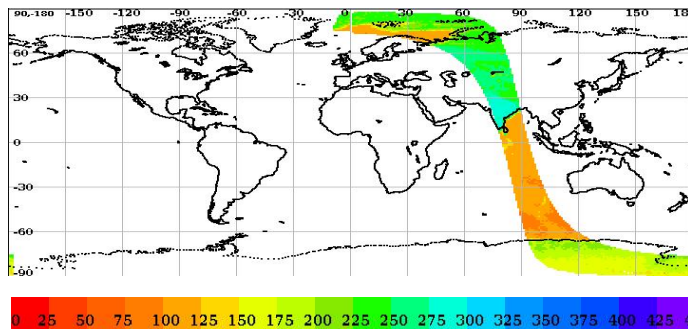


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

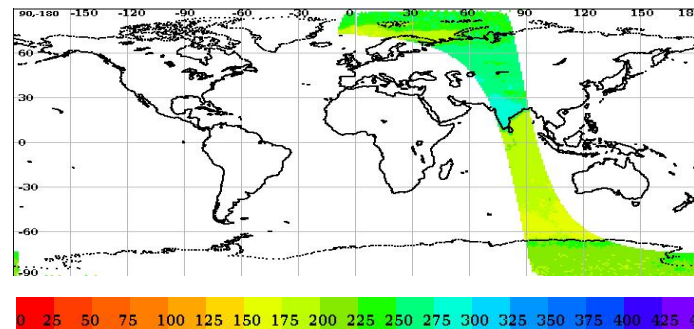
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 8270              | 8271            |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 405            | 36              | 19-04-2018        | 19-04-2018      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 50              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

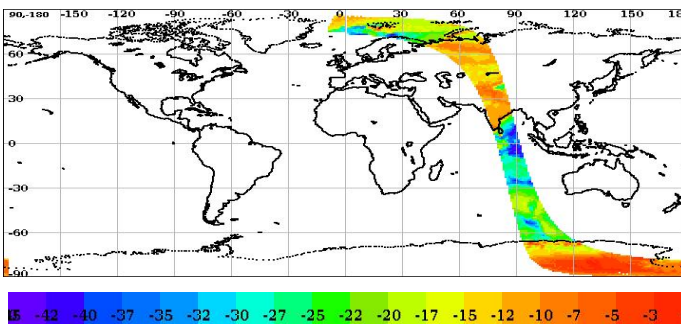


Outer Beam (VV)

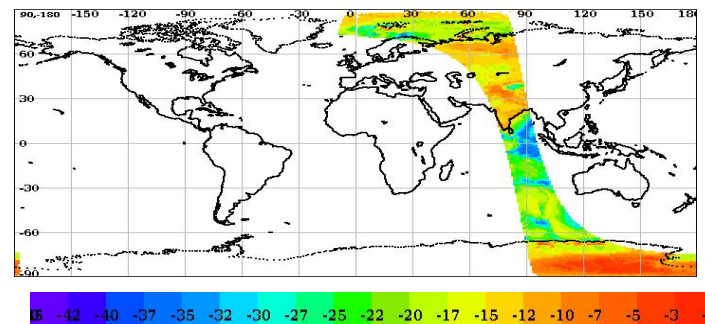


## Sigma0(dB)

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 |
|-----------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| ROK       | 23.00      | 73.60      | Inner | ASC  | Aft     | -13.76     | -7.13      | -10.05      | 1.03       | 254.50 | 329.15 | 283.00  | 14.40  |
| ROK       | 23.00      | 73.60      | Outer | ASC  | Aft     | -14.31     | -9.51      | -12.06      | 0.95       | 246.04 | 330.88 | 290.11  | 18.75  |
| ROK       | 23.00      | 73.60      | Inner | ASC  | Fore    | -11.43     | -7.10      | -9.91       | 0.96       | 257.65 | 332.24 | 286.48  | 14.55  |
| ROK       | 23.00      | 73.60      | Outer | ASC  | Fore    | -15.83     | -8.60      | -11.97      | 1.08       | 249.87 | 321.97 | 288.04  | 16.38  |
| ANT_1     | -75.00     | 121.00     | Inner | ASC  | Aft     | -8.92      | -5.67      | -7.42       | 0.99       | 159.60 | 214.46 | 184.26  | 16.47  |
| ANT_1     | -75.00     | 121.00     | Outer | ASC  | Aft     | -9.57      | -6.75      | -8.23       | 0.87       | 168.22 | 232.50 | 206.58  | 16.91  |
| ANT_1     | -75.00     | 121.00     | Inner | ASC  | Fore    | -8.68      | -4.71      | -6.97       | 1.10       | 148.42 | 193.38 | 172.20  | 9.76   |
| ANT_1     | -75.00     | 121.00     | Outer | ASC  | Fore    | -12.01     | -5.54      | -7.82       | 1.45       | 186.10 | 224.32 | 206.05  | 13.54  |

## 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            | 31.02   | 12.71        | 0.00    | 199.11  | 12.76        | 0.00            | 147.48  | 10.22        | 0.00    | 236.03  | 13.21        |

| 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    | 39.72   | 5.74         | 0.00     | 45.00   | 7.63         | 0.00     | 39.51   | 0.42         | 0.00      | 33.60   | 0.28         |
|  | <b>Outer (VV)</b> | 0.00    | 38.35   | 5.76         | 0.00     | 39.87   | 7.43         | 0.00     | 36.27   | 0.56         | 0.00      | 37.66   | 0.43         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 38.30   | 5.81         | 0.00     | 42.11   | 7.12         | 0.00     | 41.17   | 0.37         | 0.00      | 31.73   | 0.25         |
|  | <b>Outer (VV)</b> | 0.00    | 39.34   | 5.82         | 0.00     | 38.60   | 7.69         | 0.00     | 37.49   | 0.47         | 0.00      | 34.24   | 0.20         |

| 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

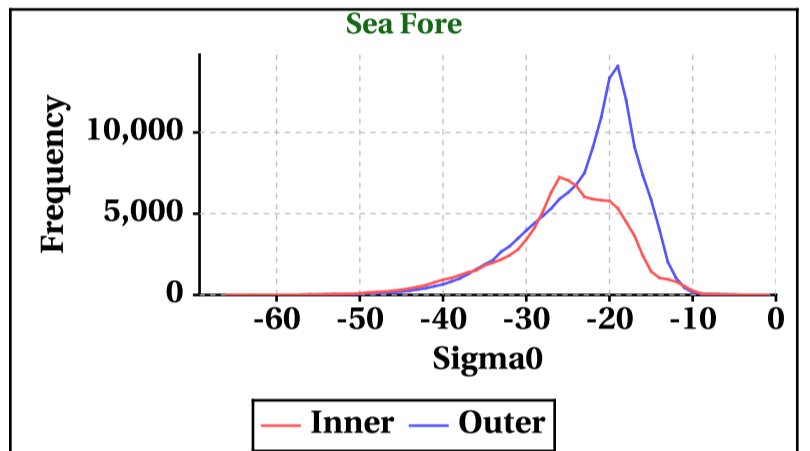
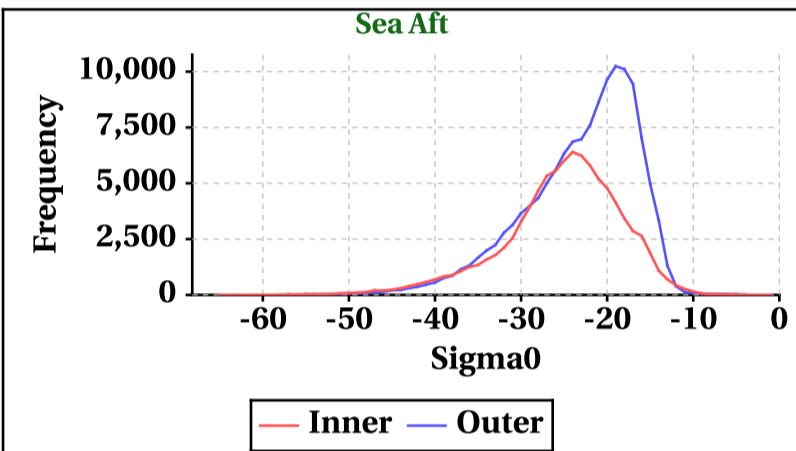
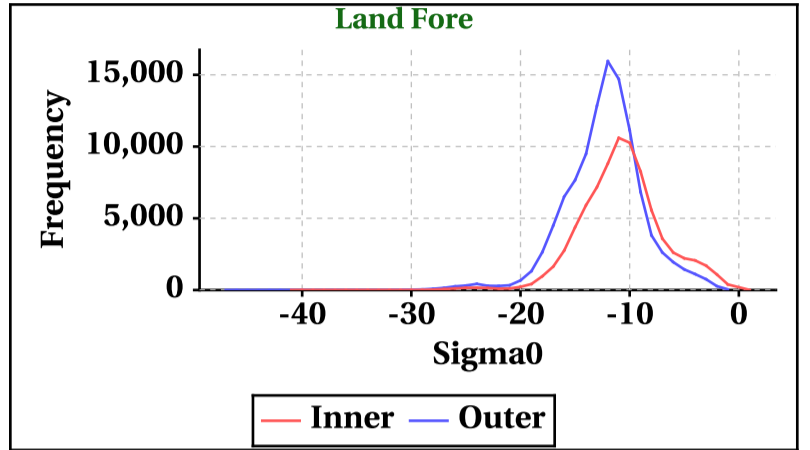
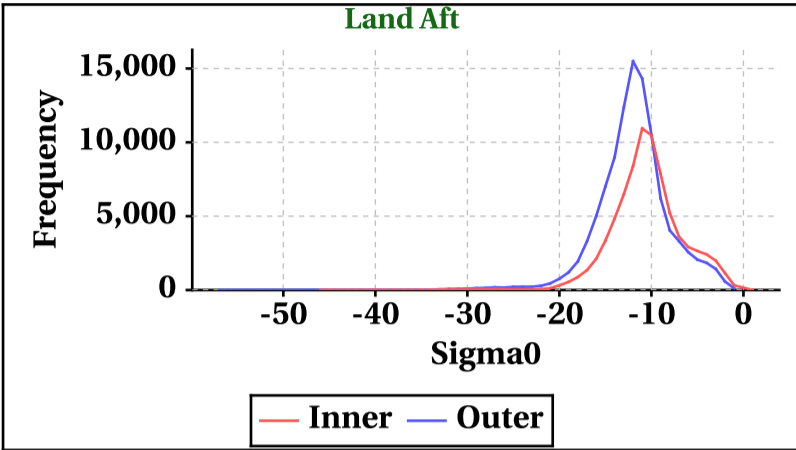
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -46      | -41       | -65     | -66      |
| Max             | 1        | 1         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -57      | -47       | -60     | -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            | 404      | 345       | 306     | 310      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 500      | 500       | 311     | 311      |

