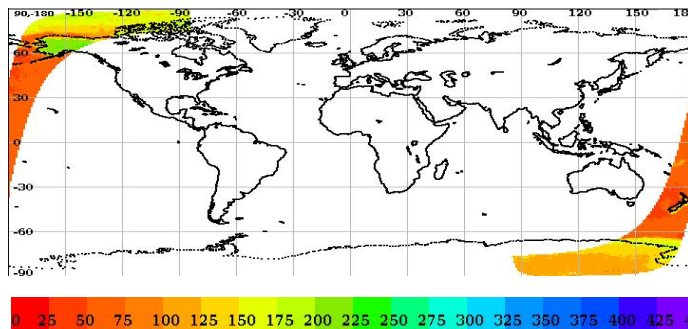


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

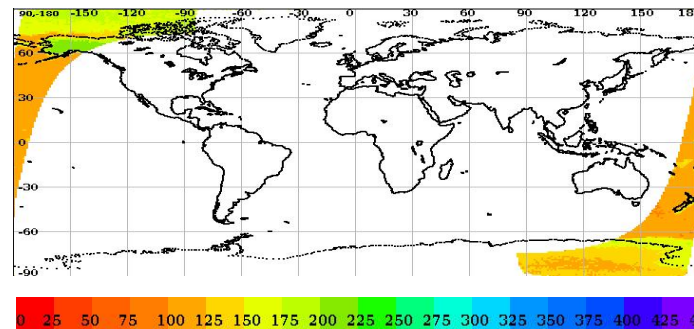
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 14683             | 14684           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 812            | 72              | 05-07-2019        | 06-07-2019      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 25              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

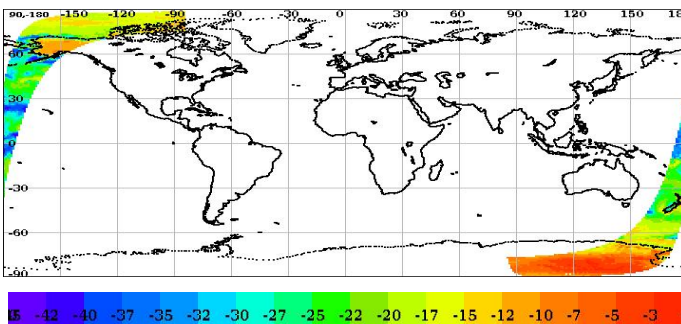


Outer Beam (VV)

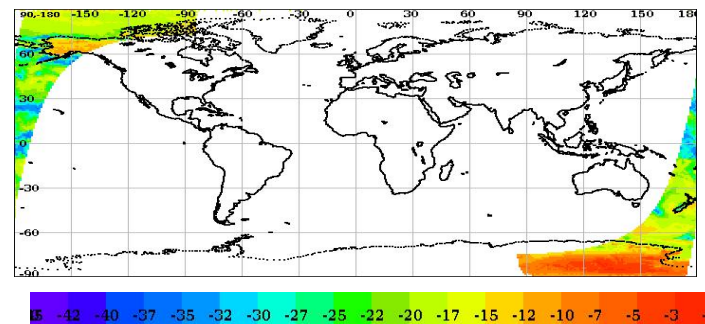


## Sigma0(dB)

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 |
|-----------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| ANT_1     | -75.00     | 121.00     | Inner | DSC  | Aft     | -8.72      | -4.35      | -6.70       | 1.13       | 98.79  | 142.40 | 121.12  | 10.51  |
| ANT_1     | -75.00     | 121.00     | Outer | DSC  | Aft     | -9.41      | -5.67      | -7.72       | 1.00       | 110.93 | 141.68 | 128.84  | 9.15   |
| ANT_1     | -75.00     | 121.00     | Inner | DSC  | Fore    | -10.54     | -4.25      | -7.01       | 1.50       | 80.29  | 146.17 | 119.51  | 13.89  |
| ANT_1     | -75.00     | 121.00     | Outer | DSC  | Fore    | -9.96      | -6.36      | -8.14       | 0.94       | 99.08  | 165.01 | 130.54  | 17.04  |

## 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            | 218.33  | 6.37         | 0.00    | 24.66   | 6.96         | 0.00            | 148.76  | 2.57         | 0.00    | 48.65   | 3.09         |

| 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    | 41.93   | 2.00         | 0.00     | 47.91   | 2.49         | 0.00     | 19.38   | 0.00         | 0.00      | 25.54   | 0.03         |
|  | <b>Outer (VV)</b> | 0.00    | 39.25   | 1.82         | 0.00     | 37.68   | 2.73         | 0.00     | 20.15   | 0.01         | 0.00      | 29.75   | 0.08         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 43.49   | 2.06         | 0.00     | 44.22   | 2.41         | 0.00     | 20.28   | 0.01         | 0.00      | 23.68   | 0.03         |
|  | <b>Outer (VV)</b> | 0.00    | 36.96   | 1.85         | 0.00     | 37.97   | 2.53         | 0.00     | 20.65   | 0.01         | 0.00      | 30.09   | 0.07         |

| 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

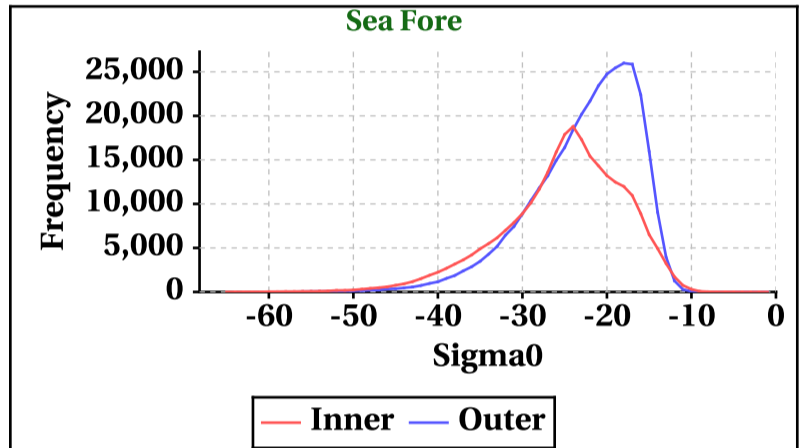
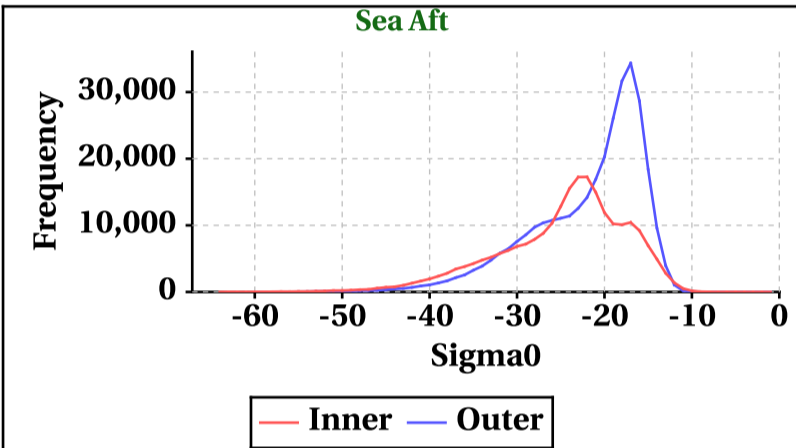
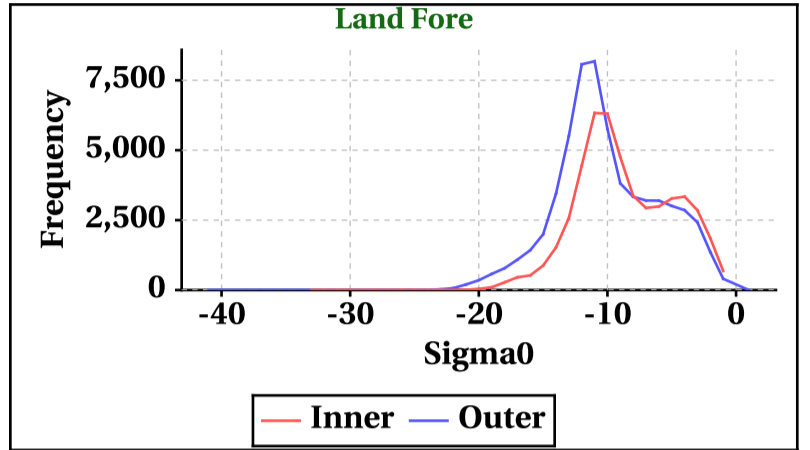
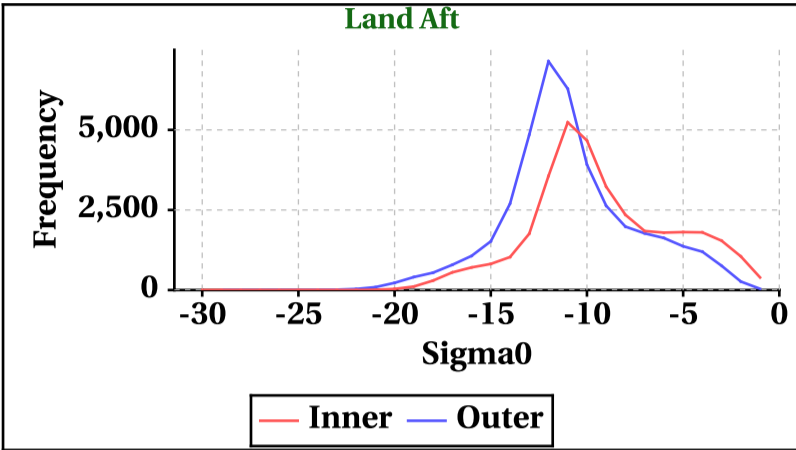
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -30      | -33       | -64     | -65      |
| Max             | -1       | -1        | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -29      | -41       | -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            | 283      | 275       | 232     | 227      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 261      | 272       | 240     | 234      |

