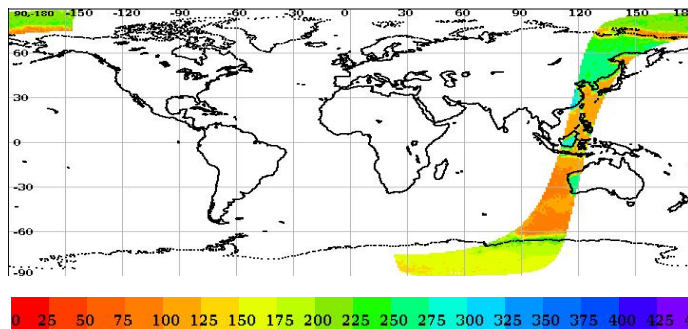


# Scatsat-1 Scatterometer Level-2A Data Quality Evaluation Report

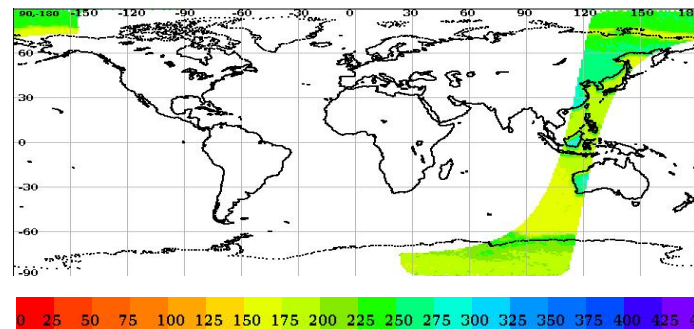
| Satellite      | Sensor          | Start Orbit       | End Orbit       |
|----------------|-----------------|-------------------|-----------------|
| SCATSAT-1      | Scatterometer   | 5478              | 5479            |
| WV Cells Along | WV Cells Across | EquatorCrossDate  | Production Date |
| 405            | 36              | 09-10-2017        | 09-10-2017      |
| Direction      | WVC Size(km)    | Processor Version |                 |
| NS             | 50              | v1.1.2            |                 |

## Brightness Temperature

Inner Beam (HH)

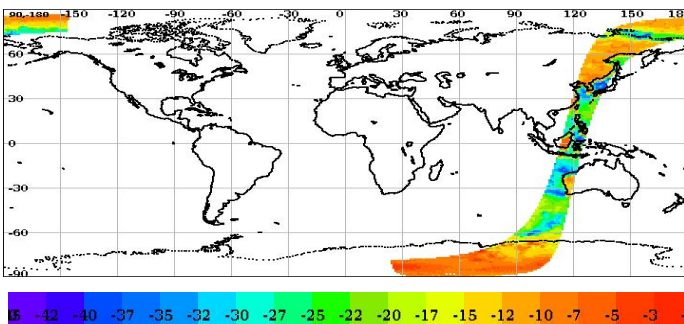


Outer Beam (VV)

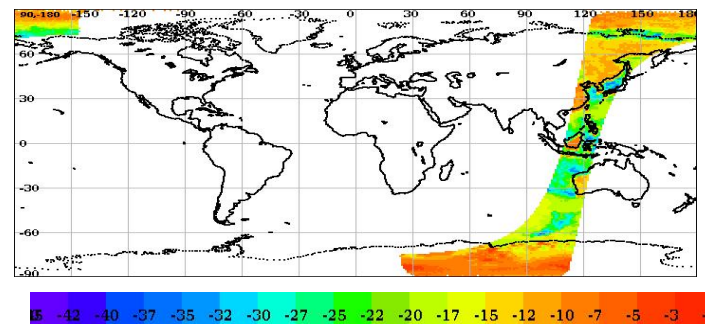


## Sigma0(dB)

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 |
|-----------|------------|------------|-------|------|---------|------------|------------|-------------|------------|--------|--------|---------|--------|
| Australia | -23.00     | 118.00     | Inner | DSC  | Aft     | -13.71     | -5.35      | -9.57       | 1.49       | 238.21 | 301.04 | 275.76  | 14.02  |
| Australia | -23.00     | 118.00     | Outer | DSC  | Aft     | -16.15     | -7.96      | -11.03      | 1.27       | 246.28 | 334.46 | 277.37  | 17.02  |
| Australia | -23.00     | 118.00     | Inner | DSC  | Fore    | -13.09     | -7.17      | -9.40       | 1.04       | 238.05 | 311.25 | 274.42  | 16.94  |
| Australia | -23.00     | 118.00     | Outer | DSC  | Fore    | -15.65     | -8.98      | -11.26      | 1.12       | 239.27 | 305.70 | 267.16  | 15.21  |

## 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            | 25.90   | 13.77        | 0.00    | 36.07   | 15.61        | 0.00            | 150.17  | 14.20        | 0.00    | 73.67   | 13.93        |

| 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    | 51.58   | 17.18        | 0.00     | 56.78   | 16.30        | 0.00     | 22.82   | 0.03         | 0.00      | 35.07   | 0.10         |
|  | <b>Outer (VV)</b> | 0.00    | 50.80   | 10.67        | 0.00     | 49.17   | 10.94        | 0.00     | 30.42   | 0.09         | 0.00      | 36.19   | 0.19         |
| <b>Sigma0(dB)</b>  | <b>Inner (HH)</b> | 0.00    | 52.45   | 16.01        | 0.00     | 58.99   | 14.62        | 0.00     | 21.82   | 0.05         | 0.00      | 36.02   | 0.05         |
|  | <b>Outer (VV)</b> | 0.00    | 48.62   | 9.55         | 0.00     | 49.04   | 9.59         | 0.00     | 25.77   | 0.06         | 0.00      | 33.62   | 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

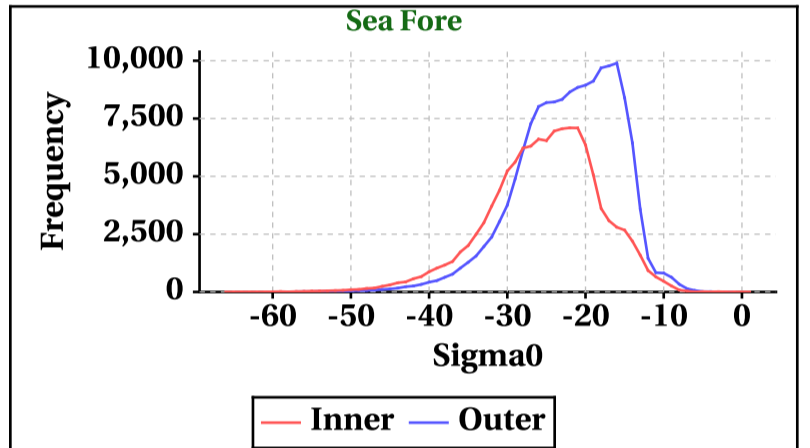
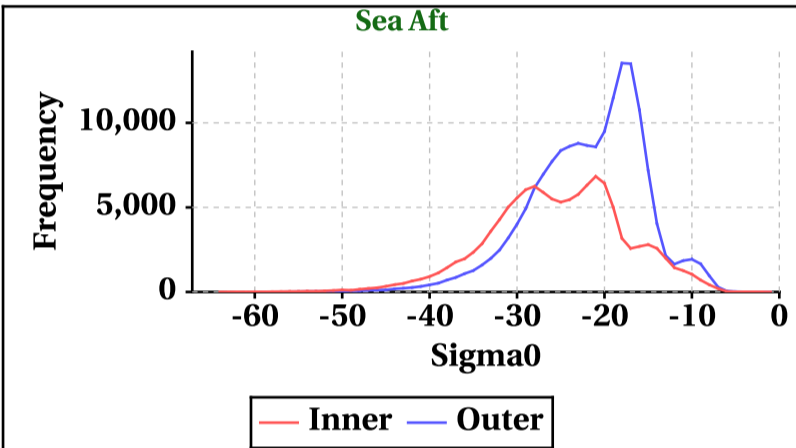
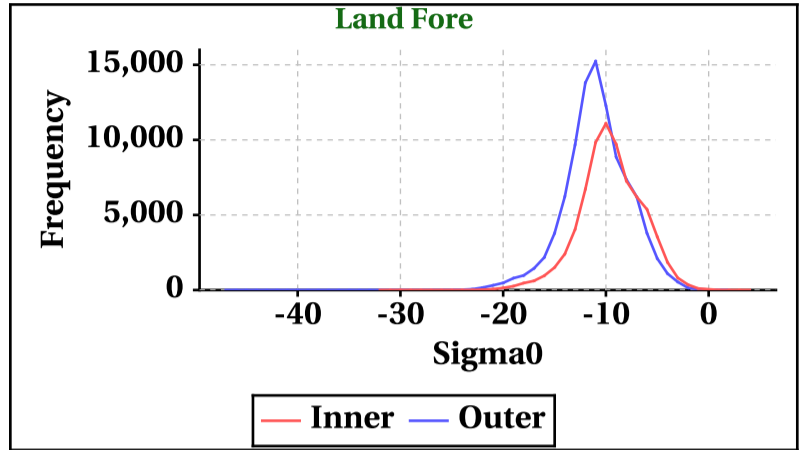
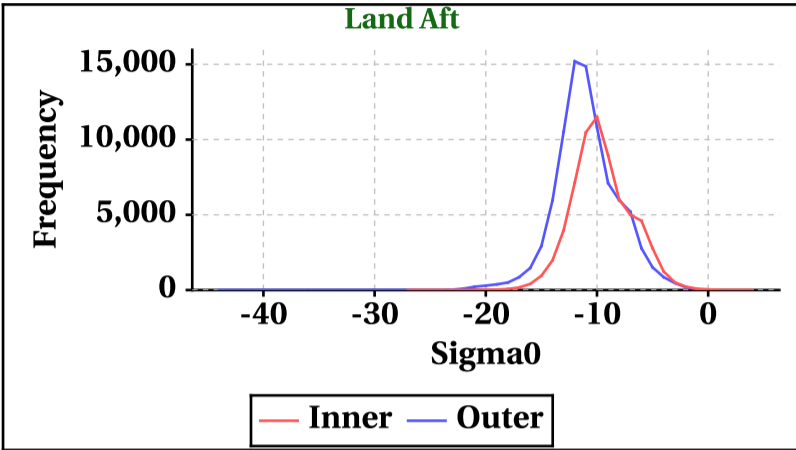
\* Note: Deviations within a Cell for a category is observed and flagged if out of range specifications

# Dynamic Range (Data Histograms)

## Sigma0(db)

| Inner Beam (HH) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -27      | -32       | -64     | -66      |
| Max             | 4        | 4         | -1      | 1        |

| Outer Beam (VV) |          |           |         |          |
|-----------------|----------|-----------|---------|----------|
|                 | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min             | -44      | -47       | -59     | -59      |
| Max             | -1       | 2         | -1      | -1       |



## Brightness Temperature(K)

| Inner Beam(HH) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 500      | 500       | 294     | 291      |

| Outer Beam(VV) |          |           |         |          |
|----------------|----------|-----------|---------|----------|
|                | Land Aft | Land Fore | Sea Aft | Sea Fore |
| Min            | 1        | 1         | 1       | 1        |
| Max            | 365      | 500       | 308     | 301      |

