Correction

Correction on "Towards Detecting Swath Events in TerraSAR-X Time Series to Establish NATURA 2000 Grassland Habitat Swath Management as Monitoring Parameter"

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We found a mistake in the swath detection rule in Section 2.4 [1]. Specifically, the percent deviation calculation in the definition of the signal changes D_1 and D_2 and axiom A_2 are altered. The correct version shall be:

Consequently, the proposed rule for the detection of swath events consists of two axioms (A_1 and A_2) that need to be satisfied. For the signal backscatter ($\sigma°$) at a specific acquisition order number (k) of the acquired scene in the time series (N), the positive or negative signal changes in percent deviation for the first (D_1) and second (D_2) acquisition after a potential swath event are considered as:

$$D_1 = (\sigma^0(k) - \sigma^0(k-1)) / (-\sigma^0(k)) \times 100$$
$$D_2 = (\sigma^0(k+1) - \sigma^0(k)) / (-(\sigma^0(k)) \times 100$$

The second axiom focuses on the absolute magnitude of signal change:

$$|D_1| \succ \frac{\sum_{i=1}^{N}\left|\sigma^0(i-1)-\sigma^0(i)\right|}{N} \bigg/ (\sigma^0(i)) \times 100 \,, where\, \forall i,\, D_1 \succ \approx 10\%$$

AND   (A₂)

$$|D_2| \succ \frac{\sum_{i=1}^{N}\left|\sigma^0(i-1)-\sigma^0(i)\right|}{N} \bigg/ (\sigma^0(i)) \times 100 \,, where\, \forall i,\, D_2 \succ \approx 5\%$$

If (A₁) and (A₂) are satisfied then:

$$\sigma^0(k) \Rightarrow swath$$

References

1. Schuster, C.; Ali, I.; Lohmann, P.; Frick, A.; Förster, M.; Kleinschmit, B. Towards detecting swath events in TerraSAR-X time series to establish NATURA 2000 grassland habitat swath management as monitoring parameter. *Remote Sens.* **2011**, *3*, 1308–1322.