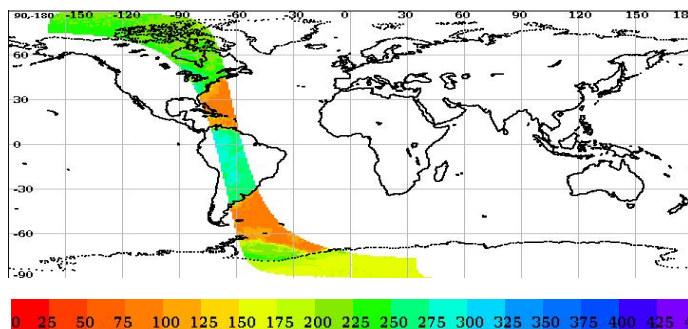


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

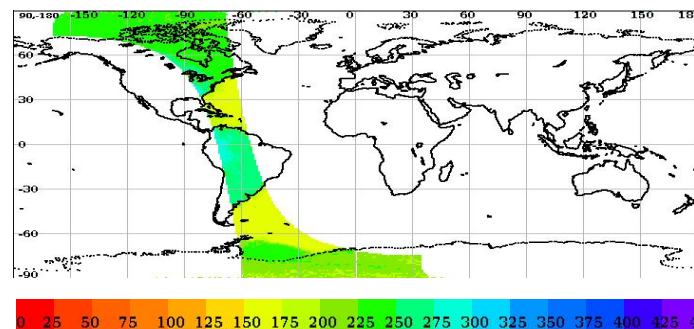
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 2709              | 2710            |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 814            | 72              | 01-04-2017        | 01-04-2017      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 25              | 1.1.1             |                 |

## Brightness Temperature

Inner Beam (HH)

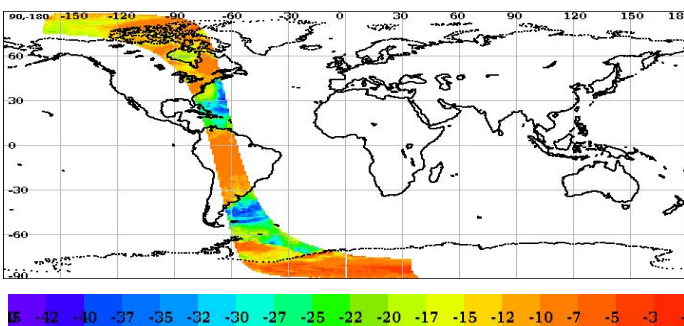


Outer Beam (VV)

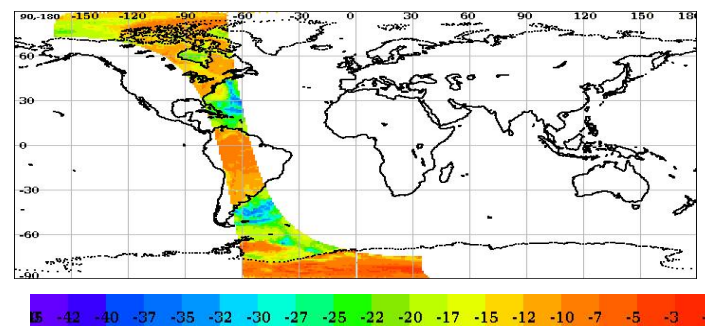


## Sigma0(dB)

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 |
|-----------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| Amazon_3  | -6.00      | -61.00     | Inner | DSC  | Aft     | -11.84     | -5.71      | -8.91       | 1.06       | 241.50 | 324.48 | 278.54  | 17.26  |
| Amazon_3  | -6.00      | -61.00     | Outer | DSC  | Aft     | -13.25     | -5.64      | -9.55       | 1.40       | 232.32 | 301.15 | 266.45  | 13.92  |
| Amazon_3  | -6.00      | -61.00     | Inner | DSC  | Fore    | -14.87     | -4.30      | -8.71       | 2.31       | 245.79 | 310.35 | 274.08  | 15.46  |
| Amazon_3  | -6.00      | -61.00     | Outer | DSC  | Fore    | -15.79     | -7.49      | -9.99       | 1.40       | 236.50 | 302.24 | 274.37  | 14.58  |
| Amazon_2  | -3.00      | -61.00     | Inner | DSC  | Aft     | -15.05     | -5.62      | -9.29       | 1.72       | 181.93 | 312.53 | 247.36  | 28.39  |
| Amazon_2  | -3.00      | -61.00     | Outer | DSC  | Aft     | -15.00     | -6.25      | -10.38      | 1.67       | 223.21 | 304.41 | 258.34  | 16.75  |
| Amazon_2  | -3.00      | -61.00     | Inner | DSC  | Fore    | -21.56     | -5.02      | -9.41       | 2.92       | 205.72 | 305.81 | 243.71  | 24.20  |
| Amazon_2  | -3.00      | -61.00     | Outer | DSC  | Fore    | -19.10     | -6.42      | -10.22      | 2.02       | 209.15 | 289.72 | 259.06  | 17.74  |
| Amazon_1  | 0.00       | -67.00     | Inner | DSC  | Aft     | -10.46     | -3.39      | -7.81       | 1.22       | 251.30 | 334.95 | 286.14  | 16.18  |
| Amazon_1  | 0.00       | -67.00     | Outer | DSC  | Aft     | -11.23     | -5.10      | -8.56       | 1.35       | 236.14 | 324.62 | 277.25  | 18.02  |
| Amazon_1  | 0.00       | -67.00     | Inner | DSC  | Fore    | -13.65     | -4.22      | -7.79       | 1.47       | 238.59 | 316.86 | 283.87  | 16.37  |
| Amazon_1  | 0.00       | -67.00     | Outer | DSC  | Fore    | -12.35     | -6.40      | -8.70       | 1.08       | 235.27 | 316.28 | 277.84  | 17.64  |

## 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            | 25.93   | 12.92        | 0.00    | 27.50   | 12.97        | 0.00            | 196.93  | 4.79         | 0.00    | 248.36  | 5.09         |

| 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    | 40.48   | 1.91         | 0.00     | 38.39   | 2.34         | 0.00     | 42.26   | 0.23         | 0.00      | 39.15   | 0.19         |
|  | <b>Outer (VV)</b> | 0.00    | 38.50   | 2.03         | 0.00     | 41.20   | 2.81         | 0.00     | 35.49   | 0.17         | 0.00      | 45.52   | 0.16         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 40.50   | 1.93         | 0.00     | 37.92   | 2.01         | 0.00     | 41.20   | 0.16         | 0.00      | 39.55   | 0.11         |
|  | <b>Outer (VV)</b> | 0.00    | 35.80   | 2.06         | 0.00     | 37.25   | 1.92         | 0.00     | 38.14   | 0.13         | 0.00      | 42.43   | 0.07         |

| 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

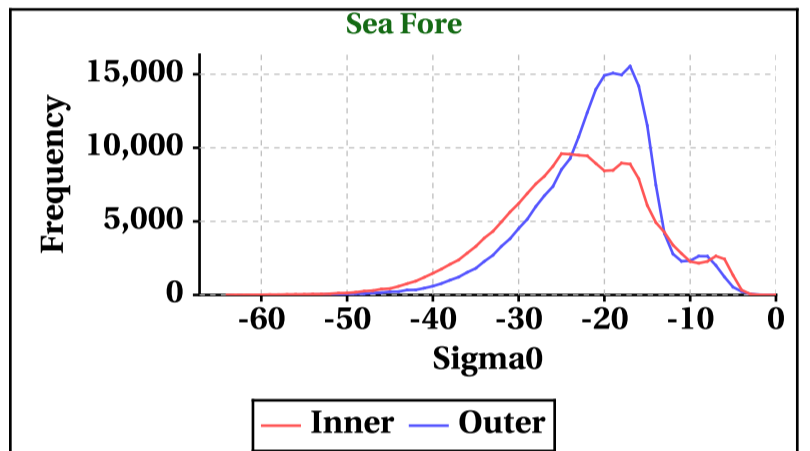
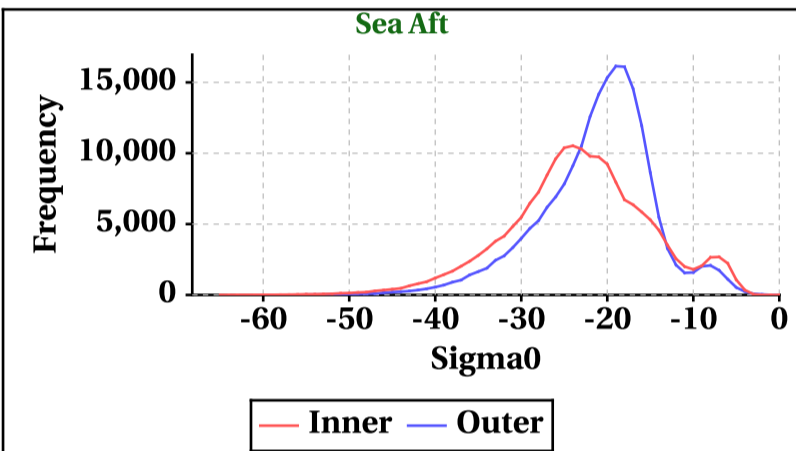
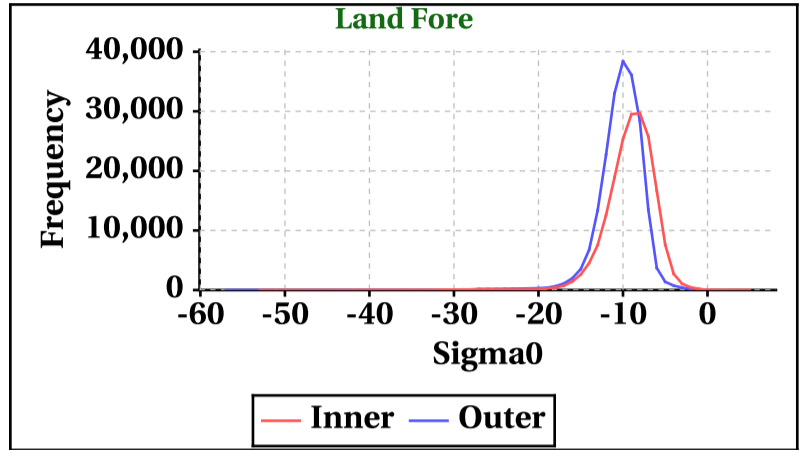
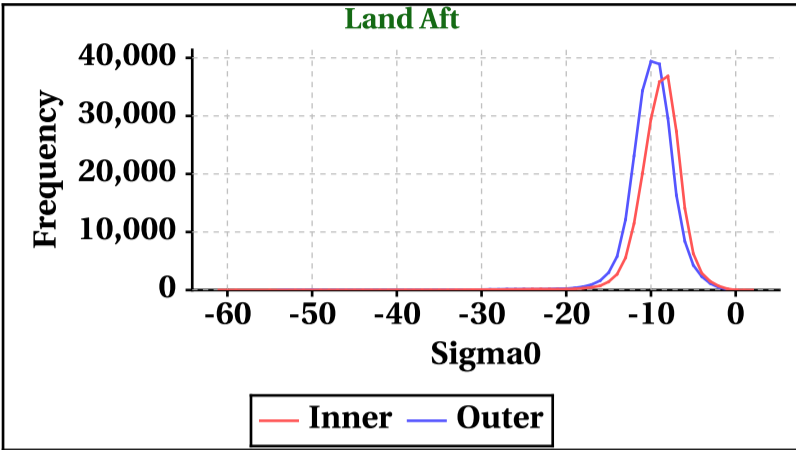
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -61      | -53       | -65     | -64      |
| Max             | 2        | 5         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -54      | -57       | -61     | -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            | 417      | 361       | 301     | 286      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 404      | 382       | 323     | 307      |

