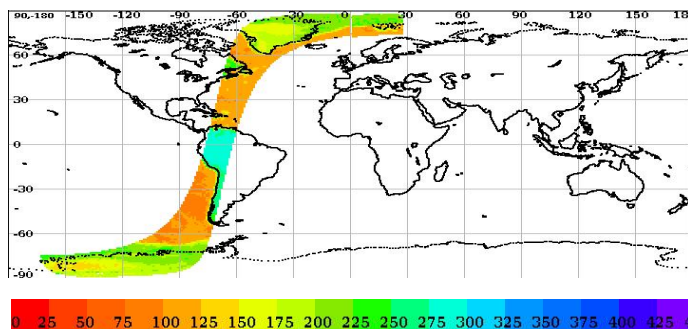


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

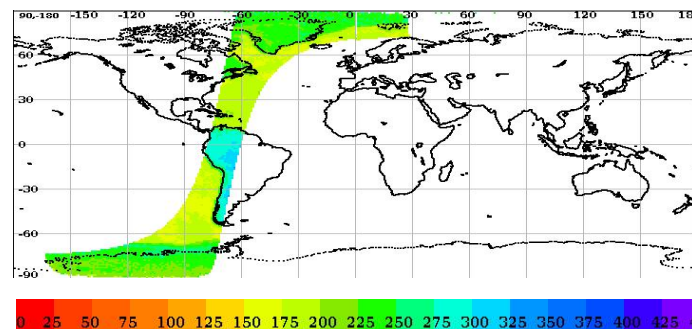
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 5906              | 5907            |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 404            | 36              | 07-11-2017        | 07-11-2017      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 50              | v1.1.2            |                 |

## Brightness Temperature

Inner Beam (HH)

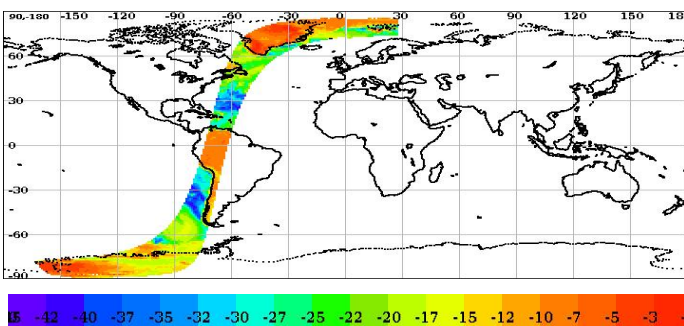


Outer Beam (VV)

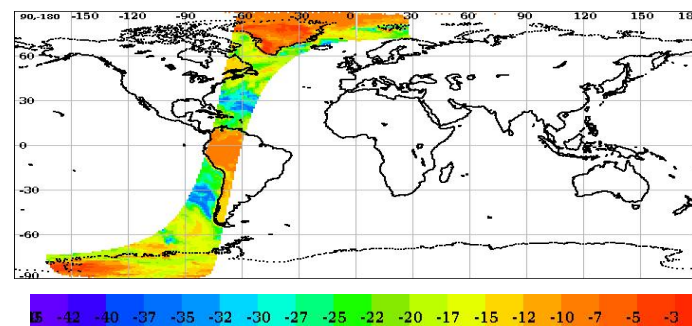


## Sigma0(dB)

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 | DSC  | Aft     | -5.91      | -3.08      | -4.48       | 0.83       | 143.07 | 176.81 | 161.77  | 12.05  |
| GreenLand_2 | 77.50      | -41.50     | Outer | DSC  | Aft     | -5.82      | -2.62      | -4.48       | 1.02       | 202.61 | 245.36 | 217.14  | 13.17  |
| GreenLand_2 | 77.50      | -41.50     | Inner | DSC  | Fore    | -6.48      | -2.37      | -4.41       | 1.27       | 131.65 | 191.88 | 160.63  | 17.02  |
| GreenLand_2 | 77.50      | -41.50     | Outer | DSC  | Fore    | -6.78      | -3.94      | -5.59       | 0.87       | 235.31 | 276.11 | 255.66  | 15.21  |
| GreenLand_3 | 71.55      | -42.45     | Inner | DSC  | Aft     | -14.00     | -8.03      | -10.21      | 1.19       | 165.16 | 232.44 | 198.10  | 17.90  |
| GreenLand_3 | 71.55      | -42.45     | Outer | DSC  | Aft     | -12.70     | -8.66      | -10.75      | 0.89       | 207.60 | 250.79 | 235.14  | 10.99  |
| GreenLand_3 | 71.55      | -42.45     | Inner | DSC  | Fore    | -14.07     | -8.10      | -10.11      | 1.43       | 162.29 | 230.81 | 188.69  | 17.23  |
| GreenLand_3 | 71.55      | -42.45     | Outer | DSC  | Fore    | -12.67     | -9.39      | -10.87      | 0.81       | 219.08 | 265.94 | 238.28  | 13.80  |
| GreenLand_1 | 74.69      | -42.50     | Inner | DSC  | Aft     | -10.79     | -6.56      | -8.27       | 0.92       | 152.11 | 202.95 | 176.97  | 12.88  |
| GreenLand_1 | 74.69      | -42.50     | Outer | DSC  | Aft     | -9.56      | -7.64      | -8.52       | 0.50       | 201.33 | 243.77 | 224.87  | 11.91  |
| GreenLand_1 | 74.69      | -42.50     | Inner | DSC  | Fore    | -12.19     | -6.06      | -8.22       | 1.39       | 146.66 | 209.75 | 179.15  | 18.18  |
| GreenLand_1 | 74.69      | -42.50     | Outer | DSC  | Fore    | -11.00     | -6.50      | -8.19       | 1.14       | 210.94 | 284.37 | 237.02  | 17.61  |
| Amazon_2    | -3.00      | -61.00     | Outer | DSC  | Aft     | -11.38     | -8.39      | -9.50       | 0.72       | 264.06 | 340.64 | 303.84  | 18.66  |
| Amazon_2    | -3.00      | -61.00     | Outer | DSC  | Fore    | -10.91     | -8.17      | -9.18       | 0.55       | 242.55 | 315.04 | 287.30  | 17.59  |
| Amazon_1    | 0.00       | -67.00     | Inner | DSC  | Aft     | -13.13     | -4.38      | -7.70       | 1.43       | 244.87 | 319.55 | 289.63  | 14.59  |
| Amazon_1    | 0.00       | -67.00     | Outer | DSC  | Aft     | -11.02     | -6.28      | -8.44       | 0.76       | 278.41 | 351.44 | 308.86  | 17.45  |
| Amazon_1    | 0.00       | -67.00     | Inner | DSC  | Fore    | -10.72     | -4.28      | -7.61       | 1.24       | 258.68 | 335.52 | 294.84  | 16.67  |
| Amazon_1    | 0.00       | -67.00     | Outer | DSC  | Fore    | -11.80     | -6.18      | -8.73       | 1.01       | 243.01 | 320.66 | 282.57  | 17.46  |

## 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. (%) |
| <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            | 25.70   | 15.05        | 0.00    | 32.31   | 15.80        | 0.00            | 358.87  | 10.96        | 0.00    | 35.43   | 10.92        |

| 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    | 53.47   | 10.36        | 0.00     | 52.36   | 8.80         | 0.00     | 32.57   | 0.19         | 0.00      | 23.98   | 0.15         |
|  | <b>Outer (VV)</b> | 0.00    | 42.67   | 6.82         | 0.00     | 42.53   | 7.63         | 0.00     | 28.28   | 0.06         | 0.00      | 29.22   | 0.11         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 55.38   | 9.71         | 0.00     | 52.74   | 8.19         | 0.00     | 34.48   | 0.13         | 0.00      | 23.60   | 0.07         |
|  | <b>Outer (VV)</b> | 0.00    | 39.81   | 6.96         | 0.00     | 43.19   | 7.29         | 0.00     | 26.54   | 0.06         | 0.00      | 27.56   | 0.09         |

| 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

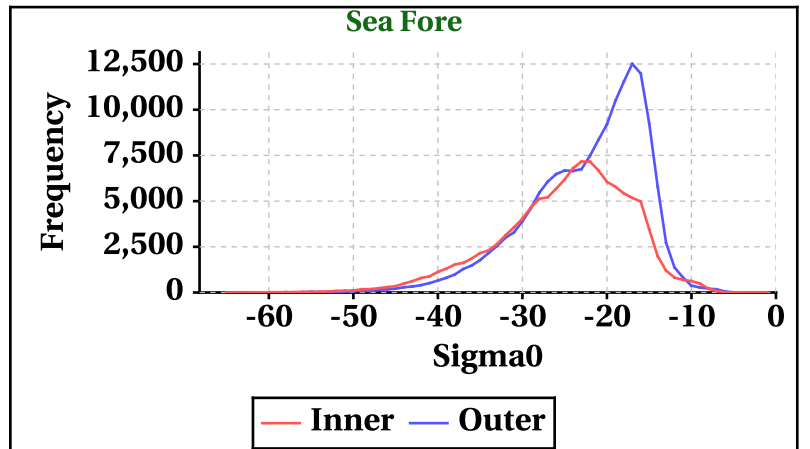
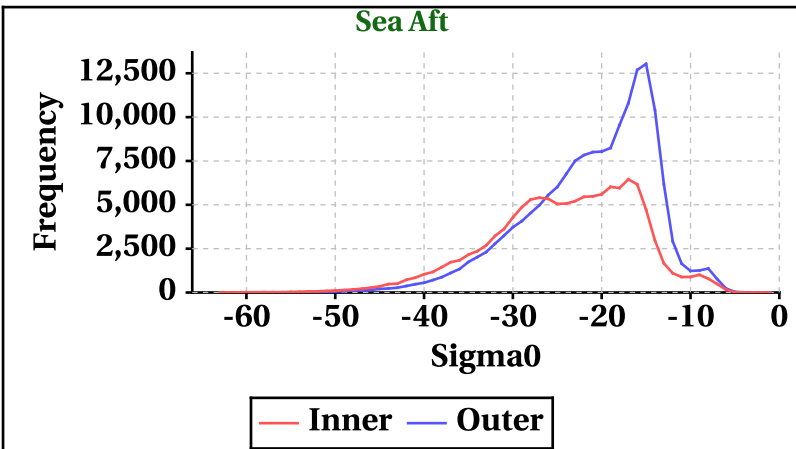
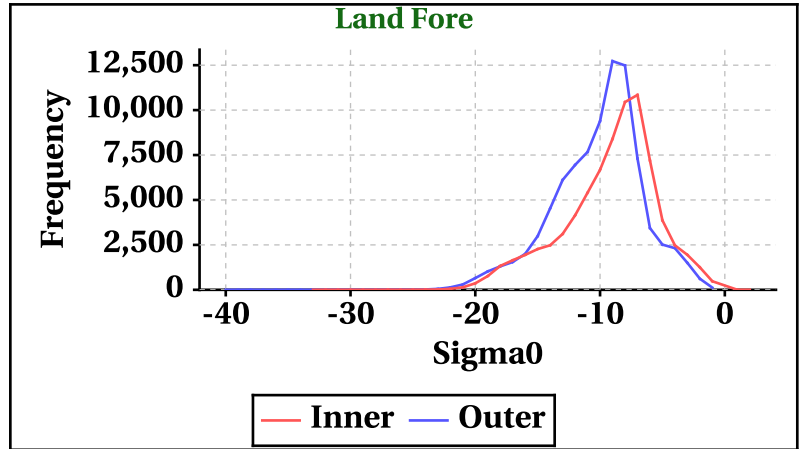
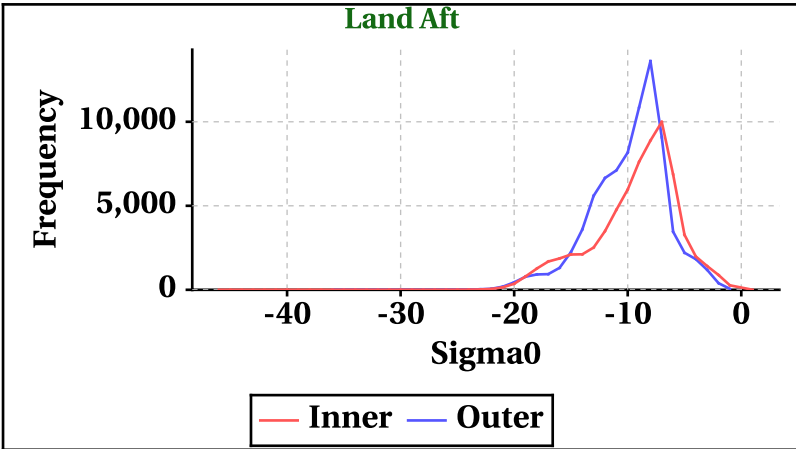
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -46      | -33       | -63     | -65      |
| Max             | 1        | 2         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -36      | -40       | -59     | -60      |
| 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            | 364      | 363       | 289     | 281      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 428      | 368       | 331     | 309      |

