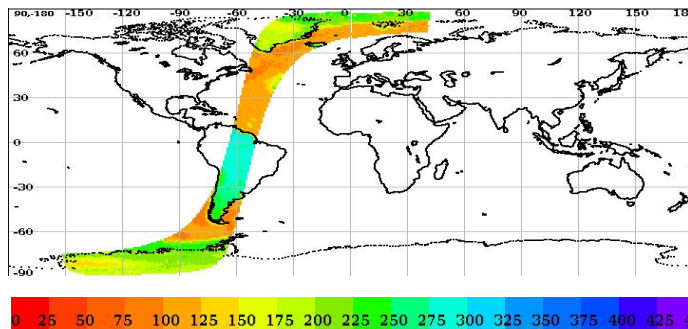


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

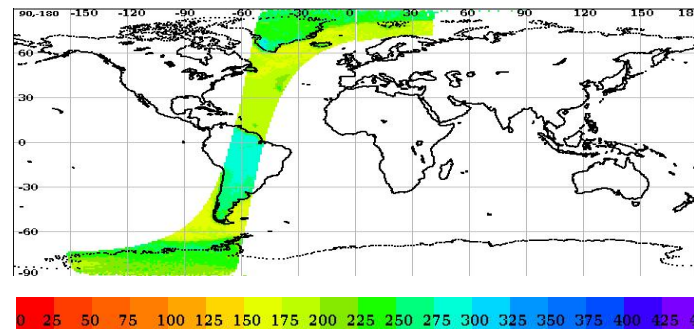
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 10589             | 10590           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 405            | 36              | 26-09-2018        | 26-09-2018      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 50              | v1.1.3            |                 |

## Brightness Temperature

Inner Beam (HH)

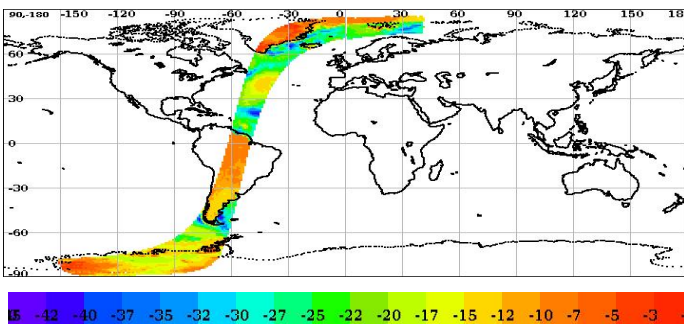


Outer Beam (VV)

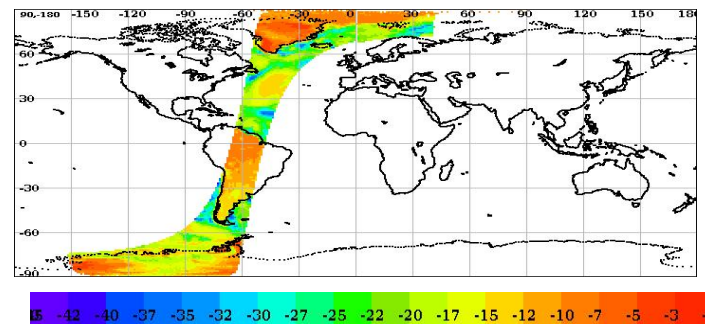


## Sigma0(dB)

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 |
|-------------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| GreenLand_2 | 77.50      | -41.50     | Outer | DSC  | Aft     | -6.12      | -4.26      | -5.04       | 0.49       | 226.31 | 259.81 | 242.43  | 10.27  |
| GreenLand_2 | 77.50      | -41.50     | Outer | DSC  | Fore    | -6.84      | -4.26      | -5.41       | 0.56       | 225.39 | 258.98 | 244.03  | 11.01  |
| GreenLand_3 | 71.55      | -42.45     | Outer | DSC  | Aft     | -13.22     | -10.37     | -11.98      | 0.76       | 212.82 | 265.62 | 237.31  | 16.12  |
| GreenLand_3 | 71.55      | -42.45     | Outer | DSC  | Fore    | -14.95     | -10.46     | -11.98      | 1.07       | 223.78 | 270.02 | 246.05  | 12.65  |
| Amazon_3    | -6.00      | -61.00     | Inner | DSC  | Aft     | -10.88     | -6.71      | -8.48       | 0.89       | 264.42 | 331.08 | 290.76  | 15.49  |
| Amazon_3    | -6.00      | -61.00     | Outer | DSC  | Aft     | -11.48     | -6.76      | -9.60       | 0.87       | 244.22 | 326.07 | 284.87  | 18.57  |
| Amazon_3    | -6.00      | -61.00     | Inner | DSC  | Fore    | -11.41     | -4.64      | -8.32       | 0.97       | 262.17 | 329.63 | 288.33  | 14.40  |
| Amazon_3    | -6.00      | -61.00     | Outer | DSC  | Fore    | -15.17     | -6.94      | -9.37       | 1.13       | 262.08 | 327.56 | 288.90  | 14.62  |
| GreenLand_1 | 74.69      | -42.50     | Outer | DSC  | Aft     | -10.16     | -6.51      | -8.87       | 0.82       | 220.81 | 274.04 | 248.31  | 16.26  |
| GreenLand_1 | 74.69      | -42.50     | Outer | DSC  | Fore    | -10.73     | -7.26      | -9.30       | 0.83       | 230.60 | 277.34 | 253.33  | 11.78  |
| Amazon_2    | -3.00      | -61.00     | Inner | DSC  | Aft     | -13.17     | -6.43      | -9.24       | 1.37       | 209.07 | 321.86 | 270.28  | 28.73  |
| Amazon_2    | -3.00      | -61.00     | Outer | DSC  | Aft     | -16.38     | -6.72      | -10.23      | 1.43       | 241.71 | 306.49 | 275.37  | 16.41  |
| Amazon_2    | -3.00      | -61.00     | Inner | DSC  | Fore    | -17.44     | -5.92      | -9.12       | 1.67       | 210.90 | 338.87 | 268.24  | 26.65  |
| Amazon_2    | -3.00      | -61.00     | Outer | DSC  | Fore    | -13.29     | -6.99      | -9.77       | 1.27       | 238.12 | 309.21 | 284.62  | 17.19  |

## 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            | 124.28  | 10.12        | 0.00    | 31.45   | 15.06        | 0.00            | 228.40  | 12.47        | 0.00    | 66.87   | 13.86        |

| 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    | 45.96   | 3.79         | 0.00     | 50.04   | 5.57         | 0.00     | 31.16   | 0.07         | 0.00      | 27.48   | 0.16         |
|                                                                            | <b>Outer (VV)</b> | 0.00    | 44.83   | 4.70         | 0.00     | 43.04   | 6.14         | 0.00     | 22.70   | 0.03         | 0.00      | 25.41   | 0.34         |
| <b>Sigma0(dB)</b>                                                          | <b>Inner (HH)</b> | 0.00    | 46.29   | 3.72         | 0.00     | 49.40   | 5.26         | 0.00     | 32.24   | 0.07         | 0.00      | 25.50   | 0.16         |
|                                                                            | <b>Outer (VV)</b> | 0.00    | 44.60   | 4.29         | 0.00     | 42.15   | 5.39         | 0.00     | 21.44   | 0.02         | 0.00      | 25.48   | 0.19         |

| 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

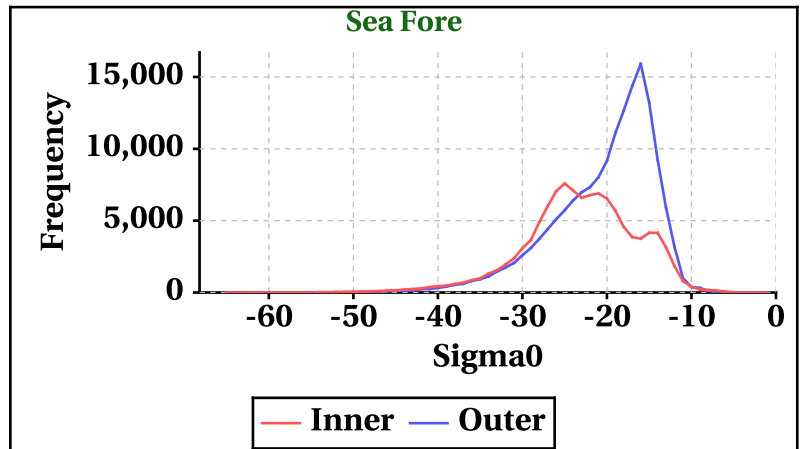
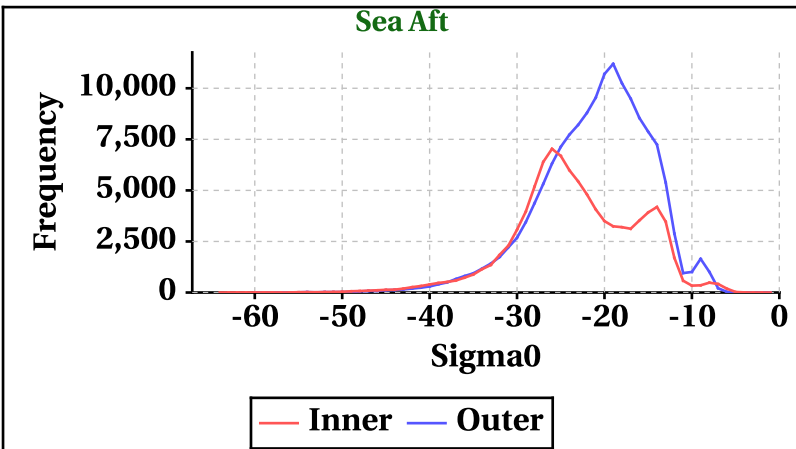
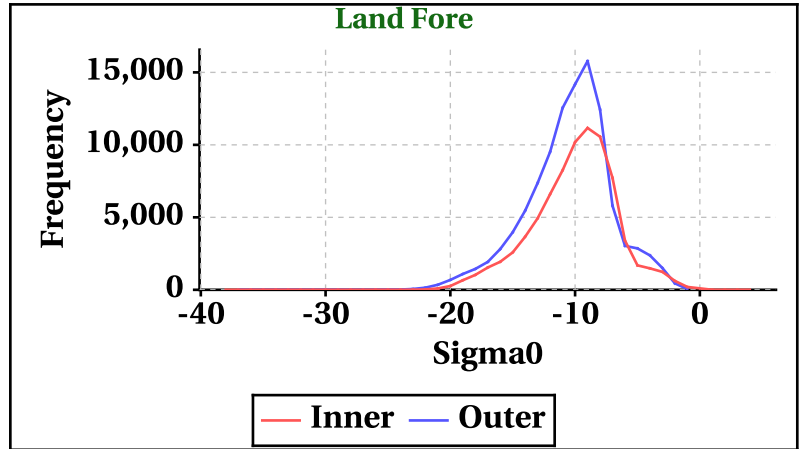
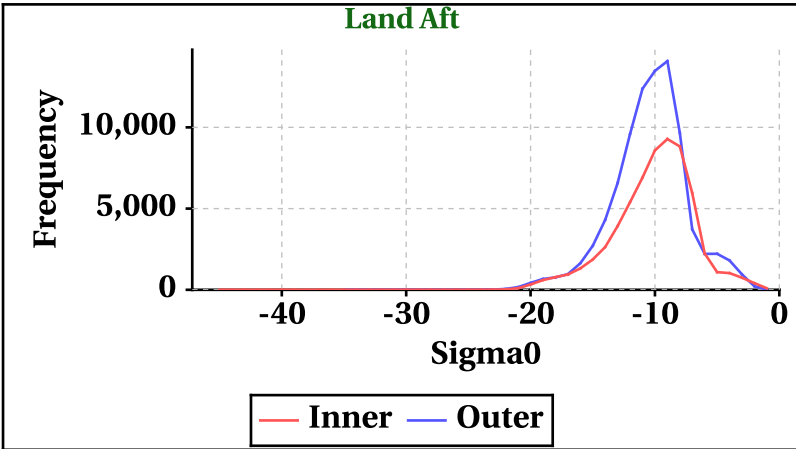
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -45      | -38       | -64     | -65      |
| Max             | -1       | 4         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -35      | -37       | -60     | -61      |
| 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            | 362      | 366       | 300     | 302      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 359      | 441       | 326     | 306      |

