

Picosecond Polarized Electronbunches from GaAs Photocathodes*,

H.G. ANDRESEN¹,
K. AULENBACHER², J. BERMUTH¹,
P. DRESCHER², H. EUTENEUER¹, H. FISCHER²,
D.V. HARRACH¹, P. HARTMANN¹,
J. HOFFMANN¹, P. JENNEWEIN¹, K.-H. KAISER¹,
S. KÖBIS¹, H.J. KREIDEL¹, CH. NACHTIGALL²,
S. PLÜTZER², E. REICHERT², K.-H. STEFFENS¹,
M. STEIGERWALD², H. TRAUTNER² - At the Mainz

electron accelerator MAMI an experiment has been set up that allows the measurement of bunchlength, transversal and longitudinal effective emittance and average and phase resolved polarization of picosecond electron bunches from a source of polarized electrons for MAMI. Measurements of polarized electron bunches from bulk GaAs of 20 ps duration and from strained layer GaAsP with durations of less than 20 ps are presented.

* Work supported by the Deutsche Forschungsgemeinschaft in SFB 201, B2.

1 Institut für Kernphysik.

2 Institut für Physik, Joh. Gutenberg Universität, Mainz.