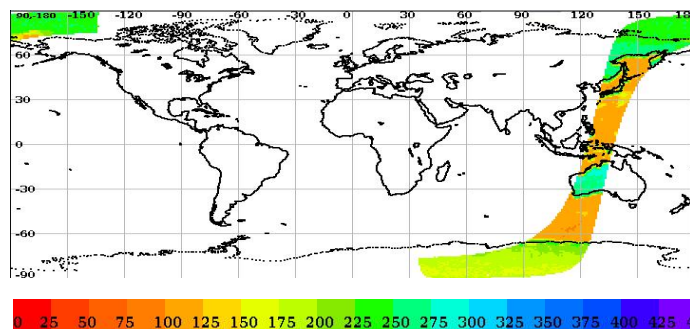


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

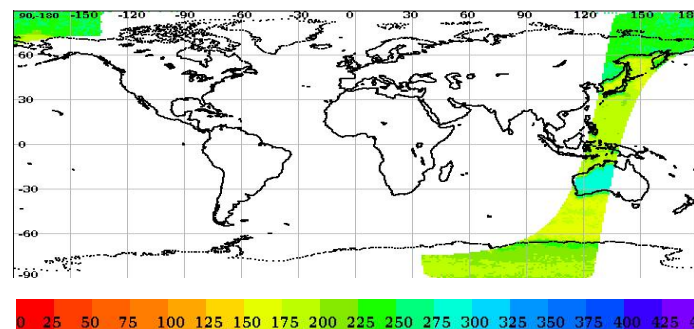
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 16715             | 16716           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 813            | 72              | 22-11-2019        | 23-11-2019      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 25              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

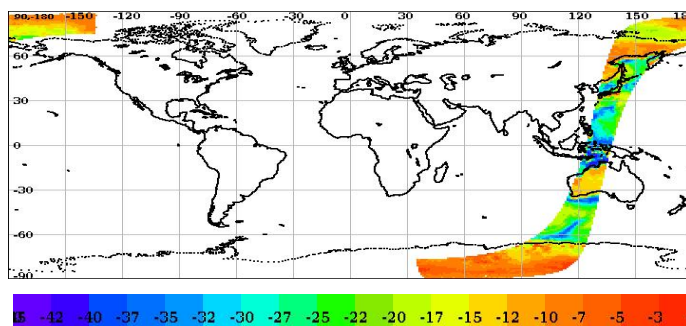


Outer Beam (VV)

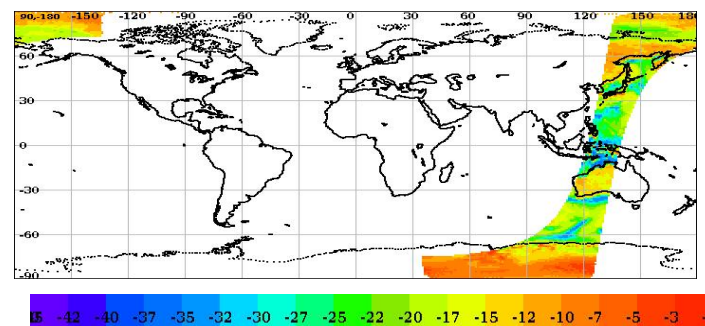


## Sigma0(dB)

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     | Outer | DSC  | Aft     | -11.41     | -6.22      | -8.29       | 0.98       | 172.94 | 245.72 | 202.18  | 13.84  |
| ANT_1     | -75.00     | 121.00     | Outer | DSC  | Fore    | -11.57     | -5.31      | -8.48       | 1.33       | 167.65 | 234.97 | 207.86  | 16.48  |
| Australia | -23.00     | 118.00     | Inner | DSC  | Aft     | -11.90     | -6.28      | -9.04       | 1.08       | 240.27 | 319.18 | 283.00  | 15.29  |
| Australia | -23.00     | 118.00     | Outer | DSC  | Aft     | -13.04     | -7.92      | -10.71      | 0.99       | 226.62 | 339.87 | 278.76  | 19.66  |
| Australia | -23.00     | 118.00     | Inner | DSC  | Fore    | -12.30     | -6.02      | -9.08       | 1.15       | 239.50 | 333.10 | 281.65  | 16.58  |
| Australia | -23.00     | 118.00     | Outer | DSC  | Fore    | -14.37     | -7.34      | -10.40      | 1.07       | 234.12 | 322.35 | 282.79  | 18.46  |

## 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. (%) |
| Kpa                                                                                      | 0.00            | 0.07    | 0.00         | 0.00    | 0.07    | 0.00         | 0.00            | 0.07    | 0.00         | 0.00    | 0.07    | 0.00         |
| Kpb                                                                                      | 0.00            | 0.09    | 0.00         | 0.00    | 0.09    | 0.00         | 0.00            | 0.09    | 0.00         | 0.00    | 0.09    | 0.00         |
| Kpc                                                                                      | 0.00            | 0.00    | 0.00         | 0.00    | 0.00    | 0.00         | 0.00            | 0.00    | 0.00         | 0.00    | 0.00    | 0.00         |
| Inc. Angle(deg)                                                                          | 0.00            | 0.00    | 0.00         | 0.00    | 0.00    | 0.00         | 0.00            | 0.00    | 0.00         | 0.00    | 0.00    | 0.00         |
| Delta Azi.Angle(deg)                                                                     | 0.00            | 78.77   | 6.53         | 0.00    | 24.71   | 7.74         | 0.00            | 354.53  | 3.04         | 0.00    | 80.03   | 3.72         |

| 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. (%) |
| SNR(dB)                                                                    | Inner (HH) | 0.00    | 49.98   | 3.29         | 0.00     | 49.79   | 4.17         | 0.00     | 17.74   | 0.00         | 0.00      | 21.08   | 0.01         |
|                                                                            | Outer (VV) | 0.00    | 37.69   | 2.84         | 0.00     | 49.86   | 3.66         | 0.00     | 21.63   | 0.01         | 0.00      | 30.76   | 0.01         |
| Sigma0(dB)                                                                 | Inner (HH) | 0.00    | 50.69   | 3.32         | 0.00     | 49.59   | 4.08         | 0.00     | 17.52   | 0.00         | 0.00      | 19.29   | 0.00         |
|                                                                            | Outer (VV) | 0.00    | 38.42   | 2.89         | 0.00     | 45.66   | 3.42         | 0.00     | 17.97   | 0.00         | 0.00      | 28.29   | 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

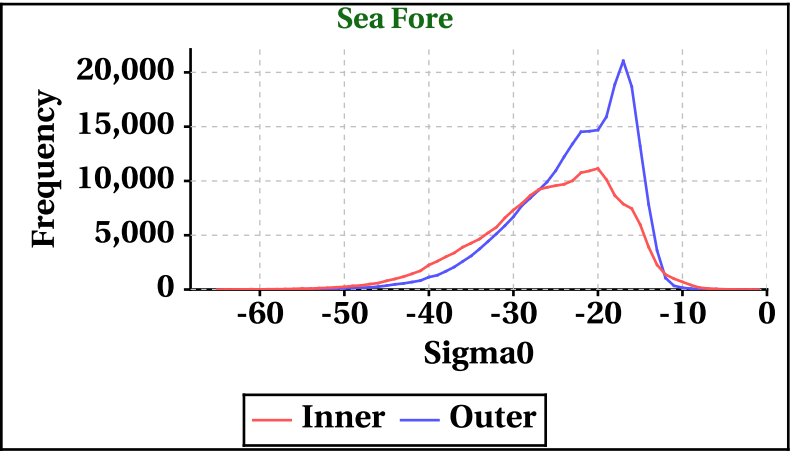
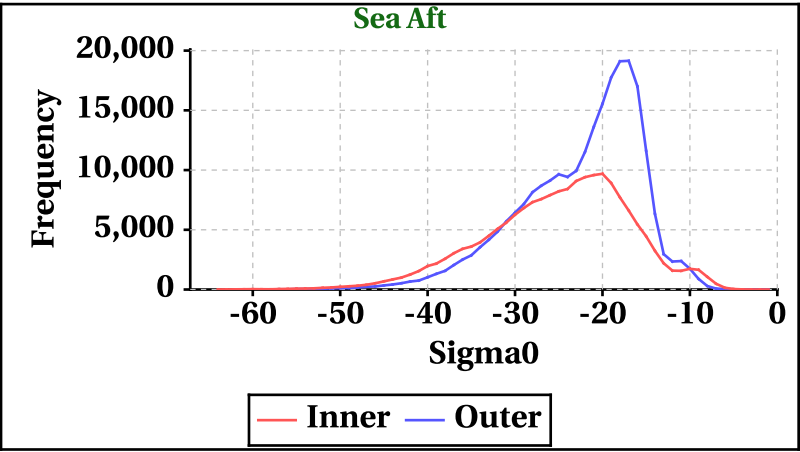
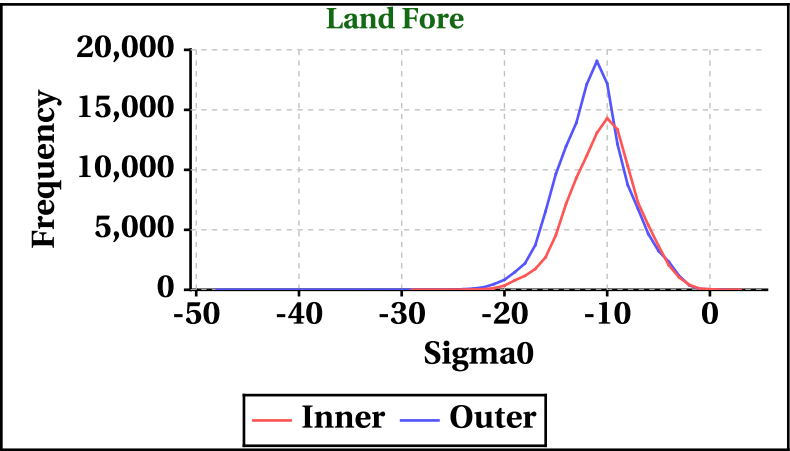
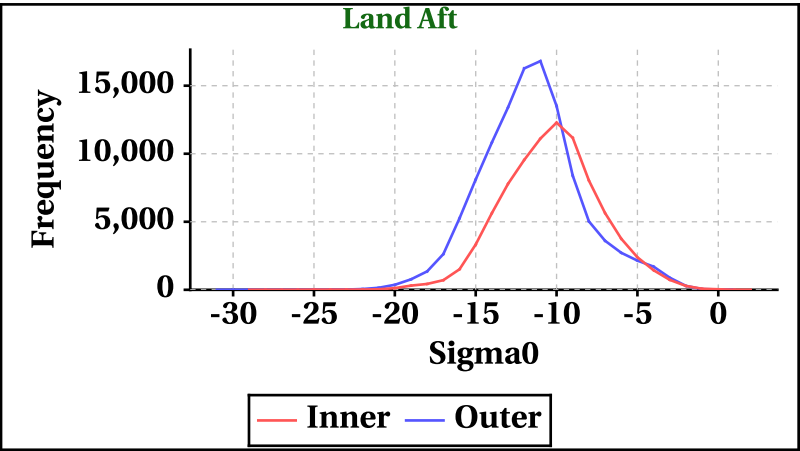
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

Dynamic Range (Data Histograms)

Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -29      | -29       | -64     | -65      |
| Max             | 2        | 3         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -31      | -48       | -60     | -61      |
| Max             | 1        | 2         | -1      | -1       |



Brightness Temperature(K)

| Inner Beam(HH) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 342      | 352       | 316     | 311      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 352      | 353       | 308     | 304      |

