Corrigendum

Corrigendum to “Background Radiance Estimation for Gas Plume Quantification for Airborne Hyperspectral Thermal Imaging”

Ramzi Idoughi,^{1,2} Thomas H. G. Vidal,¹ Pierre-Yves Foucher,¹ Marc-André Gagnon,³ and Xavier Briottet¹

¹ONERA, The French Aerospace Lab, DOTA, 2 Avenue Edouard Belin, 31400 Toulouse, France

²Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), Toulouse, France

³Telops Inc., 100-2600 St-Jean-Baptiste Avenue, Québec, QC, Canada G2E 6J5

Correspondence should be addressed to Pierre-Yves Foucher; pierre-yves.foucher@onera.fr

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In the article titled “Background Radiance Estimation for Gas Plume Quantification for Airborne Hyperspectral Thermal Imaging” [1], there are some errors in Figures 2(b), 10, 15, and 16. In Figure 2(b), the emissivity of “slate stone shingle” is absent. Moreover, the emissivities of

some materials have been misnamed. In Figure 10, there is a confusion between the curves of the methods CB and SB. In Figures 15 and 16 the curves' order in the legend has been modified. The corrected figures are shown as follows.

FIGURE 2: Ground parameters simulation. (a) Ground temperature map. (b) Emissivity spectra of materials present in the synthetic scene.

FIGURE 10: Comparison of background radiance estimation methods, for four different pixels through the plume. The red curves stand for the on-plume radiances; the dashed green ones are the real background radiances. The cyan, blue, and magenta curves represent, respectively, the background radiance estimated by the SB, CB, and CSB methods. (a) Results for pixel 1 (brown sandy loam), (b) results for pixel 2 (asphalt), (c) results for pixel 3 (aluminum), and (d) results for pixel 4 (copper).

FIGURE 15: Comparison of background radiance estimation methods, for three different pixels through the plume. The red curves stand for the on-plume radiances; the dashed green ones are the expected background radiances. The cyan, blue, and magenta curves represent, respectively, the background radiance estimated by the SB, CB, and CSB methods. (a) Results for pixel 1, (b) results for pixel 2, and (c) results for pixel 3.

FIGURE 16: Comparison of different radiances at the ethylene absorptive band (950.4 cm^{-1}), along a horizontal cross section containing some plume-present pixels. The red curve stands for the on-plume radiances; the green dashed one is the expected background radiances. The cyan, blue, and magenta curves represent, respectively, the background radiances estimated by the SB, CB, and CSB methods.

References

- [1] R. Idoughi, T. H. G. Vidal, P. Foucher, M. Gagnon, and X. Briottet, "Background radiance estimation for gas plume quantification for airborne hyperspectral thermal imaging," *Journal of Spectroscopy*, vol. 2016, Article ID 5428762, 17 pages, 2016.