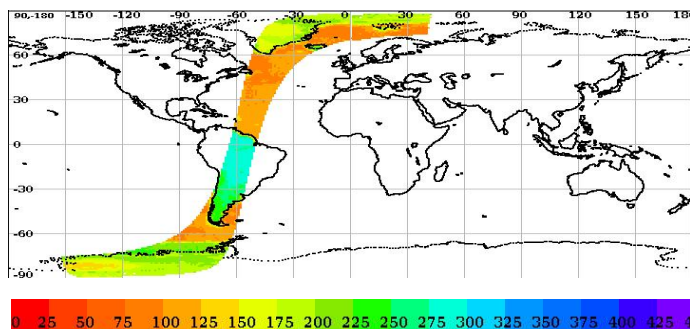


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

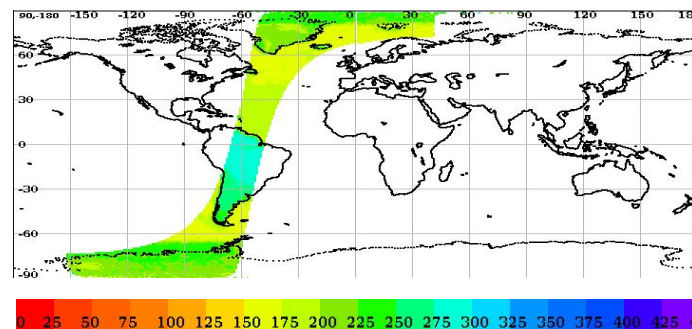
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 5050              | 5051            |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 813            | 72              | 09-09-2017        | 09-09-2017      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 25              | v1.1.2            |                 |

## Brightness Temperature

Inner Beam (HH)

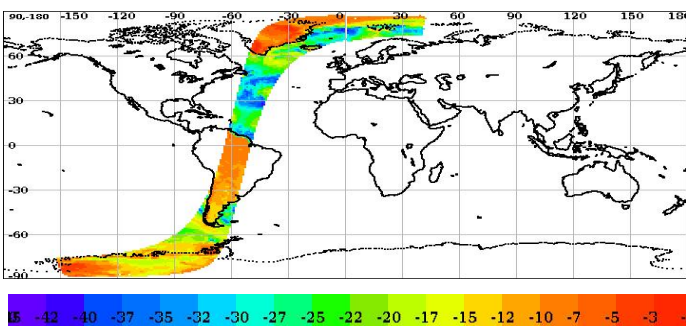


Outer Beam (VV)

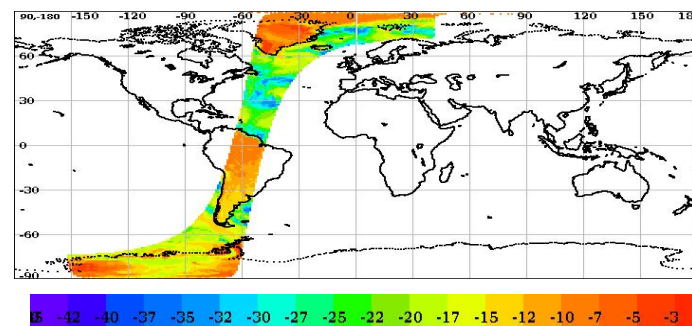


## Sigma0(dB)

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     | -7.47      | -2.57      | -5.23       | 1.20       | 134.98 | 187.23 | 162.02  | 15.66  |
| GreenLand_2 | 77.50      | -41.50     | Outer | DSC  | Aft     | -8.58      | -2.03      | -5.33       | 1.45       | 182.37 | 238.63 | 203.71  | 14.43  |
| GreenLand_2 | 77.50      | -41.50     | Inner | DSC  | Fore    | -10.06     | -1.00      | -5.43       | 1.78       | 135.73 | 197.15 | 162.06  | 13.57  |
| GreenLand_2 | 77.50      | -41.50     | Outer | DSC  | Fore    | -8.00      | -2.71      | -5.05       | 1.44       | 168.34 | 235.50 | 199.92  | 15.51  |
| GreenLand_3 | 71.55      | -42.45     | Inner | DSC  | Aft     | -13.02     | -7.71      | -10.62      | 1.06       | 164.63 | 222.80 | 190.19  | 11.82  |
| GreenLand_3 | 71.55      | -42.45     | Outer | DSC  | Aft     | -13.71     | -9.25      | -11.15      | 1.03       | 193.79 | 256.63 | 227.39  | 18.87  |
| GreenLand_3 | 71.55      | -42.45     | Inner | DSC  | Fore    | -17.72     | -8.09      | -10.91      | 1.68       | 158.56 | 226.49 | 187.35  | 13.85  |
| GreenLand_3 | 71.55      | -42.45     | Outer | DSC  | Fore    | -13.96     | -8.88      | -11.91      | 1.27       | 182.78 | 258.44 | 225.11  | 18.09  |
| Amazon_3    | -6.00      | -61.00     | Inner | DSC  | Aft     | -10.92     | -5.40      | -8.03       | 1.17       | 249.12 | 340.16 | 290.89  | 19.70  |
| Amazon_3    | -6.00      | -61.00     | Outer | DSC  | Aft     | -11.89     | -5.74      | -9.16       | 0.91       | 234.27 | 321.61 | 287.55  | 15.38  |
| Amazon_3    | -6.00      | -61.00     | Inner | DSC  | Fore    | -12.80     | -4.22      | -8.25       | 1.82       | 225.04 | 331.10 | 286.63  | 19.04  |
| Amazon_3    | -6.00      | -61.00     | Outer | DSC  | Fore    | -12.66     | -6.23      | -9.31       | 1.23       | 256.36 | 328.87 | 289.23  | 18.18  |
| GreenLand_1 | 74.69      | -42.50     | Inner | DSC  | Aft     | -12.22     | -5.56      | -8.68       | 1.36       | 132.00 | 192.49 | 170.50  | 15.27  |
| GreenLand_1 | 74.69      | -42.50     | Outer | DSC  | Aft     | -12.12     | -6.33      | -9.10       | 1.24       | 184.57 | 243.65 | 212.96  | 16.22  |
| GreenLand_1 | 74.69      | -42.50     | Inner | DSC  | Fore    | -12.37     | -6.08      | -9.17       | 1.43       | 140.95 | 195.83 | 174.11  | 12.88  |
| GreenLand_1 | 74.69      | -42.50     | Outer | DSC  | Fore    | -12.55     | -6.36      | -9.19       | 1.50       | 188.71 | 246.14 | 214.44  | 16.65  |
| Amazon_2    | -3.00      | -61.00     | Inner | DSC  | Aft     | -16.14     | -6.01      | -8.91       | 1.73       | 225.66 | 331.19 | 270.81  | 26.65  |
| Amazon_2    | -3.00      | -61.00     | Outer | DSC  | Aft     | -17.04     | -6.99      | -9.95       | 1.55       | 230.37 | 311.94 | 274.24  | 18.28  |
| Amazon_2    | -3.00      | -61.00     | Inner | DSC  | Fore    | -18.86     | -3.77      | -9.12       | 2.37       | 223.81 | 313.61 | 267.62  | 21.57  |
| Amazon_2    | -3.00      | -61.00     | Outer | DSC  | Fore    | -20.17     | -5.92      | -10.19      | 2.05       | 242.57 | 324.37 | 277.33  | 15.71  |

## 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            | 24.93   | 9.87         | 0.00    | 24.06   | 10.64        | 0.00            | 353.91  | 4.74         | 0.00    | 73.19   | 4.77         |

| 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    | 43.24   | 3.08         | 0.00     | 44.43   | 2.94         | 0.00     | 35.18   | 0.02         | 0.00      | 29.17   | 0.04         |
|  | <b>Outer (VV)</b> | 0.00    | 43.75   | 2.35         | 0.00     | 43.37   | 2.37         | 0.00     | 22.61   | 0.00         | 0.00      | 28.72   | 0.01         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 43.46   | 2.68         | 0.00     | 42.21   | 2.54         | 0.00     | 31.62   | 0.02         | 0.00      | 25.97   | 0.03         |
|  | <b>Outer (VV)</b> | 0.00    | 45.19   | 2.08         | 0.00     | 42.78   | 2.15         | 0.00     | 20.40   | 0.00         | 0.00      | 27.27   | 0.01         |

| 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

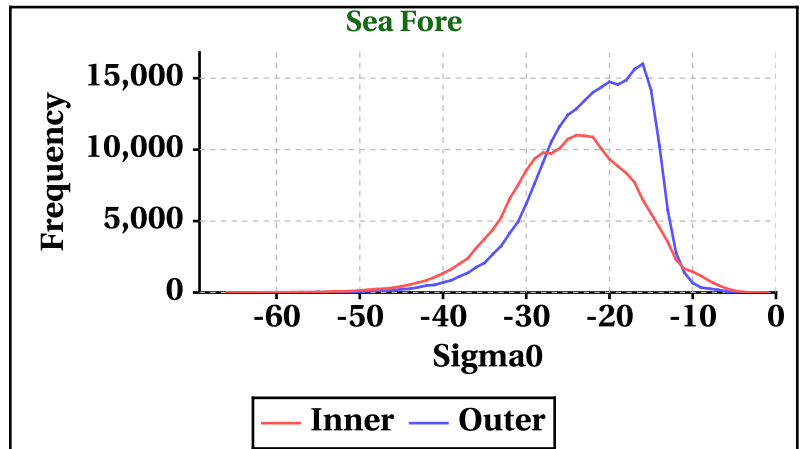
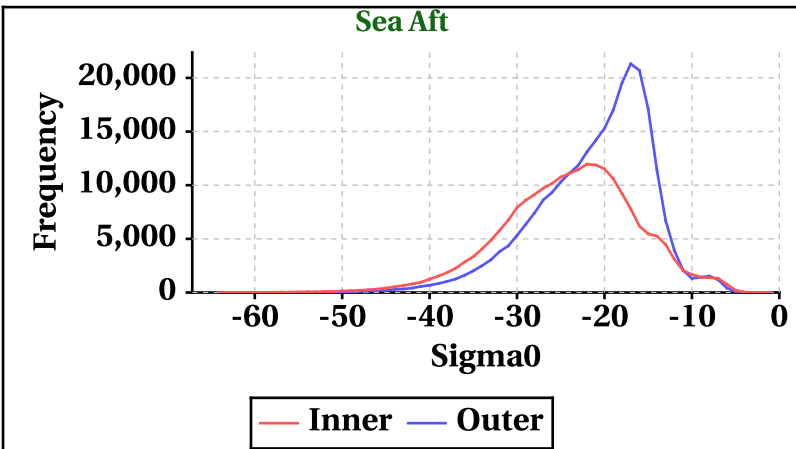
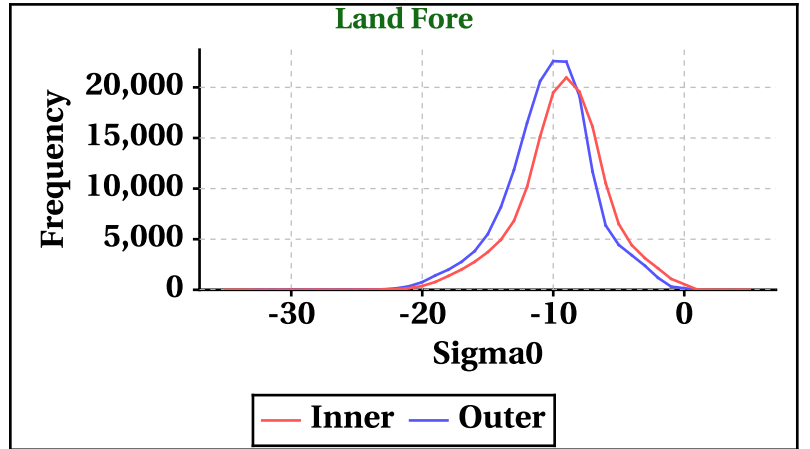
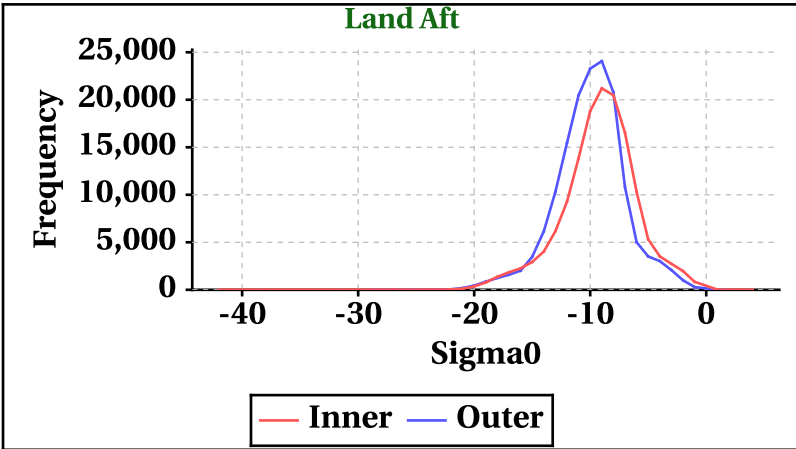
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -42      | -35       | -64     | -66      |
| Max             | 4        | 5         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -29      | -33       | -60     | -61      |
| Max             | 2        | 1         | -1      | -1       |



## Brightness Temperature(K)

| Inner Beam(HH) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 356      | 368       | 283     | 291      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 351      | 351       | 298     | 294      |

