ERRATA

In the paper "The Airy Function as a Non-Subgroup Basis for the Oscillator Representation $(D^{+}_{1/4} + D^{+}_{3/4})$ of SL(2,R)", by Kurt Bernardo Wolf, Revista Mexicana de Física 26 (1979) 1-11, there is a calculation error which appeared in Ref. 6 Eq. (3.4c) and appears here in Eq. (2.8). It was noticed and corrected, however, during the elaboration of "Integral Transforms in Science and Engineering" (Plenum, New York, 1979), and appears there as Eq. (10.9), Chapter 10. Due to the delay between reception and publication, some references are updated. The following corrections should be made:

Title

"$(D^{+I}_{1/4} + D^{+I}_{3/4})$" should read "$(D^{+}_{1/4} \dot{+} D^{+}_{3/4})$"

Equation (2.1)

replace Π by π.

Page 5, line 3

"W ⊗ SL(2,R)" should read "W ⊗ SL(2,R)"

Equation (2.8) should be

$$[\exp(\mathrm{i}tL)f](q) = \left[F\left\{\begin{pmatrix}1 & -t\\ 0 & 1\end{pmatrix}[t, -\tfrac{1}{2}t^2, -\tfrac{1}{12}t^3]\right\} f\right](q).$$

Equation (2.9a) should be

$$[C\begin{pmatrix}a & b\\ c & d\end{pmatrix}\Psi^{\ell}_{\lambda}](q) = \left[F\left\{\begin{pmatrix}a & 0\\ c & a^{-1}\end{pmatrix}(\tfrac{b}{a}, -\tfrac{1}{2}\tfrac{b^2}{a^2}, -\tfrac{1}{12}\tfrac{b^3}{a^3})\right\} F\left\{\begin{pmatrix}1 & b/a\\ 0 & 1\end{pmatrix}(-\tfrac{b}{a}, -\tfrac{1}{2}\tfrac{b^2}{a^2}, \tfrac{1}{12}\tfrac{b^3}{a^3})\right\}\Psi^{\ell}_{\lambda}\right](q) =$$

$$= e^{-\mathrm{i}\lambda b/a}\left[F\left\{\begin{pmatrix}a & 0\\ c & a^{-1}\end{pmatrix}(\tfrac{b}{a}, -\tfrac{1}{2}\tfrac{b^2}{a^2}, -\tfrac{1}{12}\tfrac{b^3}{a^3})\right\}\Psi^{\ell}_{\lambda}\right](q)$$

$$= a^{-1/2}\exp \mathrm{i}[\tfrac{cq^2}{2a} + \tfrac{b}{a^2}q - \tfrac{1}{3}\tfrac{b^3}{a^3} - \tfrac{b}{a}\lambda]\,\Psi^{\ell}_{\lambda}(\tfrac{q}{a} - \tfrac{b^2}{2a^2}),$$

Equation (2.1) should be

$$[C(B)\Psi^{\ell}_{\lambda}](q) \equiv \bar{\Psi}^{\ell}_{\lambda}(q) = 2^{1/4}\exp[\tfrac{1}{2}q^2 + \sqrt{2}q + \tfrac{1}{3} - \lambda]\;\Psi^{\ell}_{\lambda}(\sqrt{2}q + \tfrac{1}{2})$$

$$= 2^{7/12}\exp[\tfrac{1}{2}q^2 + \sqrt{2}q + \tfrac{1}{3} - \lambda]\; A\mathrm{i}(2^{5/6}q + 2^{-2/3} - 2^{1/3}\lambda)$$

Equation (3.1) should be

$$\mathcal{D}^{\ell}_{\lambda'\lambda}\begin{pmatrix} a & b \\ c & d \end{pmatrix} \equiv (\Psi^{\ell}_{\lambda'}, C\begin{pmatrix} a & b \\ c & d \end{pmatrix}\Psi^{\ell}_{\lambda}) =$$

$$= 2^{2/3}a^{-1/2}\exp i[-\frac{1}{3}\frac{b^3}{a^3} - \frac{b}{a}\lambda] \int_{\mathbb{R}} dq\ Ai(2^{1/3}(q-\lambda'))$$

$$\times \exp i[\frac{cq^2}{2a} + \frac{bq}{a^2}]\ Ai(2^{1/3}[\frac{q}{a} - \frac{b^2}{2a^2} - \lambda])$$

$$= (C\begin{pmatrix} 0 & -1 \\ 1 & 0 \end{pmatrix}\Psi^{\ell}_{\lambda'},\ C\begin{pmatrix} 0 & -1 \\ 1 & 0 \end{pmatrix}C\begin{pmatrix} a & b \\ c & d \end{pmatrix}\Psi^{\ell}_{\lambda})$$

$$= (P\tilde{\Psi}^{\ell}_{\lambda'}, C\begin{pmatrix} c & d \\ -a & -b \end{pmatrix}\Psi^{\ell}_{\lambda}),$$

$$= 2^{1/3}(2\pi c)^{-1/2}\ \exp i[-\frac{1}{3}\frac{d^3}{c^3} - \frac{d\lambda}{c} + \frac{\pi}{4}] \int_{\mathbb{R}} dq\ \exp i[\frac{q^3}{6} - \frac{aq^2}{2c}$$

$$+ (\frac{d}{c^2} - \lambda')q]\ Ai(2^{1/3}[\frac{q}{c} - \frac{d^2}{2c^2} - \lambda]),$$

Page 7, line 2

$\left| C\begin{pmatrix} 0 & 1 \\ -1 & 0 \end{pmatrix}\right|^2 = P$ should read $\left[C\begin{pmatrix} 0 & 1 \\ -1 & 0 \end{pmatrix}\right]^2 = P$

Page 7, line 8

replace Π by π

Equations (3.3), (3.6) and (3.8) replace absolute value bars $|\ldots|$ by brackets $[\ldots]$

Equations (3.4) should be

$$C^{\lambda}_{M} = 2^{7/12}(a - ic)^{-1/2}\ \exp[\frac{1}{3}\left(\frac{d+ib}{a-ic}\right)^3 - \left(\frac{d+ib}{a-ic}\right)\lambda],$$

$$\alpha = (a+ic)/2(a-ic)\ ,\quad \beta = \sqrt{2}\ (d+ib)/(a-ic)^2\ ,$$

$$\gamma = 2^{5/6}/(a-ic),\quad \delta = -2^{1/3}[\lambda - (d+ib)^2/2(a-ic)^2],$$

Equation (3.10) should be:

$$\mathcal{D}^{\ell}_{\lambda'\lambda}\begin{pmatrix} a & b \\ c & d \end{pmatrix} = (2\pi)^{1/2}\ C^{\lambda}_{\mathbb{1}}\ C^{\lambda}_{M}\sum_{n=0}^{\infty} n!$$

$$\times A_n[\frac{1}{2}, \sqrt{2}, 2^{5/6}, -2^{1/3}(\lambda' - 1/2)]\ A_n(\alpha,\beta,\gamma,\delta)\ .$$

First line of Section 4
"1/3" should be "3/4"

Page 9, line 4 from bottom, $|L,P|$ should read $[L,P]$

The following references were published:

1 C.P. Boyer and K.B. Wolf, Rev.Mex. Física 25 (1976) 31.

9 K.B. Wolf, J. Math. Phys. 18 (1977) 1046.

A reference which should be added is

K.B. Wolf, Integral Transforms in Science and Engineering Plenum Publ. Corp. New York (1979).