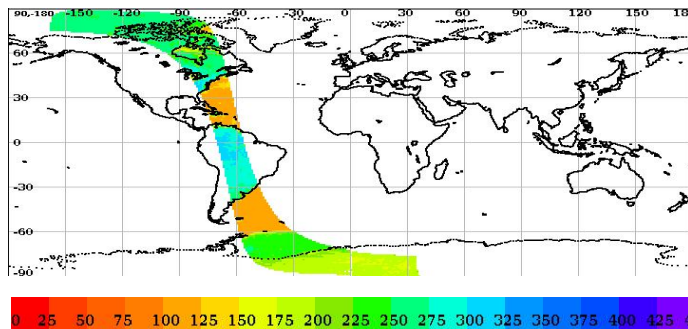


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

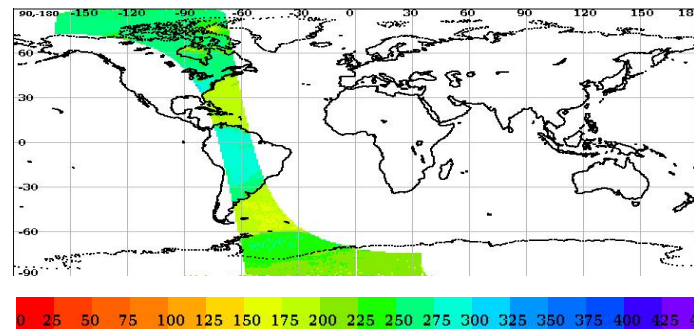
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 19528             | 19529           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 813            | 72              | 04-06-2020        | 04-06-2020      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 25              | v1.1.4            |                 |

## Brightness Temperature

Inner Beam (HH)

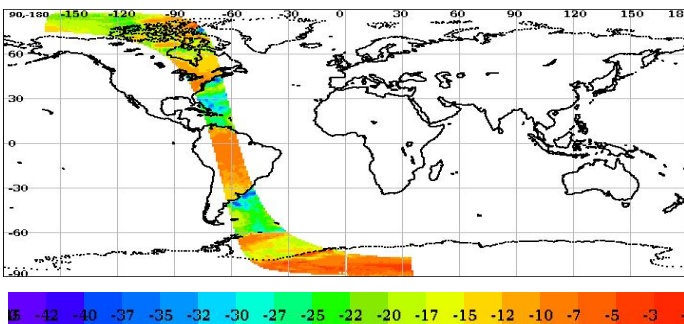


Outer Beam (VV)

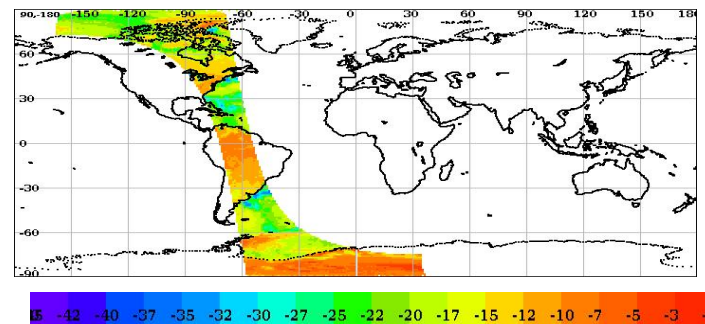


## Sigma0(dB)

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 | ASC  | Aft     | -11.75     | -6.45      | -8.71       | 0.86       | 266.79 | 332.07 | 298.69  | 16.89  |
| Amazon_3  | -6.00      | -61.00     | Outer | ASC  | Aft     | -12.30     | -8.06      | -10.03      | 0.78       | 244.93 | 322.12 | 287.30  | 17.19  |
| Amazon_3  | -6.00      | -61.00     | Inner | ASC  | Fore    | -11.12     | -5.52      | -8.69       | 1.08       | 275.79 | 358.01 | 303.87  | 16.70  |
| Amazon_3  | -6.00      | -61.00     | Outer | ASC  | Fore    | -13.15     | -6.77      | -9.76       | 0.95       | 251.37 | 325.45 | 288.95  | 15.62  |
| Amazon_2  | -3.00      | -61.00     | Inner | ASC  | Aft     | -15.88     | -6.80      | -9.56       | 1.63       | 221.89 | 329.34 | 275.75  | 28.54  |
| Amazon_2  | -3.00      | -61.00     | Outer | ASC  | Aft     | -15.83     | -8.13      | -10.69      | 1.36       | 229.79 | 310.68 | 270.46  | 20.83  |
| Amazon_2  | -3.00      | -61.00     | Inner | ASC  | Fore    | -16.45     | -6.80      | -9.57       | 1.74       | 234.97 | 329.84 | 274.65  | 23.44  |
| Amazon_2  | -3.00      | -61.00     | Outer | ASC  | Fore    | -16.94     | -7.28      | -10.72      | 1.75       | 242.49 | 323.66 | 270.89  | 17.96  |
| Amazon_1  | 0.00       | -67.00     | Inner | ASC  | Aft     | -11.28     | -5.38      | -8.32       | 1.09       | 262.72 | 346.77 | 306.21  | 15.56  |
| Amazon_1  | 0.00       | -67.00     | Outer | ASC  | Aft     | -12.50     | -5.73      | -9.25       | 1.04       | 256.13 | 326.81 | 295.59  | 17.05  |
| Amazon_1  | 0.00       | -67.00     | Inner | ASC  | Fore    | -11.92     | -5.49      | -8.05       | 1.09       | 271.73 | 342.43 | 305.31  | 14.76  |
| Amazon_1  | 0.00       | -67.00     | Outer | ASC  | Fore    | -12.67     | -6.32      | -9.10       | 1.22       | 263.06 | 329.32 | 296.00  | 17.15  |

## 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            | 22.20   | 6.15         | 0.00    | 68.37   | 7.44         | 0.00            | 181.18  | 2.70         | 0.00    | 154.70  | 3.99         |

| 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    | 42.87   | 0.82         | 0.00     | 37.10   | 1.12         | 0.00     | 40.30   | 0.26         | 0.00      | 40.87   | 0.28         |
|                                                                            | <b>Outer (VV)</b> | 0.00    | 42.33   | 0.89         | 0.00     | 39.24   | 1.48         | 0.00     | 40.33   | 0.25         | 0.00      | 34.13   | 0.31         |
| <b>Sigma0(dB)</b>                                                          | <b>Inner (HH)</b> | 0.00    | 42.97   | 0.82         | 0.00     | 37.09   | 1.02         | 0.00     | 40.40   | 0.27         | 0.00      | 42.43   | 0.24         |
|                                                                            | <b>Outer (VV)</b> | 0.00    | 39.97   | 0.81         | 0.00     | 39.42   | 1.06         | 0.00     | 38.77   | 0.23         | 0.00      | 34.86   | 0.20         |

| 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

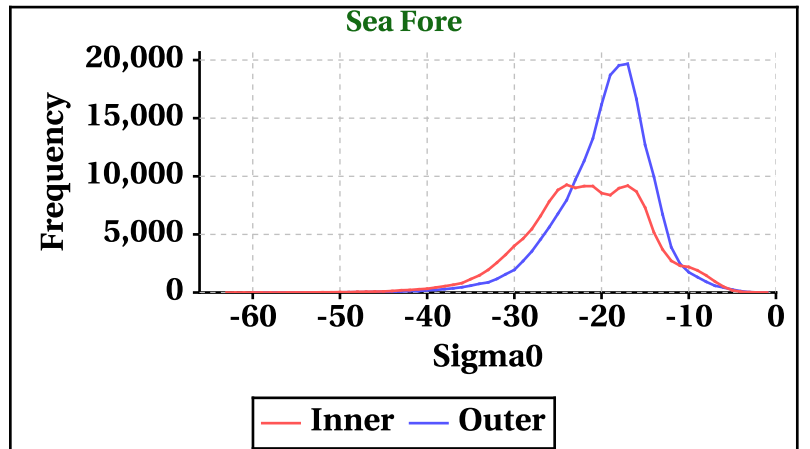
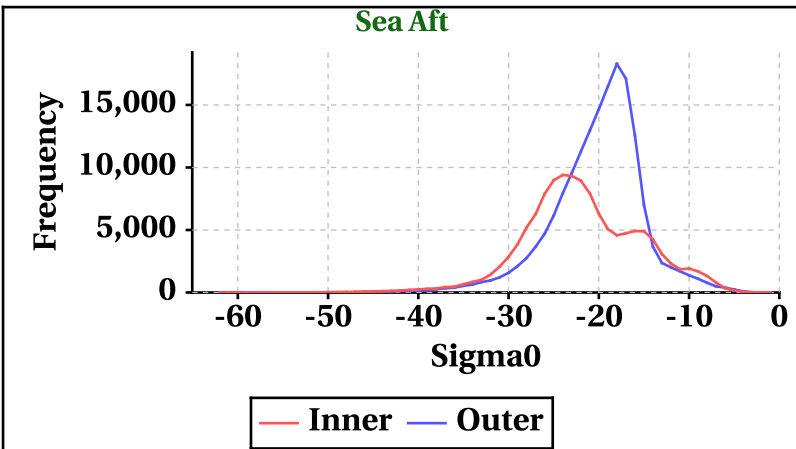
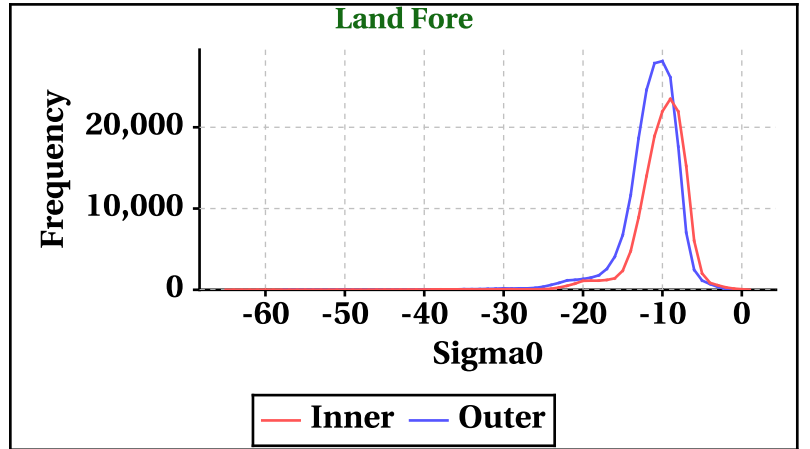
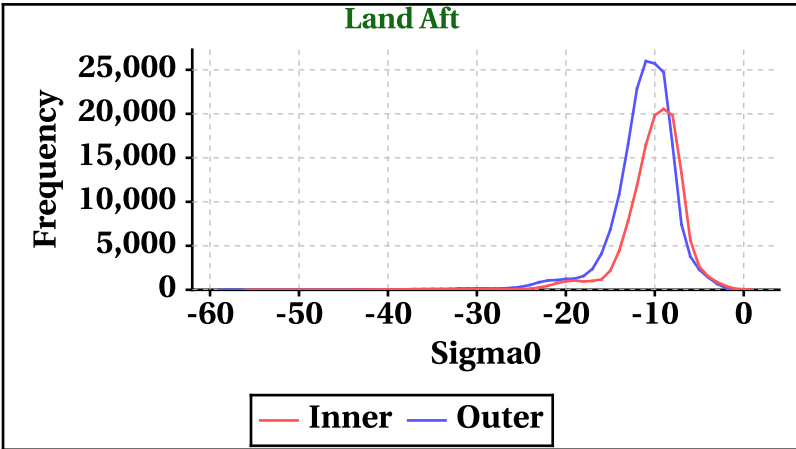
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -56      | -65       | -62     | -63      |
| Max             | 1        | 1         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -59      | -58       | -60     | -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            | 376      | 366       | 328     | 322      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 379      | 424       | 312     | 324      |

