

NAL PROPOSAL NO. 265

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Exposure of Emulsions to 400 GeV Protons

for

New Determination of Mean Life of  $\pi^0$

P. S. Young

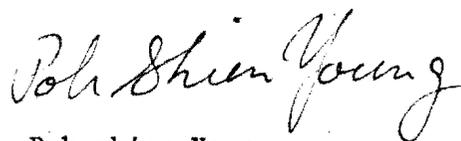
October 26, 1973

Exposure of Emulsions to 400 GeV Protons  
for  
New Determination of Mean Life of  $\pi^0$

(Proposed Continuation and Extension of Experiment 195)

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1. The first set of exposures of our experiment 195 was carried out with 300 GeV proton on October 20, 1973.
2. We would like to extend our measurement of mean life of  $\pi^0$  by use of 400 GeV protons in order to observe longer path lengths of  $\pi^0$  through a greater Lorentz time dilation factor, which will make our measurement more accurate.
3. We will use 3 Stacks of G5 emulsions as detectors, each containing 10 pellicles 3" x 7" x 600  $\mu$  each.
4. Three exposures are requested with the following intensities:  $5 \times 10^4$ ,  $1 \times 10^5$ ,  $5 \times 10^5$  protons/cm<sup>2</sup>.



Poh-shien Young

October 26, 1973