

Fred Myhrer, Biographical Sketch

Education:

Siv.ing-degree, NTNU, Trondheim, Norway (1967),
Ph. D., University of Rochester, Rochester, NY (1973)

Professorships:

Professor (1984-date); University of South Carolina, Columbia, SC
Department Chair (Febr. 2000 - July 2004); University of South Carolina, Columbia, SC
Associate Professor (1981-1984); University of South Carolina, Columbia, SC
Assistant Professor (1977-1981); NORDITA; Copenhagen, Denmark

Visiting position:

CSSM, University of Adelaide, Australia (Aug.-Dec. 2012)
HISKP, University of Bonn, Germany (1. July- 31. Sept., 2004)
NORDITA, Copenhagen, Denmark (15. April – 15. Aug. 1994).
Center for Theoretical Physics, MIT, Cambridge, MA (1. Aug. 1988 - 31 July, 1989)

Postdoctoral positions (1972-1977):

University of Trondheim; Norway (1972-1973)
PSI (formerly SIN); Switzerland (1973-1975);
CERN; Geneva; Switzerland (1975-1977);

Awards:

Fellow of the American Physical Society (1991).
The King's Gold Medal in Science (Norwegian award, 1986).

Selected List of Publications

Neutrino pion-production on a nucleon". F. Myhrer, Proc. of Science (PoS) accepted (2019);
arXiv:1903.03542.

Low-Energy Lepton-Proton Bremsstrahlung via Effective Field Theory, P. Talukdar, F. Myhrer,
G. Meher, U. Raha, Eur. Phys. J. A 54, 195 (2018).

Threshold pion production in proton-proton collisions at NNLO in chiral EFT, V. Baru, E. Epel-
baum, A.A. Filin, C. Hanhart, H. Krebs, F. Myhrer, Eur. Phys. J. A 52, 146 (2016).

Neutrino emissivities from deuteron-breakup and formation in supernovae, S. Nasu, S.X. Naka-
mura, K. Sumiyoshi, T. Sato, F. Myhrer, K. Kubodera, Astrophys. J. 801, 78 (2015).

Effective field theory calculations of $NN \rightarrow NN\pi$
V. Baru, C. Hanhart, F. Myhrer, Int. J. Mod. Phys. E **23**, 1430004 (2014)

An update of muon capture on hydrogen
S. Pastore, F. Myhrer, K. Kubodera, Int. J. Mod. Phys. E **23**, 1430010 (2014)

Pion production in nucleon-nucleon collisions in chiral effective field theory w/ Δ degrees of freedom
A. Filin, V. Baru, E. Epelbaum, H. Krebs, C. Hanhart, F. Myhrer, Phys. Rev. C **88**, 064003
(2013).

Understanding the proton's spin structure,

F. Myhrer and A.W. Thomas, J. Phys. G: Nucl. Part. Phys. **37**, 023101 (2010).

Resolution of the Proton Spin Problem,

F. Myhrer and A.W. Thomas, Phys. Lett. B **663**, 302 (2008).

The μ^-d capture rate in effective field theory

S. Ando, T.-S. Park, K. Kubodera, F. Myhrer. Phys. Lett. B **533**, 25 (2002).

Neutrino-deuteron reactions at solar neutrino energies, S. Nakamura, T. Sato, S. Ando, T.-S. Park, F. Myhrer, V. Gudkov and K. Kubodera, Nuclear Physics A707, 561 (2002).

Chiral perturbation approach to the $pp \rightarrow pp\pi^0$ reaction near threshold, B.-Y. Park,

F. Myhrer, J.R. Morones, T. Meissner and K. Kubodera, Phys. Rev. **C 53**, 1519 (1996).

Electromagnetic Decays of Excited Hyperons II,

Y. Umino and F. Myhrer, Nucl. Phys. **A 554**, 593 (1993).

Low Energy Antiproton Physics,

C. Amsler and F. Myhrer, Ann. Rev. Nucl. Part. Science **41**, 219 (1991).

The Nucleon-Nucleon Force and the Quark Degrees of Freedom,

F. Myhrer and J. Wroldsen, Rev. Mod. Phys. **60**, 629 (1988).

The Chiral Quarks Bag; Properties and Spectroscopy of Baryons and the Nuclear Force, F. Myhrer, in "Quarks and Nuclei", Int. Review Nucl. Phys. **Vol. 1** (ed. W. Weise) World Scientific Publ. Co., Singapore pp. 325-407 (1984).

The Baryon Masses and the Chiral Quark Bag Model,

F. Myhrer, G. E. Brown and Z. Xu, Nucl. Phys. **A 362**, 317 (1981).

A Simple Model for Proton-Antiproton Scattering at Low Energies,

O. D. Dalkarov and F. Myhrer, Nuovo Cimento **40A**, 152 (1977).

Pion-Deuteron Scattering in the $\Delta(1236)$ Energy Region as a Three-Body Problem,

F. Myhrer and D. S. Koltun, Phys. Letters B **46**, 322 (1973).

Postdoctoral Fellows and Graduate Students supervised:

Postdoctoral fellows: R. Tegen ('83-'85); S. Takeuchi ('91-'92); H. Yabu ('92-'94); Th. Meissner ('94-'96); V. Dmitrašinović ('96-'99); S. Ando ('99-'02); T.-S. Park ('00-'02); S. Kondratyuk('02-'04); Y. Kim('02-'05); A. Gårdestig ('05 - '08); U. Raha ('10 - '12); S. Pastore (Dec. 2012 - 2015)

Students: G. Balchin, M.S. (1983); K. Gounder, Ph.D., USC (1988); Y. Umino, Ph.D. at SUNY, Stony Brook (1992); G. Fox, M.S. (1996); A. Tetervak, M.S. (1999); W.P. Alvarez, Ph.D. (2002); I. Danchev, Ph.D. (2006) A total of eleven (Master and Ph.D.) students at USC have been advised including frequent consultation of Ph.D. candidates in experimental nuclear physics.