

To the memory of M. P. Rekaló

**MEASUREMENT OF THE DEUTERON TENSOR  
POLARIZATION AT THE  ${}^3\text{He} \rightarrow d + p$  VERTEX UP  
TO INTERNAL MOMENTA OF 0.44 GEV/C**

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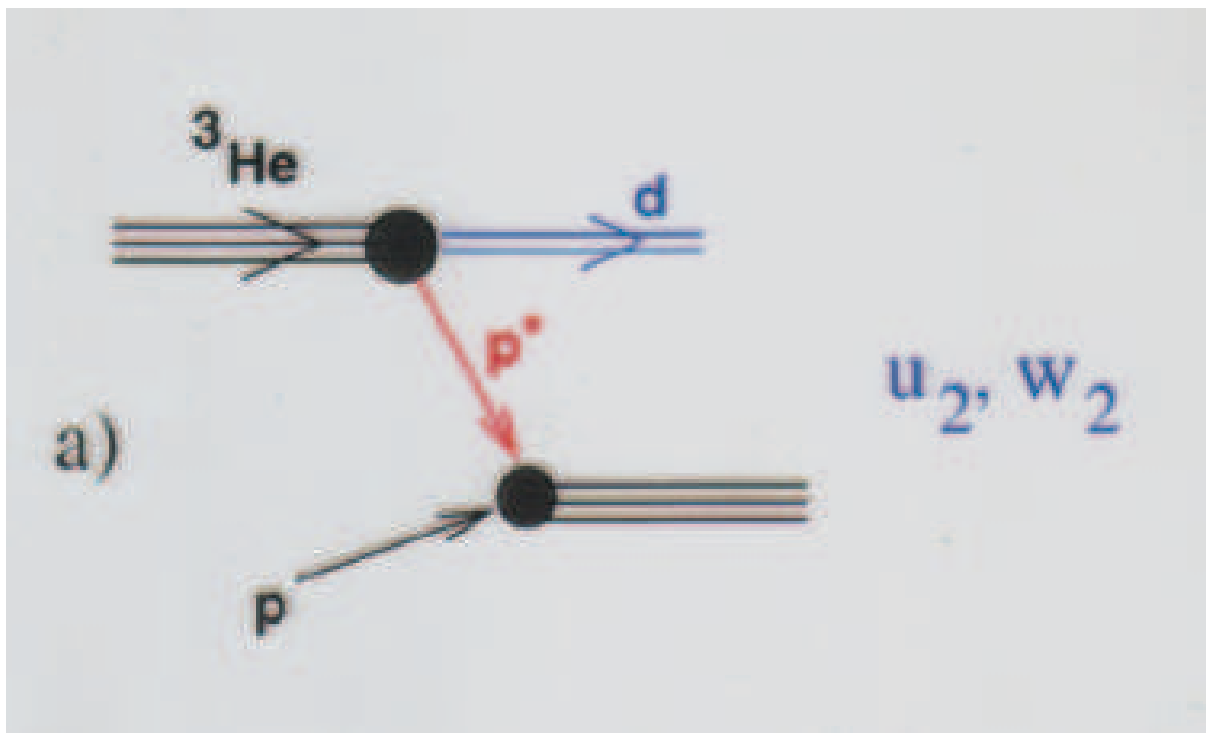
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$$\rho_{20} = -\sqrt{2} \frac{2u_2 w_2 + w^2}{2u_2^2 + (u_2 + w_2)^2} (\text{Rekalo})$$

The axis of alignment is  
 along internal momentum,  
 in Lab system – along Lab momentum

$$\sigma = \sigma_0(1 + \rho_{20}T_{20})$$

THE EXPERIMENT :



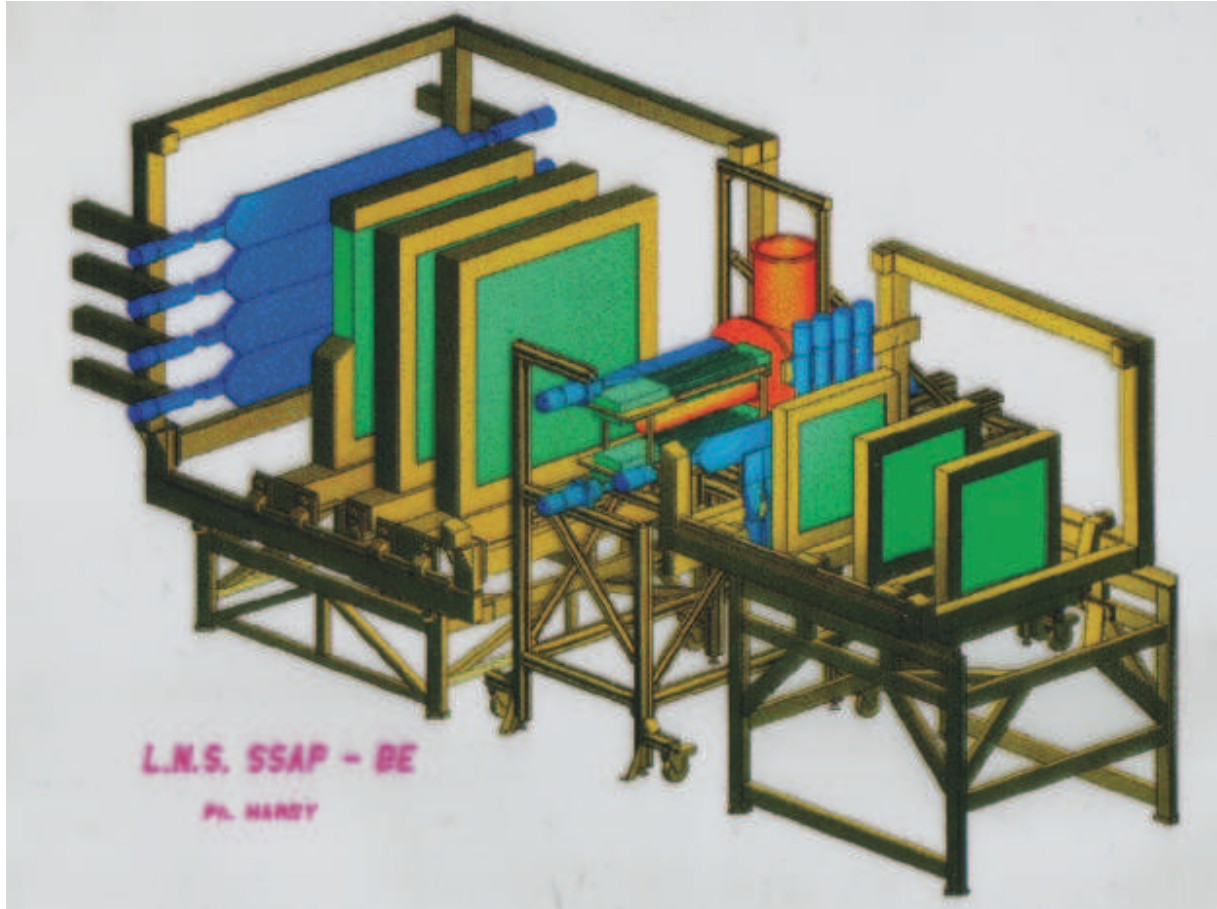
1) Calibration of HYPOM

direct  $\vec{d}$  beam  $E_d = 3.773, 3.390 \text{ GeV}/c$

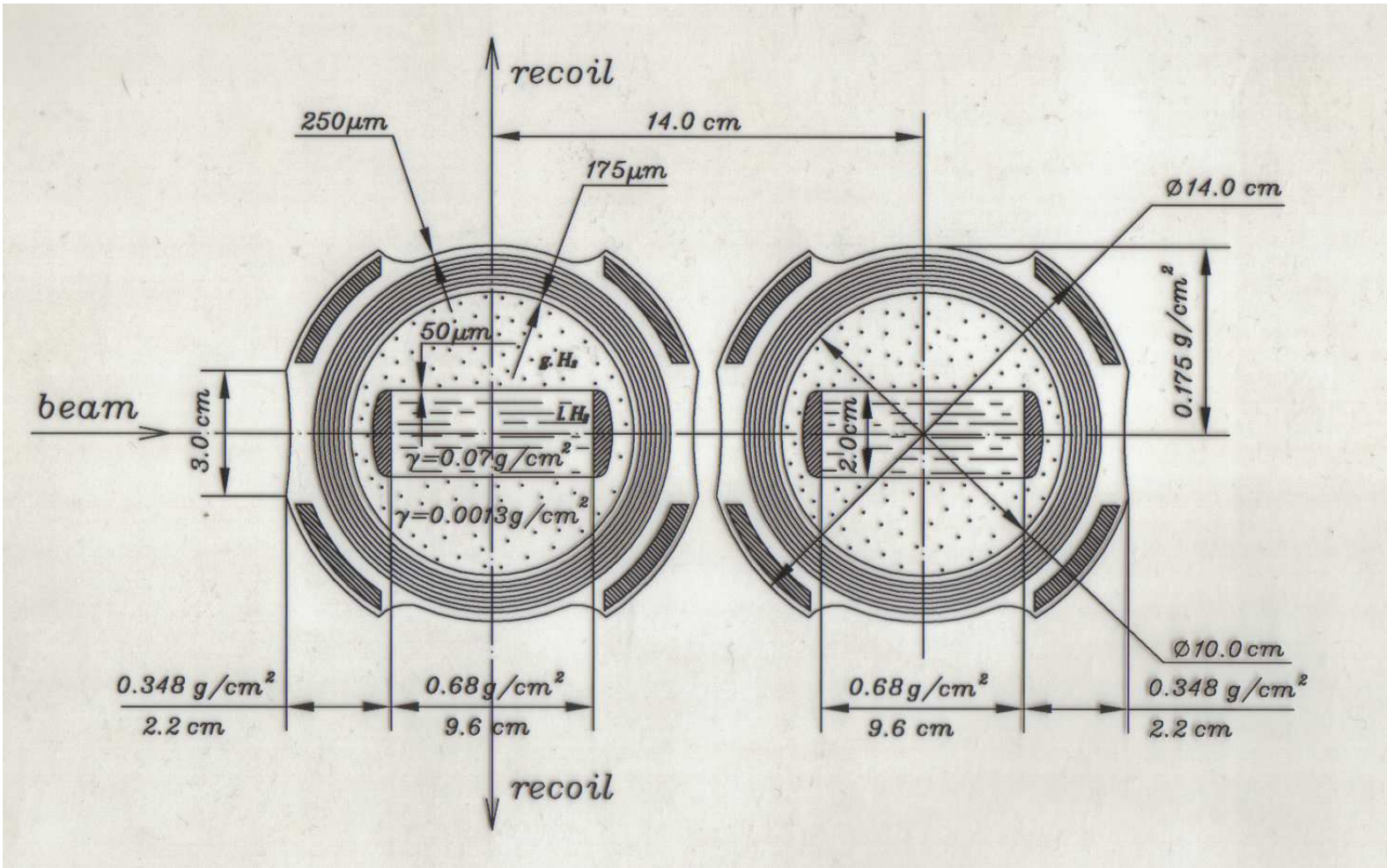
2)  ${}^3_2\text{He}$  beam  $E_k = 2.84, 2.99, 3.51, 2.58 \text{ GeV}/c$

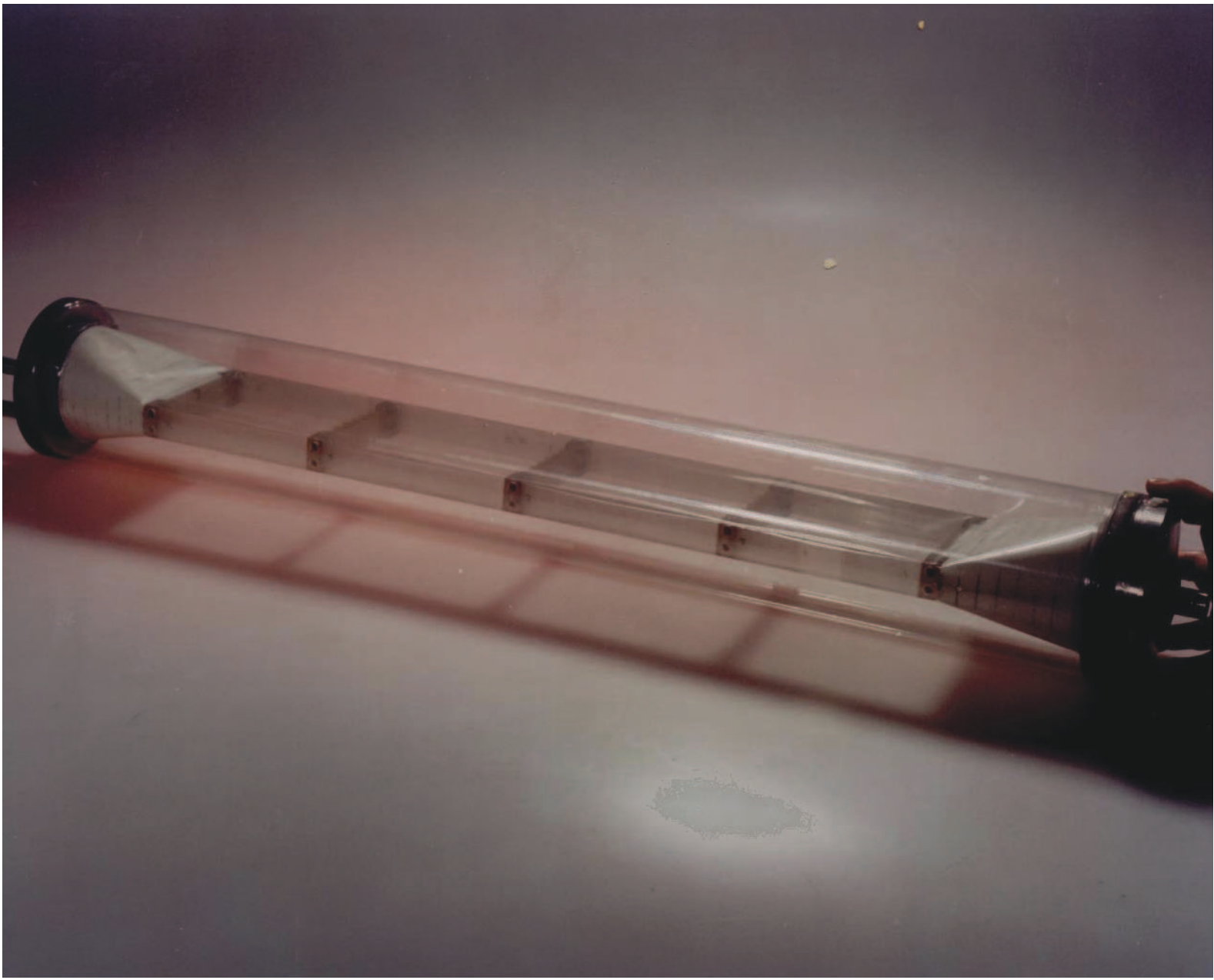
$\Rightarrow p_d = 3.773 \text{ GeV}/c$  at  $0^\circ$

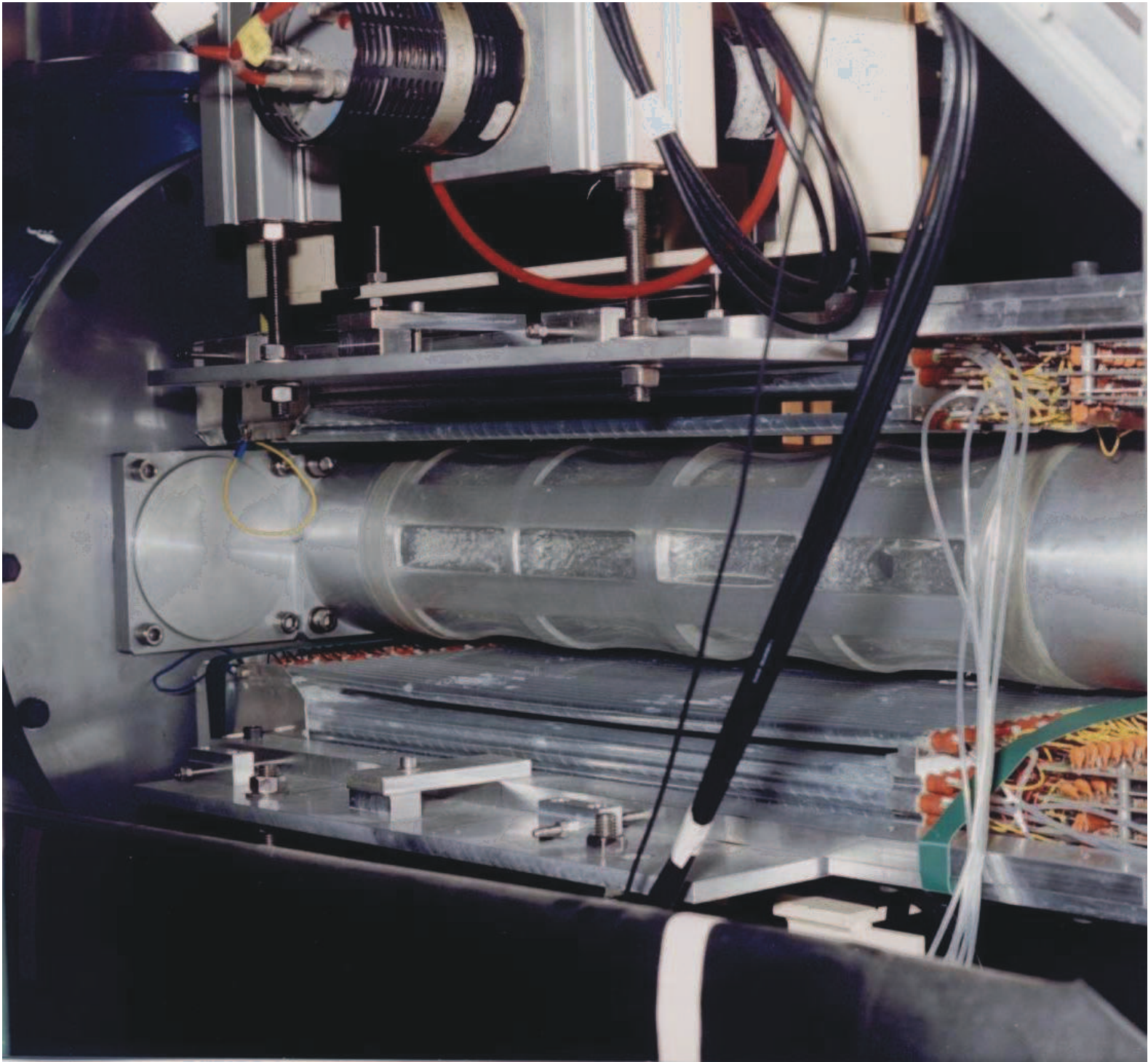
$k_d = 0.28, 0.20, 0.00, 0.36, 0.44 \text{ GeV}/c$

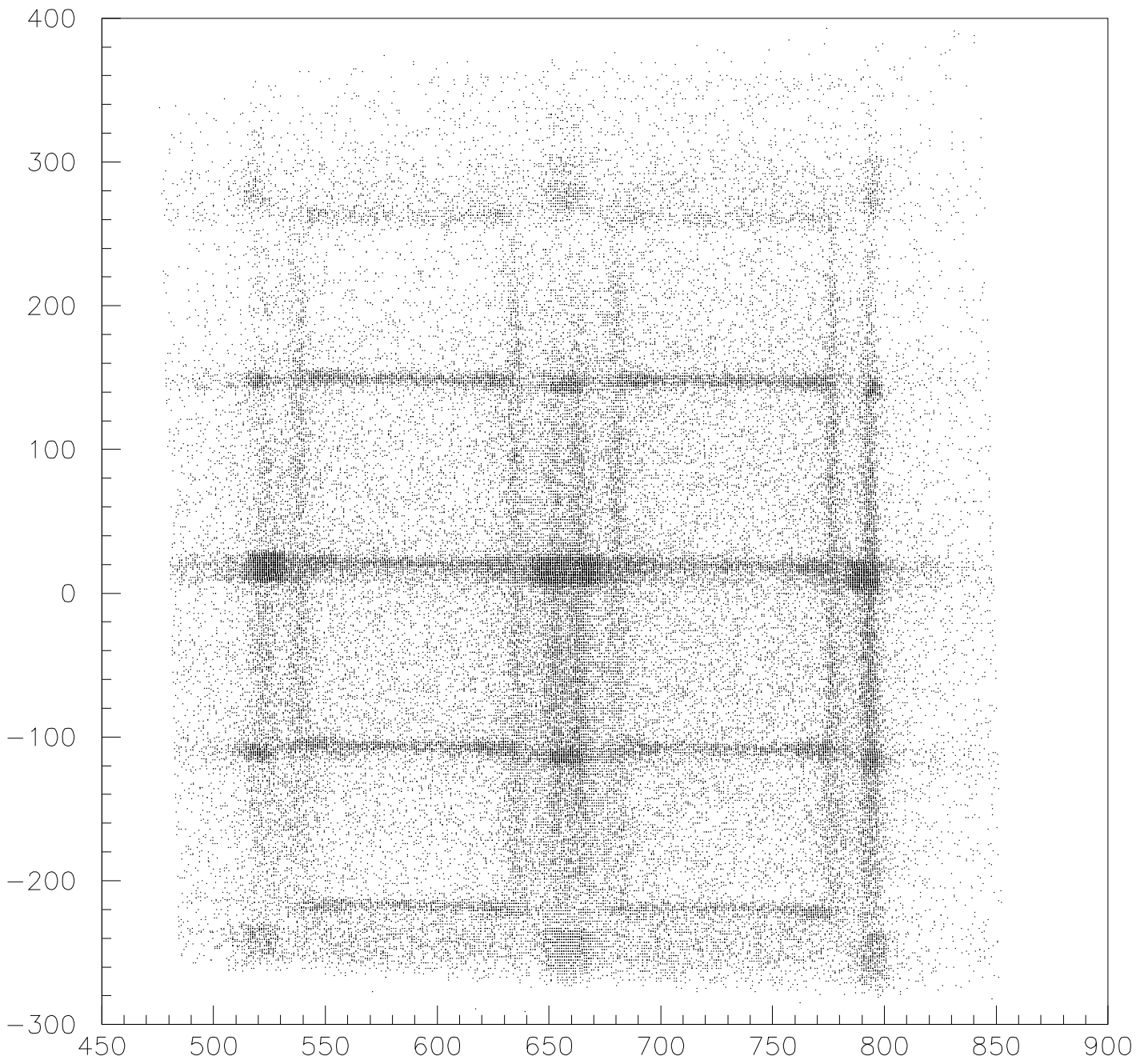


L.N.S. SSAP - BE  
PL. HARDY



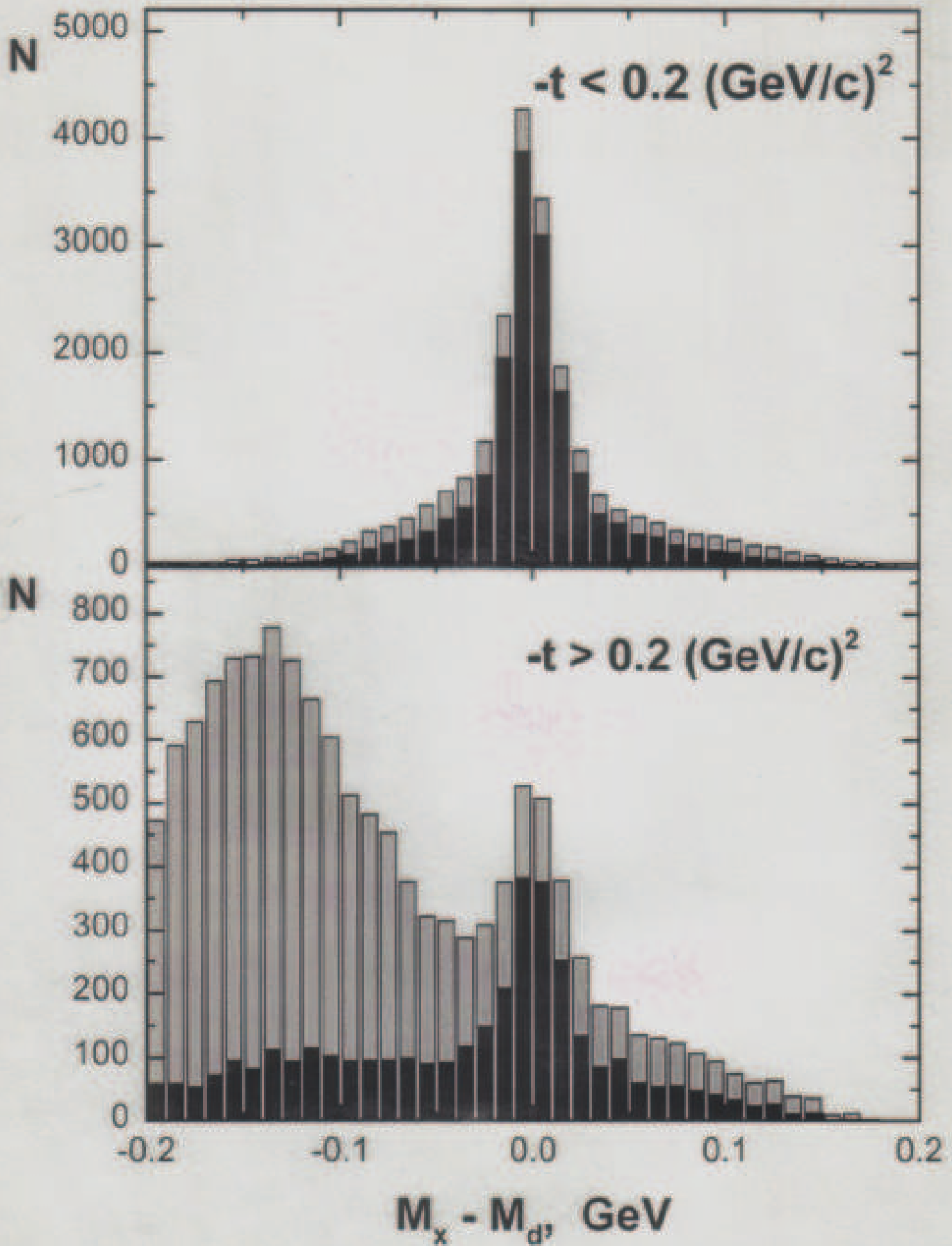




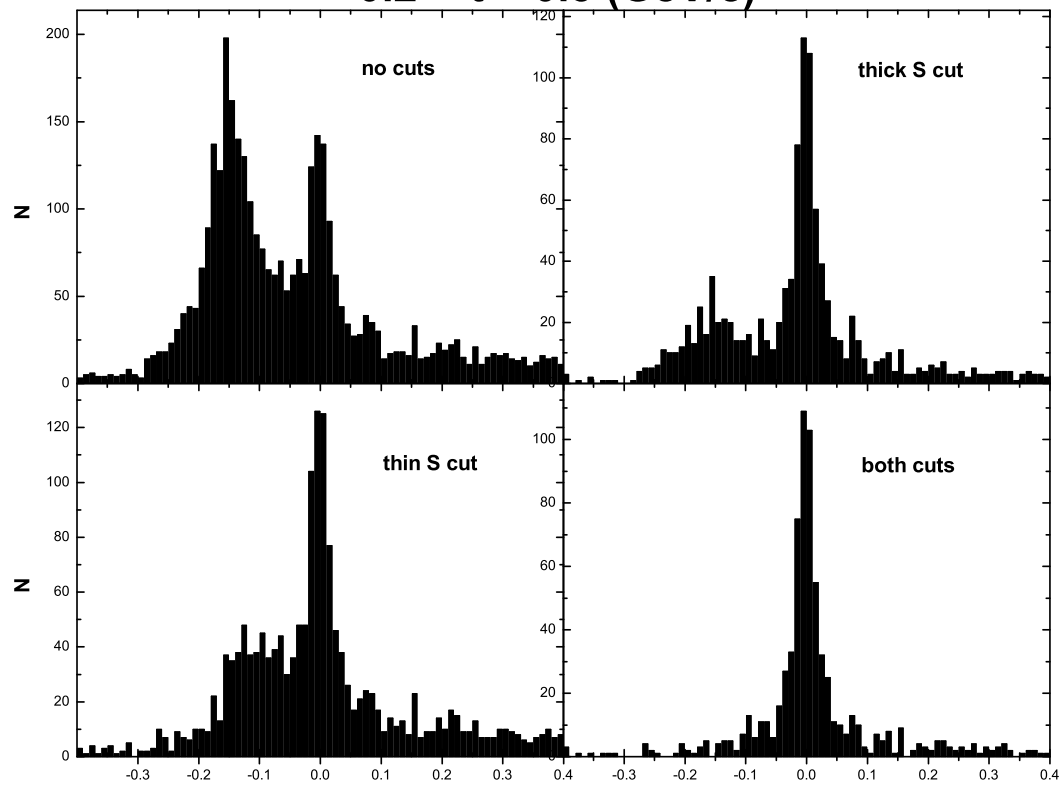


$ixint$  VS.  $izint - ixint * 0.015$

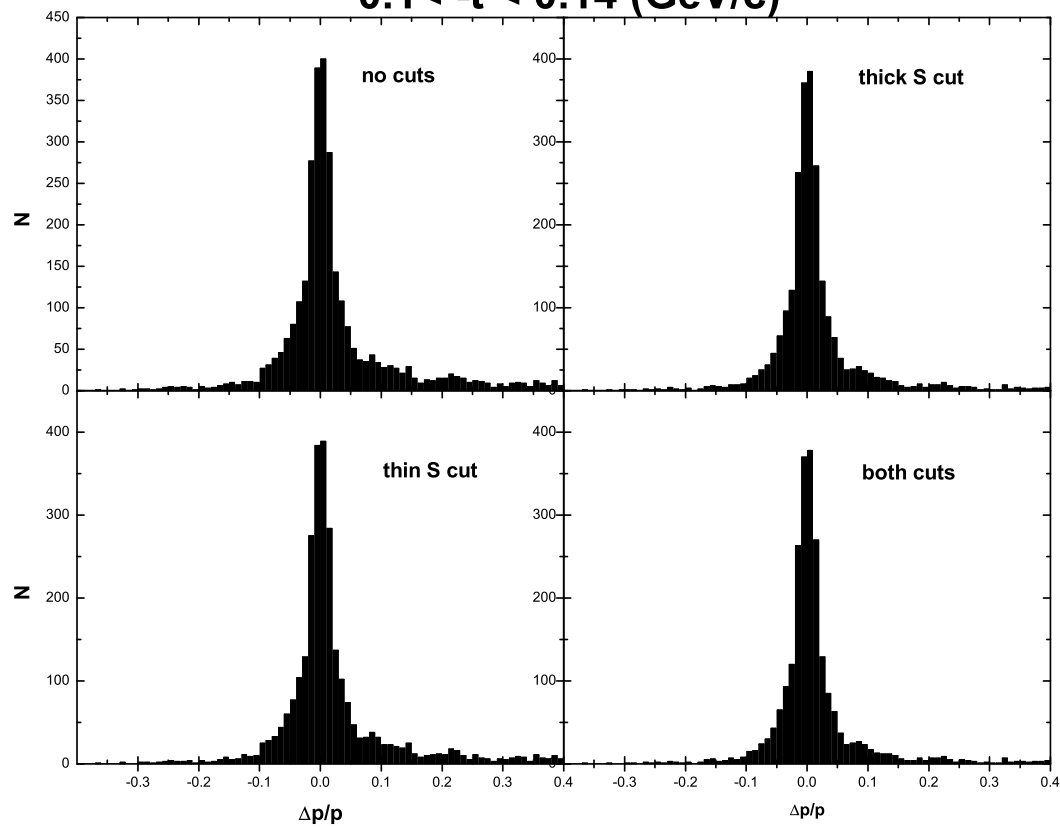


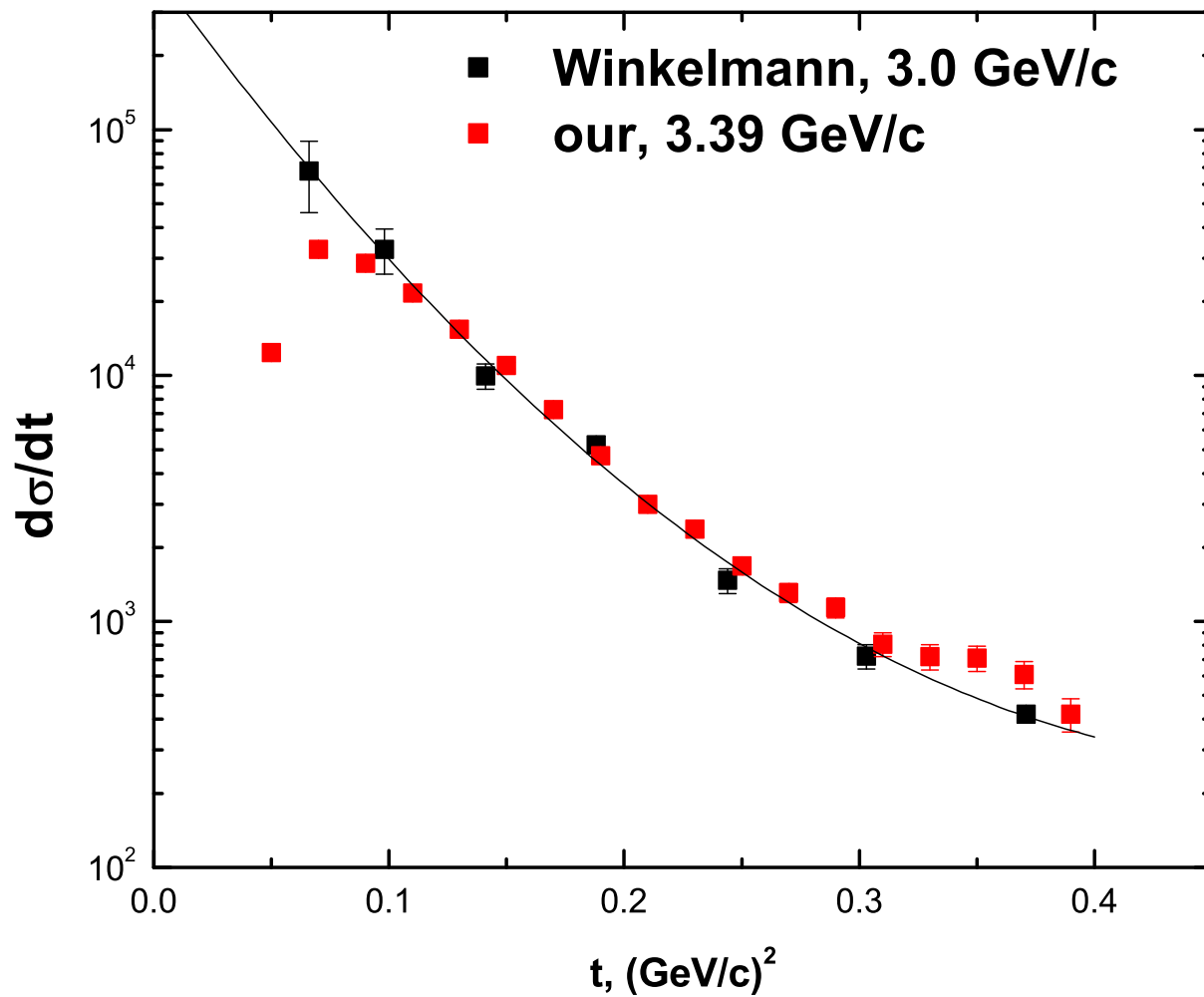


$0.2 < -t < 0.3 \text{ (GeV/c)}^2$



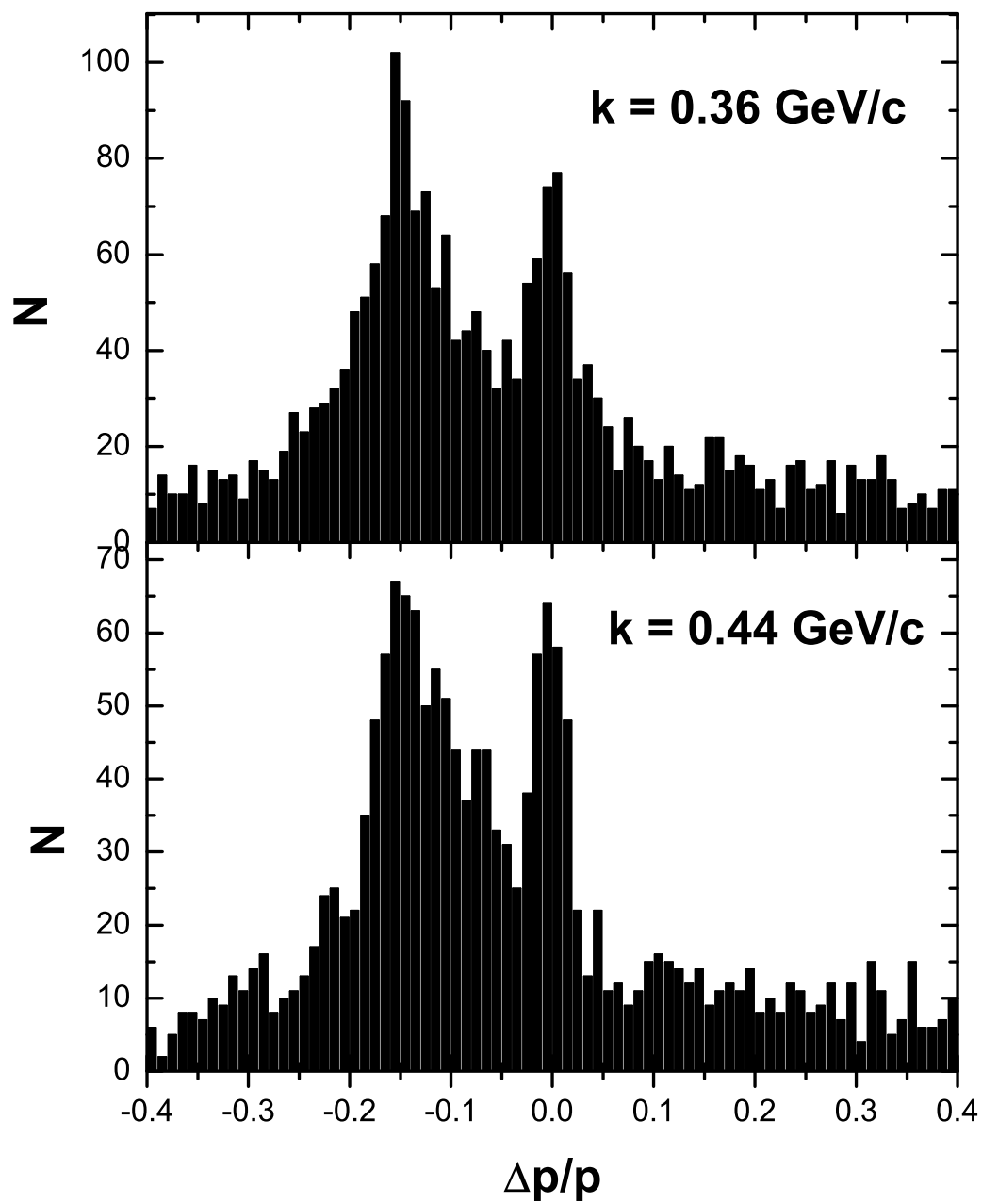
$\Delta p/p$   $0.1 < -t < 0.14 \text{ (GeV/c)}^{2p/p}$

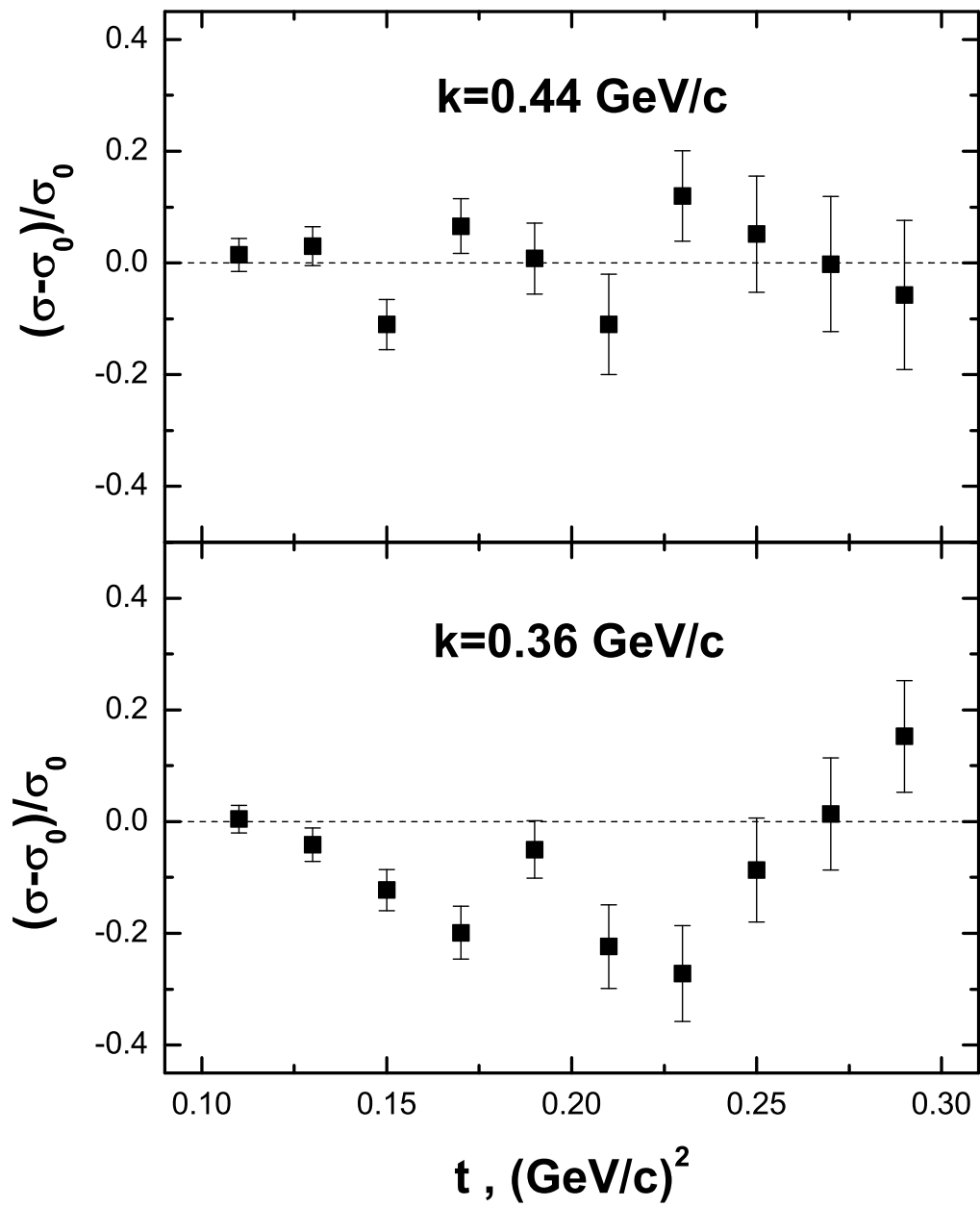




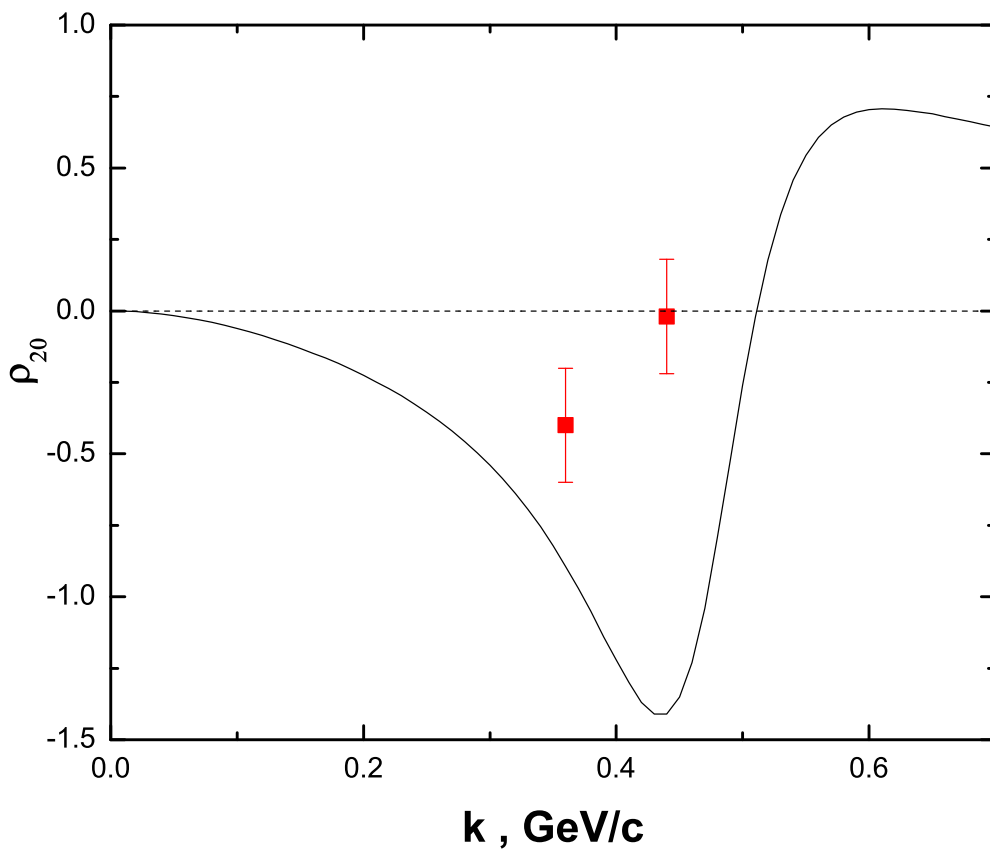
Winkelmann et al., PRC 21 (1980) 2535

**$0.2 < -t < 0.3 \text{ GeV}/c$**





$$\frac{\sigma - \sigma_0}{\sigma_0} = \rho_{20} T_{20}$$



$$\rho_{20} = -\sqrt{2} \frac{2u_2 w_2 + w^2}{2u_2^2 + (u_2 + w_2)^2} (\text{Rekalo})$$

$u_2, v_2$  - Germond, Wilkin parametrization of Schiavilla, Pandharipande, Wiranga table calculations.



