Double Slit Revisited

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The mainstream continues to self-destruct. And the destruction is accelerating this year, as we have seen that every couple of weeks I notch another win. My production of papers has gone way up this year, simply because I am given some new experiment or finding to comment on so often. Physics is in utter disarray and they either tacitly admit I was right about something every month or provide a new theory I can knock over in a matter of moments, as here.

Seventeen years after I posted my double-slit solution using my charge field, the mainstream still has its head up its shorts. Villas-Boas et al came out with a paper last month at *PRL* and Hossenfelder just commented on it at Youtube. To her credit, she doesn't think much of it, but others are selling it as a major breakthrough. That is sort of strange in itself, in that we have been told this had been solved for decades. Feynman allegedly solved it with path integrals 60 years ago, and it had been solved before that with standard wave interference. So it is curious anyone in the mainstream was even working on this in 2024, or that *PRL* would deign to publish it. People like Sean Carroll have been bragging that the mainstream already knows everything, so it doesn't make much sense for the double-slit experiment to make the news in 2025. So if nothing else, these guys in Brazil, ETH Zurich, and Max Planck are admitting the old solutions aren't satisfactory. And they aren't, because they aren't physical or mechanical. They are mathematical only, but don't explain where the wave pattern comes from.

I had at first feared they were trying to steal my solution, but I needn't have worried. They are nowhere near it. Instead, they propose the dark areas in the interference pattern are caused by dark photons. No really, that's what they decided to go with.

Here, we show that in quantum optics, classical interference emerges from collective bright and dark states of light, i.e., particular cases of two-mode binomial states, which are entangled superpositions of multimode photon-number states. This makes it possible to explain wave interference using the particle description of light and the superposition principle for linear systems only. It also sheds new light on an old debate concerning the origin of complementarity.

Two-mode binomial states in an entangled superposition? Wow. And PRL thought this was a viable solution, better than Feynman's sum-overs?

According their interpretation of their new math, the laser is emitting both light and dark photons, and the slits cause these photons to clump into the patterns we see. You will say that is a move to my theory, since my charge field, being dark, could be said to create the patterns in a similar way. I have shown that everyone has missed the fact that there was a field in the experiment even before they turned on their lasers. Even if the experiment is done in a vacuum, the walls will be emitting a charge field, since everything is recycling the ambient charge field all the time. That is what charge is. You can't create a charge vacuum, only an ion vacuum. On top of that, charge is real photons and is dark, since it is in the infrared. So the field pre-contains interference patterns before the experiment even starts.

In that way, their theory might be said to overlap with mine, but they still miss the fundamental fact of the experiment and therefore its baseline solution. So they are actually just mucking it up further. The only advance here is that it has finally dawned on them that something might be going on here in the dark. But they still don't have a clue what that is, since they still don't know about the real charge field. Their only idea here was to paste entangled states over Feynman's old math, updating it a bit with more fudgy operators. So if anything, this solution is even *less* mechanical than what they are trying to replace. Feynman was bright enough to stick with his *hypothesis non fingo* here, and you can see why. If you can't solve it in a straightforward way, as I do, it is probably best to remain silent.