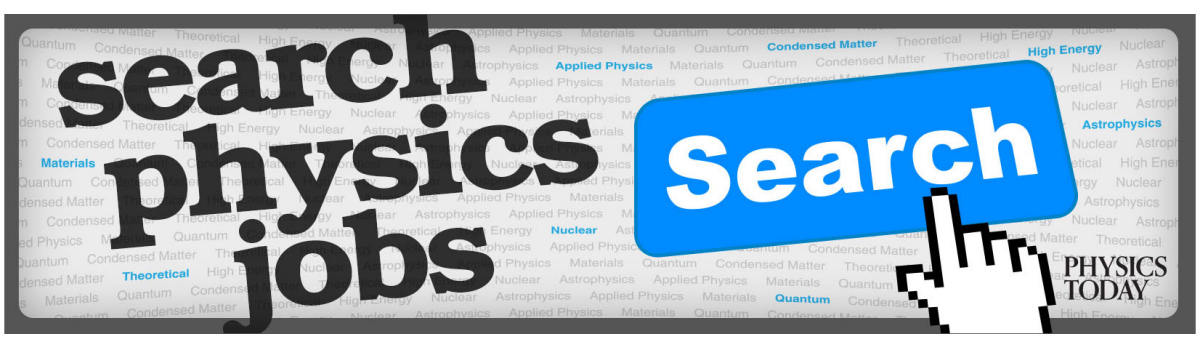
AIP | Journal of Mathematical Physics

Errata: An Approach to Gravitational Radiation by a Method of Spin Coefficients

E. Newman and R. Penrose

Citation: Journal of Mathematical Physics **4**, 998 (1963); doi: 10.1063/1.1704025
View online: http://dx.doi.org/10.1063/1.1704025
View Table of Contents: http://scitation.aip.org/content/aip/journal/jmp/4/7?ver=pdfcov
Published by the AIP Publishing



Errata: An Approach to Gravitational Radiation by a Method of Spin Coefficients

E. NEWMAN
University of Pittsburgh, Pittsburgh, Pennsylvania
AND
R. PENROSE
Kings College, University of London, London, England
[J. Math. Phys. 3, 566 (1962)]

Page 568: The next-to-the-last term in Eq. (3.14) should read $\Lambda\epsilon_{a'b'}(\epsilon_{cd}\epsilon_{af} + \epsilon_{ad}\epsilon_{cf})$;

Page 569: The last term in the first equation of (3.17) should read $2\Lambda\xi_{(A}\epsilon_{B)C}$;

Page 570: The third term from the end of Eq. (4.2g) should read $-\nu\bar{\kappa}$;
The third term from the end of Eq. (4.2k) should read $+(\mu - \bar{\mu})\kappa$;
The first term after the equals sign in Eq. (4.2m) should read $+(\rho - \bar{\rho})\nu$;
The third term from the end of Eq. (4.2r) should read $+(\bar{\gamma} - \bar{\mu})\alpha$;
The third equation of (4.3a) should read $\Psi_2 = -\frac{1}{2}(C_{1212} - C_{1234}) = -\frac{1}{2}C_{\alpha\beta\gamma\delta} \times (l^\alpha n^\beta l^\gamma n^\delta - l^\alpha n^\beta m^\gamma \bar{m}^\delta) = \Psi_{0011}$.

Page 572: The second sentence after Eq. 6.3 should read "Sachs uses a "luminosity" parameter $\tilde{r}$, satisfying $D\tilde{r} = -\tilde{r}\rho$, which $\cdots$," etc.

Page 574: In footnote 26, the second sentence should read, " $\cdots$ affine parameter $\tilde{r}$ and tangent vector $\tilde{l}_\mu$ $\cdots$ ".

Page 575: The lemma should read, "Let the $(n \times n)$ matrix A be independent of r and have no eigenvalue with positive real part. Suppose, also that any eigenvalue of A with vanishing real part is regular (i.e. its multiplicity is equal to the number of linearly independent eigenvectors corresponding to it). Then all the solutions $\cdots$ ".

Page 578: In Eqs. (A3) of the Appendix, the differentiated terms on the right-hand side all appear with the wrong sign. Also the δ's on the right-hand sides of the third, fifth, and seventh equations should be $\bar{\delta}$'s. The equality symbol on the left in the seventh equation should, of course, be a minus sign. As an example this seventh equation should be correctly written

$$(D - 3\rho)\Psi_2 + 2\kappa\Psi_3 - (\bar{\delta} + 2\pi - 2\alpha)\Psi_1 + \lambda\Psi_0 = -\bar{\Phi}_0\Delta\Phi_0 + \bar{\Phi}_1\bar{\delta}\Phi_0 + 2(\bar{\Phi}_0\Phi_0\gamma - \bar{\Phi}_1\Phi_0\alpha - \bar{\Phi}_0\Phi_1\tau + \bar{\Phi}_1\Phi_1\rho).$$

Errata: Cluster Sums for the Ising Model

G. S. RUSHBROOKE* AND H. I. SCOINS
University of Durham, King's College, Newcastle upon Tyne, England
[J. Math. Phys. 3, 176 (1962)]

The following misprints should be noted, on pp. 183–4:

Simple Cubic Lattice β_5: $871\frac{1}{2}f^5$ should read $871\frac{1}{5}f^5$;

Body-centered Lattice β_5: $16f^2$ should read $16f^3$;

$\bar{b}_5$: $+9072\eta^{34}$ should read $-9072\eta^{34}$;

Equation (29) should read

$$\ln \Lambda(1, \eta) = 3 \ln (1 + \eta) - 2 \ln 2 + 3u^4 + 22u^6 + 187\tfrac{1}{2}u^8 + \cdots ;$$

and in the expression for b_l in terms of β_k, $l!$ should read l^2.

* At present, Visiting Professor, Chemistry Department, University of Oregon, Eugene, Oregon.