

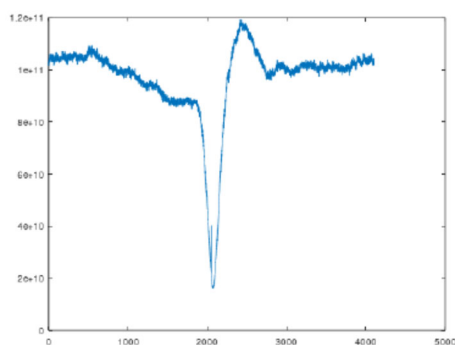
Data provision of the new PALSAR-2 standard products with bug fixing of Spotlight mode and ScanSAR mode (burst processing) for Interferometric SAR anomalies

April 21th, 2021

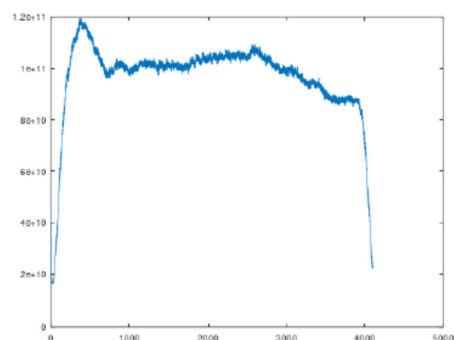
Japan Aerospace Exploration Agency  
ALOS-2 Project Team / Earth Observation Research Center

Concerning about PALSAR-2 standard product problem announced on January 25<sup>th</sup>, JAXA releases new PALSAR-2 L1.1 standard products of Spotlight mode and ScanSAR mode (burst processing). We apologize for any inconvenience this may cause to users and thank you for your understanding.

1. The error in the current products
  - It was found that Interferometric SAR analysis (InSAR) using the standard product L1.1 of PALSAR-2 Spotlight mode and ScanSAR mode (burst processing) may cause unexplained fringes in the azimuth direction.
  - As a result of checking the product processing software, there is an error that the frequency band in azimuth direction is shifted by half of the bandwidth in these modes, and it causes the above-mentioned InSAR error.



Azimuth frequency before correction



Azimuth frequency after correction

2. Correction of the products
  - The error in the standard product processing has been fixed in March, 2021. Only the L1.1 product for Spotlight and ScanSAR modes (burst processing) is changed. Stripmap and ScanSAR (full aperture processing) modes and the product levels other than L1.1 are not changed.
  - Please note that InSAR processing between products that have been processed before and after the correction will not give the correct results. For products that have been

processed before correction, it is possible to convert them to the same state as after correction by doing the following process. On the other hand, if you want to convert inversely, you should do the same process as below.

Alternately multiply 1, -1, 1, -1, ... for each azimuth line.

(Equivalent to a  $1/2$  shift in bandwidth)

- The above process has already implemented in some published InSAR processing tools. If you need to convert the product to the same state as before correction, please do the above process.