

CURRICULUM VITÆ
STEFANO PROFUMO

Contact Details:

Santa Cruz Institute for Particle Physics
University of California, Santa Cruz
1156 High Street
Santa Cruz, CA 95064 (USA)

Phone: 1-831-459-3039

Fax: 1-831-459-5777

Email: profumo@scipp.ucsc.edu

Place and Date of Birth: Alessandria (Italy), January 25, 1978

Citizenship: Italian (US Permanent Resident)

Languages: Italian, English, French

Employment

July 2011-present: Associate Professor of Physics,
Department of Physics, University of California at Santa Cruz

July 2011-present: Deputy Director for Theory,
Santa Cruz Institute for Particle Physics

July 2007-June 2011: Assistant Professor of Physics,
Department of Physics, University of California at Santa Cruz

Oct 2005-Aug 2007: Postdoctoral Scholar in Theoretical Astrophysics
California Institute of Technology

Nov 2004-Oct 2005: Postdoctoral Fellow in High Energy Physics
Florida State University

Education

Oct 2004: PhD in Elementary Particles Theory at SISSA-ISAS, Trieste
Thesis title: “*Neutralino Dark Matter, where particle physics meets cosmology*”
Advisors: Prof. S. T. Petcov and Dr. P. Ullio

Oct 2001: Diploma degree at Scuola Normale Superiore, Pisa
Dissertation title: “*Non-commutative Principal Chiral Models*”.

Sep 2001: Laurea Degree (M.Sc.) in Theoretical Physics at the University of Pisa
Thesis title: “*Twisted Eguchi-Kawai Reduced Chiral Models in the large N limit*”
Advisor: Prof. E. Vicari

1997-2001: Undergraduate work in Physics, Scuola Normale Superiore, Pisa, and University of Pisa
Field: Theoretical Physics

Research Interests

- Astro-particle and Dark Matter Physics
- Baryogenesis Models
- Physics Beyond the Standard Model
- Supersymmetry Phenomenology
- High-energy Astrophysics

Honors and Awards

- *Outstanding Junior Investigator* Award, Department of Energy, Office of Science (High Energy Physics)
- *Lawrence Fellowship* Lawrence Livermore National Laboratory (offered, February 2007)
- *Berkeley Center for Cosmological Physics* Fellowship, UC Berkeley (offered, January 2007)
- *Center for Cosmology and Astro-Particle Physics* Fellowship, Ohio State University (offered, January 2007)
- *Robert J. Oppenheimer* Distinguished Postdoctoral Fellowship, Los Alamos National Laboratory (offered, November 2006)
- “*L. Caiani*” National Prize for the best degree Thesis on Field Theory (January 2003)
- Scholarship at Scuola Normale Superiore (1997-2001)
- “*E. Garuzzo*” National Prize in Philosophy, for High School Students (May 1996)

Publications

- See the enclosed list of scientific publications (Last updated March 2012).
- High school textbook in Classical Mechanics, “*Fisica 1*”, ed. AlphaTest, Milano, December 2003
- Editor (with E. Aprile) of a special focus issue of the New Journal of Physics on “*Dark Matter and Particle Physics*”

Research Grants

- 2011 **Principal Investigator**, NASA Fermi-GLAST Guest Investigator Grant “*IDENTIFYING THE NATURE OF THE GALACTIC CENTER GAMMA RAY SOURCE 1FGL J1745.6-2900*”
- 2010 NASA NESSF Graduate Fellowship (to fund Tim Linden; **Principal Investigator**: Profumo) “*A search for dark matter annihilation in the anisotropy power spectrum of the Fermi-LAT Gamma-Ray Sky*”
- 2010 DoE Fermilab Fellowship (to fund Tim Linden; **Principal Investigator**: Profumo)
- 2009 **Principal Investigator**, Outstanding Junior Investigator Award, Department of Energy, Office of High Energy Physics, “*Theoretical Techniques and Computational Tools for the Identification of Particle Dark Matter and Baryogenesis*”
- 2009 **Co-Investigator** (PI: L. Rudnick), NASA NRAO Grant “*Abell 2319: from cosmic rays to gamma rays*”
- 2009 **Principal Investigator**, Faculty Research Grant, UC Santa Cruz “*Electro-Weak Bubbles: connecting the Origin of Matter and Gravitational Waves*”
- 2009 **Principal Investigator**, NASA Fermi-GLAST Guest Investigator Grant “*DMMW: a tool for multi-wavelength dark matter searches*”

- 2009 **Principal Investigator**, NASA Fermi-GLAST Guest Investigator Grant “*Fermi Observations of Nearby Radio Halo Clusters: Probing Cosmic Ray and Dark Matter Models with Multiwavelength Observations*”
- 2009 Joined as **Principal Investigator** the DoE Grant, Theory Task (J), of the Santa Cruz Institute for Particle Physics
- 2008 **Principal Investigator**, Faculty Research Grant, UC Santa Cruz “*Probes of the origin of the matter-antimatter asymmetry in the Universe*”
- 2008 **Principal Investigator**, NASA GLAST Guest Investigator Grant “*Probing Dark Matter with AGN Jets*”
- 2008 **Co-Investigator** (PI: P. Madau), NASA GLAST Guest Investigator Grant, “*GLAST and Dark Matter Substructure in the Milky Way*”
- 2008 **Principal Investigator**, NSF Grant “*Origin and Probes of Baryonic and Dark Matter*”
- 2008 **Co-Investigator** (PI: E. Ramirez-Ruiz), Special Research Grant, UCSC Committee on Research

Recent Conference Talks (2009-)

- *Workshop on the Identification of Dark Matter*, Chicago, Illinois, July 2012 (Invited Plenary Speaker)
- *High-Energy Gamma-Ray Astrophysics Conference*, Heidelberg, Germany, July 2012 (Invited Plenary Speaker)
- *PASCOS 2012*, Merida, Mexico, June 2012 (Invited Plenary Speaker)
- *2012 April meeting of American Physical Society*, plenary talk on “Cosmic rays in the search for dark matter”
- *Dark 2011*, Heidelberg, Germany, October 2011 (Invited Plenary Speaker)
- *Electroweak Baryogenesis Workshop*, Weizmann Institute, Israel, May 2011 (Invited Review Plenary Speaker)
- *Texas 2010*, Heidelberg, Germany, December 2010 (Invited Speaker)
- *SciNeGHE 2010*, Trieste, Italy, September 2010 (Invited Plenary Speaker)
- *HEAD 2010*, Hawai’I, HI, March 2010
- *IPMU Focus Week*, Tokyo, Japan, December 2010 (Co-organizer and Speaker)
- *TeVPA 09*, Stanford, CA, July 2009 (Invited Plenary Speaker)
- *SUSY 09*, Boston, MA, June 2009 (Invited Plenary Speaker)
- *CIPANP 2009*, San Diego, CA, May 2009 (Invited Speaker)
- *PPC 2009*, Oklahoma, May 2009 (Invited Plenary Speaker)
- *April APS Meeting*, Denver, Colorado, May 2009
- *Dark 2009*, Christchurch, New Zealand, January 2009 (Invited Plenary Speaker)

Recent Seminars and Colloquia (2009-)

- Institute for Advanced Studies, Princeton, NJ (March 2012))
- San Francisco State University, CA (December 2011)
- University of Maryland, College Park, MD, USA (February 2011)
- Max Planck Institute, Düsseldorf, Germany (February 2011)
- Carnegie Mellon University, inaugural Cosmology Colloquium, Pittsburgh, PA, USA (January 2010)
- Karlsruhe Institute of Technology, Karlsruhe, Germany (December 2010)
- University of Texas, inaugural Cosmology Colloquium, Austin, TX, USA (August 2010)
- UCSC, Astronomy Colloquium, Santa Cruz, CA, USA (June 2010)
- UC Davis, Davis, CA, USA (May 2010)
- University of Wisconsin, Madison, WI, USA (April 2010)
- Johns Hopkins University, Baltimore, MD, USA (April 2010)
- University of Delaware, Newark, DE, USA (April 2010)
- University of Maryland, College Park, MD, USA (April 2010)
- Caltech, Pasadena, CA, USA (July 2009)
- UC Berkeley, CA, USA (May 2009)
- CITA, Toronto, Canada (April 2009)
- University of Pittsburgh, Pittsburgh, PA, USA (April 2009)
- Ohio State University, Columbus, OH, USA (April 2009)
- Indiana University, Bloomington, IN, USA (April 2009)
- Brookhaven National Laboratory, NY, USA (March 2009)
- University of New Mexico, Albuquerque, NM, USA (March 2009)
- University of Minnesota, Minneapolis, MN, USA (March 2009)
- Stanford University, CA, USA (February 2009)

Professional Activities

- Invited Lecturer at the TASI 2012 Summer School, Boulder, CO
- Referee for *Physical Review Letters*, *Physical Review D*, *Physics Reports*, *Physics Letters B*, *Journal of High Energy Physics*, *Journal of Cosmology and Astroparticle Physics*, *Classical and Quantum Gravity*, *Astrophysical Journal*, *Astrophysical Journal Letters*, *Journal of Physics A*, *Journal of Physics G*, *Advances in Astronomy*, *Monthly Notices of the Royal Astronomical Society*, *Nature*, *Nuclear Inst. and Methods in Physics Research*.
- Grant Proposal Reviewer for *Department of Energy*, *National Science Foundation* and *NASA*
- Research Grant Proposal Reviewer for the science agencies of Canada, Estonia, France, Australia, Kazakhstan and Japan.
- Guest Editor, *New Journal of Physics* (2009-2010)

- Guest Editor, *Physics of the Dark Universe* (new Elsevier Journal) (2012-)
- Invited representative for the Astro-Particle Physics Community to the Working Group on Laboratory Astrophysics (WGLA, now a AAS Division) of the American Astronomical Society (2009-present)
- Organizer, Aspen Winter 2010 Workshop on “*Indirect Dark Matter Detection*” and Aspen Summer 2010 Workshop on “*A Roadmap Towards Discovery*”
- Profumo is co-organizing and coordinating a Santa Barbara KITP workshop on Dark Matter to take place in 2013, that received final approval by the KITP, with Trotta, Bertone and Hooper
- With Ramsey-Musolf, Wagner and Riotto, Profumo is also organizing a Santa Barbara KITP workshop on Baryogenesis, that will take place in 2014, that also recently received approval by the KITP.
- Convener, White Paper for the Department of Energy, Office of Nuclear Physics, Long Range Plan

Publications in Refereed Journals

81. “*Earthly measurements of the smallest dark matter halos*”,
 J. M. Cornell and **S. Profumo**,
 submitted, arXiv:1203.1100 [hep-ph].
80. “*The Impact of Recent Advances in Laboratory Astrophysics on our Understanding of the Cosmos*”,
 D. W. Savin et al. (incl. **S. Profumo**)
 Rept. Prog. Phys. **75**, 036901 (2012) [arXiv:1112.2770 [astro-ph.IM]].
79. “*Regenerating a Symmetry in Asymmetric Dark Matter*”,
 M. R. Buckley and **S. Profumo**,
 Phys. Rev. Lett. **108**, 011301 (2012) [arXiv:1109.2164 [hep-ph]].
78. “*Constraining Dark Matter Models from a Combined Analysis of Milky Way Satellites with the Fermi Large Area Telescope*”,
 M. Ackermann *et al.* [Fermi-LAT Collaboration, **S. Profumo** contributing affiliated scientist¹]
 Phys. Rev. Lett. **107**, 241302 (2011) [arXiv:1108.3546 [astro-ph.HE]].
77. “*Dark Matter Detection with Hard X-ray Telescopes*”,
 T. E. Jeltema and **S. Profumo**,
 arXiv:1108.1407 [astro-ph.HE].
76. “*Closing in on Supersymmetric Electroweak Baryogenesis with Dark Matter Searches and the Large Hadron Collider*”,
 J. Kozaczuk and **S. Profumo**,
 JCAP **1111**, 031 (2011) [arXiv:1108.0393 [hep-ph]].
75. “*Cosmic Ray-Dark Matter Scattering: a New Signature of (Asymmetric) Dark Matter in the Gamma Ray Sky*”,
S. Profumo, L. Ubaldi
 JCAP **1108**, 020 (2011) [arXiv:1106.4568 [hep-ph]].
74. “*Direct and Indirect Singlet Scalar Dark Matter Detection in the Lepton-Specific two-Higgs-doublet Model*”,
 M. S. Boucenna, **S. Profumo**
 Phys. Rev. D **84**, 055011 (2011) [arXiv:1106.3368 [hep-ph]].
73. “*The Quest for Supersymmetry: Early LHC Results versus Direct and Indirect Neutralino Dark Matter Searches*”,
S. Profumo
 Phys. Rev. D (2011) to appear, arXiv:1105.5162 [hep-ph].

¹“Affiliated members”, according to the Fermi Collaboration publication policy, are eligible to appear as authors on Collaboration papers only “*when the person makes an identifiable, substantial contribution to a particular paper*”

72. “*Gravity Waves from a Cosmological Phase Transition: Gauge Artifacts and Daisy Resummations*”,
C. Wainwright, **S. Profumo**, M. J. Ramsey-Musolf
Phys. Rev. D (2011) to appear, arXiv:1104.5487 [hep-ph].
71. “*Anisotropies in the gamma-ray sky from millisecond pulsars*”,
J. M. Siegal-Gaskins, R. Reesman, V. Pavlidou, **S. Profumo**, T. P. Walker
MNRAS (2011), to appear, arXiv:1011.5501 [astro-ph.HE].
70. “*Constraints on Decaying Dark Matter from Fermi Observations of Nearby Galaxies and Clusters*”,
L. Dugger, T. E. Jeltema, **S. Profumo**
submitted, arXiv:1009.5988 [astro-ph.HE].
69. “*Singlet Scalar Dark Matter: monochromatic gamma rays and metastable vacua*”,
S. Profumo, L. Ubaldi, C. Wainwright
submitted, arXiv:1009.5377 [hep-ph].
68. “*Searches for Cosmic-Ray Electron Anisotropies with the Fermi Large Area Telescope*”,
Fermi-LAT Collaboration, **S. Profumo** contributing affiliated scientist,
Phys. Rev. D (2010) to appear, arXiv:1008.5119 [astro-ph.HE].
67. “*Fermi LAT observations of cosmic-ray electrons from 7 GeV to 1 TeV*”,
Fermi-LAT Collaboration, **S. Profumo** contributing affiliated scientist,
Phys. Rev. D (2010) to appear, arXiv:1008.3999 [astro-ph.HE].
66. “*Probing Dark Matter with AGN Jets*”,
M. Gorchtein, **S. Profumo**, L. Ubaldi,
Phys. Rev. D (2010) to appear, arXiv:1008.2230 [astro-ph.HE].
65. “*Dark Matter decay and annihilation in the Local Universe: CLUES from Fermi*”,
A. J. Cuesta, T. E. Jeltema, F. Zandanel, **S. Profumo et al.**,
submitted, arXiv:1007.3469 [astro-ph.HE].
64. “*Implications of Fermi Observations for Hadronic Models of Radio Halos in Clusters of Galaxies*”,
T. Jeltema and **S. Profumo**,
submitted, arXiv:1006.1648 [astro-ph.CO],
63. “*A Comprehensive Analysis of Electric Dipole Moment Constraints on CP-violating Phases in the MSSM*”
Y. Li, **S. Profumo** and M. Ramsey-Musolf,
J. High Energy Phys. (*JHEP*) **1008** (2010) 062, arXiv:1006.1440 [hep-ph]
62. “*The Morphology of the Galactic Dark Matter Synchrotron Emission with Self-Consistent Cosmic Ray Diffusion Models*”,
T. Linden, **S. Profumo** and B. Anderson,
Phys. Rev. D **82** (2010) 063529, arXiv:1004.3998 [astro-ph.GA]
61. “*Systematic Effects in Extracting a ‘Gamma-Ray Haze’ from Spatial Templates*”,
T. Linden and **S. Profumo**,
Astrophys. J. **714** (2010) L228, arXiv:1003.0002 [astro-ph.GA]

60. “*GeV Gamma-ray Flux Upper Limits from Clusters of Galaxies*”, M. Ackermann, et al. [Fermi-LAT Collaboration], **S. Profumo** contributing affiliated scientist, *Astrophys. J.* **717** (2010) L71, arXiv:1006.0748 [astro-ph.HE]
59. “*Constraints on Dark Matter Annihilation in Clusters of Galaxies with the Fermi Large Area Telescope*”, M. Ackermann, et al. [Fermi-LAT Collaboration], **S. Profumo** corresponding author, *J. Cosm. and Astrop. Phys. (JCAP)* **1005** (2010) 025, arXiv:1002.2239 [astro-ph.CO]
58. “*Observations of Milky Way Dwarf Spheroidal galaxies with the Fermi-LAT detector and constraints on Dark Matter models*”, A.A. Abdo et al. [Fermi-LAT Collaboration], **S. Profumo** corresponding author, *Astrophys. J.* **712** (2010) 147, arXiv:1001.4531 [astro-ph.CO]
57. “*The Contribution of Fermi Gamma-Ray Pulsars to the local Flux of Cosmic-Ray Electrons and Positrons*”, L. Gendeleev, **S. Profumo** and M. Dormody, *J. Cosm. and Astrop. Phys. (JCAP)* **1002** (2010) 016, arXiv:1001.4540 [astro-ph.HE]
56. “*Focus on dark matter and particle physics*”, E. Aprile and **S. Profumo**, *New J.Phys.* **11** (2009) 105002
55. “*Semi-Analytic Calculation of the Gravitational Wave Signal From the Electroweak Phase Transition for General Quartic Scalar Effective Potentials*”, J. Kehayias and **S. Profumo**, *J. Cosm. and Astrop. Phys. (JCAP)* **1003** (2010) 003, arXiv:0911.0687 [hep-ph]
54. “*MSSM Baryogenesis and Electric Dipole Moments: An Update on the Phenomenology*”, V. Cirigliano, Y. Li, **S. Profumo** and M.J. Ramsey-Musolf, *J. High Energy Phys. (JHEP)* 1001 (2010) 002, arXiv:0910.4589 [hep-ph]
53. “*The impact of a strongly first-order phase transition on the abundance of thermal relics*”, C. Wainwright and **S. Profumo**, *Phys. Rev. D* **80** (2009) 103517, arXiv:0909.1317 [hep-ph]
52. “*Can we discover multi-component WIMP dark matter?*”, **S. Profumo**, K. Sigurdson and L. Ubaldi, *J. Cosm. and Astrop. Phys. (JCAP)*, **0912** (2009) 016, arXiv:0907.4374 [astro-ph]
51. “*Extragalactic Inverse Compton Light from Dark Matter Annihilation and the Pamela Positron Excess*”, **S. Profumo** and T. Jeltema, *J. Cosm. and Astrop. Phys. (JCAP)*, **0907** (2009) 020, [arXiv:0906.0001 [astro-ph]]
50. “*On possible interpretations of the high energy electron-positron spectrum measured by the Fermi Large Area Telescope*”, D. Grasso, **S. Profumo**, A. Strong et al. *Astrop. Phys.* **32** (2009) 140, [arXiv:0905.0636 [astro-ph]]

49. “*Measurement of the Cosmic Ray e^+ plus e^- spectrum from 20 GeV to 1 TeV with the Fermi Large Area Telescope*”,
A. Abdo et al. (**S. Profumo**)
Phys. Rev. Lett. **102** (2009) 181101 [arXiv:0905.0025 [astro-ph]]
48. “*Protohalo Constraints to the Resonant Annihilation of Dark Matter*”,
F.Y. Cyr-Racine, **S. Profumo** and K. Sigurdson
submitted, arXiv:0904.3933 [astro-ph]
47. “*The cosmic ray lepton puzzle in the light of cosmological N -body simulations*”,
P. Brun, T. Delahaye, J. Diemand, **S. Profumo** and P. Salati
Phys. Rev. D **80** (2009) 035023, [arXiv:0904.0812 [astro-ph]]
46. “*Dissecting Pamela (and ATIC) with Occam’s Razor: existing, well-known Pulsars naturally account for the ‘anomalous’ Cosmic-Ray Electron and Positron Data*”,
S. Profumo
submitted, arXiv:0812.4457 [astro-ph]
45. “*The origin of the diffuse non-thermal X-ray and radio emission in the Ophiuchus cluster of galaxies*”,
M. A. Perez-Torres, F. Zandanel, M. A. Guerrero, S. Pal, **S. Profumo**, F. Prada and F. Panessa
MNRAS, **396** (2009) 2237 [arXiv:0812.3598 [astro-ph]]
44. “*Gamma Rays from Clusters and Groups of Galaxies: Cosmic Rays versus Dark Matter*”,
T. E. Jeltema, J. Kehayias and **S. Profumo**,
Phys. Rev. D **80** (2009) 023005 [arXiv:0812.0597 [astro-ph]]
43. “*Angular correlations in the cosmic gamma-ray background from dark matter annihilation around intermediate-mass black holes*”,
M. Taoso, S. Ando, G. Bertone and **S. Profumo**
Phys. Rev. D **79** (2009) 043521 [arXiv:0811.4493 [astro-ph]]
42. “*Bino-driven Electroweak Baryogenesis with highly suppressed Electric Dipole Moments*”,
Y. Li, **S. Profumo** and M. Ramsey-Musolf
Phys. Lett. B **673** (2009) 95 [arXiv:0811.1987 [hep-ph]]
41. “*Early Annihilation and Diffuse Backgrounds in $1/v$ WIMP models*”,
M. Kamionkowski and **S. Profumo**
Phys. Rev. Lett. **101** (2008) 261301 [arXiv:0810.3233v3 [astro-ph]]
40. “*Fitting the Gamma-Ray Spectrum from Dark Matter with DMFIT: GLAST and the Galactic Center Region*”,
T. Jeltema and **S. Profumo**
J. Cosm. and Astrop. Phys. (JCAP), **0811** (2008) 003 [arXiv:0808.2641 [astro-ph]]
39. “*Higgs-Higgsino-Gaugino Induced Two Loop Electric Dipole Moments*”,
Y. Li, **S. Profumo** and M. J. Ramsey-Musolf
Phys. Rev. D **78** (2008) 075009 [arXiv:0806.2693 [hep-ph]]

38. “*Hunting the lightest lightest neutralinos*”,
S. Profumo,
 Phys. Rev. D, **78** (2008) 023507 [arXiv:0806.2150 [hep-ph]]
37. “*Searching for Dark Matter with X-ray Observations of Local Dwarf Galaxies*”,
 T. Jeltema and **S. Profumo**
 Astroph. J. **686** (2008) 1045 [arXiv:0805.1054 [astro-ph]]
36. “*Non-thermal X-rays from the Ophiuchus cluster and dark matter annihilation*”,
S. Profumo
 Phys. Rev. D, **77** (2008) 103510 [arXiv:0801.0740 [astro-ph]]
35. “*Probing new physics with long-lived charged particles produced by atmospheric and astrophysical neutrinos*”,
 S. Ando, J. F. Beacom, **S. Profumo** and D. Rainwater
 J. Cosm. and Astrop. Phys. (*JCAP*), **0804** (2008) 029 [arXiv:0711.2908 [hep-ph]]
34. “*Singlet Higgs phenomenology and the electroweak phase transition*”,
S. Profumo, M. J. Ramsey-Musolf and G. Shaughnessy
 J. High Energy Phys. (*JHEP*) **0708** (2007) 010 [arXiv:0705.2425 [hep-ph]]
33. “*Dark Matter and Collider Phenomenology of Universal Extra Dimensions*”
 D. Hooper and **S. Profumo**
 (Invited Review Article for Physics Reports)
 Phys. Rept. **453** (2007) 29 [arXiv:hep-ph/0701197]
32. “*The Shadow of Dark Matter*”,
S. Profumo and K. Sigurdson
 Phys. Rev. D , **75** (2007) 023521 [arXiv:astro-ph/0611129]
31. “*Probing SUSY beyond the reach of LEP2 at the Fermilab Tevatron: low $|M_3|$ dark matter models*”,
 H. Baer, A. Mustafayev, **S. Profumo** and X. Tata
 Phys. Rev. D , **75** (2007) 035004 [arXiv:hep-ph/0610154]
30. “*Increasing the Neutralino Relic Abundance with Slepton Coannihilations: Consequences for Indirect Dark Matter Detection*”,
S. Profumo and A. Provenza
 J. Cosm. and Astrop. Phys. (*JCAP*) **0612** (2006) 019 [arXiv:hep-ph/0609290]
29. “*Indirect Detection of Light Neutralino Dark Matter in the NMSSM*”,
 F. Ferrer, L. Krauss and **S. Profumo**
 Phys. Rev. D , **74** (2006) 115007 [arXiv:hep-ph/0609257]
28. “*Supersymmetric Contributions to Weak Decay Correlation Coefficients*”,
S. Profumo, M. J. Ramsey-Musolf and S. Tulin
 Phys. Rev. D , **75** (2007) 075017 [arXiv:hep-ph/0608064]
27. “*Detecting dark matter WIMPs in the Draco dwarf: a multi-wavelength perspective*”,
 S. Colafrancesco, **S. Profumo** and P. Ullio
 Phys. Rev. D , **75** (2007) 023513 [arXiv:astro-ph/0607073]

26. “*Baryogenesis, electric dipole moments and dark matter in the MSSM*”,
V. Cirigliano, **S. Profumo** and M. J. Ramsey-Musolf
J. High Energy Phys. (*JHEP*) **0607** (2006) 002 [arXiv:hep-ph/0603246]
25. “*What mass are the smallest protohalos?*”,
S. Profumo, K. Sigurdson and M. Kamionkowski
Phys. Rev. Lett. **97** (2006) 031301 [arXiv:astro-ph/0603373]
24. “*Mixed Higgsino Dark Matter from a reduced $SU(3)$ gaugino mass: consequences for dark matter and collider searches*”,
H. Baer, A. Mustafayev, E. K. Park, **S. Profumo** and X. Tata
J. High Energy Phys. (*JHEP*) **0604** (2006) 041 [arXiv:hep-ph/0603197]
23. “*Dark matter and the CACTUS gamma-ray excess from Draco*”,
S. Profumo and M. Kamionkowski
J. Cosm. and Astrop. Phys. (*JCAP*) **0603** (2006) 003 [arXiv:astro-ph/0601249]
22. “*Low energy antideuterons: shedding light on dark matter*”,
H. Baer and **S. Profumo**
J. Cosm. and Astrop. Phys. (*JCAP*) **0512** (2005) 008 [arXiv:astro-ph/0510722]
21. “*TeV gamma-rays and the largest masses and annihilation cross sections of neutralino dark matter*”,
S. Profumo
Phys. Rev. D , **72** (2005) 103521 [arXiv:astro-ph/0508628]
20. “*Multi-frequency analysis of neutralino dark matter annihilations in the Coma cluster*”,
S. Colafrancesco, **S. Profumo** and P. Ullio
Astron. & Astrophys, **455** (2006) 21 [arXiv:astro-ph/0507575]
19. “*Exploring the BWCA (Bino-Wino co-annihilation) scenario for neutralino dark matter*”,
H. Baer, T. Krupovnickas, A. Mustafayev, E. K. Park, **S. Profumo** and X. Tata
J. High Energy Phys. (*JHEP*) **0512** (2005) 011 [arXiv:hep-ph/0511034]
18. “*Model independent approach to focus point supersymmetry: From dark matter to collider searches*”,
H. Baer, T. Krupovnickas, **S. Profumo** and P. Ullio
J. High Energy Phys. (*JHEP*) **0510** (2005) 020 [arXiv:hep-ph/0507282]
17. “*Mixed Wino dark matter: Consequences for direct, indirect and collider detection*”,
H. Baer, A. Mustafayev, E. K. Park and **S. Profumo**
J. High Energy Phys. (*JHEP*) **0507** (2005) 046 [arXiv:hep-ph/0505227]
16. “*Direct, indirect and collider detection of neutralino dark matter in SUSY models with non-universal Higgs masses*”,
H. Baer, A. Mustafayev, **S. Profumo**, A. Belyaev and X. Tata
J. High Energy Phys. (*JHEP*) **0507** (2005) 065 [arXiv:hep-ph/0504001]
15. “*Neutralino cold dark matter in a one parameter extension of the minimal supergravity model*”,

- H. Baer, A. Mustafayev, **S. Profumo**, A. Belyaev and X. Tata
Phys. Rev. D , **71** (2005) 095008 [arXiv:hep-ph/0412059]
14. “*Neutralino dark matter detection in split supersymmetry scenarios*”,
A. Masiero, **S. Profumo** and P. Ullio
Nucl. Phys. B **712** (2005) 86 [arXiv:hep-ph/0412058]
 13. “*A running spectral index in supersymmetric dark-matter models with quasi-stable charged particles*”,
S. Profumo, K. Sigurdson, P. Ullio and M. Kamionkowski
Phys. Rev. D **71** (2005) 023518 [arXiv:astro-ph/0410714]
 12. “*Statistical analysis of supersymmetric dark matter in the minimal supersymmetric standard model after WMAP*”,
S. Profumo and C. E. Yaguna
Phys. Rev. D **70** (2004) 095004 [arXiv:hep-ph/0407036]
 11. “*The role of antimatter searches in the hunt for supersymmetric dark matter*”,
S. Profumo and P. Ullio
J. Cosm. and Astrop. Phys. (*JCAP*) **0407** (2004) 006 [arXiv:hep-ph/0406018]
 10. “*Gluino coannihilations and heavy bino dark matter*”,
S. Profumo and C. E. Yaguna
Phys. Rev. D **69** (2004) 115009 [arXiv:hep-ph/0402208]
 9. “*Lepton flavor violation, neutralino dark matter and the reach of the LHC*”,
A. Masiero, **S. Profumo**, S. K. Vempati and C. E. Yaguna
J. High Energy Phys. (*JHEP*) **0403** (2004) 046 [arXiv:hep-th/0401138]
 8. “*SUSY dark matter and quintessence*”,
S. Profumo and P. Ullio,
J. Cosm. and Astrop. Phys. (*JCAP*) **0311** (2003) 006 [arXiv:hep-ph/0309220]
 7. “*Non-universal gaugino masses and the fate of $\mu \rightarrow e\gamma$* ”,
S. Profumo and C. E. Yaguna
Nucl. Phys. B, **681** (2004) 247 [arXiv:hep-ph/0307225]
 6. “*Charged lepton flavor violating decays: Leading logarithmic approximation versus full RG results*”,
S. T. Petcov, **S. Profumo**, Y. Takanishi and C. E. Yaguna
Nucl. Phys. B **676** (2004) 453 [arXiv:hep-ph/0306195]
 5. “*Neutralino relic density in supersymmetric GUTs with no-scale boundary conditions above the unification scale*”,
S. Profumo
J. High Energy Phys. (*JHEP*) **06** (2003) 052 [arXiv:hep-ph/0306119]
 4. “*Neutralino dark matter, $b - \tau$ Yukawa unification and non-universal sfermion masses*”,
S. Profumo
Phys. Rev. D **68** (2003) 015006 [arXiv:hep-ph/0304071]
 3. “*Matrix models of noncommutative $(2d+1)$ lattice gauge theories*”,
F. Bazzocchi, M. Cirafici, C. Maccaferri and **S. Profumo**
Int. J. Mod. Phys. A **19** (2004) *in press* [arXiv:hep-th/0211060]

2. “*Twisted Eguchi-Kawai reduced chiral models*”,
S. Profumo and E. Vicari
J. High Energy Phys. (*JHEP*) **0205** (2002) 014 [arXiv:hep-th/0203155]
1. “*Noncommutative principal chiral models*”,
S. Profumo
J. High Energy Phys. (*JHEP*) **0210** (2002) 035 [arXiv:hep-th/0111285]

Contributions to Proceedings and Other Publications

20. “*Les Houches 2011: Physics at TeV Colliders New Physics Working Group Report*,”
G. Brooijmans, B. Gripaios, F. Moortgat, J. Santiago, P. Skands, D. A. Vasquez,
B. C. Allanach and A. Alloul *et al.*,
arXiv:1203.1488 [hep-ph].
19. “*Evaluating the dark matter contribution to galactic synchrotron radiation*,”
T. Linden, **S. Profumo** and B. Anderson,
PoS IDM **2010**, 023 (2011).
18. “*Possible interpretations of the high energy cosmic ray electron spectrum measured
with the Fermi space telescope*,”
D. Grasso, **S. Profumo**, A. W. Strong, L. Baldini, R. Bellazzini, E. D. Bloom,
J. Bregeon and G. Di Bernardo *et al.*,
Nucl. Instrum. Meth. A **630**, 48 (2011).
17. “*Multi-wavelength studies*,”
S. Profumo and P. Ullio,
In *Bertone, G. (ed.): Particle dark matter* 547-564
16. “*Theory of indirect dark matter detection*”,
S. Profumo,
PoS TEXAS **2010**, 210 (2010).
15. “*Fundamental physics from the sky: Latest news on indirect dark matter detection*”,
S. Profumo,
AIP Conf.Proc. **1200** (2010) 176, prepared for the 17th International Conference on
Supersymmetry
14. “*Astrophysical boost factor and dark matter indirect detection*”,
T. Delahaye, P. Brun, J. Diemand, **S. Profumo** and P. Salati,
J. Phys. Conf. Ser. **203** (2010) 012050
13. “*Indirect detection of dark matter: Theory perspective*”,
S. Profumo,
AIP Conf.Proc. **1182** (2009) 256, prepared for CIPANP 2009
12. “*Prospects for dark matter searches with measurements of the electron flux with GLAST*”,
A. Moiseev and **S. Profumo**,
AIP Conf.Proc. **1166** (2009) 151, prepared for the 8th UCLA Symposium On Sources
And Detection Of Dark Matter And Dark Energy In The Universe
11. “*Section on Prospects for Dark Matter Detection of the White Paper on the Status
and Future of Ground-Based TeV Gamma-Ray Astronomy*”,
J. Buckley, **S. Profumo** et al.
White paper commissioned by the American Physical Society on the status and future
of TeV gamma-ray astronomy
arXiv:0812.0795v1 [astro-ph]
10. “*DUSEL Theory White Paper*”,
S. Raby, **S. Profumo** et al.

DUSEL Theory White paper addressing the scientific case at a level which may be useful in the decision making process for policy makers at the NSF and in the U.S. Congress
arXiv:0810.4551v1 [hep-ph]

9. “*Non-thermal X-rays from dark matter annihilation*”,
S. Profumo,
Proceedings of the *16th International Conference on Supersymmetry and the Unification of Fundamental Interactions* (SUSY 08), Seoul, Korea, June 16-21, 2008
8. “*Dark Matter searches at Colliders*”,
S. Profumo,
Proceedings of the *Incontri di Fisica delle Alte Energie* (IFAE 08), Bologna, Italy March 26-28, 2008
7. “*Dark Matter in Nuclear Physics*”,
G. Fuller, A. Hime, R. Henning, D. Kinion, S. Klein, **S. Profumo**, M.J. Ramsey-Musolf, R. Stokstad
White Paper for the Nuclear Science Town Meeting on “Neutrinos, Neutrons and Fundamental Symmetries”, Chicago, Jan. 17-19, 2007 [arXiv:nucl-th/0702031]
6. “*Probing Supersymmetric Baryogenesis: From EDMs to Neutrino Telescopes*”,
S. Profumo,
Proceedings of the *14th International Conference on Supersymmetry and the Unification of Fundamental Interactions* (SUSY 06), Irvine, California, USA June 12-17, 2006, ed. by J. Feng.
5. “*Recent results from atmospheric Cherenkov telescopes and dark matter*”,
S. Profumo,
Proceedings of the *7th UCLA Symposium on Sources and Detection of Dark Matter and Dark Energy in the Universe* (DM 06), Nucl. Phys. Proc. Suppl. **173** (2007) 64 Marina Del Rey, California, USA February 22-24, 2006, ed. by D.L. MacLaughlan-Dumes.
4. “*Subgalactic Structure Suppression in the MSSM*”,
S. Profumo,
Proceedings of the *40th Rencontres de Moriond Workshop on Electroweak Interactions and Unified Theories*, La Thuile, Italy, March 5-12, 2005, ed. by J. Tran Thanh Van
3. “*Antimatter searches as probes of SUSY dark matter*”,
S. Profumo and P. Ullio,
Proceedings of the *Frontier Science 2004, Physics and Astrophysics in Space*, Frascati, Italy, June 14-19, 2004, Frascati Physics Series, *in press*
2. “*Neutralino relic density enhancement in non-standard cosmologies*”,
S. Profumo and P. Ullio,
Proceedings of the *39th Rencontres de Moriond Workshop on Exploring the Universe: Contents and Structures of the Universe*, La Thuile, Italy, March 28 - April 4, 2004, ed. by J. Tran Thanh Van [arXiv:astro-ph/0404390]
1. “*Extended coannihilations from non universal sfermion masses*”
S. Profumo,

Proceedings of the *38th Rencontres de Moriond on Electroweak Interactions and Unified Theories*, Les Arcs, France, March 15-22, 2003, ed. by J. Tran Thanh Van [arXiv:hep-ph/0305040]