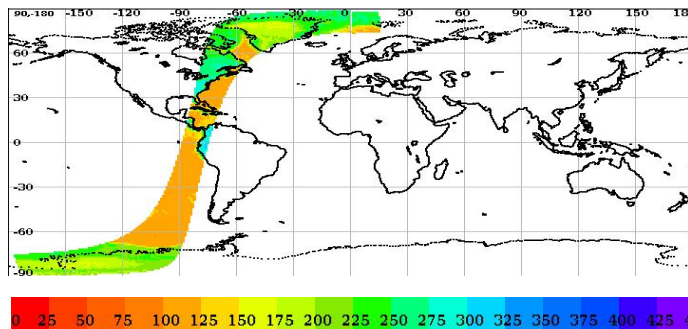


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

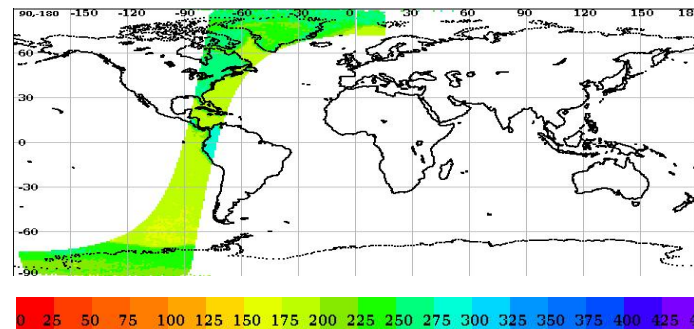
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 19145             | 19146           |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 812            | 72              | 08-05-2020        | 08-05-2020      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 25              | v1.1.4            |                 |

## Brightness Temperature

Inner Beam (HH)

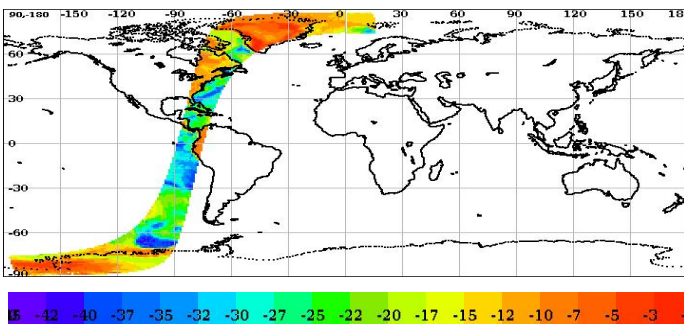


Outer Beam (VV)

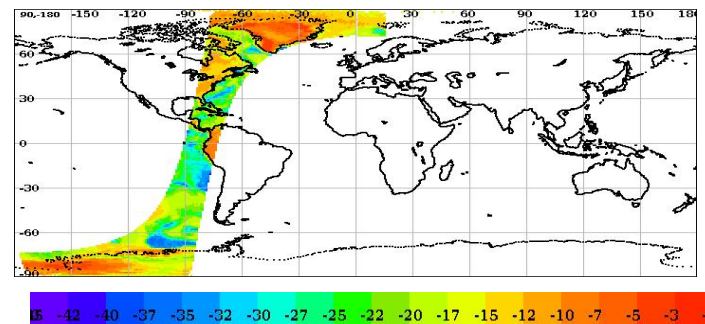


## Sigma0(dB)

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 |
|-------------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| GreenLand_2 | 77.50      | -41.50     | Inner | DSC  | Aft     | -7.72      | -4.87      | -6.08       | 0.92       | 153.56 | 169.71 | 161.67  | 6.29   |
| GreenLand_2 | 77.50      | -41.50     | Outer | DSC  | Aft     | -5.96      | -4.29      | -5.24       | 0.50       | 193.52 | 252.43 | 221.22  | 23.24  |
| GreenLand_2 | 77.50      | -41.50     | Inner | DSC  | Fore    | -7.45      | -3.45      | -5.54       | 1.22       | 150.30 | 191.79 | 171.99  | 12.74  |
| GreenLand_2 | 77.50      | -41.50     | Outer | DSC  | Fore    | -7.12      | -3.82      | -5.14       | 0.86       | 223.31 | 269.92 | 239.54  | 13.91  |
| GreenLand_3 | 71.55      | -42.45     | Inner | DSC  | Aft     | -11.31     | -7.53      | -9.24       | 0.89       | 176.53 | 243.71 | 200.80  | 13.84  |
| GreenLand_3 | 71.55      | -42.45     | Outer | DSC  | Aft     | -12.38     | -9.53      | -11.32      | 0.70       | 206.25 | 256.40 | 230.99  | 13.27  |
| GreenLand_3 | 71.55      | -42.45     | Inner | DSC  | Fore    | -11.52     | -6.83      | -9.65       | 0.99       | 178.27 | 234.70 | 202.11  | 14.75  |
| GreenLand_3 | 71.55      | -42.45     | Outer | DSC  | Fore    | -14.96     | -9.76      | -11.76      | 1.09       | 215.95 | 248.85 | 230.88  | 10.04  |
| GreenLand_1 | 74.69      | -42.50     | Inner | DSC  | Aft     | -11.93     | -7.55      | -9.78       | 1.24       | 174.91 | 225.68 | 192.24  | 14.06  |
| GreenLand_1 | 74.69      | -42.50     | Outer | DSC  | Aft     | -11.11     | -7.61      | -9.37       | 1.05       | 205.08 | 268.93 | 230.53  | 16.54  |
| GreenLand_1 | 74.69      | -42.50     | Inner | DSC  | Fore    | -11.32     | -6.80      | -9.05       | 0.91       | 163.02 | 222.17 | 191.46  | 18.86  |
| GreenLand_1 | 74.69      | -42.50     | Outer | DSC  | Fore    | -10.73     | -5.79      | -9.05       | 1.10       | 213.48 | 283.75 | 248.46  | 23.07  |

## 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            | 26.75   | 5.80         | 0.00    | 24.56   | 6.77         | 0.00            | 358.66  | 2.19         | 0.00    | 63.23   | 3.01         |

| 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    | 43.65   | 2.01         | 0.00     | 44.35   | 2.49         | 0.00     | 30.15   | 0.08         | 0.00      | 45.03   | 0.05         |
|  | <b>Outer (VV)</b> | 0.00    | 41.65   | 1.86         | 0.00     | 37.71   | 2.73         | 0.00     | 31.25   | 0.04         | 0.00      | 29.73   | 0.05         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 43.79   | 2.02         | 0.00     | 45.96   | 2.32         | 0.00     | 29.41   | 0.06         | 0.00      | 46.58   | 0.03         |
|  | <b>Outer (VV)</b> | 0.00    | 40.55   | 1.82         | 0.00     | 37.33   | 2.33         | 0.00     | 31.81   | 0.03         | 0.00      | 30.48   | 0.02         |

| 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

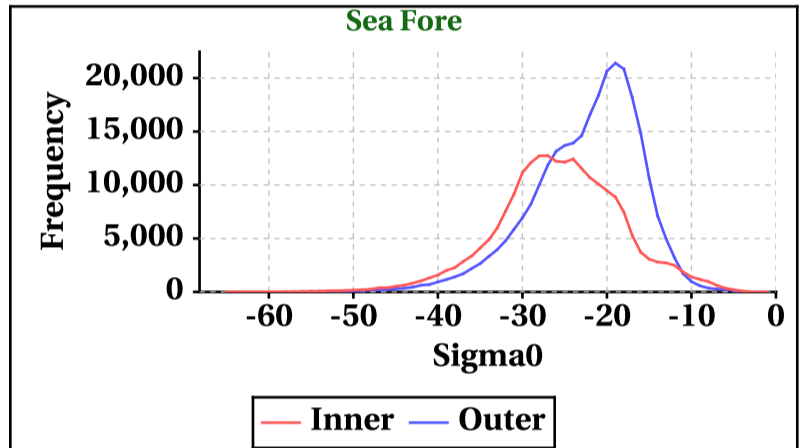
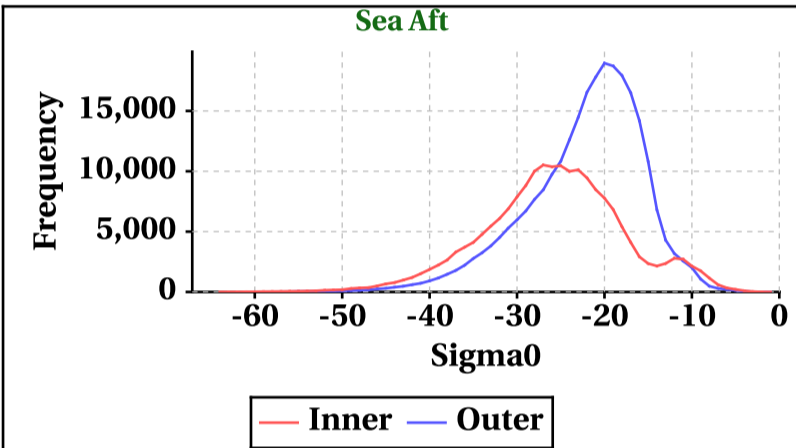
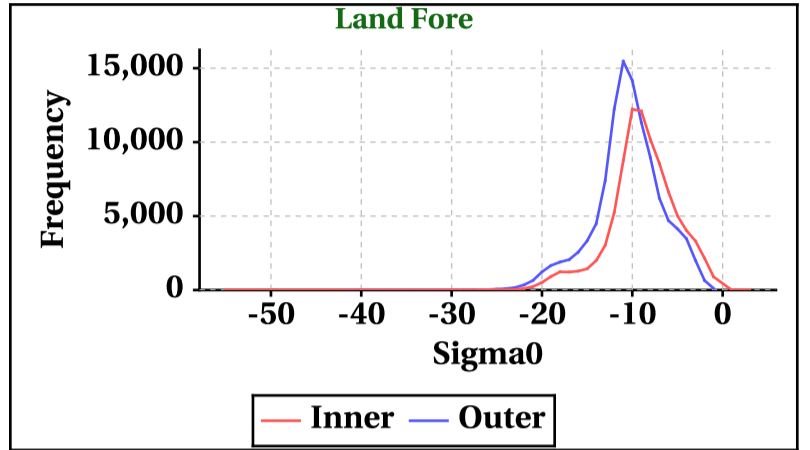
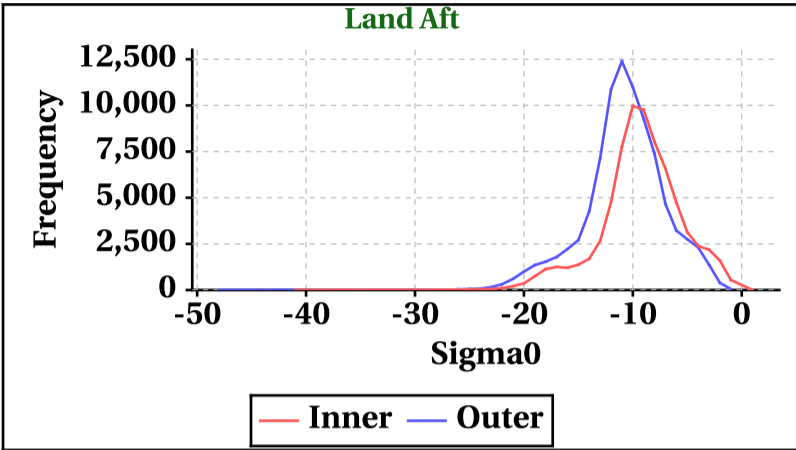
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -41      | -55       | -64     | -65      |
| Max             | 1        | 3         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -48      | -42       | -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            | 375      | 355       | 304     | 308      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 348      | 342       | 323     | 311      |

