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Erratum

Erratum to "Joint Delay Doppler Probability Density Functions for Air-to-Air Channels"

Michael Walter, Dmitriy Shutin, and Uwe-Carsten Fiebig

Institute of Communications and Navigation, German Aerospace Center (DLR), Oberpfaffenhofen, 82234 Wessling, Germany

Correspondence should be addressed to Michael Walter; m.walter@dlr.de

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In the article titled "Joint delay Doppler probability density functions for air-to-air channels," International Journal of Antennas and Propagation, Volume 2014 (2014), Article ID 814218, 11 pages, http://dx.doi.org/10.1155/2014/814218, errors occurred in (14), (19), and (20).

(I) Equation (14). The semimajor axis a_{ell} and the semiminor axis b_{ell} in (14) have to be calculated as

$$a_{\text{ell}} = \sqrt{\left(\frac{p}{a}\right)^2 - \frac{d}{a}},$$
$$b_{\text{ell}} = \sqrt{\frac{p^2}{ab} - \frac{d}{b}}. \tag{14}$$

The offset from the origin $[x_c, y_c]$ is correct.

(II) Equation (19). It should read as follows:

$$p(\phi \mid \tau) = \frac{\sqrt{1 - \epsilon_\tau^2 \cos^2\phi}}{4E(\epsilon_\tau)}. \tag{19}$$

(III) Equation (20). It should read as follows:

$$p(\phi \mid \tau; \kappa, \mu) = \frac{\sqrt{1 - \epsilon_\tau^2 \cos^2\phi}}{4E(\epsilon_\tau)} \times \frac{\exp\left\{\kappa \cos\left((\pi/2E(\epsilon_\tau))\left(\int_0^\phi \sqrt{1 - \epsilon_\tau^2 \cos^2\zeta}\, d\zeta - \mu\right)\right)\right\}}{I_0(\kappa)}, \tag{20}$$

with κ being the concentration parameter of the distribution and μ being the centrality parameter of the distribution, that is, the place on the ellipse, where the dominant scatterers come from. The centrality parameter is given by $\mu = \int_0^{\overline{\phi}} \sqrt{1 - \epsilon_\tau^2 \cos^2\zeta}\, d\zeta$ and $I_0(\kappa)$ is the modified zeroth order Bessel function of the first kind.