

Publication List J. J. Engelen

1. Overview

Study of K^*p interactions at 4.2 GeV/c (1973-1978). Experiment using CERN 2 m Hydrogen Bubble Chamber. Participated in data collection; contributed to data reduction and, mainly, data analysis. The experiment yielded 'state of the art' results on hadron production and spectroscopy (Y^* , Ξ^* , Ω^*); Partial Wave Analysis techniques were developed starting from Ascoli's code ($K\pi\pi$ system); I performed a multi-channel analysis, in fully dimensional phase space, of the $K\pi p$ final state, following a suggestion during a discussion with L. van Hove. The full analysis identified 16 channels, further split up over various partial waves; the method was also sensitive to relatively low cross sections (i.e. spin 3 K^* (1780); clear evidence was also found for the not well-established Σ (1480)).

Study of hard processes in γp interactions at an average photon energy of 90 GeV – CERN (1979-1984). I joined this experiment (NA14) in an early phase, i.e. when it was still on the drawing board. I was involved in modifying an existing magnet (GOLIATH) to increase its acceptance; in designing magnetic shielding, beam testing lead glass (SF6)-light guide- PM- presampler system, beam testing Cerenkov counter PM's, integrating and running the full experiment, the data reduction process and data analysis. The experiment yielded unique results on 'hard' processes: QED photon-quark Compton scattering, QCD Compton scattering, photon-gluon fusion and was one of the first to allow a quantitative test of perturbative, higher order QCD (pioneering calculations by Aurenche, Fontannaz, Duke, Owens and others). The experiment also concluded against the integrally charged quarks and gluons of the Pati-Salam unified lepton-hadron symmetry.

Study of electron(positron) proton deeply inelastic scattering at the Hadron Elektron Ring Anlage (HERA) – DESY, Hamburg (1985 - ~2002). I joined the ZEUS experiment at a very early stage, contributing to Letter of Intent (1985) and Technical Proposal (1986). Contributions to initial physics studies include hard photoproduction (including cross section calculations); a study of luminosity monitoring (using $ep \rightarrow ep\gamma$; also $ep \rightarrow ep\mu\mu$, the former process being very useful in practice, the latter more academic); a study of the reconstruction of Neutral Current kinematics (this included the discovery of the Double Angle formula – the Double Angle method has been crucial for structure function measurements at HERA; work done together with S. Bentvelsen and P. Kooijman). Early work on calorimeter design (with H. Tiecke) concentrating on optimizing the compensation of fluctuations in hadron showers (pioneered in particular by Wigmans). This led to a very substantial NIKHEF contribution to the ZEUS integrated electromagnetic-hadronic uranium-scintillator calorimeter. The NIKHEF ZEUS group also made leading contributions to the high level trigger (introducing transputers), to off-line software etc. The ZEUS experiment (and similarly the 'competing' H1 experiment) produced a wealth of new and important results: proton structure function and parton densities, showing strong increase for low fractional momenta; QCD evolution consistent with DGLAP (Dokshitzer, Gribov, Lipatov, Altarelli, Parisi) picture; extraction of gluon density; discovery of rather spectacular large rapidity gap DIS events; measurement of contribution of charm to proton structure function (F_2^c); measurement of charged current scattering and related parton densities; measurement of F_3 ; etc.

Construction of a deep sea telescope for high energy neutrinos, ANTARES (1997 - ~2003). Major conceptual design work had already been done, mainly in Marseille and at Saclay, when I decided to join and with me a NIKHEF group. We introduced the 'all data to shore' concept and contributed to its implementation. Today this adds crucially to ANTARES's performance and potential. The first ANTARES detector strings are now operational (2007) and first (astro)physics results should appear soon.

2. List of Publications

1. M. Ageron et al., ANTARES: the first undersea neutrino telescope, arXiv:1104.1607 [astro-ph.IM]; Nucl.Instrum.Meth. A656 (2011) 11-38.
2. J. Engelen, The LHC project, Acta Phys.Polon. B38 (2007) 267-270.
3. J. Engelen, Towards a Strategy for Future Projects in High-Energy Physics (European Perspective), Acta Phys.Polon.B37:2149-2152,2006.
4. J.J. Engelen, The LHC Project: Overview and Status, Czech.J.Phys.55:B13-B21,2005.
5. J.A. Aguilar et al., Study of Large Hemispherical Photomultiplier Tubes for the ANTARES Neutrino Telescope, Nucl.Instrum.Meth.A555:132-141,2005.
6. J. Engelen, The Large Hadron Collider Project, Proc. of the EPS General Conference, 11-15 July 2005, Bern, Switzerland.
7. J. Engelen, Physics at the LHC with ATLAS and CMS, Nucl.Phys.Proc.Suppl.135:3-8,2004, In *Zinnowitz 2004, Loops and Legs in Quantum Field Theory*
8. J.A. Aguilar et al., Transmission of Light in Deep Sea Water at the Site of the ANTARES Neutrino Telescope, Astropart.Phys.23:131-155,2005.
9. J. Engelen, Challenges of the LHC: The Detector Challenge, Eur.Phys.J.C34:61-65,2004.
10. J.A. Aguilar et al., Status of the ANTARES Project, Eur.Phys.J.C33:s971-s974,2004.
11. J.A. Aguilar et al., The ANTARES Neutrino Project: Status Report, Phys.atom.Nucl.67:1172-1176,2004., Yad.Fiz.67N6:1195-1199, 2004.
12. S. Chekanov et al., Scaling Violations and Determination of α_s from Jet Production in γp Interactions at HERA, Phys.Lett.B560:7-23,2003.
13. S. Chekanov et al., Measurement of Subjet Multiplicities in Neutral Current Deep Inelastic Scattering at HERA and Determination of α_s , Phys.Lett.B558:41-58,2003.
14. S. Chekanov et al., Measurement of Event Shapes in Deep Inelastic Scattering at HERA, Eur.Phys.J.C27:531-545,2003.
15. S. Chekanov et al., Observation of the Strange Sea in the Proton via Inclusive ϕ Meson Production in Neutral Current Deep Inelastic Scattering at HERA, Phys.Lett.B553:141-158,2003.
16. S. Chekanov et al., Measurements of Inelastic J/ψ and ψ' Photoproduction at HERA, Eur.Phys.J.C27:173-188,2003.
17. S. Chekanov et al., Study of the Azimuthal Asymmetry of Jets in Neutral Current Deep Inelastic Scattering at HERA, Phys.Lett.B551:226-240,2003.
18. S. Chekanov et al., Leading Proton Production in e^+p Collisions at HERA, Nucl.Phys.B658:3-46,2003.
19. S. Chekanov et al., Measurement of High Q^2 ep Neutral Current Cross-Sections at HERA and the Extraction of xF_3 , Eur. Phys. J. C28 (2003) 175-201

20. S. Chekanov et al., Inclusive Jet Cross-Sections in the Breit Frame in Neutral Current Deep Inelastic Scattering at HERA and Determination of α_s , Phys.Lett.B547:164-180,2002.
21. S. Chekanov et al., A ZEUS Next-to-Leading-Order QCD Analysis of Data on Deep Inelastic Scattering, Phys.Rev.D67:012007,2003.
22. P. Amram et al., Sedimentation and Fouling of Optical Surfaces at the ANTARES Site, Astropart.Phys.19:253-267,2003.
23. S. Chekanov et al., Measurement of Diffractive Production of D^{*+} (2010) Mesons in Deep Inelastic Scattering at HERA, Phys.Lett.B545:244-260,2002.
24. S. Chekanov et al., Measurement of High Q^2 Charged Current Cross-Sections in e^+p Deep Inelastic Scattering at HERA, Phys.Lett.B539:197-217,2002., Erratum-ibid.B552:308,2003.
25. S. Chekanov et al., Measurement of Proton Dissociative Diffractive Photoproduction of Vector Mesons at Large Momentum Transfer at HERA, Eur.Phys.J.C26:389-409,2003.
26. S. Chekanov et al., Leading Neutron Production in e^+p Collisions at HERA, Nucl.Phys.B637:3-56,2002.
27. S. Chekanov et al., Measurement of the Q^2 and Energy Dependence of Diffractive Interactions at HERA, Eur.Phys.J.C25:169-187,2002.
28. S. Chekanov et al., Exclusive Photoproduction of J/ψ Mesons at HERA, Eur.Phys.J.C24:345-360,2002.
29. S. Chekanov et al., Measurement of the Photon Proton Total Cross-Section at a Center-of-Mass Energy of 209 GeV at HERA, Nucl.Phys.B627:3-28,2002.
30. S. Chekanov et al., Search for Lepton Flavor Violation in e^+p Collisions at HERA, Phys.Rev.D65:092004,2002.
31. S. Chekanov et al., High Mass Dijet Cross-Sections in Photoproduction at HERA, Phys.Lett.B531:9-27,2002.
32. S. Chekanov et al., Dijet Photoproduction at HERA and the Structure of the Photon, Eur.Phys.J.C23:615-631,2002.
33. S. Chekanov et al., Dijet Production in Neutral Current Deep Inelastic Scattering at HERA, Eur.Phys.J.C23:13-27,2002.
34. S. Chekanov et al., Searches for Excited Fermions in ep Collisions at HERA, Phys.Lett.B549:32-47,2002.
35. S. Chekanov et al., Properties of Hadronic Final States in Diffractive Deep Inelastic ep Scattering at HERA, Phys.Rev.D65:052001,2002.
36. S. Chekanov et al., Three Jet Production in Diffractive Deep Inelastic Scattering at HERA, Phys.Lett.B516:273-292,2001.

37. P. Amram et al., The ANTARES Optical Module, Nucl.Instrum.Meth.A484:369-383,2002.
38. S. Chekanov et al., Measurement of the Neutral Current Cross-Section and F_2 Structure Function for Deep Inelastic e^+p Scattering at HERA, Eur.Phys.J.C21:443-471,2001.
39. S. Chekanov et al., Multiplicity Moments in Deep Inelastic Scattering at HERA, Phys.Lett.B510:36-54,2001.
40. S. Chekanov et al., Study of the Effective Transverse Momentum of Partons in the Proton Using Prompt Photons in Photoproduction at HERA, Phys.Lett.B511:19-32,2001.
41. J. Breitweg et al., Measurement of Dijet Production in Neutral Current Deep Inelastic Scattering at High Q^2 and Determination of α_s , Phys.Lett.B507:70-88,2001.
42. J. Breitweg et al., Measurement of Open Beauty Production in Photoproduction at HERA, Eur.Phys.J.C18:625-637,2001.
43. J. Breitweg et al., Measurement of Dijet Cross-Sections for Events with a Leading Neutron in Photoproduction at HERA, Nucl.Phys.B596:3-29,2001.
44. J. Breitweg et al., Search for Resonance Decays to an Anti-Neutrino Plus Jet in e^+p Scattering at DESY HERA, Phys.Rev.D63:052002,2001.
45. J. Breitweg et al., Measurement of Exclusive ω Electroproduction at HERA, Phys.Lett.B487:273-288,2000.
46. J. Breitweg et al., Measurement of the Proton Structure Function F_2 at Very Low Q^2 at HERA, Phys.Lett.B487:53-73,2000.
47. J. Breitweg et al., Measurement of Inclusive D_s^{+} Photoproduction at HERA, Phys.Lett.B481:213-227,2000.
48. J. Breitweg et al., Measurement of Azimuthal Asymmetries in Deep Inelastic Scattering, Phys.Lett.B481:199-212,2000.
49. J. Breitweg et al., Search for Resonances Decaying to e +Jet in e^+p Interactions at HERA, Eur.Phys.J.C16:253-267,2000.
50. J. Breitweg et al., The Q^2 Dependence of Dijet Cross-Sections in γp Interactions at HERA, Phys.Lett.B479:37-52,2000.
51. J. Breitweg et al., Measurement of Diffractive Photoproduction of Vector Mesons at Large Momentum Transfer at HERA, Eur.Phys.J.C14:213-238,2000.
52. J. Engelen, New Results from HERA on Deep Inelastic Scattering, in *Blois 1994, The Heart of The Matter* 173-185.
53. P. Amram et al., The Antares Project, Nucl.Phys.Proc.Suppl.75a:415-417,1999, in *Tegernsee 1999, Astroparticle Physics* 3-5
54. J. Breitweg et al., Measurement of the Spin Density Matrix Elements in Exclusive Electroproduction of ρ^0 Mesons at HERA, Eur.Phys.J.C12:393-410,2000.

55. J. Breitweg et al., Measurement of D^{*+} Production and the Charm Contribution to F_2 in Deep Inelastic Scattering at HERA, *Eur.Phys.J.C*12:35-52,2000.
56. J. Breitweg et al., W Production and the Search for Events with an Isolated High-Energy Lepton and Missing Transverse Momentum at HERA, *Phys.Lett.B*471:411-428,2000.
57. J. Breitweg et al., Measurement of High Q^2 Charged Current e^+p Deep Inelastic Scattering Cross-Sections at HERA, *Eur.Phys.J.C*12:411-428,2000., Erratum-Ibid.C27:305-309, 2003.
58. E. Aslanides et al., A Deep Sea Telescope for High-Energy Neutrinos, CPPM-P-1999-02 (May 1999) 149p.
59. J. Breitweg et al., Angular and Current Target Correlations in Deep Inelastic Scattering at HERA, *Eur.Phys.J.C*12:53-68,2000.
60. J. Breitweg et al., Measurement of Dijet Photoproduction at High Transverse Energies at HERA, *Eur.Phys.J.C*11:35-50,1999.
61. J. Breitweg et al., Search for Contact Interactions in Deep Inelastic $e^+p \rightarrow e^+X$ Scattering at HERA, *Eur.Phys.J.C*14:239-254,2000.
62. J. Engelen, P. Kooijman, Deep Inelastic Scattering at HERA: A Review of Experimental Results in The Light of Quantum Chromodynamics, *Prog.Part.Nucl.Phys.*41:1-47,1998.
63. J. Breitweg et al., Measurement of High Q^2 Neutral Current e^+p Deep Inelastic Scattering Cross-Sections at HERA, *Eur.Phys.J.C*11:427-445,1999.
64. J. Breitweg et al., Measurement of Multiplicity and Momentum Spectra in the Current and Target Regions of the Breit Frame in Deep Inelastic Scattering at HERA, *Eur.Phys.J.C*11:251-270,1999.
65. J. Breitweg et al., Measurement of Three Jet Distributions in Photoproduction at HERA, *Phys.Lett.B*443:394-408,1998.
66. J. Breitweg et al., ZEUS Results on the Measurement and Phenomenology of F_2 at Low x and Low Q^2 , *Eur.Phys.J.C*7:609-630,1999.
67. J. Breitweg et al., Exclusive Electroproduction of ρ^0 and J/ψ Mesons at HERA, *Eur.Phys.J.C*6:603-627,1999.
68. J. Breitweg et al., Measurement of Elastic γ Photoproduction at HERA, *Phys.Lett.B*437:432-444,1998.
69. J. Breitweg et al., Measurement of Inclusive Prompt Photon Photoproduction at HERA, *Phys.Lett.B*472:175-188,2000.
70. J. Breitweg et al., Measurement of the $E_{T,jet}^2/Q^2$ Dependence of Forward Jet Production at HERA, *Phys.Lett.B*474:223-233,2000.
71. J. Breitweg et al., Measurement of the Diffractive Cross-Section in Deep Inelastic Scattering Using ZEUS 1994 Data, *Eur.Phys.J.C*6:43-66,1999.

72. J. Breitweg et al., Measurement of Inclusive D^{*+} and Associated Dijet Cross-Sections in Photoproduction at HERA, *Eur.Phys.J.C6*:67-83,1999.
73. J. Breitweg et al., Search for Selectron and Squark Production in e^+p Collisions at HERA, *Phys.Lett.B434*:214-230,1998.
74. J. Breitweg et al., Forward Jet Production in Deep Inelastic Scattering at HERA, *Eur.Phys.J.C6*:239-252,1999.
75. J. Breitweg et al., Diffractive Dijet Cross-Sections in Photoproduction at HERA, *Eur.Phys.J.C5*:41-56,1998.
76. J. Breitweg et al., Measurement of Jet Shapes in High Q^2 Deep Inelastic Scattering at HERA, *Eur.Phys.J.C8*:367-380,1999.
77. J. Breitweg et al., High E_T Inclusive Jet Cross-Sections in Photoproduction at HERA, *Eur.Phys.J.C4*:591-606,1998.
78. J. Breitweg et al., Measurement of the t Distribution in Diffractive Photoproduction at HERA, *Eur.Phys.J.C2*:237-246,1998.
79. J. Breitweg et al., Elastic and Proton Dissociative p^0 Photoproduction at HERA, *Eur.Phys.J.C2*:247-267,1998.
80. J. Breitweg et al., Charged Particles and Neutral Kaons in Photoproduced Jets at HERA, *Eur.Phys.J.C2*:77-93,1998.
81. J. Breitweg et al., Event Shape Analysis of Deep Inelastic Scattering Events with a Large Rapidity Gap at HERA, *Phys.Lett.B421*:368-384,1998.
82. J. Breitweg et al., Dijet Cross-Sections in Photoproduction at HERA, *Eur.Phys.J.C1*:109-122,1998.
83. J. Breitweg et al., Observation of Scaling Violations in Scaled Momentum Distributions at HERA, *Phys.Lett.B414*:428-443,1997.
84. J. Breitweg et al., Measurement of Jet Shapes in Photoproduction at HERA, *Eur.Phys.J.C2*:61-75,1998.
85. J. Breitweg et al., Measurement of the Diffractive Structure Function $F_2^{D(4)}$ at HERA, *Eur.Phys.J.C1*:81-96,1998.
86. J. Breitweg et al., Observation of Isolated High E_T Photons in Photoproduction at HERA, *Phys.Lett.B413*:201-216,1997.
87. J. Breitweg et al., Measurement of Inelastic J/ψ Photoproduction at HERA, *Z.Phys.C76*:599-612,1997.
88. J. Breitweg et al., Measurement of the Proton Structure Function F_2 and $\sigma_{tot}(\gamma p)$ at Low Q^2 and Very Low x at HERA, *Phys.Lett.B407*:432-448,1997.
89. J. Breitweg et al., A Search for Excited Fermions in e^+p Collisions at HERA, *Z.Phys.C76*:631-646,1997.

90. J. Breitweg et al., D^* Production in Deep Inelastic Scattering at HERA, Phys.Lett.B407:402-418,1997.
91. J. Breitweg et al., Measurement of Elastic J/ψ Photoproduction at HERA, Z.Phys.C75:215-228,1997.
92. J. Breitweg et al., Study of Photon Dissociation in Diffractive Photoproduction at HERA, Z.Phys.C75:421-435,1997.
93. J. Breitweg et al., Differential Cross-Sections of D^{*+} Photoproduction in ep Collisions at HERA, Phys.Lett.B401:192-206,1997.
94. J. Breitweg et al., Comparison of ZEUS Data with Standard Model Predictions for $e^+p \rightarrow e^+X$ Scattering at High x and Q^2 , Z.Phys.C74:207-220,1997.
95. M. Derrick et al., Study of Elastic ρ^0 Photoproduction at HERA Using the ZEUS Leading Proton Spectrometer, Z.Phys.C73:253-268,1997.
96. M. Derrick et al., Search For Lepton Flavor Violation in ep Collisions at 300 GeV Center-Of-Mass Energy, Z.Phys.C73, 613-628,1997.
97. M. Derrick et al., Measurement of Elastic ω Photoproduction at HERA, Z.Phys.C73:73-84,1996.
98. M. Derrick et al., Measurement of the F_2 Structure Function in Deep Inelastic e^+p Scattering Using 1994 Data from the ZEUS Detector at HERA, Z.Phys.C72:399-424,1996.
99. M. Derrick et al., Study of Charged Current ep Interactions at $Q^2 > 200 \text{ GeV}^2$ with The ZEUS Detector at HERA, Z.Phys.C72:47-64,1996.
100. M. Derrick et al., Observation of Events with an Energetic Forward Neutron in Deep Inelastic Scattering at HERA, Phys.Lett.B384:388-400,1996.
101. M. Derrick et al., Dijet Angular Distributions in Direct and Resolved Photoproduction at HERA, Phys.Lett.B384:401-413,1996.
102. M. Derrick et al., Measurement of the Reaction $\gamma^* p \rightarrow \phi p$ in Deep Inelastic e^+p Scattering at HERA, Phys.Lett.B380:220-234,1996.
103. M. Derrick et al., Measurement of the Diffractive Cross-Section in Deep Inelastic Scattering, Z.Phys.C70:391-412,1996.
104. M. Derrick et al., Measurement of Elastic ϕ Photoproduction at HERA, Phys.Lett.B377:259-272,1996.
105. M. Derrick et al., Inclusive Charged Particle Distributions in Deep Inelastic Scattering Events at HERA, Z.Phys.C70:1-16,1996.
106. M. Derrick et al., Rapidity Gaps Between Jets in Photoproduction at HERA, Phys.Lett.B369:55-68,1996.

107. M. Derrick et al., Measurement of the Proton Structure Function F_2 at Low x and Low Q^2 at HERA, *Z.Phys.C69:607-620,1996*.
108. M. Derrick et al., Measurement of α_s from Jet Rates in Deep Inelastic Scattering at HERA, *Phys.Lett.B363:201-216,1995*.
109. M. Derrick et al., Measurement of Elastic ρ^0 Photoproduction at HERA, *Z.Phys.C69:39-54,1995*.
110. M. Derrick et al., Exclusive ρ^0 Production in Deep Inelastic Electron - Proton Scattering at HERA, *Phys.Lett.B356:601-616,1995*.
111. M. Derrick et al., Diffractive Hard Photoproduction at HERA and Evidence for the Gluon Content of the Pomeron, *Phys.Lett.B356:129-146,1995*.
112. M. Derrick et al., Measurement of the Diffractive Structure Function in Deep Elastic Scattering at HERA, *Z.Phys.C68:569-584,1995*.
113. M. Derrick et al., Neutral Strange Particle Production in Deep Inelastic Scattering at HERA, *Z.Phys.C68:29-42,1995*.
114. M. Derrick et al., Measurement of Charged and Neutral Current ep Deep Inelastic Scattering Cross-Sections at High Q^2 , *Phys.Rev.Lett.75:1006-1011,1995*.
115. M. Derrick et al., Measurement of the Cross-Section for the Reaction $\gamma p \rightarrow J/\psi p$ with The ZEUS Detector at HERA, *Phys.Lett.B350:120-134,1995*.
116. M. Derrick et al., Dijet Cross-Sections in Photoproduction at HERA, *Phys.Lett.B348:665-680,1995*.
117. M. Derrick et al., Jet Production in High Q^2 Deep Inelastic ep Scattering at HERA, *Z.Phys.C67:81-92,1995*.
118. M. Derrick et al., Study of D^{*+} (2010) Production in ep Collisions at HERA, *Phys.Lett.B349:225-237,1995*.
119. M. Derrick et al., Measurement of Multiplicity and Momentum Spectra in the Current Fragmentation Region of the Breit Frame at HERA, *Z.Phys.C67:93-108,1995*.
120. M. Derrick et al., Study of the Photon Remnant in Resolved Photoproduction at HERA, *Phys.Lett.B354:163-177,1995*.
121. M. Derrick et al., Inclusive Transverse Momentum Distributions of Charged Particles in Diffractive and Nondiffractive Photoproduction at HERA, *Z.Phys.C67:227-238,1995*.
122. M. Derrick et al., Observation of Hard Scattering in Photoproduction Events with a Large Rapidity Gap at HERA, *Phys.Lett.B346:399-414,1995*.
123. M. Derrick et al., Extraction of the Gluon Density of the Proton at Small x , *Phys.Lett.B345:576-588,1995*.
124. M. Derrick et al., Inclusive Jet Differential Cross-Sections in Photoproduction at HERA, *Phys.Lett.B342:417-432,1995*.

- 125.M. Derrick et al., A Search for Excited Fermions in Electron - Proton Collisions at HERA, Z.Phys.C65:627-648,1995.
- 126.M. Derrick et al., Measurement of the Proton Structure Function F_2 from the 1993 HERA Data, Z.Phys.C65:379-398,1995.
- 127.M. Derrick et al., Comparison of Energy Flows in Deep Inelastic Scattering Events with and without a Large Rapidity Gap, Phys.Lett.B338:483-496,1994.
- 128.M. Derrick et al., Observation of Jet Production in Deep Inelastic Scattering with a Large Rapidity Gap at HERA, Phys.Lett.B332:228-243,1994.
- 129.M. Derrick et al., Measurement of Total and Partial Photon Proton Cross-Sections at 180 GeV Center-of-Mass Energy, Z.Phys.C63:391-408,1994.
- 130.M. Derrick et al., Observation of Direct Processes in Photoproduction at HERA, Phys.Lett.B322:287-300,1994.
- 131.M. Derrick et al., Measurement of the Proton Structure Function F_2 in ep Scattering at HERA, Phys.Lett.B316:412-426,1993.
- 132.M. Derrick et al., Observation of Events with A Large Rapidity Gap in Deep Inelastic Scattering at HERA, Phys.Lett.B315:481-493,1993.
- 133.M. Derrick et al., Search for Excited Electrons Using the ZEUS Detector, Phys.Lett.B316:207-218,1993.
- 134.M. Derrick et al., Hadronic Energy Distributions in Deep Inelastic Electron - Proton Scattering, Z.Phys.C59:231-242,1993.
- 135.M. Derrick et al., Observation of Two Jet Production in Deep Inelastic Scattering at HERA, Phys.Lett.B306:158-172,1993.
- 136.M. Derrick et al., Search for Leptoquarks with the ZEUS Detector, Phys.Lett.B306:173-186,1993.
- 137.J. Engelen, M. Klein, R. Ruckl, Structure Functions: Introduction, In *Hamburg 1991, Proceedings, Physics at HERA, Vol. 1 * 19-22.
- 138.J.J. Engelen, (Ed.), J.H. Koch, (Ed.), P.K.A. De Witt Huberts, (Ed.), Hadronic Structure and Electroweak Interactions. Proceedings, EPS Nuclear Physics Conference, Amsterdam, Netherlands, August 5-10, 1991, Nucl.Phys.A546:1c-491c,1992
- 139.M. Derrick et al., Initial Study of Deep Inelastic Scattering with ZEUS at HERA, Phys.Lett.B303:183-197,1993.
- 140.M. Derrick et al., Observation of Hard Scattering In Photoproduction at HERA, Phys.Lett.B297:404-416,1992.
- 141.M. Derrick et al., A Measurement of $\sigma_{TOT}(\gamma p)$ at $\sqrt{s} = 210$ GeV, Phys.Lett.B293:465-477,1992.
- 142.Stan Bentvelsen, Jos Engelen, Paul Kooijman, Reconstruction of (x, Q^2) and Extraction of Structure Functions in Neutral Current Scattering at HERA, DESY HERA Workshop 1991:0023-42 (QCD161:H51:1991)

143. Andresen et al., Construction and Beam Test of the ZEUS Forward and Rear Calorimeter, Nucl.Instrum.Meth.A309:101-142,1991.
- 144.R. Blankers et al., Construction of the ZEUS Forward / Rear Calorimeter Modules at NIKHEF. NIKHEF-H-90-11 (Jul 1990) 54p.
- 145.F. Barreiro et al., Measurements of Longitudinal And Transverse Profiles for Hadron Showers In the Range 10-Gev - 100-Gev And Comparisons with Monte Carlo Simulations, Nucl.Instrum.Meth.A292:259-278,1990.
- 146.Andresen et al., Response of A Uranium Scintillator Calorimeter To Electrons, Pions And Protons In the Momentum Range 0.5-Gev/C To 10-Gev/C, Nucl.Instrum.Meth.A290:95,1990.
- 147.U. Behrens et al., Test of the ZEUS forward Calorimeter Prototype, Nucl.Instrum.Meth.A289:115-138,1990.
- 148.J.J. Engelen, S.J. De Jong, R. Laterveer, J.A.M. Vermaseren, QCD Compton Scattering at HERA Energy, NIKHEF-H/89-3 (Feb 1989) 12p.
- 149.G. D'agostini et al., Experimental Study of Uranium Plastic Scintillator Calorimeters, Nucl.Instrum.Meth.A274:134,1989.
- 150.Sijbrand J. de Jong, Jos J. Engelen, Hard Scattering of (Almost) Real Photons at HERA, DESY HERA Workshop 1987:0533 (Qcd161:H15:1987)
- 151.J.J. Engelen, S.J. De Jong, M. Poletiek, J.A.M. Vermaseren, Photon Gluon Fusion Cross-Sections at HERA Energy, Z.Phys.C41:173,1988.
- 152.R. Barate et al., Measurement of J/ψ and ψ' Real Photoproduction on Li-6 at a Mean Energy of 90-Gev, Z.Phys.C33:505,1987, Bari Europhys.High Energy Phys. Conf. 1985:271 (QCD161:I48:1985)
- 153.J. Engelen, H. Tiecke, Performance of A Hadron Test Calorimeter for the ZEUS Experiment, Nucl.Instrum.Meth.A263:94-101,1988.
- 154.E. Auge et al., Topological Isolation of the Deep Inelastic QED Compton Scattering, Phys.Lett.B182:409,1986.
- 155.R. Barate et al., Photoproduction of Charged Hadrons at Large Transverse Momenta, Phys.Lett.B174:458-464,1986.
- 156.J. Engelen, Photoproduction of Prompt Photons at High Transverse Momentum, In *La Plagne 1984, Proceedings, New Particle Production*, 567-579.
- 157.G. Wolf et al., The ZEUS Detector: Technical Proposal, DESY-HERA-ZEUS-1 (Mar 1986) 277p.
- 158.D. Kisieleska et al., Fast Luminosity Monitoring at HERA, Nukleonika 31:205-238,1986.
- 159.E. Auge et al., High-Energy Photoproduction of Large Transverse Momentum π^0 Mesons: A Quantitative Test of QCD, Phys.Lett.B168:163,1986.

- 160.K. Edwards et al., ZEUS, a Detector for HERA: Letter of Intent. DESY-HERA-Li-1 (Jun 1985) 90p.
- 161.P. Astbury et al., Measurement of Deep Inelastic Compton Scattering of High-Energy Photons, Phys.Lett.B152:419,1985.
- 162.J.J. Engelen, Photoproduction at HERA, In *Amsterdam 1983, Proceedings, Experimentation at HERA*, 241-283.
- 163.J.J. Engelen, Multichannel Analysis of High Statistics Data on the Reaction $K^+p \rightarrow \text{Anti-}K^0 \pi^+ p$ at 4.2 GeV/c. (Talk), In *Nijmegen 1978, Proceedings, Multidimensional Analysis of High Energy Data*, 265-310.
- 164.J.J. Engelen et al., Multichannel Analysis of the Reaction $K^+p \rightarrow \text{Anti-}K^0 \pi^+ p$ at 4.2 GeV/c, Nucl.Phys.B167:61-97,1980.
- 165.J.S.M. Vergeest et al., Partial Wave Analysis in the Q Region of (Anti- $K^0 \pi^+ \pi^-$)- Systems Produced in K^+p Reactions at 4.2-GeV/c, Nucl.Phys.B158:265-279,1979.
- 166.B. Foster et al., Partial Wave Analysis of Backwardly Produced Three Pion Systems in K^+p Interactions at 4.2 GeV/c, Nucl.Phys.B187:231,1981.
- 167.M. Mazzucato et al., $\Xi(1320)$ and $\Xi(1530)$ Production in K^+p Interactions at 4.2 GeV/c, Nucl.Phys.B178:1,1981.
- 168.J.J. Engelen et al., A Study of Noncharge Exchange Anti- $K^0 \pi^+$ Production in the Reaction $K^+p \rightarrow \text{Anti-}K^0 \pi^+ p$ at 4.2 GeV/c, Nucl.Phys.B134:14-30,1978.
- 169.P.M. Heinen et al., Partial Wave Analysis of the Low Mass ($\pi^+ \pi^- p$) System Produced in K^+p Interactions at 4.2 GeV/c, Nucl.Phys.B122:443-463,1977.
- 170.J.S.M. Vergeest et al., Spin Parity Structure of The (Anti- $K^0 \pi^+ \pi^-$)⁰ System Produced in the Charge Exchange Reaction $K^+p \rightarrow (\text{Anti-}K^0 \pi^+ \pi^-) n$ at 4.2 GeV/c, Phys.Lett.B62:471-476,1976.
- 171.P. Gavillet et al., Backward Production of the B Meson in K^+p Interactions at 4.2 GeV/c, Phys.Lett.B78:158,1978.
- 172.C. Dionisi et al., An $I = 1$ Enhancement at a Mass of 1550 MeV in the ($\Lambda \pi$) and ($\Sigma \pi$) Systems, Phys.Lett.B78:154,1978.
- 173.P. Gavillet et al., Backward Production of a Spin Parity 1^+ $K^0 p$ Resonance at 1.28-GeV, Phys.Lett.B76:517,1978.
- 174.B. Jongejans et al., Rare Decay Modes of $K^*(1420)$ and $K^*(892)$, Nucl.Phys.B139:383,1978.
- 175.P. Gavillet et al., Backward Production of a Spin Parity 1^+ $\rho \pi$ Enhancement at 1.04 GeV, Phys.Lett.B69:119,1977, Spanish Winter Mtg.1977:305 (QCD161:192:1977)
- 176.F. Barreiro et al., Study of $\Sigma^+(1385)$ Inclusive Production in K^+p Interactions at 4.2 GeV/c, Nucl.Phys.B126:319,1977.
- 177.S.O. Holmgren et al., $\rho \omega$ Interference in the Reactions $K^+p \rightarrow \pi^+ \pi^- (\Lambda/\Sigma^0)$ at 4.2 GeV/c, Phys.Lett.B66:191,1977.

178. M. Aguilar-Benitez et al., Study of Hypercharge Exchange Reactions of the Type $K^+p \rightarrow 1^- 3/2^+$ at 4.2 GeV/c, Nucl.Phys.B124:189,1977.
179. J.J.M. Timmermans et al., Production of $\Sigma(1660)$ in K^+p Interactions at 4.2 GeV/c, Nucl.Phys.B112:77,1976.