ERRATA

Erratum: Continuum calculus and Feynman's path integrals [J. Math. Phys. 17, 1988 (1976)]

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The definition (2.1.) giving the rational derivative of a function f on a Banach space was not precise. A proper construction in a complex Banach space is given in the following:

Let C^B be the set of functions from B, the Banach space, to C, the complex number field. The function, f, maps B into C, i.e., $f \in C^B$. Let S be the support of f, $(S \neq \phi)$, and $S_i = \bar{S} - \partial S$ be the interior of S (the overbar denotes the closure and ∂ denotes the boundary). Given a point $t \in S_i$, there exists a neighborhood, V of t and $V \subset S_i$. We first define a linear form LRf_t: $B \to C$, for f at the point t. In fact, LRf_t will be recognized as the Fréchet differential[1,2] for $\ln f$.

Definition 1: The Fréchet differential LRf_t for $\ln f$ at t:

(i) LRf_t is a linear form on B.

(ii) For any $\epsilon > 0$, there exist $\delta > 0$, $\ni$

$$|\ln f(t+b) - \ln f(t) - LRf_t(b)| < \epsilon \|b\|$$

whenever

the norm of $b \in V$, $\|b\| < \delta$.

We note that $\ln f(t)$ is defined since $t \in S$. If such LRf_t exists, we can define the r derivative of f at t as follows:

Definition 2: The r derivative of f in a Banach space:

The r derivative of f, $Rf(t)/Rt$, at t is a function on $B \to C$ defined in terms of the Fréchet differential LRf_t, $\forall s \in B$, where LRf_t is defined, by

$$Rf(t)/Rt(s) = \exp[LRf_t(s)].$$

[1] N. Dunford and J. T. Schwartz, *Linear Operators, Vol. I: General Theory* (Interscience, New York, 1967), pp. 92ff.
[2] M. A. Krasnosel'skii, *Topological Methods in the Theory of Nonlinear Integral Equations* (Pergamon, New York, 1964), pp. 68ff.

Erratum: Post-Newtonian two-body and *n*-body problems with electric charge in general relativity [J. Math. Phys. 18, 1818 (1977)]

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In this paper the three terms

$$-(\alpha_g + \alpha_p)\left(\frac{1}{r_{ij}^2} + \frac{1}{r_{ik}^2}\right)\frac{\mathbf{r}_{ij}\cdot\mathbf{r}_{ik}}{r_{ij}r_{ik}},$$

$$-(\alpha_g + \alpha_p)\left(\frac{1}{r_{ji}^2} + \frac{1}{r_{jk}^2}\right)\frac{\mathbf{r}_{ji}\cdot\mathbf{r}_{jk}}{r_{ji}r_{jk}},$$

$$-(\alpha_g + \alpha_p)\left(\frac{1}{r_{ki}^2} + \frac{1}{r_{kj}^2}\right)\frac{\mathbf{r}_{ki}\cdot\mathbf{r}_{kj}}{r_{ki}r_{kj}},$$

in the last three lines of Eq. (60) are in error and should be replaced, respectively, by

$$-\left(\frac{\alpha_p}{r_{ji}^2} + \frac{\alpha_g}{r_{jk}^2}\right)\frac{\mathbf{r}_{ji}\cdot\mathbf{r}_{jk}}{r_{ji}r_{jk}} - \left(\frac{\alpha_p}{r_{ki}^2} + \frac{\alpha_g}{r_{kj}^2}\right)\frac{\mathbf{r}_{ki}\cdot\mathbf{r}_{kj}}{r_{ki}r_{kj}},$$

$$-\left(\frac{\alpha_p}{r_{ij}^2} + \frac{\alpha_g}{r_{ik}^2}\right)\frac{\mathbf{r}_{ij}\cdot\mathbf{r}_{ik}}{r_{ij}r_{ik}} - \left(\frac{\alpha_g}{r_{ki}^2} + \frac{\alpha_p}{r_{kj}^2}\right)\frac{\mathbf{r}_{ki}\cdot\mathbf{r}_{kj}}{r_{ki}r_{kj}},$$

$$-\left(\frac{\alpha_g}{r_{ij}^2} + \frac{\alpha_p}{r_{ik}^2}\right)\frac{\mathbf{r}_{ij}\cdot\mathbf{r}_{ik}}{r_{ij}r_{ik}} - \left(\frac{\alpha_g}{r_{ji}^2} + \frac{\alpha_p}{r_{jk}^2}\right)\frac{\mathbf{r}_{ji}\cdot\mathbf{r}_{jk}}{r_{ji}r_{jk}}.$$

These changes do not affect any of the other results or conclusions of this paper.

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