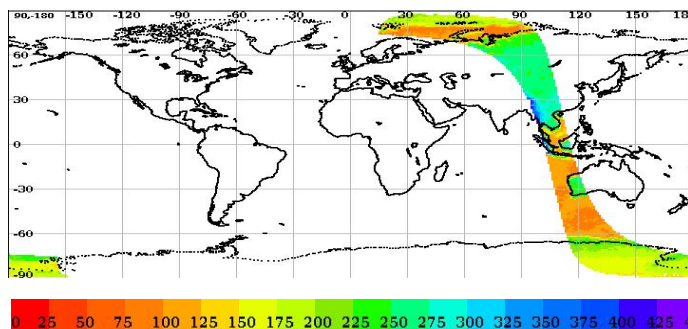


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

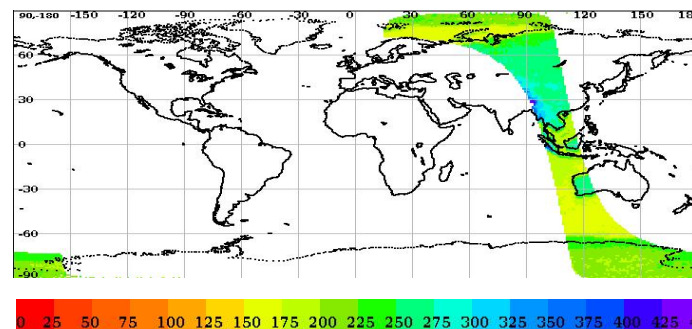
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 4702              | 4703            |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 405            | 36              | 16-08-2017        | 16-08-2017      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| SN             | 50              | v1.1.2            |                 |

## Brightness Temperature

Inner Beam (HH)

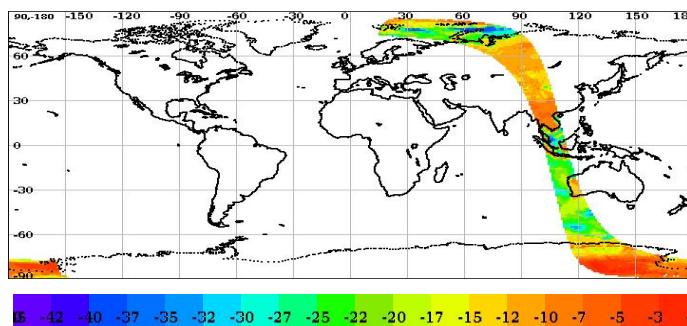


Outer Beam (VV)

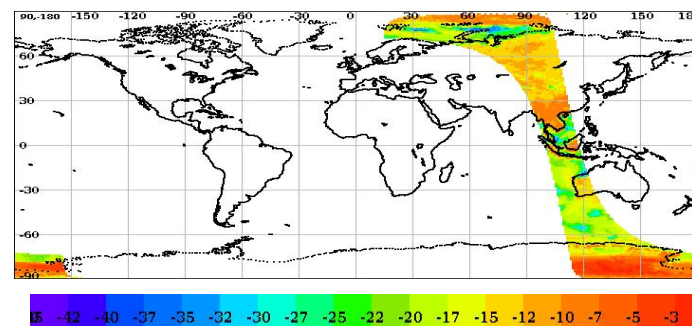


## Sigma0(dB)

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 |
|-----------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| ANT_1     | -75.00     | 121.00     | Inner | ASC  | Aft     | -10.80     | -3.92      | -6.83       | 1.50       | 148.67 | 201.20 | 176.20  | 13.99  |
| ANT_1     | -75.00     | 121.00     | Outer | ASC  | Aft     | -9.80      | -6.71      | -8.11       | 0.82       | 179.26 | 224.56 | 203.64  | 12.67  |
| ANT_1     | -75.00     | 121.00     | Inner | ASC  | Fore    | -12.10     | -4.64      | -6.95       | 1.37       | 147.12 | 214.49 | 175.18  | 15.78  |
| ANT_1     | -75.00     | 121.00     | Outer | ASC  | Fore    | -9.86      | -5.74      | -7.52       | 0.97       | 182.89 | 252.88 | 208.28  | 15.65  |
| Australia | -23.00     | 118.00     | Inner | ASC  | Aft     | -13.97     | -7.37      | -9.79       | 1.12       | 203.96 | 301.21 | 258.62  | 16.23  |
| Australia | -23.00     | 118.00     | Outer | ASC  | Aft     | -14.38     | -9.40      | -11.37      | 0.94       | 222.06 | 292.59 | 264.69  | 16.84  |
| Australia | -23.00     | 118.00     | Inner | ASC  | Fore    | -16.45     | -5.51      | -9.63       | 2.00       | 216.88 | 292.87 | 261.98  | 16.42  |
| Australia | -23.00     | 118.00     | Outer | ASC  | Fore    | -13.47     | -7.76      | -11.13      | 1.11       | 232.39 | 308.69 | 263.54  | 16.26  |

## 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            | 37.39   | 15.94        | 0.00    | 28.63   | 13.87        | 0.00            | 156.58  | 15.31        | 0.00    | 70.18   | 15.06        |

| 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    | 50.89   | 7.09         | 0.00     | 57.06   | 6.82         | 0.00     | 38.80   | 0.23         | 0.00      | 33.02   | 0.49         |
|  | <b>Outer (VV)</b> | 0.00    | 45.79   | 4.63         | 0.00     | 46.88   | 5.62         | 0.00     | 41.43   | 0.40         | 0.00      | 34.38   | 0.35         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 49.01   | 6.01         | 0.00     | 60.23   | 6.23         | 0.00     | 38.65   | 0.20         | 0.00      | 31.64   | 0.26         |
|  | <b>Outer (VV)</b> | 0.00    | 43.64   | 3.65         | 0.00     | 44.64   | 4.63         | 0.00     | 41.58   | 0.27         | 0.00      | 31.12   | 0.23         |

| 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

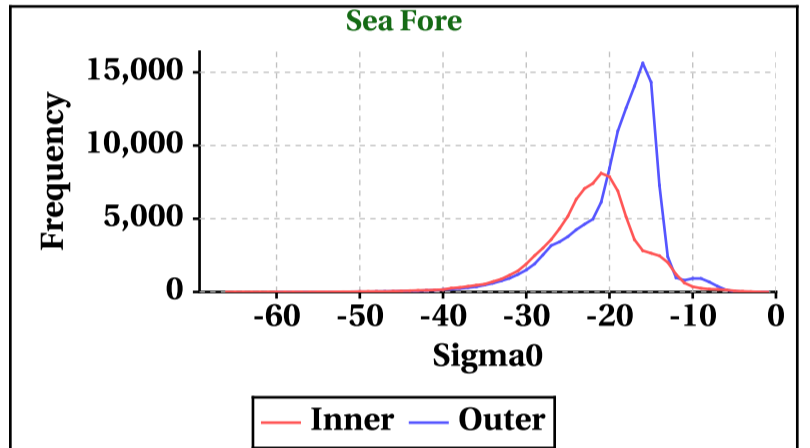
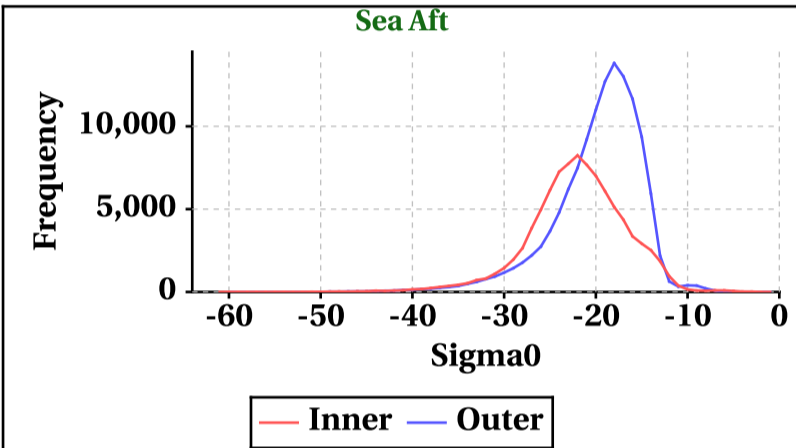
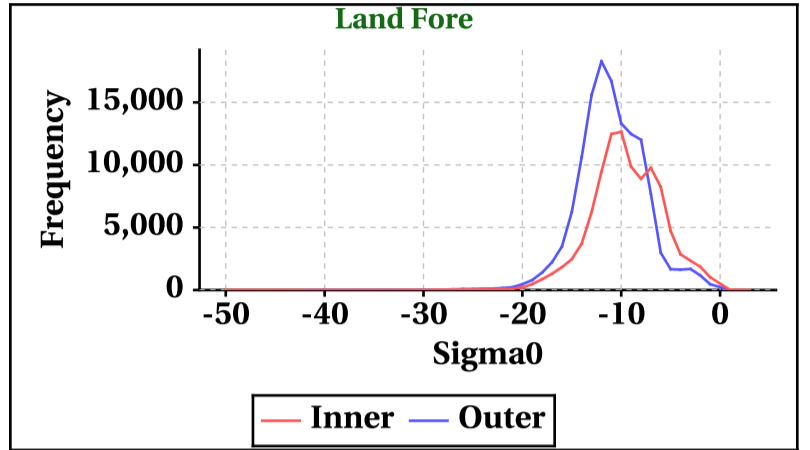
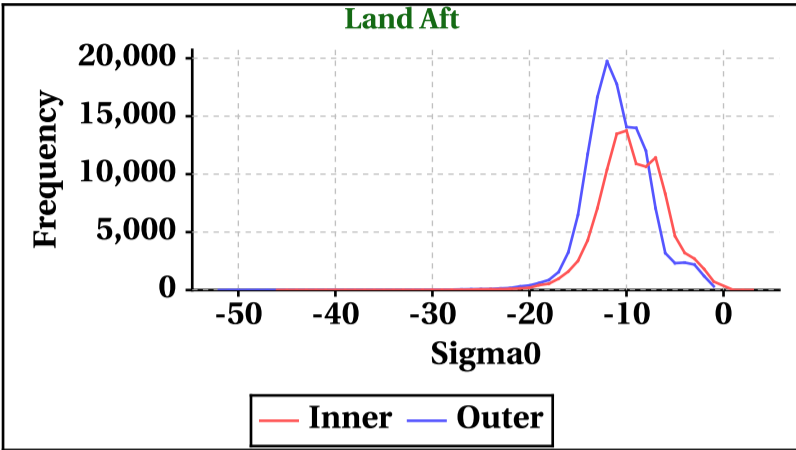
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -46      | -50       | -61     | -66      |
| Max             | 3        | 3         | -1      | -1       |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -52      | -42       | -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            | 500      | 500       | 500     | 500      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 500      | 500       | 426     | 465      |

