



Corrigendum to “Classification of synoptic circulation patterns with a two-stage clustering algorithm using the modified structural similarity index metric (SSIM)” published in Earth Syst. Dynam., 15, 607–633, 2024

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In the above mentioned manuscript we mistakenly wrote the formula (4) for the modification of the SSIM proposed for mixed-sign data. In the original paper the numerator in formula (4) was wrong $|\mu_x| + |\mu_y|$; the correct numerator is $|\mu_x + \mu_y|$. Finally, the formulas (3)–(4)–(5) make the full correct set:

$$\text{SSIM}(x, y) = \frac{(2\mu_x' \mu_y' + c_1)(2\sigma_{xy} + c_2)}{((\mu_x')^2 + (\mu_y')^2 + c_1)(\sigma_x^2 + \sigma_y^2 + c_2)} \quad (3)$$

where

$$\mu_x' = \frac{|\mu_x + \mu_y|}{2} \quad (4)$$

$$\mu_y' = \mu_x' + |\mu_x - \mu_y|. \quad (5)$$

The latter formula (3) is applicable to floating-point data with mixed-sign signals x and y , where μ_x and μ_y are average values, σ_x^2 and σ_y^2 are variances of x and y , σ_{xy} is the covariance of x and y , c_1 and c_2 are stabilizing constants for weak denominator.