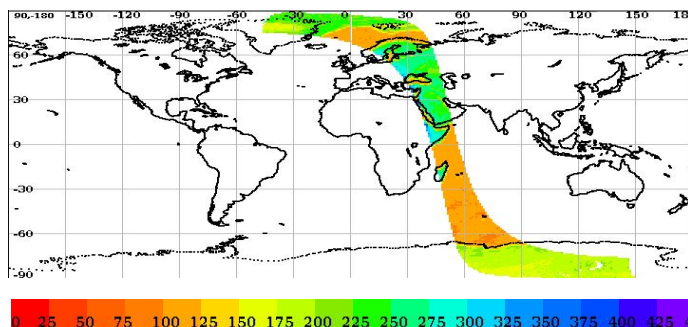


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

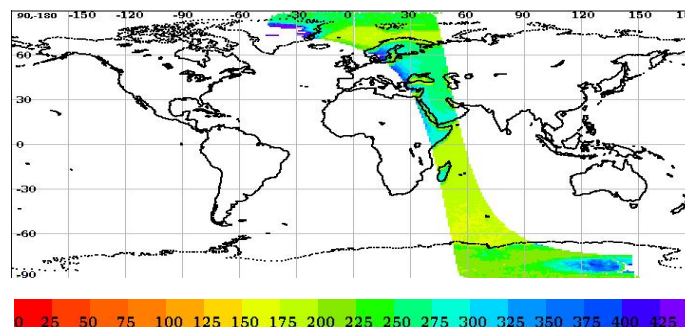
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 12607             | 12608           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 813            | 72              | 12-02-2019        | 13-02-2019      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 25              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

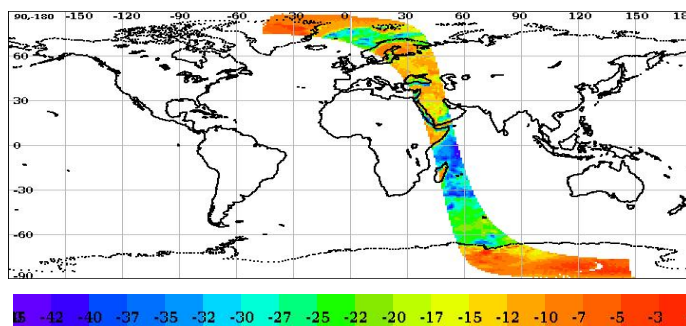


Outer Beam (VV)

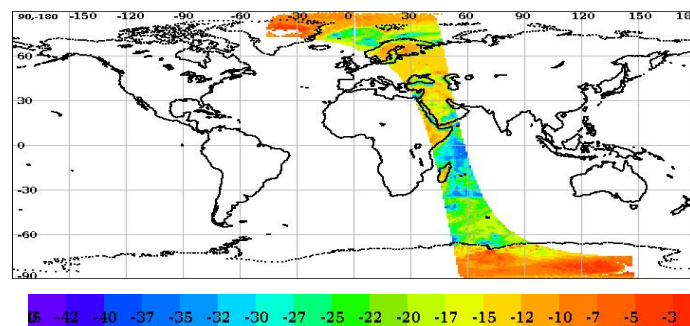


## Sigma0(dB)

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 | ASC  | Aft     | -13.43     | -3.28      | -7.83       | 2.21       | 151.01 | 211.69 | 181.34  | 17.16  |
| ANT_1       | -75.00     | 121.00     | Outer | ASC  | Aft     | -10.83     | -6.47      | -8.61       | 1.10       | 218.04 | 302.34 | 265.35  | 17.64  |
| ANT_1       | -75.00     | 121.00     | Inner | ASC  | Fore    | -10.82     | -5.60      | -7.92       | 1.16       | 142.80 | 207.93 | 169.68  | 14.02  |
| GreenLand_2 | 77.50      | -41.50     | Inner | ASC  | Fore    | -8.13      | -3.57      | -5.71       | 1.04       | 144.65 | 191.40 | 174.12  | 10.91  |
| GreenLand_2 | 77.50      | -41.50     | Outer | ASC  | Fore    | -5.77      | -3.88      | -4.82       | 0.94       | 500.00 | 500.00 | 500.00  | 0.00   |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Fore    | -12.22     | -8.84      | -9.92       | 1.02       | 469.46 | 500.00 | 488.95  | 13.99  |

## 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            | 23.29   | 6.17         | 0.00    | 25.47   | 7.90         | 0.00            | 140.97  | 3.07         | 0.00    | 191.65  | 4.42         |

| 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    | 44.18   | 2.62         | 0.00     | 52.17   | 3.47         | 0.00     | 30.75   | 0.08         | 0.00      | 37.37   | 0.14         |
|                                                                            | Outer (VV) | 0.00    | 39.12   | 2.57         | 0.00     | 38.25   | 3.57         | 0.00     | 34.68   | 0.17         | 0.00      | 39.25   | 0.27         |
| Sigma0(dB)                                                                 | Inner (HH) | 0.00    | 43.48   | 2.51         | 0.00     | 54.15   | 3.26         | 0.00     | 33.09   | 0.07         | 0.00      | 35.93   | 0.10         |
|                                                                            | Outer (VV) | 0.00    | 39.65   | 2.53         | 0.00     | 36.82   | 3.40         | 0.00     | 33.00   | 0.16         | 0.00      | 33.42   | 0.16         |

### 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

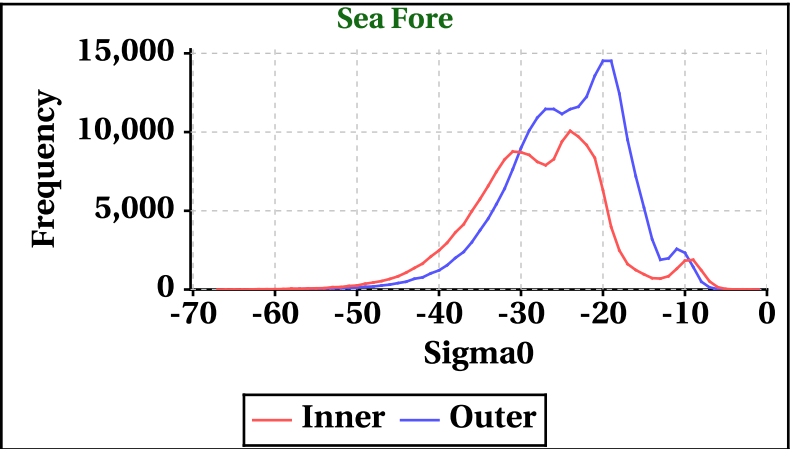
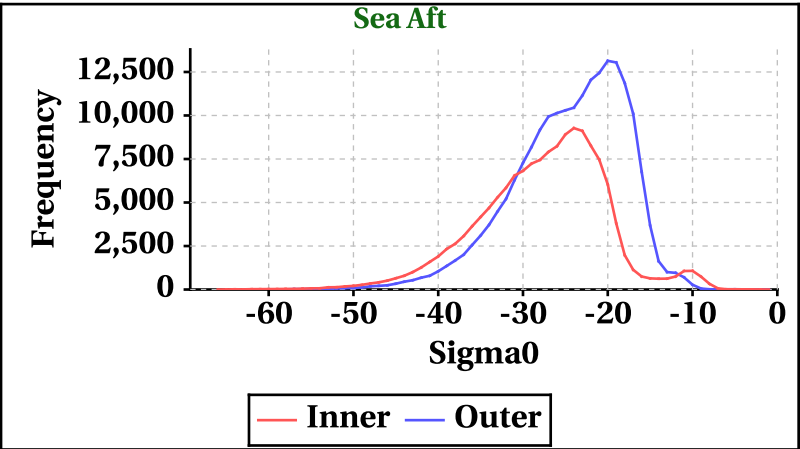
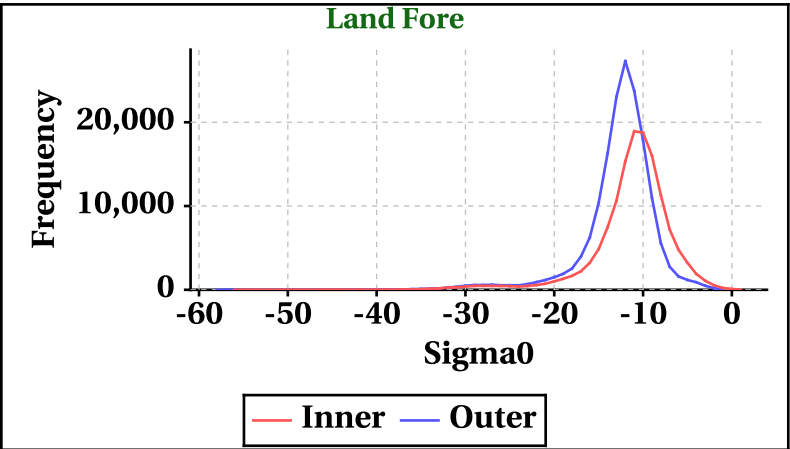
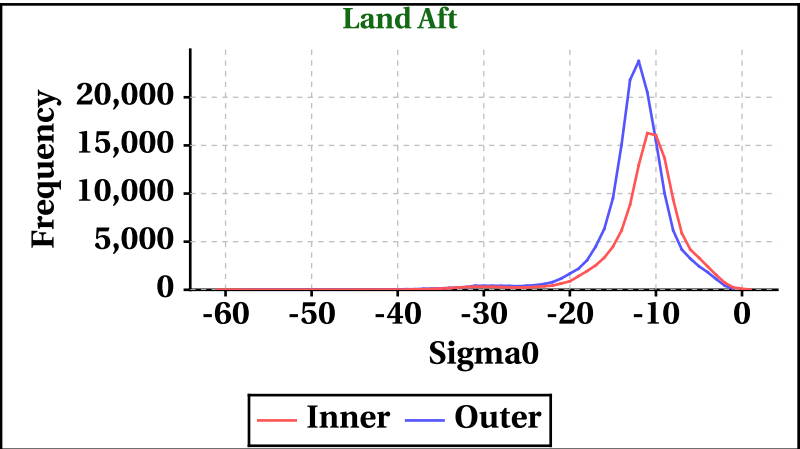
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

Dynamic Range (Data Histograms)

Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -61      | -56       | -66     | -67      |
| Max             | 1        | 1         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -58      | -58       | -61     | -62      |
| 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            | 500      | 500       | 424     | 418      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 500      | 500       | 500     | 425      |

