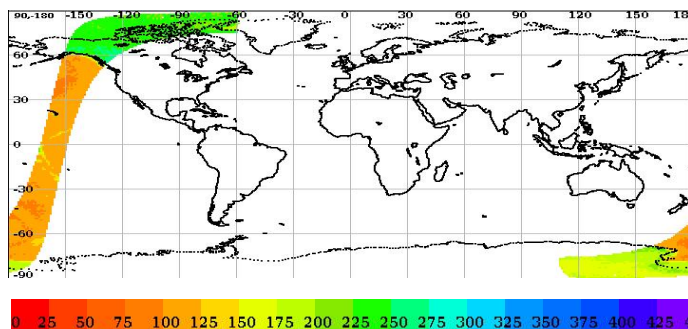


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

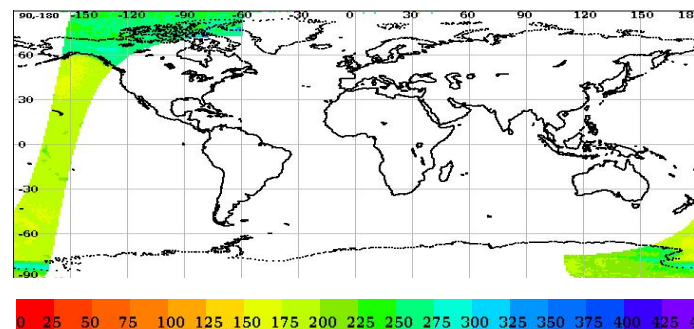
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 12449             | 12450           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 813            | 72              | 01-02-2019        | 01-02-2019      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 25              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

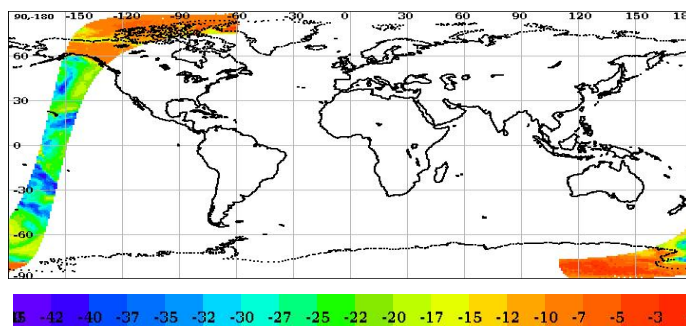


Outer Beam (VV)

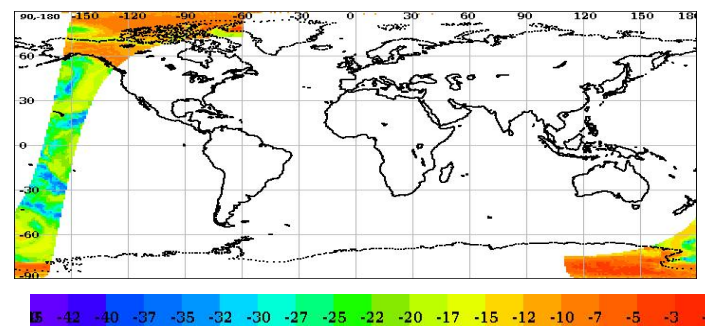


## Sigma0(dB)

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     | -9.56      | -5.61      | -7.64       | 1.02       | 143.21 | 199.22 | 174.87  | 15.59  |
| ANT_1     | -75.00     | 121.00     | Inner | DSC  | Fore    | -9.41      | -5.66      | -7.05       | 0.90       | 148.18 | 204.97 | 172.89  | 11.43  |
| ANT_1     | -75.00     | 121.00     | Outer | DSC  | Fore    | -11.80     | -6.69      | -8.86       | 0.99       | 187.12 | 230.89 | 204.55  | 13.10  |

## 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            | 255.60  | 5.98         | 0.00    | 24.57   | 7.90         | 0.00            | 353.50  | 3.85         | 0.00    | 61.56   | 4.46         |

| 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    | 38.76   | 1.09         | 0.00     | 52.55   | 1.68         | 0.00     | 14.08   | 0.00         | 0.00      | 19.68   | 0.00         |
|                                                                            | Outer (VV) | 0.00    | 37.91   | 1.39         | 0.00     | 36.83   | 2.09         | 0.00     | 24.32   | 0.01         | 0.00      | 22.03   | 0.01         |
| Sigma0(dB)                                                                 | Inner (HH) | 0.00    | 37.43   | 1.08         | 0.00     | 53.33   | 1.45         | 0.00     | 12.74   | 0.00         | 0.00      | 16.37   | 0.00         |
|                                                                            | Outer (VV) | 0.00    | 37.64   | 1.32         | 0.00     | 36.29   | 1.75         | 0.00     | 22.61   | 0.01         | 0.00      | 18.43   | 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

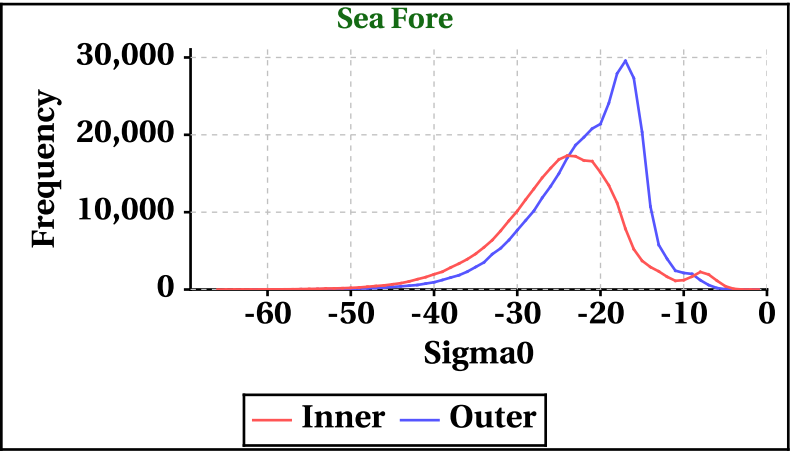
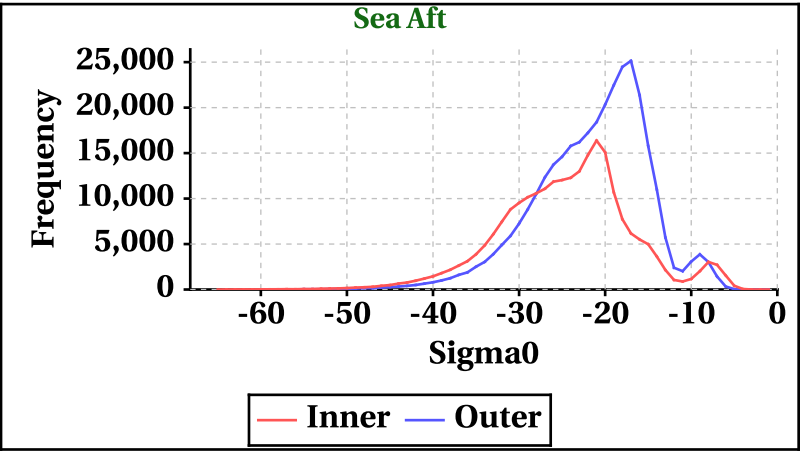
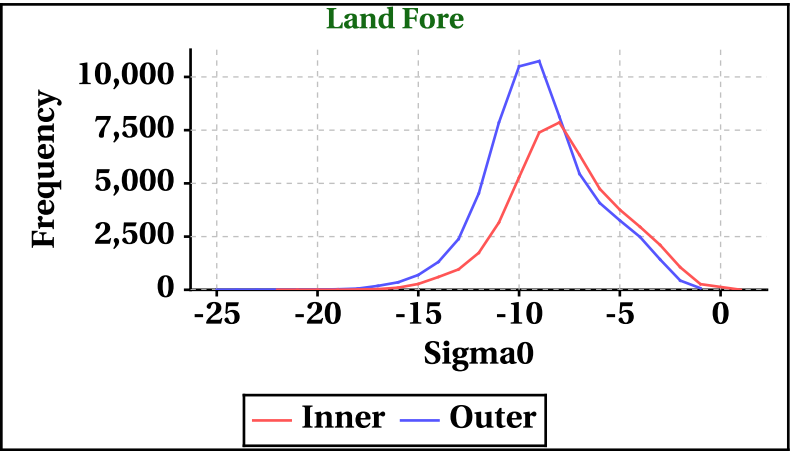
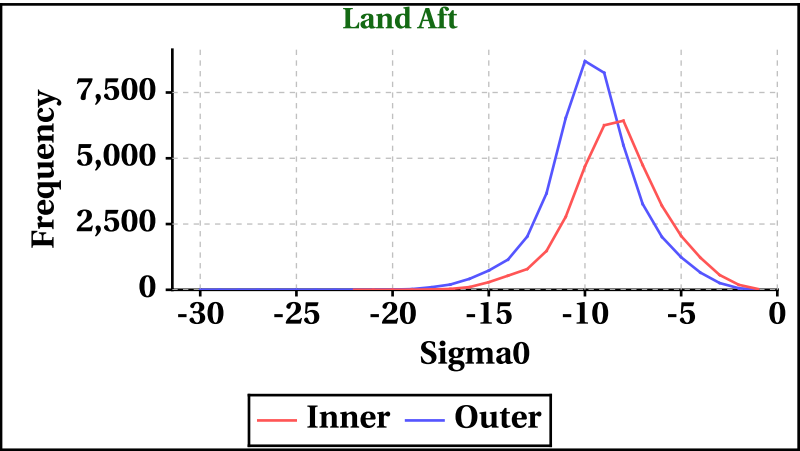
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

Dynamic Range (Data Histograms)

Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -22      | -22       | -65     | -66      |
| Max             | -1       | 1         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -30      | -25       | -60     | -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            | 305      | 316       | 298     | 295      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 493      | 500       | 367     | 393      |

