WILLIAM NASH

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WORK EXPERIENCE

UCLA Physics Department / CERN   July 2016 - Present
PhD Candidate under Jay Hauser   *Los Angeles, CA*

· Conducting a generic search for long-lived neutral particles which decay into pairs of muons
· Developed algorithm which improves low level muon position resolution by a factor of two
· Recabled muon chambers on the CMS Experiment within self-operated cherry picker
· Mentored and trained two undergraduate students

Mevion Medical Systems   September 2015 - July 2016
Software Engineer I: Physics and Algorithms   *Littleton, MA*

· Designed and wrote data acquisition, data analysis and control system software
· Developed algorithms used for real-time position modulation of proton beams

Mevion Medical Systems   June 2014 - September 2015
Physics Assistant   *Littleton, MA*

· Optimized and developed components of a 250 MeV proton synchrocyclotron
· Commissioned and verified radiation fields produced by models installed in hospitals
· Simulated and tested 800 ampere water-cooled dual-axis magnet prototype

CERN   February 2013 - September 2013
Researcher under Lucie Linssen (lucie.linssen@cern.ch)   *Geneva, Switzerland*

· Worked on the novel Tungsten digital hadronic calorimeter (W-DHCAL)
· Wrote particle tracking code used to calibrate the W-DHCAL and determined beam profiles
· Wrote algorithm which matched muon data to simulation over full energy range of $10 - 300$ GeV

EDUCATION

UCLA   *Expected May 2021*
PhD in Physics
GPA: 3.57

Boston University   *May 2014*
BA in Physics - Cum Laude
Member of Sigma Alpha Mu

ACTIVITIES

Sigma Alpha Mu   April 2011 - April 2012
Scholarship Chair   *Boston, MA*

· Regularly met with underperforming members to develop strategies for their academic success

TECHNICAL STRENGTHS

Computer Languages	C/C++, Python, Unix, Java
Programs	ROOT, git, Field Precision, GEANT4, LaTex, Qt, SolidWorks
Languages	Limited working proficiency of French

PUBLICATIONS

CMS Author from Feb 24, 2019 - Present
W. Nash, C. Grefe, "Beam Profiling through Wire Chamber Tracking", LCD-Note-2013-009, 2013