

## Radio-Frequency Interference (RFI) artefacts in PALSAR-2 global mosaics

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A certain type of noise, known as radio frequency interference (RFI), occurs when signals from other systems that use the same microwave frequency range as SAR instrument are received by the SAR antenna. This interference can cause distortions which can make it harder to correctly interpret the SAR data. The PALSAR-2 global mosaic datasets include processing methods to reduce the effects of RFI. However, in some areas, new interference has recently appeared that cannot be sufficiently handled by the existing methods.

In images affected by RFI, the entire scene may appear unusually bright, or stripe-like noise can be seen across the image (Figure 1). Because the data values in such images differ from those of normal observations, please be aware that RFI can significantly affect classifications and time-series analyses that rely on the global mosaic datasets.

At present, the global mosaic datasets do not include information that clearly identifies areas affected by RFI, so users need to rely on visual inspection to recognize such regions.

We will continue working to better identify and reduce RFI, and we plan to include these improvements in future versions of the global mosaic dataset.

Please use these products with caution.

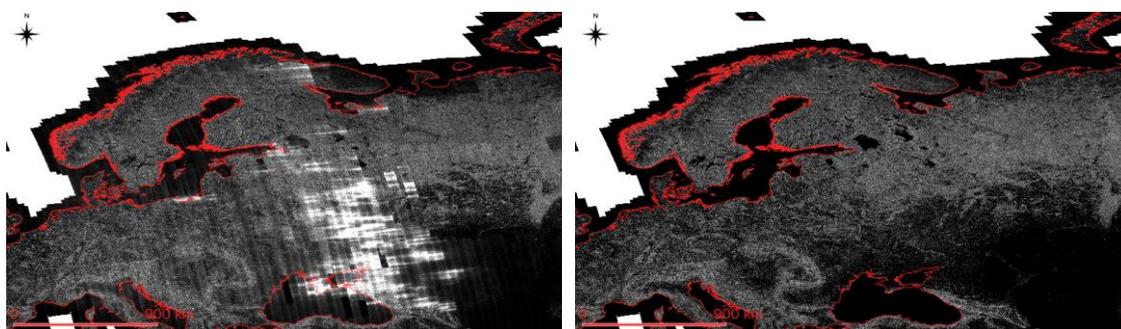


Figure 1 Image quality difference of the RFI affected area.

HV polarization, Left image: Year 2025 and 2024, Right image: Year 2020.