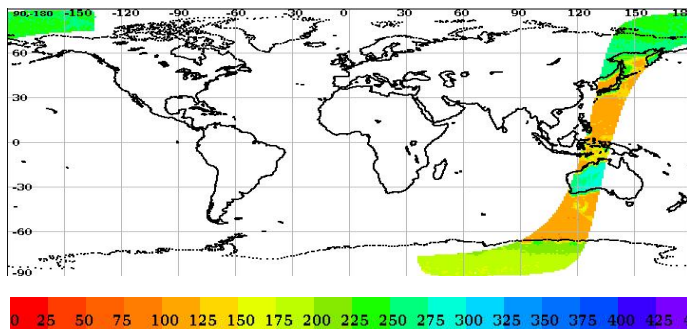


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

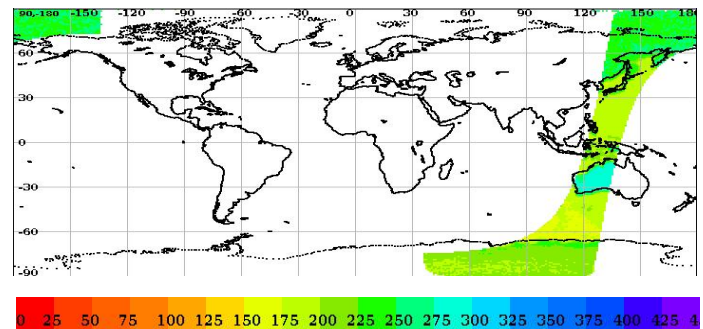
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 17846             | 17847           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 812            | 72              | 08-02-2020        | 09-02-2020      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 25              | v1.1.4            |                 |

## Brightness Temperature

Inner Beam (HH)

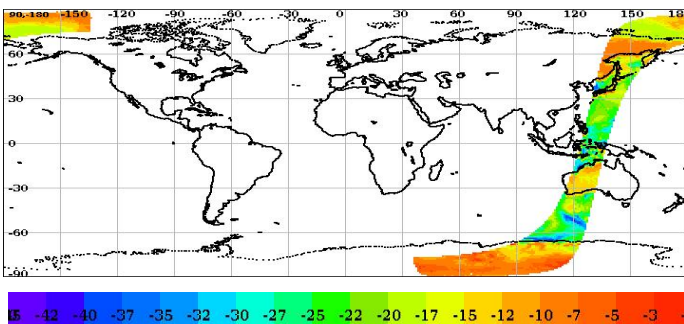


Outer Beam (VV)

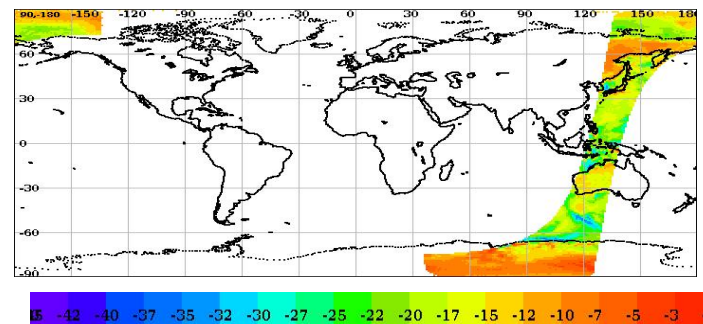


## Sigma0(dB)

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     | Outer | DSC  | Aft     | -10.88     | -6.61      | -8.59       | 1.16       | 183.37 | 226.08 | 206.39  | 12.43  |
| ANT_1     | -75.00     | 121.00     | Outer | DSC  | Fore    | -11.83     | -6.92      | -9.01       | 1.08       | 167.04 | 238.33 | 206.76  | 16.50  |
| Australia | -23.00     | 118.00     | Inner | DSC  | Aft     | -14.42     | -6.92      | -10.90      | 1.12       | 224.05 | 302.49 | 265.00  | 15.84  |
| Australia | -23.00     | 118.00     | Outer | DSC  | Aft     | -15.99     | -10.06     | -12.85      | 1.30       | 232.13 | 308.92 | 269.25  | 16.81  |
| Australia | -23.00     | 118.00     | Inner | DSC  | Fore    | -14.54     | -7.06      | -11.05      | 1.19       | 227.03 | 306.24 | 266.45  | 16.38  |
| Australia | -23.00     | 118.00     | Outer | DSC  | Fore    | -17.47     | -9.17      | -12.57      | 1.38       | 230.56 | 294.72 | 264.81  | 15.57  |

## 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            | 24.75   | 6.15         | 0.00    | 24.61   | 6.93         | 0.00            | 343.69  | 2.15         | 0.00    | 60.19   | 3.08         |

| 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    | 44.53   | 1.27         | 0.00     | 44.24   | 1.89         | 0.00     | 16.89   | 0.00         | 0.00      | 30.50   | 0.01         |
|  | <b>Outer (VV)</b> | 0.00    | 43.38   | 1.22         | 0.00     | 43.81   | 1.68         | 0.00     | 23.11   | 0.01         | 0.00      | 19.01   | 0.00         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 44.27   | 1.21         | 0.00     | 45.13   | 1.70         | 0.00     | 16.64   | 0.00         | 0.00      | 27.51   | 0.01         |
|  | <b>Outer (VV)</b> | 0.00    | 40.86   | 1.05         | 0.00     | 46.23   | 1.31         | 0.00     | 20.69   | 0.01         | 0.00      | 17.25   | 0.00         |

| 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

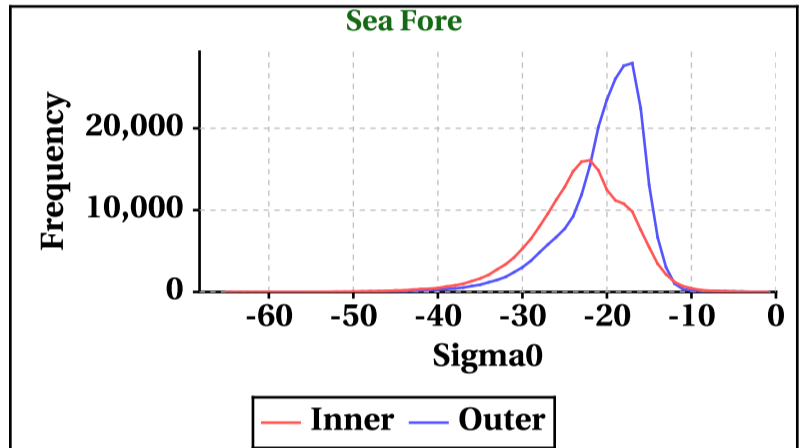
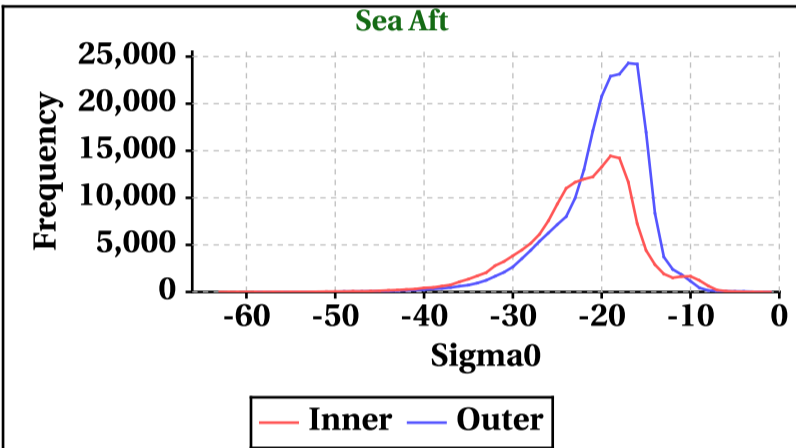
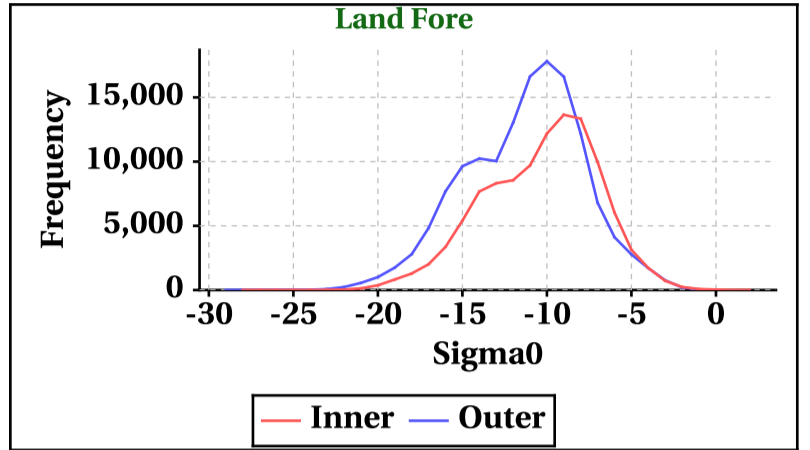
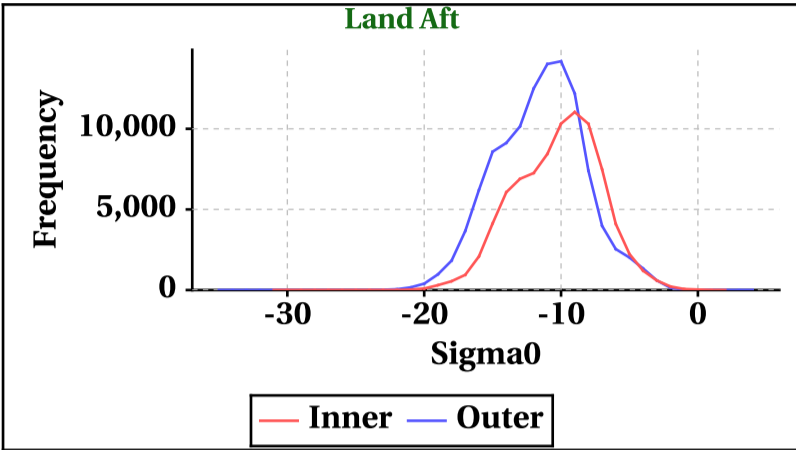
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -31      | -28       | -63     | -65      |
| Max             | 2        | 2         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -35      | -29       | -59     | -60      |
| Max             | 4        | -1        | -1      | -1       |



## Brightness Temperature(K)

| Inner Beam(HH) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 354      | 349       | 313     | 395      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 352      | 361       | 488     | 427      |

