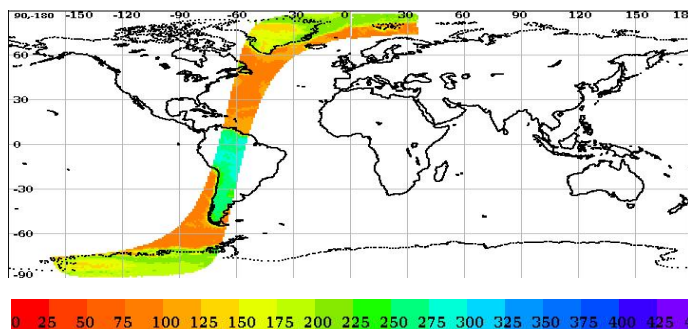


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

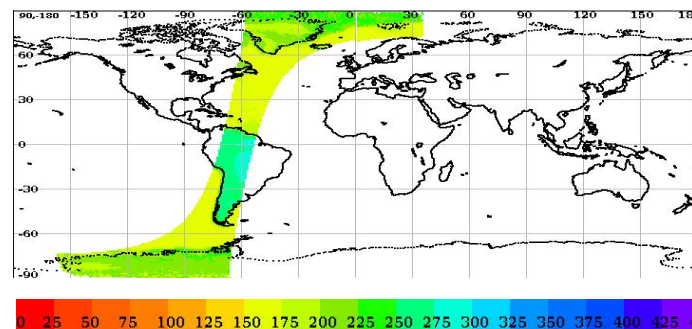
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 1340              | 1341            |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 811            | 72              | 27-12-2016        | 27-12-2016      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 25              | 1.1.0             |                 |

## Brightness Temperature

Inner Beam (HH)

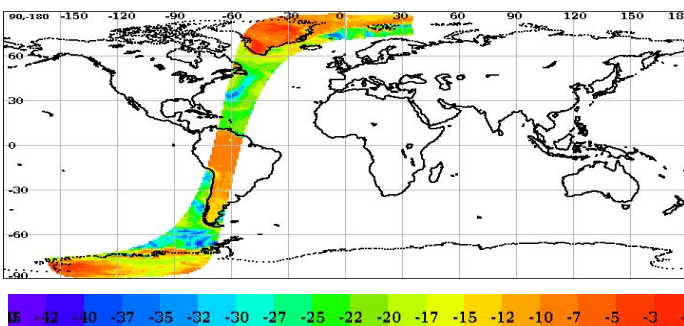


Outer Beam (VV)

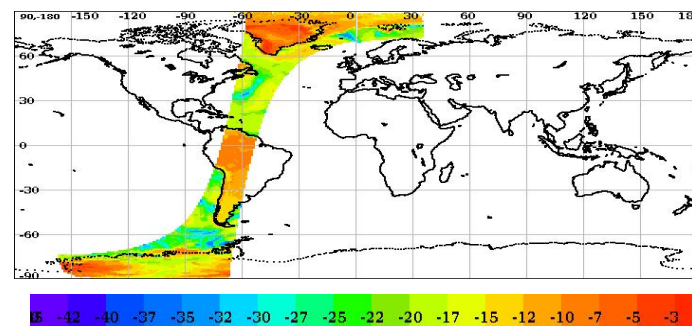


## Sigma0(dB)

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 |
|-------------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| GreenLand_2 | 77.50      | -41.50     | Inner | ASC  | Aft     | -6.54      | -2.85      | -5.01       | 1.17       | 125.15 | 165.46 | 147.69  | 11.02  |
| GreenLand_2 | 77.50      | -41.50     | Outer | ASC  | Aft     | -6.96      | -2.88      | -5.18       | 1.03       | 174.27 | 211.05 | 191.94  | 11.28  |
| GreenLand_2 | 77.50      | -41.50     | Inner | ASC  | Fore    | -9.12      | -2.11      | -4.59       | 1.81       | 120.79 | 165.82 | 140.14  | 12.96  |
| GreenLand_2 | 77.50      | -41.50     | Outer | ASC  | Fore    | -8.88      | -3.81      | -5.33       | 1.26       | 168.42 | 213.55 | 191.70  | 11.96  |
| GreenLand_3 | 71.55      | -42.45     | Inner | ASC  | Aft     | -11.76     | -6.92      | -9.71       | 1.06       | 139.00 | 208.69 | 175.68  | 19.50  |
| GreenLand_3 | 71.55      | -42.45     | Outer | ASC  | Aft     | -12.59     | -8.63      | -10.69      | 0.88       | 175.86 | 227.81 | 203.35  | 13.86  |
| GreenLand_3 | 71.55      | -42.45     | Inner | ASC  | Fore    | -15.08     | -7.01      | -9.83       | 1.94       | 151.05 | 200.13 | 170.22  | 13.65  |
| GreenLand_3 | 71.55      | -42.45     | Outer | ASC  | Fore    | -13.91     | -8.97      | -11.05      | 1.24       | 174.77 | 234.33 | 205.25  | 13.38  |
| Amazon_3    | -6.00      | -61.00     | Inner | ASC  | Aft     | -11.56     | -4.46      | -8.38       | 1.18       | 227.10 | 324.00 | 279.08  | 17.96  |
| Amazon_3    | -6.00      | -61.00     | Outer | ASC  | Aft     | -12.23     | -5.25      | -9.29       | 1.35       | 240.52 | 317.89 | 282.00  | 16.49  |
| Amazon_3    | -6.00      | -61.00     | Inner | ASC  | Fore    | -13.91     | -4.62      | -8.34       | 1.85       | 249.54 | 317.13 | 279.52  | 16.10  |
| Amazon_3    | -6.00      | -61.00     | Outer | ASC  | Fore    | -13.68     | -7.30      | -9.69       | 1.09       | 225.80 | 303.40 | 270.44  | 15.73  |
| GreenLand_1 | 74.69      | -42.50     | Inner | ASC  | Aft     | -10.55     | -6.48      | -8.47       | 1.09       | 127.70 | 203.46 | 153.89  | 21.28  |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Aft     | -11.51     | -7.10      | -8.82       | 0.98       | 184.27 | 237.80 | 204.03  | 13.93  |
| GreenLand_1 | 74.69      | -42.50     | Inner | ASC  | Fore    | -15.45     | -5.79      | -8.88       | 2.09       | 121.94 | 198.10 | 160.57  | 16.37  |
| GreenLand_1 | 74.69      | -42.50     | Outer | ASC  | Fore    | -11.67     | -6.53      | -8.76       | 1.16       | 161.64 | 228.47 | 204.64  | 15.80  |
| Amazon_2    | -3.00      | -61.00     | Inner | ASC  | Aft     | -15.41     | -5.67      | -9.27       | 1.75       | 233.40 | 305.65 | 268.32  | 16.82  |
| Amazon_2    | -3.00      | -61.00     | Outer | ASC  | Aft     | -15.38     | -4.88      | -10.05      | 2.05       | 243.82 | 304.79 | 268.45  | 17.61  |
| Amazon_2    | -3.00      | -61.00     | Inner | ASC  | Fore    | -14.14     | -4.72      | -9.30       | 2.01       | 214.10 | 296.11 | 260.35  | 19.17  |
| Amazon_2    | -3.00      | -61.00     | Outer | ASC  | Fore    | -14.39     | -6.92      | -10.66      | 1.60       | 223.03 | 292.43 | 263.87  | 13.47  |
| Amazon_1    | 0.00       | -67.00     | Inner | ASC  | Aft     | -10.41     | -4.10      | -7.86       | 1.15       | 234.20 | 315.59 | 273.93  | 17.47  |
| Amazon_1    | 0.00       | -67.00     | Outer | ASC  | Aft     | -11.24     | -5.44      | -8.63       | 0.95       | 225.74 | 326.79 | 271.96  | 17.96  |
| Amazon_1    | 0.00       | -67.00     | Inner | ASC  | Fore    | -13.98     | -2.73      | -7.74       | 2.22       | 241.41 | 309.24 | 272.73  | 15.20  |
| Amazon_1    | 0.00       | -67.00     | Outer | ASC  | Fore    | -15.70     | -6.07      | -9.03       | 1.63       | 237.85 | 295.88 | 266.35  | 14.52  |

## 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            | 34.73   | 13.49        | 0.00    | 36.64   | 13.19        | 0.00            | 19.82   | 3.42         | 0.00    | 22.37   | 3.73         |

| 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    | 42.70   | 1.36         | 0.00     | 52.83   | 1.68         | 0.00     | 24.51   | 0.01         | 0.00      | 22.39   | 0.00         |
|                                                                            | <b>Outer (VV)</b> | 0.00    | 48.22   | 1.17         | 0.00     | 55.31   | 2.28         | 0.00     | 25.69   | 0.01         | 0.00      | 40.12   | 0.06         |
| <b>Sigma0(dB)</b>                                                          | <b>Inner (HH)</b> | 0.00    | 41.84   | 1.28         | 0.00     | 49.95   | 1.30         | 0.00     | 22.15   | 0.01         | 0.00      | 19.79   | 0.00         |
|                                                                            | <b>Outer (VV)</b> | 0.00    | 49.69   | 1.00         | 0.00     | 54.14   | 1.33         | 0.00     | 25.38   | 0.01         | 0.00      | 35.49   | 0.02         |

### 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

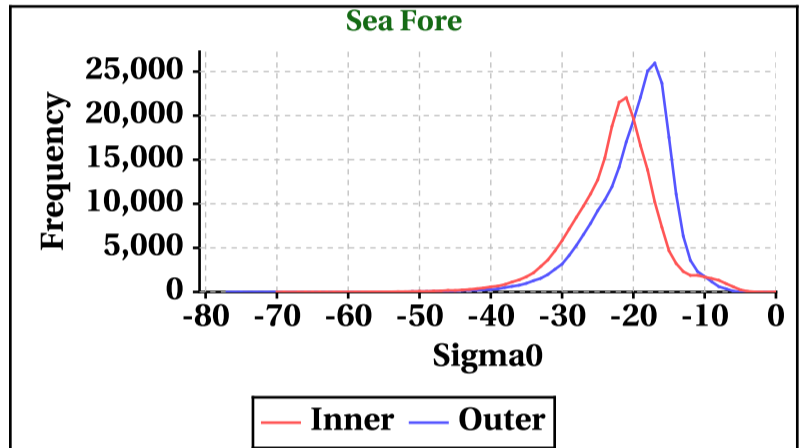
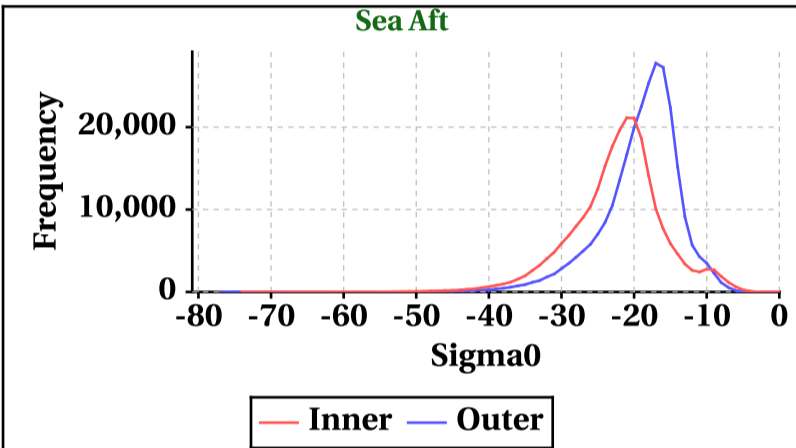
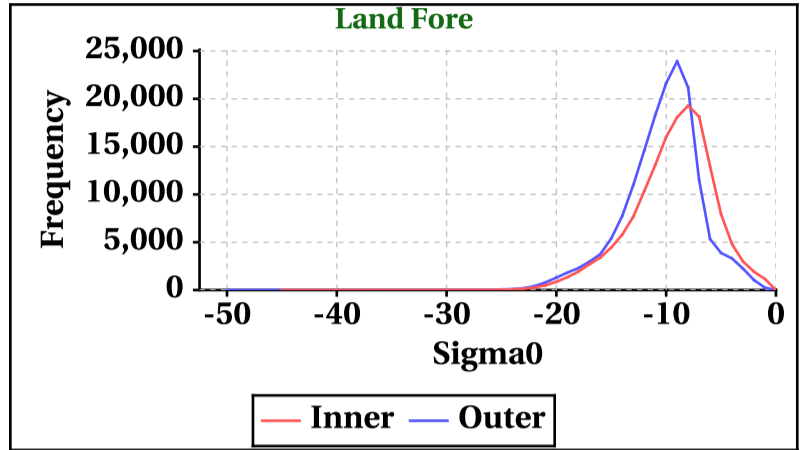
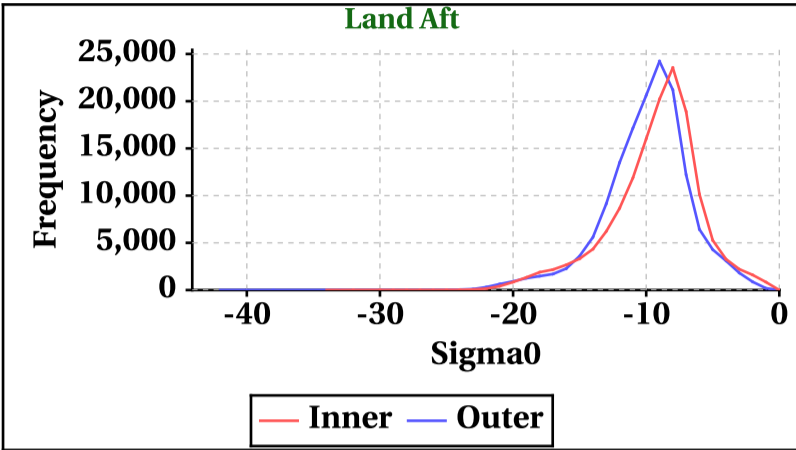
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -34      | -45       | -74     | -70      |
| Max             | -1       | -1        | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -42      | -50       | -77     | -77      |
| 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            | 344      | 359       | 282     | 279      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 354      | 342       | 280     | 292      |

