

Registration for the Spring-Meeting of the
German Physical Society
from 04.03. to 09.03.2005
in berlinhkt

**PTL - a Universal Programmable Trigger Logic for Exploratory
Setups at HERA** — ●ANGELA LUCACI-TIMOCE — c/o DESY FH1,
Notkestr. 85, 22607 HH

The 1st level Trigger of H1 combines signals from the main sources such as calorimeter and tracker. When exploring new trigger options, one often wishes to combine a limited number of detector signals to new trigger conditions without affecting the standard setup.

The PTL is a single width, standard VME unit with 32 input channels and 16 output signals. All signals are synchronised to the 96 ns HERA clock and signal formation delays at the input can be accounted for. For delays minimisation, signal latching can be optimised inside each bunch while signal phases can be actively monitored. Output signals can be extended or shortened and internal feedback can be activated. The unit provides several ancillary signals that prove useful for diagnostics in exploratory applications. On actual trigger the input pipelines can be accessed from VME together with the onboard hardware scalars for each channel.

H1 specific applications, software examples and the unit's architecture will be discussed.

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Date: 04.03.—09.03.2005
Section: Particle Physics
Subject: Data acquisition and triggering
Presentation: Talk
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Membership: none