Abstract Submitted
for the APR15 Meeting of
The American Physical Society

On measurement of the isotropy of the maximum attainable speed
BOGDAN WOJTSEKHOWSKI, Thomas Jefferson National Accelerator Laboratory — A proposal for a precision experiment to investigate possible anisotropy of the maximum attainable speed (MAS) will be presented. It is based on an electron/positron beam with a large Lorentz factor and a 180-degree magnetic arc. The ratio of the momenta at the two ends of the magnetic arc will be used to form an observable which is sensitive to the MAS variation and immune to most of the instabilities of the apparatus. The search will use the sidereal periodicity of a potential signal. The uncertainty of momenta measurement could be greatly reduced by means of the electron and positron beams simultaneously rotating in the same magnetic system. The projected sensitivity of the measurement and the implications will be discussed.

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Date submitted: 09 Jan 2015 Electronic form version 1.4