

**Spin-Singlet Wave Function for the Half-Integral Quantum Hall Effect.** F. D. M. HALDANE and E. H. REZAYI [Phys. Rev. Lett. **60**, 956 (1988)].

An important reference which we were unaware of has been brought to our attention. Borchardt<sup>1</sup> has shown that if  $\mathbf{A}$  is the square matrix with elements  $(x_i - y_j)^{-1}$  and  $\mathbf{B}$  is the matrix with elements  $(x_i - y_j)^{-2}$ , then  $\det |\mathbf{A}| \times \text{per } |\mathbf{A}| = \det |\mathbf{B}|$ . With this result, our wave function  $\Psi_{\text{HCM}}$  takes the simpler form

$$\Psi_{\text{HCM}}^{\{\sigma_i\}} = \Psi_2 \det |\overline{\mathbf{M}}^{\{\sigma_i\}}|,$$

where  $\overline{\mathbf{M}}$  is the  $\frac{1}{2}N \times \frac{1}{2}N$  matrix of inverse *square* complex distances  $(Z_{ij})^{-2}$  between the  $i$ th spin- $\uparrow$  electron and the  $j$ th spin- $\downarrow$  electron.

With this new form of  $\Psi_{\text{HCM}}$ , the previously missing formal proof that it has symmetry type  $(2^{N/2})$  follows from a simple induction argument.<sup>2</sup>

We thank E. Allen for this observation, and for bringing Ref. 1 to our attention.

<sup>1</sup>C. W. Borchardt, Monatsber. Kgl. Preuss. Akad. Wiss. **1855**, 165; this result is reviewed by H. Minc, *Permanents*, Encyclopedia of Mathematics and its Applications Vol. 6 (Addison-Wesley, Reading, MA, 1978), p. 6.

<sup>2</sup>E. Allen, private communication. This follows from applying Fock's cyclic condition [our Eq. (1)] after expanding the  $N$ -particle determinant in terms of  $(N-2)$ -particle determinants, and using the induction hypothesis.