

Paolo PEDRONI

List of all scientific publications

a) Publications on refereed journals

- a1) F. Fossati, P. Pedroni, T. Pinelli, M.G. Semenza, P.E. Argan, H. Rief:
"A moderating assembly for spallation neutrons", Nucl. Instr. Meth. A253, 51 (1986)
- a2) P. Pedroni et al. (12 authors):
"Evaluation of a selective boron absorption in liver tumors", Strahlentherapie und Onkologie, 165, 170 (1989)
- a3) P. Pedroni et al. (16 authors):
"Two nucleon photon absorption on ^3He in the Δ region", Phys. Rev. Lett. 63, 856 (1989)
- a4) P. Pedroni et al. (9 authors):
"Total cross section measurement of π^0 photoproduction near threshold on complex nuclei", Phys. Lett. B 227 (1989), 21
- a5) P. Pedroni et al. (17 authors):
"First measurement of the reaction $^3\text{He}(\gamma, pp)n$ " Phys. Lett. B 227, 331 (1989)
- a6) S. Altieri, P. Pedroni:
"Simulazione per il calcolo dell'impatto ambientale del reattore Nucleare di ricerca Triga Mark II da 250 Kw", Acqua Aria N. 7, luglio/agosto, 589 (1990)
- a7) P. Pedroni et al. (14 authors):
"DAPHNE: a large-acceptance detector for the study of photoreactions at intermediate energies", Nucl. Instr. Meth. A301, 473 (1991)
- a8) P. Pedroni et al. (11 authors):
"Direct observation of a 3 body mechanism in the reaction $^3\text{He}(\gamma, pp)n$ ", Phys. Rev. C44, R575 (1991).
- a9) P. Pedroni et al. (11 authors):
"Photoabsorption mechanisms studied with the detector DAPHNE at the new Mainz facility MAMI-B", Few Body Sys. Suppl.5, 179 (1992).
- a10) P. Pedroni et al. (9 authors):
"Charged Pion photoproduction from ^3He with quasi monochromatic photons", Nucl. Phys. A554, 679 (1993).

- a11) P. Pedroni et al. (12 authors):
"The reaction ${}^3\text{He}(\gamma, pp)$ at low neutron recoil momentum", Phys. Lett. 312, 57 (1993).
- a12) P. Pedroni et al. (11 authors):
"A range telescope technique for particle discrimination and energy reconstruction", Nucl. Instr. Meth. A343 623, (1994).
- a13) P. Pedroni et al. (16 authors):
"Two body photodisintegration of ${}^3\text{He}$ between 200 and 800 MeV", Nucl. Phys. A578 525, (1994).
- a14) P. Pedroni et al. (13 authors):
"Total cross section measurements for the three double pion photo-production channels on the proton", Phys. Lett.B 363, 46 (1995).
- a15) P. Pedroni et al. (12 authors):
"Double pion photoproduction up to 800 MeV", Few Body Sys. Suppl.8, 173 (1995).
- a16) P. Pedroni et al. (20 authors):
"Total cross section for ${}^1\text{H}$, ${}^2\text{H}$ and ${}^3\text{He}$ from 200 to 800 MeV", Phys. Rev.C 53, 41 (1996).
- a17) P. Pedroni et al. (22 authors):
"Two body photodisintegration of the deuteron from 100 to 800 MeV", Nucl. Phys. A603, 303 (1996).
- a18) P. Pedroni et al. (15 authors):
"Measurement of the $E2/M1$ ratio in the $N \rightarrow \Delta$ transition using the reaction $p(\vec{\gamma}, p)\pi^0$ ", Phys. Rev. Lett. 78, 606 (1997).
- a19) P. Pedroni et al. (15 authors):
"Study of three nucleon mechanisms in the photodisintegration of ${}^3\text{He}$ ", Nucl. Phys. A614, 461 (1997).
- a20) P. Pedroni et al. (12 authors):
"Total photoabsorption cross section for ${}^4\text{He}$ from 200 to 800 MeV", Phys. Rev.C 55 1033, (1997).
- a21) P. Pedroni et al. (12 authors):
"Total cross section measurement of the $\gamma + n \rightarrow p\pi^-\pi^0$ reaction", Phys. Rev.C 55, R1617 (1997).
- a22) P. Pedroni et al. (15 authors):
"Photon Asymmetry of Deuteron Photodisintegration Between 160 and 410 MeV", Few Body Sys. 26, 213 (1999).
- a23) P. Pedroni et al. (13 authors):
"Invariant mass distributions of the $\gamma + n \rightarrow p\pi^-\pi^0$ reaction", Phys. Rev.C 60, 055201 (1999).

- a24)** P. Pedroni et al. (17 authors):
 "Determination of the $E2/M1$ ratio in the $N \rightarrow \Delta$ transition from a simultaneous measurement of $p(\vec{\gamma}, p)\pi^0$ and $p(\vec{\gamma}, \pi^+)n$ ", Phys.Rev.C 61, 035204 (2000).
- a25)** P. Pedroni et al. (69 authors):
 "Helicity dependence of $\gamma p \rightarrow N \pi$ below 450 MeV and contribution to the Gerasimov-Drell-Hearn sum rule", Phys. Rev. Lett. 84, 5950 (2000).
- a26)** P. Pedroni et al. (9 authors):
 "A Compact Solid State Detector for Small Angle Particle Tracking", Nucl. Instr. Meth. A 452, 185 (2000).
- a27)** P. Pedroni et al. (69 authors):
 "First measurement of the Gerasimov-Drell-Hearn integral for ^1H from 200 to 800 MeV", Phys. Rev. Lett. 87, 022003 (2001).
- a28)** P. Pedroni et al. (69 authors):
 "The helicity amplitudes $A(1/2)$ and $A(3/2)$ for the D_{13} resonance obtained from the $\vec{\gamma}\vec{p} \rightarrow p\pi^0$ reaction", Phys. Rev. Lett. 88, 232002 (2002).
- a29)** P. Pedroni et al. (69 authors):
 "Helicity dependence of the $\vec{\gamma}\vec{p} \rightarrow n\pi^+\pi^0$ reaction in the second resonance region", Phys.Lett.B 551, 49 (2003).
- a30)** P. Pedroni et al. (69 authors):
 "First measurement of the helicity dependent $\vec{\gamma}\vec{p} \rightarrow p\eta$ cross section", Eur. Phys. Jour. A17, 241 (2003).
- a31)** P. Pedroni:
 "Helicity dependence of the γN interaction and the GDH sum rule", Eur. Phys. Jour. A18, 401 (2003).
- a32)** P. Pedroni et al. (57 authors):
 "First measurement of the Gerasimov-Drell-Hearn sum rule for ^1H from 0.7 to 1.8 GeV at ELSA", Phys. Rev. Lett. 91, 192001 (2003).
- a33)** P. Pedroni et al. (57 authors):
 "Experimental of the Gerasimov-Drell-Hearn sum rule for ^1H ", Phys. Rev. Lett. 93, 032003 (2004).
- a34)** P. Pedroni et al. (69 authors):
 "Helicity dependence of the $\gamma p \rightarrow N\pi$ channels and multipole analysis in the Δ region", Eur. Phys. Jour. A21, 323 (2004)
- a35)** P. Pedroni et al. (17 authors):
 "How to study boron biodistribution in liver metastases from colorectal cancer", Journal of Chemotherapy 16, Suppl.5, 15 (2004).

- a36)** P. Pedroni et al. (57 authors):
 "Measurement of the Helicity-Dependent Photoabsorption Cross Sections on the Neutron from 815 to 1825 MEV", Phys. Rev. Lett. 94, 162001 (2005).
- a37)** P. Pedroni et al. (41 authors):
 "Measurement of the G asymmetry for the $\gamma p \rightarrow N\pi$ channels in the $\Delta(1232)$ resonance region", Eur. Phys. Jour. A26, 135 (2005).
- a38)** P. Pedroni et al. (69 authors):
 "Intermediate resonance excitation in the $\gamma p \rightarrow p\pi^0\pi^0$ reaction", Phys.Lett.B 624, 173 (2005).
- a39)** P. Pedroni et al. (44 authors):
 "Measurement of the helicity dependence for the $\gamma p \rightarrow n\pi^+$ channel in the second resonance region", Phys. Rev.C 74, 045204 (2006).
- a40)** P. Pedroni et al. (44 authors):
 "Measurement of the Gerasimov-Drell-Hearn Integrand for ^2H from 200 MeV to 800 MeV", Phys. Rev. Lett. 97, 202303 (2006).
- a41)** P. Pedroni et al. (45 authors):
 "First measurement of the helicity dependence for the $\gamma p \rightarrow p\pi^+\pi^-$ reaction", Eur.Phys.Jour. A34, 11 (2007).
- a42)** P. Pedroni et al. (45 authors):
 "Incoherent pion photoproduction on ^{12}C ", Phys.Rev.Lett 100, 132301, (2008).
- a43)** P. Pedroni et al. (57 authors):
 "Determination of the Dalitz plot parameter α for the decay $\eta \rightarrow 3\pi^0$ with the Crystal Ball at MAMI", Eur.Phys.Jour. A39, 169 (2009).
- a44)** P. Pedroni et al. (31 authors):
 "Helicity dependence of the total inclusive cross section on the deuteron", Phys.Lett.B 672, 328, (2009).
- a45)** P. Pedroni et al. (71 authors):
 "Measurement of the slope parameter α for the $\eta \rightarrow 3\pi^0$ decay with the Crystal Ball at the Mainz Microtron (MAMI-C)", Phys. Rev.C 79, 035204 (2009).
- a46)** P. Pedroni et al. (61 authors):
 "Beam-helicity asymmetries in double pion photoproduction off the proton", Phys.Rev.Lett 103,052002, (2009).
- a47)** P. Pedroni et al. (68 authors):
 "Photoproduction of $\pi^0\eta$ on protons and the $\Delta(1700)\text{D}_{33}$ resonance", Eur.Phys.Jour. A42, 144 (2009).

- a48)** P. Pedroni et al. (71 authors):
 "Search for the charge-conjugation-forbidden decay $\omega \rightarrow \eta\pi^0$ ", Phys. Rev.C 79, 065201 (2009).
- a49)** P. Pedroni et al. (58 authors):
 "Radiative π^0 photoproduction on protons in the $\Delta^+(1232)$ region", Eur.Phys.Jour.A 43, 269 (2010).
 5A
- a50)** P. Pedroni et al. (33 authors):
 "Helicity dependence of the $\gamma d \rightarrow \pi NN$ reactions in the Δ resonance region", Eur.Phys.Jour. A 44, 189 (2010).
- a51)** P. Pedroni et al. (3 authors):
 "Higher order forward spin polarizability", Phys.Lett.B 687, 160 (2010).
- a52)** P. Pedroni et al. (84 authors):
 "Experimental study of the $\gamma p \rightarrow \eta p$ reaction with the Crystall Ball detector at the Mainz Microtron (MAMI-C)", Phys.Rev. C 82, 035208 (2010).
- a53)** P. Pedroni et al. (77 authors):
 "First measurement of the circular beam asymmetry in the $\gamma p \rightarrow \pi^0 \eta p$ reaction", Phys.Lett.B 693, 551 (2010).
- a54)** P. Pedroni:
 "Helicity dependent photoproduction on the deuteron and the GDH sum rule on the neutron", Int. Jour. Mod. Phys. E 19, 1009 (2010).
- a55)** P. Pedroni et al. (58 authors):
 "Measurement of the helicity-dependent total cross section for the $\gamma n \rightarrow p\pi^-\pi^0$ reaction", Eur.Phys.Jour.A 47, 36 (2011).
- a56)** P. Pedroni et al. (10 authors):
 "A polarized ^3He -3 target for the photon beam at MAMI", Nucl. Instr. Meth. A684, 35 (2011)
- a57)** P. Pedroni :
 "Double polarization Experiments at MAMI", Eur.Phys.Jour.Spec.Top. 198, 181 (2011).
- a58)** P. Pedroni et al. (57 authors):
 "Determination of the η -transition form factor in the $\gamma p \rightarrow p\eta \rightarrow p\gamma e^+e^-$ reaction", Phys.Lett.B 701, 562 (2011).
- a59)** P. Pedroni et al. (74 authors):
 "Coherent photoproduction of η -mesons off ^3He - search for η -mesic nuclei", Phys.Lett.B 709, 21 (2012).
- a60)** P. Pedroni et al. (72 authors):
 "Experimental study of the $\gamma p \rightarrow p\pi^0\pi^0p$ reaction with the Crystal

Ball/TAPS detector system at the Mainz Microtron ", Phys. Rev.C 85, 064610 (2012).

- a61)** P. Pedroni et al. (6 authors):
"Evaluation of the $\gamma n \rightarrow \pi p$ differential cross section in the Δ -isobar region", Phys. Rev.C 86, 065207 (2012).
- a61)** P. Pedroni et al. (63 authors):
"Photoproduction of $\pi^0\pi^0$ - and $\pi^0\pi^+$ -pairs off the proton from threshold to the second resonance region", Eur.Phys.J. A48, 98 (2012).
- a62)** P. Pedroni et al. (63 authors):
"Double pion photoproduction off nuclei Are there effects beyond final-state interaction?", Phys.Lett.B 722, 69 (2013).
- a63)** P. Pedroni et al. (73 authors):
"Accurate Test of Chiral Dynamics in the $\vec{\gamma}p \rightarrow \pi^0p$ Reaction ", Phys. Rev. Lett. 111, 062004 (2013).
- a64)** P. Pedroni et al. (66 authors):
"First measurement of the helicity dependence of ^3He photoreactions in the $\Delta(1232)$ resonance region ", Phys.Lett.B 723, 71 (2013).
- a65)** P. Pedroni et al. (63 authors):
"Coherent photoproduction of π^0 - and η -mesons off ^7Li ", Eur.Phys.J. A49, 38 (2013).
- a66)** P. Pedroni et al. (73 authors):
"Measurements of ^{12}C ($\vec{\gamma}, pp$) photon asymmetries for $E_\gamma=200$ 450 MeV ", Eur.Phys.J. A49, 65 (2013).
- a68)** P. Pedroni et al. (75 authors):
Measurement of the beam-helicity asymmetry I^\odot in the photoproduction of π^0 -pairs off the proton and off the neutron, Phys. Lett. B 721, 237 (2013).
- a69)** P. Pedroni et al. (60 authors):
"In-medium modifications of the ω meson near the production threshold", Eur.Phys.J. A49, 132 (2013).
- a70)** P. Pedroni et al. (73 authors):
"A narrow structure in the excitation function of eta-photoproduction off the neutron", Phys.Rev.Lett. 111, 232001 (2013).
- a71)** P. Pedroni et al. (73 authors):
"Measurement of the $\gamma p \rightarrow K^0\Sigma^+$ reaction with the Crystal Ball/TAPS detectors at the Mainz Microtron", Phys.Rev.C 88, 044601 (2013).
- a72)** P. Pedroni et al. (73 authors):
"Quasi-free photoproduction of η -mesons off ^3He ", Eur.Phys.J. A49, 154 (2013).

b) Publications in conference proceedings

- b1)** S. Altieri P. Pedroni:
"Design and realization of an apparatus for the continuous control of Ar-41 release at the LENA chimney", Proc. Eighth European Conference of Triga Reactor Users, ESPOO Finland (1984), GA Tech. ed., p. II-9
- b2)** S. Altieri, F. Lana, P. Pedroni:
"Maximum temperature after loss of coolant and pulse operation of the Triga Mark II Plant: new evaluation for licensing purposes", Proc. Ninth European Triga Users Conference, Roma 1986, GA Tech.ed., p. IV-3
- b3)** S. Altieri, P. Pedroni, M.L. Pelizza:
"Approach to neutrography at L.E.N.A. Plant", Proc. Ninth European Triga Users Conference, Roma 1986, GA Tech.ed., p. VI-33.
- b4)** P. Pedroni et al. (19 authors):
"Perspectives in Nuclear Physics at intermediate energies with a large angular and momentum acceptance detector", Proc. Third Workshop on Perspectives in Nuclear Physics at Intermediate Energies, Trieste 1987, S. Boffi et al. eds., World Scientific Co. Ltd., p. 643
- b5)** S. Altieri, P. Pedroni, S. Meloni:
"Radiological environmental impact related to reactor accidents", Proc. Tenth European Triga Users Conference, Vienna 1988, GA Tech.ed., p. iV-53.
- b6)** P. Pedroni, G. Tamas:
"DAPHNE: a large acceptance detector for photonuclear physics", Proc. International conference on future detectors for photonuclear experiments, Edinburgh 1991, D. Branford ed., p. 172
- b7)** P. Pedroni et al. (10 authors):
"The two and three body photodisintegration of ^3He ", Proc. Sixth Workshop on Perspectives in Nuclear Physics at Intermediate Energies, Trieste 1993, S. Boffi et al. eds., World Scientific Co. Ltd., p.350
- b8)** P. Pedroni:
"Results from the real photon program at MAMI in Mainz", Proc. Int.Conf. on Mesons and nuclei at intermediate energies, Dubna 1994, World Scientific Co. Ltd., p.821
- b9)** P. Pedroni et al. (13 authors):
"Double pion photoproduction up to 800 MeV at Mainz", Trieste 1995, World Scientific Co. Ltd., p.189

- b10)** P. Pedroni et al. (13 authors):
 "Double pion photoproduction up to 800 MeV", Blaubeuren 1995, πN Newsletter No.10, 141
- b11)** P. Pedroni et al. (11 authors):
 "Photoabsorption and photodisintegration processes on very light nuclei", Proc. XIV Int. Conf. on Particles and Nuclei (PANIC'96), Williamsburg 1996, World Scientific Co. Ltd., p.285
- b12)** P. Pedroni et al. (15 authors):
 "Measurement of isospin components for the E2/M1 ratio in the $N \rightarrow \Delta$ transition", Proc. International Workshop on electron nucleus scattering, Marciana Marina 1996, p.48
- b13)** P. Pedroni et al. (15 authors):
 "Measurement of the E2/M1 ratio in the $N \rightarrow \Delta$ transition", Proc. International Symposium on High Energy Spin Physics, Amsterdam 1996, World Scientific Co. Ltd., p.501
- b14)** P. Pedroni et al. (15 authors):
 "Beam Asymmetry for the Deuteron Photodisintegration Between 160 and 410 MeV" Proc. International Symposium on High Energy Spin Physics, Amsterdam 1996, World Scientific Co. Ltd., p.618
- b15)** P.Pedroni :
 "The GDH experiment at MAMI", Proc. 2th. Int Conf. on Perspectives in Hadronic Physics, Trieste 1999, World Scientific Co. Ltd., p.166
- b16)** P.Pedroni :
 "An overview of the GDH experiment at MAMI", Proc. Int. Symposium on the GDH sum rule and the spin structure of the nucleon in the resonance region, Mainz 2000, World Scientific Co. Ltd., p.99
- b17)** P.Pedroni :
 "Helicity structure of the γN interaction and the GDH sum rule", Proc. of the MENU2001 Int. Conference, Washington 2001, πN Newsletter No.16, p.186
- b18)** P.Pedroni et al. (16 authors):
 "TAOrMINA: From the first Idea to the Application to the Human liver", Proc. of the Int. Conf. on Neutron Capture Therapy, Essen 2002, Monduzzi editore, p.1065
- b19)** P.Pedroni :
 "Helicity dependence of pion photoproduction: new results from Mainz", Proc. of the N*2002 Int. Workshop, Pittsburgh 2002, World Scientific Co. Ltd., p.186

- b20)** P.Pedroni :
 "Helicity dependence of $N\pi\pi$ processes on the proton: new results from Mainz", Proc. of the GDH2004 Int. Symposium, Norfolk 2004, World Scientific Co. Ltd., p.123
- b21)** P.Pedroni :
 "Recent results on the GDH Sum Rules on the Neutron and the Proton", Proc. of the HADRON05 International Conference, Rio de Janeiro 2005, AIP series of conference proceedings N.814, p. 374
- b22)** P.Pedroni :
 "Preliminary Results with the Crystal Ball at MAMI", Proc. of the HADRON05 International Conference, Rio de Janeiro 2005, AIP series of conference proceedings N. 814, p.486
- b23)** P. Pedroni et al. (58 authors):
 "Recent Results of the BGO-OD Experiment at ELSA Facility ", Proc. of "International Seminar on Strong and Electromagnetic Interactions in High Energy Collisions 2012", Messina, J. Phys.: Conf. Ser. 424, 012008 (2013)
- b24)** P. Pedroni:
 "Helicity dependent meson photoproduction on ^3He in the Δ -resonance region", Proc. of "International Seminar on Strong and Electromagnetic Interactions in High Energy Collisions 2012", Messina, J. Phys.: Conf. Ser. 424, 012003 (2013)

c) Reports, internal notes

- c1)** P. Pedroni: "Simulation of inelastic hadron collision below 5 GeV: a modification of GEANT3 package", report INFN/BE-88/03.
- c2)** S. Altieri P. Pedroni:
 "L'incidente di perdita del refrigerante nel reattore Triga Mark II da 250 Kw", report L.E.N.A.– Pavia University, april 1988 (in Italian)
- c3)** P. Pedroni et al. (14 authors):
 "Double pion photoproduction using the DAPHNE detector: preliminary results", report INFN/BE-93/01.
- c4)** P. Pedroni et al. (9 authors):
 "M.I.D.A.S.: a Forward Detector for the GDH Experiment at Mainz" report INFN/TC-98/30.

c5) P. Pedroni et al. (6 authors):
"Design of a new beam dump for the A2-collaboration at the MAMI
accelerator in Mainz", report FNT/TA-2001/20, Pavia University.

d) Books

e1) A. Rotondi, **P. Pedroni**, A. Pievatolo:
"Probabilità, statistica e simulazione" (in Italian), 486 pages, Springer-
Verlag ed., 2001 ; third edition 2011.