
From: Lee Smolin <[REDACTED]>
Sent: Wednesday, July 7, 2010 2:24 PM
To: Lesley Groff
Cc: Jeffrey Epstein; Lee Smolin
Subject: Re: Jeffrey Epstein
Attachments: limitationsof-postarxiv1-preview.pdf; Untitled attachment 00396.htm; dsrnonlocalpostarxiv6.pdf; Untitled attachment 00399.htm

Dear Jeffrey,

Sorry to be late replying. I've had my head buried in an urgent project, which is understanding the issue of non-locality in doubly special relativity. DSR, I think we talked about, it is the modification of special relativity to preserve a minimal length. With it intervals of the Planck length or time don't contract or dilate. This has a consequence which is testable which is that the speed of light depends on energy.

A former postdoc, Sabine Hossenfelder published a paper arguing that there are non-localities in the theory which are so severe as to rule it out already.

I have been working hard to try to find if there is a way around her argument. I think I've succeeded, the result is in two papers which are attached. I'm really proud of the second one, "On imitations..." which I've just posted. The idea is that there is a cosmological consequence of quantum gravity, which is a limitation on how far away two clocks can be and still be synchronized.

Next week I am off very briefly to a conference she organized in Copenhagen where she is being nice enough to give me a slot to explain why she is wrong. So it should be interesting.

Besides this, I am mostly home through the summer, working on papers and two books, one an academic philosophy book with Roberto Mangabeira Unger, the other a more popular book.

I am sorry I haven't been there but I am traveling as little as possible, because of Kai. But I would love to catch up by phone and I do look forward to seeing you sometime soon. I hope all is well, best wishes from all of us here.

Take care,

Lee

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