## Abstract Submitted for the DAMOP11 Meeting of The American Physical Society

## The Nature of Infinity in Quantum Field Calculations RICHARD

KRISKE, University of Minnesota — In many textbooks on Quantum Field Theory it has been noted that an infinity is taken a circle and the flux is calculated from the A field in that manner. There are of course many such examples of this sort of calculation using infinity as a circle. This author would like to point out that if the three dimensions of space are curved and the one dimension of time is not, in say a four space, infinity is the horizon, which is not a circle but rather a sphere; as long as space-time is curved uniformly, smoothly and has positive curvature. This author believes the math may be in error, since maps of the CMBR seem to indicate a "Swiss-Cheese" type of topology, wherein the Sphere at infinity (the Horizon of the Universe), has holes in it that can readily be seen. This author believes that these irregularities most certainly have a calculable effect on QED, QCD and Quantum Field Theory.

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