

Bruce Andrew Schumm, Ph.D.
Department of Physics and Santa Cruz Institute for Particle Physics
University of California, Santa Cruz, CA 95064
Tel. 831-459-3034 FAX: 831-459-5777

(i) Professional Preparation

| <i>Institution</i> | <i>Major/Area</i> | <i>Degree</i> | <i>Year</i> |
|---------------------------------|-------------------------|---------------------|-------------|
| Haverford College, Haverford PA | Math and Physics | B.A. | 1981 |
| Univ. of Chicago, Chicago IL | Exptl. Particle Physics | Ph.D. | 1988 |
| LBNL, Berkeley, CA | Exptl. Particle Physics | Postdoctoral Fellow | 1988-1994 |

(ii) Appointments

| | |
|--------------|--|
| 2003-Present | Professor of Physics, UCSC |
| 1999-2003 | Associate Professor of Physics, UCSC |
| 1995-1999 | Assistant Professor of Physics, UCSC |
| 1994-1995 | Staff Scientist, Lawrence Berkeley National Laboratory |

(iii) Publications – (a) Most closely related to this proposal

1. Search for Diphoton Events with Large Missing Transverse Momentum in 5 fb^{-1} of 7 TeV pp Collision Data with the ATLAS Detector, G. Aad et al., (ATLAS Collaboration), ATLAS-CONF-2102-072, July 2012; to be submitted to Phys. Lett. B.
2. B. Schumm, “Searching for Supersymmetry with the ATLAS Detector at the LHC”, CIPANP 2012, ATL-PHYS-PROC-2012-134 (August 2012).
3. Search for a Fermiophobic Higgs Boson in the Diphoton Decay Channel with the ATLAS Detector, G. Aad et al. (ATLAS Collaboration), arXiv :1205.0701 [hep-ex], May 2012; submitted to Eur. Phys. J. C.
4. Search for the Standard Model Higgs Boson in the Diphoton Decay Channel with 4.9 fb^{-1} of pp Collision Data at $\sqrt{s} = 7 \text{ TeV}$ with ATLAS, G. Aad *et al.* (ATLAS Collaboration), Phys. Rev. Lett. 108, 111803 (2012).
5. Search for Diphoton Events with Large Missing Transverse Momentum in 1 fb^{-1} of 7 TeV Proton-Proton Collision Data with the ATLAS Detector, G. Aad et al., (ATLAS Collaboration), Phys. Lett. B 710 (2012) 519–537
6. Search for Diphoton Events with Large Missing Transverse Energy with 36 pb^{-1} of 7 TeV Proton-Proton Collision Data with the ATLAS Detector, G. Aad et al., ATLAS Collaboration, Eur. Phys. J. C 71:1744,2011.

(iii) Publications – (b) Other Significant Publications

1. Precision Measurement of the $B \rightarrow X_s \gamma$ Photon Energy Spectrum, Branching Fraction, and Direct CP Asymmetry $A_{CP}(B \rightarrow X_{s+d} \gamma)$, BaBar Collaboration, arXiv:1207.2690 [hep-ex], July 2012; submitted to Phys. Rev. Lett.

2. Longitudinal Resistive Charge Division in Multi-Channel Silicon Strip Sensors

J. K. Carman et al., Nucl. Inst. & Meth. A646, 118 (2011).

3. B Meson Radiative Effective Neutral Current ('Penguin') Transition Rates

Bruce A. Schumm, Mod.Phys.Lett.A25:2289-2303,2010.

4. Study of $B \rightarrow X_d \gamma$ Decays and Determination of $|V_{td}/V_{ts}|$,

B. Aubert et al. (BaBar Collaboration), Phys.Rev.D82:051101,2010

(iv) Synergistic Activities

July 2012 Panel, Review of the National Laboratory Applied Technology, Detector Research and Development Program

2011 National Adviser, DPF Taskforce on Instrumentation (Chair, Subcommittee on National Instrumentation Fellowships).

2010-present Member, Linear Collider Steering Group of the Americas

2004-present Executive Committee, American Linear Collider Steering Group
Trade Book: *Deep Down Things, the Breathtaking Beauty of Particle Physics*, Johns Hopkins University Press, November, 2004.

(v) Collaborators and Other Affiliations

(a) Collaborators

Tim Adye (Rutherford-Appleton Laboratory), Wolfgang Ehrenfeld (DESY), Helenka Frey (Annecy University), Helen Hayward (Liverpool University), Colin Jessop (Notre Dame University), Wolfgang Lohman (DESY), Tim Nelson (SLAC Linear Accelerator Laboratory), Richard Partridge (SLAC National Accelerator Laboratory), Aurore Savoy-Navarro (University of Paris).

(b) Graduate Advisors and Postdoctoral Sponsors

Thesis Adviser: Frank Merritt, University of Chicago

Postdoctoral Advisor: George Trilling, UC Berkeley (retired)

Postdoctoral Advisor: Herb Steiner, UC Berkeley (retired)

(c) Thesis Adviser to:

Per Lasse Reinertsen (University of Bergen), Jorge Fernandez (KLA-TENCOR), Teela Pulliam (Ohio State University), Ruth Schmitz (University of Washington), Patrick Spradlin (Oxford University), Vidya Kumar (Santur Corporation), Timothy Beck (Mendocino College), Lucas Winstrom (Cornell University), Andrea Bangert (University of Sydney), Joel Martinez

Advisees: Postdoctorate:

Wolfgang Walkowiak (Siegen University), Gavin Nesom (Riverbed Technologies), Juergen Kroseberg (Bonn University), Lei Wang.