Triple-slit experiment

The recent article titled "Triple-Slit Experiment Has Quantum Implications" (OPN, October 2010) states that: "Since the double-slit experiment has been studied so thoroughly, why has no none added a third slit before? Even if someone did multi-slit, they really didn't report about it to the community."

Multiple-slit (or multi-slit) laser interference studies and experiments for $2 \leq N \leq 1600$ (where N is the number of slits) have been reported in the open literature since 1991. See, for example, F. J. Duarte, in *High Power Dye Lasers*, Springer, Berlin, 1991, Chapter 2, and F. J. Duarte, Opt. Commun. **103**, 8-14 (1993). Particular attention was given to cases for $N = 2$, 23, 25, 100, and 800. In a more recent publication the generation of interferometric characters corresponding to $N = 2$, 3, 4, and 27 is also illustrated (F. J. Duarte, Opt. Commun. **205**, 313-19, 2002).

Perhaps the significance of the work described in the October OPN article (and Science **329**, 418) relates to interpretational matters. However, we have known for a while that there is good agreement between measured and predicted interferograms, using the generalized interferometric equation derived via Dirac's quantum notation, for even and odd values of N, from the near to the far field.

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