Erratum: "Absolute beam monitor: A novel laboratory device for neutral beam calibration" [Rev. Sci. Instrum. 93, 093302 (2022)]

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Jonathan Gasser,[a] André Galli, and Peter Wurz

AFFILIATIONS

Physics Institute, Space Research and Planetary Sciences, University of Bern, Sidlerstrasse 5, 3012 Bern, Switzerland

[a]Author to whom correspondence should be addressed: Jonathan.gasser@unibe.ch

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In Sec. II A of the paper,[1] we used ambiguous nomenclature for the detection efficiencies in the text preceding Eq. (2) and after Eq. (3). The text should read as follows:

"Each incident neutral atom has an *a priori* unknown probability μ_e for ejecting a secondary electron from the SS and an unknown probability μ_i of being itself detected subsequently by the stop detector. The probability of generating a coincidence count is thus, $\mu_c = \mu_e \cdot \mu_i$.

The start, stop, and coincidence count rates (r_e, r_i, r_c), respectively, to be observed from the incoming neutral atoms at the rate $F_n = f_n \sigma_{ap}$ through the entrance aperture with the cross section σ_{ap} will then be [as given in Eq. (2)]. With the requirement that the background rates ($r_{e,0}, r_{i,0}, r_{c,0}$) of the three count rates are negligible, we obtain [Eq. (3)] and the coincidence detection efficiency for neutral atoms is $\varepsilon_n = \mu_c = \mu_e \mu_i$."

Furthermore, there is an error in Eqs. (4) and (5). The corrected equations are

$$f_n = \frac{(r_e - r_{e,0})(r_i - r_{i,0})}{\sigma_{ap} \cdot (r_c - r_{c,0})}, \tag{4}$$

$$f_n = \frac{(c_e - c_{e,0})(c_i - c_{i,0})}{(c_c - c_{c,0})\sigma_{ap}\ t_{int}}, \tag{5}$$

where t_{int} is the total integration time.

REFERENCE

[1]J. Gasser, A. Galli, and P. Wurz, "Absolute beam monitor: A novel laboratory device for neutral beam calibration," Rev. Sci. Instrum. **93**, 093302 (2022).