

Re: QFT question

Source: <http://sci.tech-archive.net/Archive/sci.physics/2005-05/msg03340.html>

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 - *Date:* Tue, 24 May 2005 13:42:29 -0700
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"Guy Gordon" <gordon@xxxxxxxxxxxxxxxxxxxxxxxx> wrote in message news:oepl5911do4abstugcc141kmsnq0r2iuiuf@xxxxxxxxxxxx
| Are virtual photons the same as the EM field?

Photons are quanta of the EM field whether virtual or not. However, it seems to me that all photons are really virtual anyway to varying degrees.

| By that I mean, do they fulfill all the EM field such that one could say that
| virtual photons **are** the EM field, or that the EM field is made up of virtual
| photons?

QED-wise, the latter. However, if we take the quantum "vacuum" to be a relativistic medium and take vacuum polarization to tree level, then EM fields would have to be made up of virtual fermion pairs and thus photons.

Fredifizzx

http://www.vacuum-physics.com/QVC/quantum_vacuum_charge.pdf
or postscript
http://www.vacuum-physics.com/QVC/quantum_vacuum_charge.ps

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Re: QFT question

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