ERRATUM

EVIDENCE FOR THE MOTT MODEL OF HOPPING CONDUCTION IN THE ANNEAL STABLE STATE OF AMORPHOUS SILICON. Adam Lewis [Phys. Rev. Lett. 29, 1555 (1972)].

The observations presented in this Letter were as follows: (i) The conductivity and optical absorption of a-Si films were independent of annealing temperature for $400°C < T_A < 600°C$. (ii) Only in this anneal stable region was $\ln\sigma \propto T^{-1/4}$. (iii) Reasonable values of the Mott parameters were obtained in the anneal stable region.

Unfortunately, an error occurred in the calculation of γ and $N(E_F)$. Equations (2) and (3) of the manuscript are incorrect and conclusion (iii) must be withdrawn. With $T_0 \sim 10^8$ K, the value of $\sqrt{T}\,\sigma_0$ must be $\sim 10^2\ \Omega^{-1}\ \mathrm{cm}^{-1}\ \mathrm{K}^{1/2}$ in order to obtain $N(E_F) \sim 10^{19}\ \mathrm{cm}^{-3}\ \mathrm{eV}^{-1}$ and $\gamma \sim 10^7\ \mathrm{cm}^{-1}$. The prefactors reported in the anneal stable state are $\sim 10^6$–$10^7\ \Omega^{-1}\ \mathrm{cm}^{-1}\ \mathrm{K}^{1/2}$, which yield $N(E_F) \sim 10^{30}\ \mathrm{cm}^{-3}\ \mathrm{eV}^{-1}$ and $\gamma \sim 10^{10}\ \mathrm{cm}^{-1}$.

The author regrets this error and thanks D. K. Paul for bringing it to his attention.