

William Lockman  
Santa Cruz Institute for Particle Physics (SCIPP)  
UC Santa Cruz Department of Physics

**PROFESSIONAL PREPARATION**

University of California, Los Angeles	Physics	B.S.	1970
University of California, Los Angeles	Physics	M.S.	1971
University of California, Los Angeles	Physics	Ph.D.	1978

**POST DOCTORAL APPOINTMENTS**

1978-1980	Postdoctoral Research Scientist, High Energy Physics, University of California, Los Angeles
1980-1984	Postdoctoral Research Scientist, Stanford Linear Accelerator Center

**APPOINTMENTS**

2013-present	Research Physicist Recalled, University of California, Santa Cruz
1993-2013	Research Physicist, University of California, Santa Cruz
1984-1993	Associate Research Physicist, University of California, Santa Cruz

**SELECTED PUBLICATIONS PERTINENT TO THIS PROPOSAL (Primary Author Only)**

1. Beam Background Overlay for ATLAS Simulation, ATLAS Internal Note ATL-SOFT-INT-2011-001, 2011.

**OTHER PUBLICATIONS (Not ATLAS related)**

1. Measurement of  $D^0$ - $\bar{D}^0$  mixing and CP violation in two-body  $D^0$  decays, J. P. Lees et al. (BaBar Collaboration), Phys. Rev. **D87**, 012004 (2013).
2. Charm Meson Mixing: an Experimental Review, C. A. Chavez, R. F. Cowan and W. S. Lockman, Int. J. Mod. Phys. A **27**, 1230019 (2012).
3. Search for CP violation in the decay  $D^0 \rightarrow K^0_s \pi$ , P. del Amo Sanchez *et al.* (BaBar Collaboration), Phys. Rev. **D83**, 071103 (2011).
4. Measurements of  $D^0$ - $\bar{D}^0$  mixing parameters using  $D^0 \rightarrow K^0_s \pi \pi$  and  $D^0 \rightarrow K^0_s K K$  decays, P. del Amo Sanchez *et al.* (BaBar Collaboration), Phys. Rev. Lett. **105**, 081803 (2010).
5. Measurement of  $D^0$ - $\bar{D}^0$  mixing from a time-dependent amplitude analysis of  $D^0 \rightarrow K \pi \pi$  decays, B. Aubert *et al.* (BaBar collaboration), Phys. Rev. Lett. **103**, 211801 (2009).
6. Measurement of  $D^0$ - $\bar{D}^0$  mixing using the ratio of lifetimes for the decays  $D^0 \rightarrow K \pi$  and  $K K$ , B. Aubert *et al.* (BaBar collaboration), Phys. Rev. **D80**, 071103 (2009).
7. Measurement of  $D^0$ - $\bar{D}^0$  mixing using the ratio of lifetimes for the decays  $D^0 \rightarrow K \pi$ ,  $K K$  and  $\pi \pi$ , B. Aubert *et al.* (BaBar collaboration), Phys. Rev. **D78**, 011105 (2008).
8. Evidence for  $D^0$ - $\bar{D}^0$  mixing, B. Aubert *et al.* (BaBar collaboration), Phys. Rev. Lett. **98**, 211802 (2007).

## SYNERGISTIC ACTIVITIES

Have had significant service roles for BaBar, ATLAS and GEANT4 collaborations and SLAC User's Organization (SLUO). Examples with dates of service are given below.

2013	Ongoing ATLAS analysis of Higgs to BB in association with a W or Z
2012	Chair of BaBar review committee for the analysis, Search for $CP$ violation in the decays $D^+ \rightarrow K_s^0 K^+$ , $D_s^+ \rightarrow K_s^0 K^+$ and $D_s^+ \rightarrow K_s^0 \pi^+$
2010-2011	Member of the BaBar review committee for publications 1, 2 and 4
2007	Co-analyzer and co-author for publications 5, 6 and 7
2008-2012	Member of SLUO Executive Committee
2006-2009	Co-chair of the SLAC/ATLAS Tier-2 Advisory committee

## COLLABORATORS & OTHER AFFILIATIONS

### a) Collaborators:

I am a member of the BaBar and ATLAS collaborations with approximately 3000 members. Individuals with whom I have worked closely include: Andrew Haas (NYU), Georges Azuelos (Montreal), Angelina Galtieri (LBNL), Brian Petersen (CERN), Witold Kozanecki (Saclay)

### b) Graduate Advisor:

Peter Schlein (UCLA), deceased.

### c) Postdoctoral Advisor:

Elliot Bloom (SLAC).