

Abraham Seiden
Santa Cruz Institute for Particle Physics (SCIPP)
UC Santa Cruz Department of Physics

PROFESSIONAL PREPARATION

Columbia University	Applied Physics	B.S.	1967
California Institute of Technology	Physics	M.S.	1970
University of California, Santa Cruz	Physics	Ph.D.	1974

POST DOCTORAL APPOINTMENTS

1975-1976	Postdoctoral Research Scientist, High Energy Physics, University of California, Santa Cruz
1974-1975	Visiting Scientist, CERN

APPOINTMENTS

2008-present	Distinguished Professor of Physics, University of California, Santa Cruz
1981-2010	Director, Santa Cruz Institute for Particle Physics
1986-2008	Professor of Physics, University of California, Santa Cruz
1985-1986	Visiting Scientist, European Laboratory for Particle Physics (CERN)
1981-1985	Associate Professor of Physics, University of California, Santa Cruz
1978-1981	Assistant Professor of Physics, University of California, Santa Cruz
1976-1978	Assistant Professor of Physics in Residence, University of California, Santa Cruz

SELECTED PUBLICATIONS PERTINENT TO THIS PROPOSAL (Primary Author Only)

1. Characteristics of the ATLAS and CMS Detectors. A. Seiden, Phil. Trans. R. Soc., 370 no. 1961, 892 (2012).
2. Comparing radiation tolerant materials and devices for ultra rad-hard tracking detectors. M. Bruzzi, H.F.W. Sadrozinski, A. Seiden, Nucl.Instrum.Meth. A579:754 (2007).
3. Radiation-hard semiconductor detectors for Super LHC. M. Bruzzi *et al.* Nucl. Instrum. Meth. A 541: 189 (2005).
4. Tracking detectors for the sLHC, the LHC upgrade. H.F.W. Sadrozinski and A. Seiden, Nucl. Instrum. Meth. A 541: 434 (2005)
5. Ionization Damage on Atlas-SCT Front-End Electronics considering Low-Dose-Rate Effects. M. Ullan *et al.*, IEEE Trans. Nucl. Sci. 49:1106, (2002).

OTHER PUBLICATIONS (Not ATLAS related)

1. Search for CP Violation in the Decays $D_0 \rightarrow K-K^+$ and $D_0 \rightarrow \pi-\pi^+$. B. Aubert et al. (BaBar Collaboration), Phys. Rev. Lett. 100:061803 (2008).

2. Evidence for D0-anti-D0 Mixing.
B. Aubert *et al.* (BaBar Collaboration). Phys. Rev. Lett. 98:211802 (2007).
3. Search for D0-anti-D0 Mixing and Branching-Ratio Measurement in the Decay $D0 \rightarrow K+\pi\pi^0$.
B. Aubert *et al.* (BaBar Collaboration). Phys. Rev. Lett. 97:221803 (2006).
4. Limits on D0-anti-D0 mixing and CP violation from the ratio of lifetimes for decay to $K-\pi^+$, $K-K^+$ and $\pi-\pi^+$.
B. Aubert *et al.* (BaBar Collaboration). Phys. Rev. Lett. 91:121801 (2003).
5. Tracking at the SSC/LHC.
H. F.-W. Sadrozinski, A. Seiden, A. Weinstein, Nuclear Instruments and Methods A 279, 223, (1998).

SYNERGISTIC ACTIVITIES

Author of a textbook on particle physics: "Particle Physics, A Comprehensive Introduction", published by Addison Wesley in 2005.

Have had significant service roles for US ATLAS, various laboratories, the US High Energy Physics Program and other areas of physics. Examples, with dates of service are given below.

2010	Chair of Program Advisory Committee for SURF (formerly DUSEL)
2009	Member of Particle Astrophysics Scientific Assessment Group
2005-present	Manager, US ATLAS Upgrade Effort
2002-2007	Chair, Particle Physics Project Prioritization Panel
2001-2003	Chair of LIGO Program Advisory Committee
1994-2000	Member of CERN Scientific Policy Committee

COLLABORATORS & OTHER AFFILIATIONS

a) Collaborators

I am a member of the ATLAS collaboration with several thousand members.

Recent individuals with whom I have worked closely include: Howard Gordon (BNL), Mike Tuts (Columbia), Maurice Garcia-Sciveres (LBNL), Carl Haber (LBNL), M. Gilchriese (LBNL), Phil Allport (Liverpool, U.K.), Nigel Hessey (Nikhef, Holland).

b) Graduate Advisor

Clemens Heusch, retired.

c) Postdoctoral Advisor

Pierre Darriulat, retired

d) Advisees

Graduate Students: Michael Wilson, Christian Flacco, Ken Fowler, Peter Manning (current).

Postdoctoral Scientists: Jovan Mitrevski, Sofia Chouridou.