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Toward an Objective Interpretation of Quantum Mechanics.

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In Secttion **2**, paragraph 3, of this paper it is incorrectly stated that « since the maximum possible Δp_T is h/d (occurring for $x = d/2$), then $\Delta p_H < h/d$ implies $\Delta x_H > d$, which destroys the double-slit pattern ». This is true only in the case $\omega = d$ and the sentence should read « since the maximum possible Δp_T is h/ω, then $\Delta p_H < h/\omega$ implies $\Delta x_H > \omega$ which destroys the double-slit pattern ». Consequently, condition (3) should read

$$m > \frac{h}{\lambda c} \cdot \frac{d}{\omega} .$$

Although this is not experimentally incompatible with the result following from the *criterion for spontaneous collapse* as stated in eq. (4), it to some extent weakens the justification for that particular choice of criterion.

However, the criterion may yet be justified as follows: If $\omega < d$, as the mass m of the slit-assembly is reduced, quantum mechanics predicts a destruction of the pattern at a larger mass than is predicted by the collapse criterion. This would then mean that the pattern could be disrupted by « phase randomization » prior to collapse, and these are compatible. If $\omega > d$, then so long as the Heisenberg spread on the slit-assembly is a superposition (as is, after all, implied by the concept of wave packet) rather than a mixture, the double-slit pattern will, according to Q.M., be destroyed unless $\delta x < d$ (immediately before equation (4)), and condition (3) again reads

$$m > \frac{h}{\lambda c} .$$