33 | 126.32  | 21.50  |
| GreenLand_2 | 77.50      | -41.50     | Outer | ASC  | Fore    | -7.29      | -4.73      | -5.48       | 0.81       | 108.52 | 172.78 | 145.15  | 24.89  |
| GreenLand_3 | 71.55      | -42.45     | Inner | ASC  | Aft     | -12.91     | -9.05      | -11.37      | 1.16       | 111.78 | 161.85 | 136.60  | 14.14  |
| GreenLand_3 | 71.55      | -42.45     | Outer | ASC  | Aft     | -13.22     | -10.73     | -12.13      | 0.63       | 146.16 | 201.80 | 172.51  | 17.20  |
| GreenLand_3 | 71.55      | -42.45     | Inner | ASC  | Fore    | -13.74     | -9.19      | -11.54      | 1.26       | 111.63 | 173.57 | 142.38  | 17.15  |
| GreenLand_3 | 71.55      | -42.45     | Outer | ASC  | Fore    | -13.32     | -8.84      | -11.82      | 1.00       | 142.87 | 189.25 | 169.28  | 15.16  |
| GreenLand_1 | 74.69      | -42.50     | Inner | ASC  | Aft     | -10.72     | -7.51      | -9.03       | 0.80       | 106.79 | 173.73 | 133.94  | 18.61  |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Aft     | -12.04     | -8.20      | -9.49       | 0.96       | 148.75 | 195.98 | 161.91  | 12.46  |
| GreenLand_1 | 74.69      | -42.50     | Inner | ASC  | Fore    | -11.29     | -6.41      | -8.52       | 1.12       | 100.41 | 155.72 | 136.33  | 12.84  |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Fore    | -10.35     | -7.53      | -8.75       | 0.77       | 122.56 | 187.73 | 164.61  | 12.39  |

## 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            | 28.19   | 12.91        | 0.00    | 56.01   | 13.60        | 0.00            | 138.92  | 9.71         | 0.00    | 78.08   | 12.52        |

| 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    | 40.37   | 5.10         | 0.00     | 46.56   | 6.29         | 0.00     | 18.72   | 0.00         | 0.00      | 21.75   | 0.09         |
|  | <b>Outer (VV)</b> | 0.00    | 39.41   | 4.64         | 0.00     | 41.28   | 6.19         | 0.00     | 28.96   | 0.66         | 0.00      | 43.02   | 1.07         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 40.51   | 5.05         | 0.00     | 45.32   | 6.09         | 0.00     | 17.87   | 0.00         | 0.00      | 20.99   | 0.05         |
|  | <b>Outer (VV)</b> | 0.00    | 40.33   | 4.60         | 0.00     | 38.23   | 5.53         | 0.00     | 29.91   | 0.54         | 0.00      | 37.44   | 0.81         |

| 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

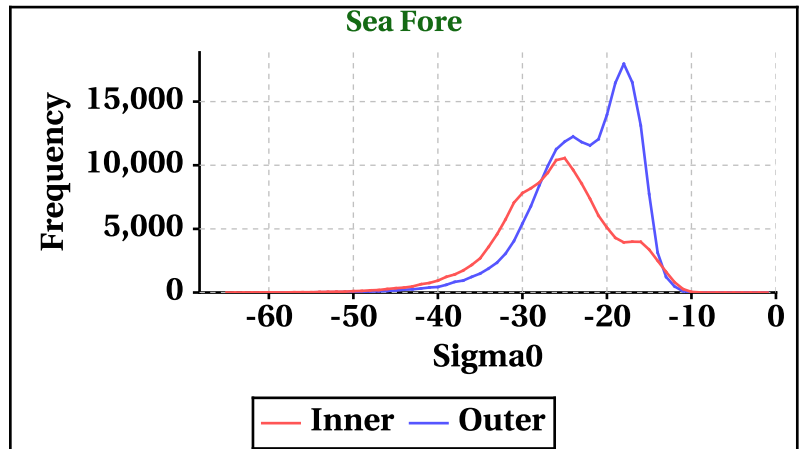
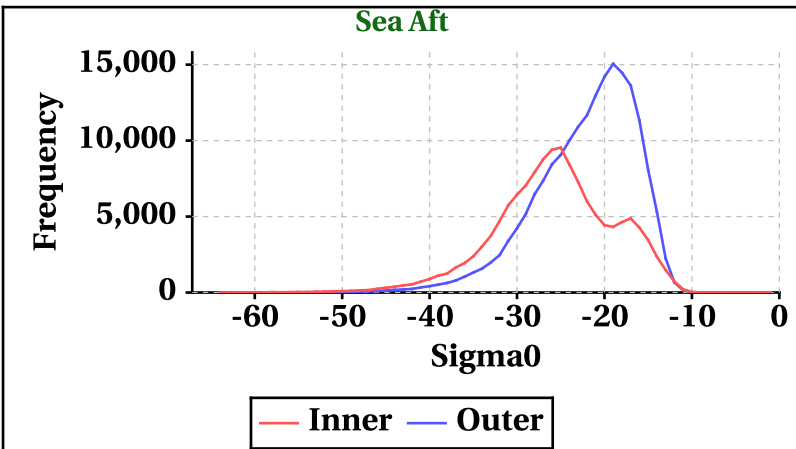
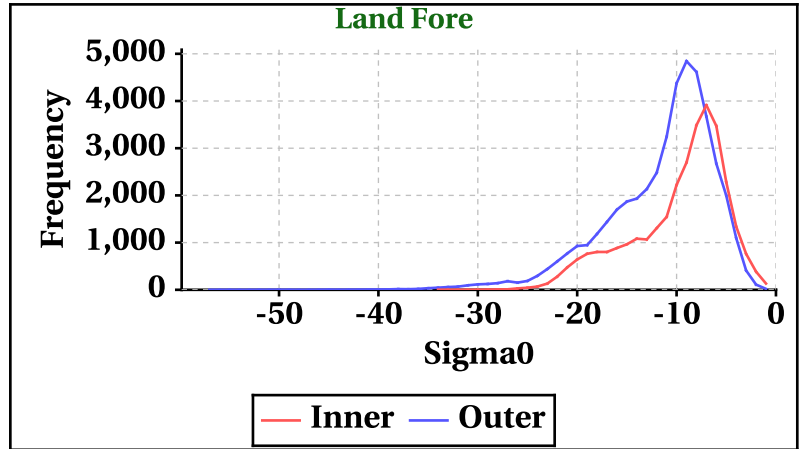
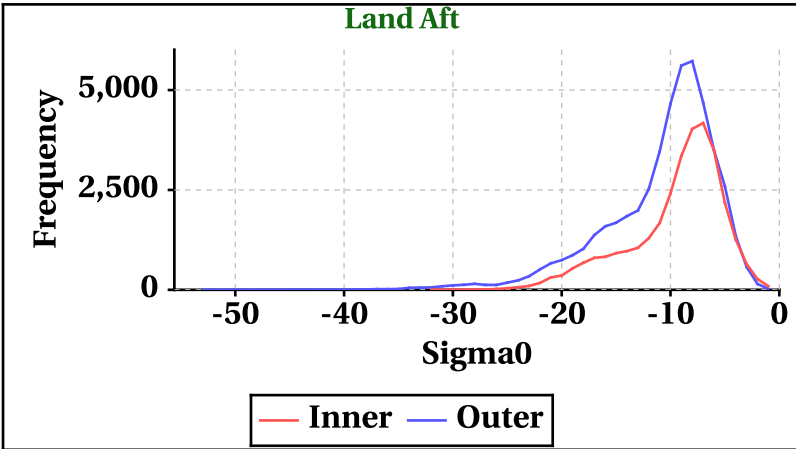
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -32      | -34       | -64     | -65      |
| Max             | -1       | -1        | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -53      | -57       | -60     | -60      |
| 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            | 277      | 270       | 235     | 230      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 282      | 278       | 240     | 243      |

