32-vertex model on the triangular lattice

Corrigenda

A simple proof of the Perron–Frobenius theorem for positive symmetric matrices
Ninio F 1976 *J. Phys. A: Math. Gen.* **9** 1281

Part (iv) of the proof should read as follows.

Let (ω_j) be a real normalized eigenvector belonging to $\mu < \lambda$,

$$\sum_j a_{ij}\omega_j = \mu\omega_i.$$

By the variational theorem,

$$\lambda \geqslant \sum_{ij} a_{ij}|\omega_i|\,|\omega_j| \geqslant \left|\sum_{ij} a_{ij}\omega_i\omega_j\right| = |\mu|.$$

If $\mu = -\lambda$, the above relation shows that $|\omega_j| = x_j$ for all j, and hence there is an i for which $\omega_i = x_i$. Adding $\lambda x_i = \sum_j a_{ij}x_j$ to $-\lambda\omega_i = \sum_j a_{ij}\omega_j$ gives

$$0 = \sum_j a_{ij}(x_j + \omega_j) \geqslant a_{ii}(x_i + \omega_i)$$

which contradicts the fact that $a_{ii} > 0$ and $\omega_i = x_i > 0$. Thus $\mu \neq -\lambda$.

The time structure of atmospheric Čerenkov light in extensive air showers
Böhm E, Bosia G, Navarra G and Saavedra O 1977 *J. Phys. A: Math. Gen.* **10** 441–60

The vertical axis of figure 2 (p 443) should read 'Anode current (arbitrary units)' and this same axis should not appear in figure 19 (p 459).

The caption for figure 15 (p 456) should read as follows.

Figure 15. Calculated energy spectrum of bursts compared with measured frequencies. Calculated frequencies of bursts: 1, protons; 2, iron primaries (where (a) refers to residual primaries and (b) to secondaries); 6, threshold burst energies. Measured fluxes: 3, bursts+Čerenkov light ($\theta = 1\cdot5°$); 4, bursts+Čerenkov light ($\theta = 4°$); 5, bursts only ($\theta = 20°$). θ is the assumed opening angle of the detector.

The fifth line of the second paragraph of appendix 3 (p 457) should read : ... (see figure 3) ....

Also the equation at the bottom of p 458 should read:

$$n(\alpha) \approx \exp(-\alpha/\alpha_0)\, d\omega\, \cos^n(\vec{\theta} + \vec{\alpha}).$$

32-vertex model on the triangular lattice
Sacco J E and Wu F Y 1975 *J. Phys. A: Math. Gen.* **8** 1780–7

The factors $2c$, $2d$, $2e$ in (21) should read $4c$, $4d$, $4e$; the definitions of a and b in (22) should be interchanged; the third line in (22) should read $\Omega_5\Omega_6 = f_{16}f_{34} + \bar{f}_{16}\bar{f}_{34} + f_0f_{25} + \bar{f}_0\bar{f}_{25}$.

These changes do not alter any of the discussions and conclusions of the paper. We are indebted to K Y Lin and I P Wang for calling our attention to these corrections.