Kevin Stenson, Department of Physics, University of Colorado
390 UCB, Boulder, CO 80309, 303-492-1106, kevin.stenson@colorado.edu

Curriculum Vitae

Education

1992–1998: University of Wisconsin, Madison, Wisconsin
Doctor of Philosophy in Physics
1988–1992: Bates College, Lewiston, Maine
Bachelor of Science, *cum laude,* in Physics and Mathematics
Elected to Phi Beta Kappa and Sigma Xi

Academic Appointments

2012–present: Associate Professor,
University of Colorado, Boulder, Colorado
2005–2012: Assistant Professor,
University of Colorado, Boulder, Colorado
2003–2005: Research Associate,
University of Colorado, Boulder, Colorado
2000–2002: Research Assistant Professor,
Vanderbilt University, Nashville, Tennessee
1998–2000: Research Associate,
Vanderbilt University, Nashville, Tennessee
1995–1998: Research Assistant
University of Wisconsin, Madison, Wisconsin
1992–1995: Teaching Assistant
University of Wisconsin, Madison, Wisconsin

Research Experience

CMS (2005–present):

In 2005, the Colorado group joined the CMS experiment, one of the two flagship LHC experiments at CERN in Geneva, Switzerland. Data taking began in December 2009 and steadily increasing lumionsities have enabled CMS and ATLAS to announce the discovery on July 4, 2012 of what is likely the Higgs particle. This was one of the major goals of the experiment and completes the Standard Model of particle physics. This discovery is just the beginning, however, as we now begin the task of measuring the new particle's properties and continuing to search for new physics such as supersymmetry (SUSY). Finding or not finding these particles will have a profound impact on particle physics. At Colorado, I lead our service commitments in the areas of track reconstruction. While the Colorado group has a wide variety of physics interests, I lead the Colorado QCD and b-physics programs.

Colorado was responsible for testing and commissioning the prototype forward pixel detector. Postdoc Dinardo spent the second half of 2006 at Fermilab supervising the initial checkout of the detector. In January, 2007 he moved to CERN to supervise the commissioning of this detector plus the production detectors as they arrived. Some of the milestones reached at CERN included: testing and characterization of the detector, testing the detector with a radioactive source using production readout systems, and testing the radiation hardness of the detector in a test beam. The Colorado group designed and constructed environmental chambers for testing and storing the detectors. The forward pixel detector was installed in July, 2008. In spring 2009 the detector was removed to fix some power distribution issues and add carbon-fiber "cold fingers," to regulate the temperature of the analog-optical hybrid. The fixes, designed and overseen by Dinardo, were successful and completed on schedule.

I have been leading an effort to improve track reconstruction and to reconstruct long-lived V^0 particles. I have concentrated on increasing the reconstruction efficiency for charged tracks which originate far from the interaction point. These tracks come from processes such as nuclear interactions and photon conversions as well as from decays of particles like the K^0_S or Λ^0, collectively called V^0 particles. The various improvements I have made increase the V^0 reconstruction efficiency by a factor of 10 and are now part of the standard reconstruction software. Concurrently, my graduate student Drell has developed software to reconstruct and save V^0 candidates. During the initial CMS data taking, both efforts paid off. The Colorado group was able to produce evidence for K^0_S particles within hours of the first collisions. Since then, our results have been shown countless times in meetings, conferences, reviews, etc. In addition to reconstructing K^0_S and Λ^0, our group has also reconstructed $\Xi^- \to \Lambda^0\pi^-$ decays. From these particles, we built up an analysis of the production of strange particles at 0.9 and 7 TeV which was published in 2011.

Our group has produced an analysis of the production of B^0 particles using the $B^0 \to K^0_S J/\psi$ decay which was published in 2011. This was followed up with a 2012 publication on the production of Λ_b using the topologically identical decay $\Lambda_b \to J/\psi\Lambda$. The production physics tests models and provides input to simulations at a new energy regime. Working with a former post-doc, Mauro Dinardo, I am continuing work on the angular analysis of the rare decay $B^0 \to K^+\pi^-\mu^+\mu^-$ in search of new physics. The results from the 2011 data set were published in 2013. The data were fit to three variables: B^0 invariant mass, $\cos\theta_K$, and $\cos\theta_\ell$ where θ_K and θ_ℓ are associated with the kaon angle and muon angle in the K^{*0} and dimuon rest frame, respectively. The results of the fit give the dimuon forward-backward asymmetry (A_{FB}), K^* longitudinal polarization fraction (F_L), and the branching fraction, all as a function of q^2 (squared invariant mass of the two muons). The LHCb experiment has shown hints of new physics in their analysis of this decay mode and we are continuing our study with the (larger) 2012 data sample. The fit will be expanded to include more observables and should be as precise as the LHCb result.

My work in tracking led to me being selected as the lead editor for the first tracking performance paper utilizing collision data which was published in November 2010. I am also a sub-editor of a new tracking publication, which should be published in 2014. During all of 2011 and 2012 I was co-convener of the Tracking Physics Object Group (POG), a level 2 position in CMS. The Tracking POG also serves on the Tracker management board. The Tracking POG is responsible for reconstruction of tracks and vertices, measuring and reporting on the performance, and addressing any issues which arise. During my tenure, the main effort was dealing with the increase in pileup associated with the dramatic increase in instantaneous luminosity. Pileup refers to multiple proton-proton collisions occuring within the same bunch crossing. This leads to many overlapping events which are difficult to reconstruct. As Tracking POG co-convener, I have overseen work to improve the track and vertex reconstruction in this area. Recently I have worked to tune the track reconstruction code to reduce the amount of CPU time taken as this is the main driver in the CMS reconstruction. Due to my efforts, the CPU time for high pileup events has been reduced by a factor of three with an increase in the reconstruction efficiency and an improvement in the track purity.

BTeV (1999–2005):

The BTeV experiment was to start in 2009 using a forward spectrometer in Fermilab collision hall C0. BTeV was intended to challenge the Standard Model explanation of CP violation, mixing, and rare decays in the b and c quark systems. I was involved in all aspects of the development of the BTeV muon system. In the summer of 1999 we conducted a beam test at Fermilab which provided valuable information for refining our design. I assembled the readout equipment, constructed the trigger, and wrote the data-acquisition software. I investigated the efficiency and background rejection of muon triggers using simulation software, gaining experience in coding and running GEANT. I examined the contributions BTeV could make in semileptonic beauty physics. I also chaired the BTeV web design committee. Unfortunately, BTeV was canceled in February 2005.

FOCUS (1995–2010):

FOCUS was used to investigate charm production and decay with a $\sim$180 GeV photon beam. Data collected at Fermilab during the 1996/7 fixed-target run easily met the goal of 1 million reconstructed charm decays. My main responsibility was the silicon strip detectors which measured the e^+/e^- beam particle momentum. This is used to find the photon energy, essential for many production studies. I wrote online monitoring and calibration software with user-friendly GUI interfaces and remained on call during the run to fix hardware problems and then certified the alignment, momentum calibration, and reconstruction software. I was also involved in the implementation of four new vertex silicon planes. In addition to hardware work, I wrote the on-line monitoring and control software. This detector dramatically improved the lifetime resolution of the experiment and provided a 40% increase in the $D^0 \to K\pi$ yield.

At Vanderbilt, I conducted a search for doubly-charmed baryons, that is, baryons with two charm quarks and one light quark. The search was done using 21 possible decay modes of the $\Xi_{cc}^+(ccd)$ and $\Xi_{cc}^{++}(ccu)$. No evidence for any events above background was observed, consistent with our uncertainty about the production and decay of these particles.

At Colorado I completed a search for D^0–$\overline{D}^0$ mixing using hadronic decay modes. Observation of charm mixing with the statistics available in FOCUS would likely be a sign of physics beyond the Standard Model. The *right-sign* decay mode $D^0 \to K^-\pi^+$ is Cabibbo favored (CF). The *wrong-sign* decay $D^0 \to K^+\pi^-$ can occur directly as a doubly Cabibbo suppressed decay (DCSD) or by mixing into $\overline{D}^0$ and decaying in the CF mode. By *tagging* the D^0's which come from a D^{*+} decay into $D^0\pi^+$ it is possible to determine the initial flavor of the D^0 and thus determine if a decay is right-sign or wrong-sign. Distinguishing DCSD from mixing requires lifetime information; mixing distorts the D^0 lifetime while DCSD does not. The analysis employed a binned maximum likelihood which used the D^0 mass, the D^{*+} mass, and the D^0 lifetime, fitting the right and wrong sign $K\pi$ data simultaneously. Limits on charm mixing and a new measurement of the DCSD decay $D^0 \to K^+\pi^-$ were published in July, 2005.

I also published two results on pentaquark searches. At least 9 experiments have reported observations of a pentaquark at a mass of around 1540 MeV/c^2 decaying to a nucleon and a kaon. Using a FOCUS sample of 63 million K_S^0 candidates I searched for the decay $\Theta(1540)^+ \to pK_S^0$. While FOCUS reconstructs many more K_S^0, $K^*(892)^+$, and $\Sigma(1385)^\pm$ decays, no evidence for the $\Theta(1540)^+$ has been found, calling into question the observations reported by other experiments. A paper with upper limits over a broad mass range was published in August, 2006. I also searched for $\Theta_c(3100)^0 \to D^{*-}p$, seen by H1. The FOCUS sample of D^{*+} decays is 30 times larger and much cleaner. Also, the production mechanism in FOCUS is very similar to H1. Nevertheless, no pentaquark signal was observed, with very little background, contradicting the H1 evidence. Upper limits were published in September 2005.

I contributed extensively to the FOCUS Monte Carlo program. In addition to fixing many bugs, I created part of the trigger simulation, frequently updated the particle properties table, and tuned the parameters available with PYTHIA to provide a much better match to the data. I also added elastic and inelastic scattering and ionization energy loss into the simulation. I added a bremsstrahlung-in-decay process, resulting in a much better match of mass distributions between the Monte Carlo and data.

E791 (1994–2005):

The E791 experiment recorded data at Fermilab during the 1991 fixed-target run with a 500 GeV/c π^- beam on platinum and diamond targets. The goal of 100,000 fully reconstructed charm decays was exceeded by a factor of two. I joined the collaboration in 1994, after the data had been collected and reconstructed. In 1995 I modified the Monte Carlo program to model the time and position dependent inefficiencies in the drift chambers due to the passage of the 2 MHz π^- beam. I was also involved in the analysis and drafting of the E791 charm-pairs paper, published in 1999. In October, 1998 I defended my dissertation, *A study of D^0 production from 500 GeV π^-–nucleon interactions.* These results, published in 1999, gave total and differential cross sections of neutral D mesons from the largest sample of fixed-target hadroproduced charm events.

Teaching Experience

At the University of Colorado I have taught two semesters of the sophomore lab course. I have co-taught first and second semester introductory students, in some cases with more than 600 students in a class. I have used active learning techniques in these classes such as classroom response systems (clickers) during lectures and use of the McDermott tutorials during recitations. I have also managed the computerized homework system in use at Colorado. I have taught one semester of junior quantum mechanics where I scanned all of my lecture notes, homework solutions, and exam solutions and made them available on the course website. I taught the sophomore level modern physics course, using Powerpoint slides for lectures and incorporating an interactive recitation on quantum tunneling. I have twice taught the junior level electronics laboratory class and twice taught the advanced laboratory course in optics and modern physics. I have also taught the graduate-level particle physics course.

I worked with one REU undergraduate during the summer of 2006 on a FOCUS analysis of charm decays which led to a publication for her. I currently supervise one graduate student working on the CMS project. I co-supervised one postdoctoral research, who is now a faculty member at the Bicocca University in Milan, Italy. I currently co-supervise one postdoctoral researcher, located at CERN.

Peer Reviewed Publications

The full list of peer reviewed publications is below. Entries in bold are ones for which I performed the analysis, wrote the paper, and/or provided critical contributions essential for publishing the analysis.

1. E.M. Aitala *et al.* (E791), *Search for D^0–$\overline{D}^0$ mixing in semileptonic decays,* Phys. Rev. Lett. **77** (2384) 1996.
2. E.M. Aitala *et al.* (E791), *Measurement of the branching ratio $B(D^+ \to \rho^0 \ell^+ \nu_\ell)/B(D^+ \to \overline{K}^{*0} \ell^+ \nu_\ell)$,* Phys. Lett. **B397** (325) 1997.
3. E.M. Aitala *et al.* (E791), *Observation of D–π production correlations in 500 GeV π^-–N interactions,* Phys. Lett. **B403** (185) 1997.
4. E.M. Aitala *et al.* (E791), *Search for CP violation in charged D meson decays,* Phys. Lett. **B403** (377) 1997.

5. E.M. Aitala *et al.* (E791), *The doubly Cabibbo–suppressed decay* $D^+ \to K^+\pi^-\pi^+$, Phys. Lett. **B404** (187) 1997.
6. E.M. Aitala *et al.* (E791), *Asymmetries between the production of* D_s^+ *and* D_s^- *mesons from 500 GeV/c* π^- *nucleon interactions as functions of* x_F *and* p_t^2, Phys. Lett. **B411** (230) 1997.
7. E.M. Aitala *et al.* (E791), *A search for* D^0–$\overline{D}^0$ *mixing and doubly–Cabibbo–suppressed decays of the* D^0 *in hadronic final states,* Phys. Rev. **D57** (13) 1998.
8. E.M. Aitala *et al.* (E791), *Measurement of the form-factor ratios for* $D^+ \to \overline{K}^{*0}e^+\nu_e$, Phys. Rev. Lett. **80** (1393) 1998.
9. E.M. Aitala *et al.* (E791), *Branching fractions for* $D^0 \to K^+K^-$ *and* $D^0 \to \pi^+\pi^-$, *and a search for CP violation in* D^0 *decays,* Phys. Lett. **B421** (405) 1998.
10. E.M. Aitala *et al.* (E791), *Study of the decay* $D^0 \to K^-K^+\pi^-\pi^+$, Phys. Lett. **B423** (185) 1998.
11. E.M. Aitala *et al.* (E791), *Search for the pentaquark via the* $P_{\bar{c}s} \to \phi\pi p$ *decay,* Phys. Rev. Lett. **81** (44) 1998.
12. E.M. Aitala *et al.* (E791), *Measurement of the form-factor ratios for* $D^+ \to \overline{K}^{*0}\ell^+\nu_\ell$, Phys. Lett. **B440** (435) 1998.
13. E.M. Aitala *et al.* (E791), *Measurement of the* D_s *lifetime,* Phys. Lett. **B445** (449) 1998.
14. E.M. Aitala *et al.* (E791), *Search for the pentaquark via the* $P \to \overline{K}^{*0}K^-p$ *decay,* Phys. Lett. **B448** (303) 1999.
15. E.M. Aitala *et al.* (E791), *Measurement of the form-factor ratios for* $D_s^+ \to \phi^0\ell^+\nu_\ell$, Phys. Lett. **B450** (294) 1999.
16. **E.M. Aitala *et al.* (E791), *Correlations between* D *and* $\overline{D}$ *mesons produced in 500 GeV/c* π^-*–nucleon interactions,* Eur. Phys. J. direct C4 (1) 1999.**
17. E.M. Aitala *et al.* (E791), *Measurements of lifetimes and a limit on the lifetime difference in the neutral D-meson system,* Phys. Rev. Lett. **83** (32) 1999.
18. **E.M. Aitala *et al.* (E791), *Total forward and differential cross section of neutral* D *mesons produced in 500 GeV/c* π^-*–nucleon interactions,* Phys. Lett. B462 (225) 1999.**
19. E.M. Aitala *et al.* (E791), *Search for rare and forbidden dilepton decays of the* D^+, D_s^+, *and* D^0 *charmed mesons,* Phys. Lett. **B462** (401) 1999.
20. E.M. Aitala *et al.* (E791), *Multidimensional resonance analysis of* $\Lambda_c^+ \to pK^-\pi^+$, Phys. Lett. **B471** (449) 2000.
21. J.M. Link *et al.* (FOCUS), *A measurement of lifetime differences in the neutral D-meson system,* Phys. Lett. **B485** (62) 2000.
22. J.M. Link *et al.* (FOCUS), *Measurement of the* Σ_c^0 *and* Σ_c^{++} *mass splittings,* Phys. Lett. **B488** (218) 2000.
23. J.M. Link *et al.* (FOCUS), *Search for CP violation in* D^0 *and* D^+ *decays,* Phys. Lett. **B491** (232) 2000.
24. E.M. Aitala *et al.* (E791), *Asymmetries in production of* Λ_c^+ *and* Λ_c^- *baryons in 500 GeV/c* π^-*–nucleon interactions*, Phys. Lett. **B495** (42) 2000.
25. E.M. Aitala *et al.* (E791), *Asymmetries in the production of* Λ^0, Ξ^-, *and* Ω^- *hyperons in 500 GeV/c* π^-*–nucleon interactions*, Phys. Lett. **B496** (9) 2000.
26. E.M. Aitala *et al.* (E791), *Study of the* $D_s^+ \to \pi^-\pi^+\pi^+$ *Decay and Measurement of* f_0 *Masses and Widths*, Phys. Rev. Lett. **86** (765) 2001.

27. E.M. Aitala *et al.* (E791), *Experimental Evidence for a Light and Broad Scalar Resonance in* $D^+ \to \pi^-\pi^+\pi^+$ *Decay*, Phys. Rev. Lett. **86** (770) 2001.

28. J.M. Link *et al.* (FOCUS), *Measurement of the relative branching ratio* $BR(\Xi_c^+ \to p^+K^-\pi^+)/BR(\Xi_c^+ \to \Xi^-\pi^+\pi^+)$, Phys. Lett. **B512** (277) 2001.

29. J.M. Link *et al.* (FOCUS), *A study of the decay* $D^0 \to K^+\pi^-$, Phys. Rev. Lett. **86** (2955) 2001.

30. E.M. Aitala *et al.* (E791), *Search for rare and forbidden charm meson decays* $D^0 \to V\ell^+\ell^-$ *and* $hh\ell\ell$, Phys. Rev. Lett. **86** (3969) 2001.

31. E.M. Aitala *et al.* (E791), *Direct measurement of the pion valence quark momentum distribution, the pion light-cone wave function squared*, Phys. Rev. Lett. **86** (4768) 2001.

32. E.M. Aitala *et al.* (E791), *Observation of color-transparency in diffractive dissociation of pions*, Phys. Rev. Lett. **86** (4773) 2001.

33. J.M. Link *et al.* (FOCUS), *Measurement of the Branching Ratios of* D^+ *and* D_s^+ *Hadronic Decays to Four-Body Final States Containing a* K_S, Phys. Rev. Lett. **87** (162001) 2001.

34. E.M. Aitala *et al.* (E791), *Study of the decay* $D^0 \to K^-K^-K^+\pi^+$, Phys. Rev. **D64** (112003) 2001.

35. J.M. Link *et al.* (FOCUS), *A new measurement of the* Ξ_c^+ *lifetime*, Phys. Lett. **B523** (53) 2001.

36. J.M. Link *et al.* (FOCUS), *Measurement of natural widths of* Σ_c^0 *and* Σ_c^{++} *baryons*, Phys. Lett. **B525** (205) 2002.

37. J.M. Link *et al.* (FOCUS), *Search for CP Violation in the Decays* $D^+ \to K_S^0\pi^+$ *and* $D^+ \to K_S^0K^+$, Phys. Rev. Lett. **88** (041602) 2002.

38. J.M. Link *et al.* (FOCUS), *A High Statistics Measurement of the* Λ_c^+ *Lifetime*, Phys. Rev. Lett. **88** (161801) 2002.

39. J.M. Link *et al.* (FOCUS), *Reconstruction of Vees, Kinks,* Ξ^-*'s, and* Ω^-*'s in the FOCUS spectrometer*, Nucl. Instrum. Methods **A 484** (174) 2002.

40. J.M. Link *et al.* (FOCUS), *Cherenkov particle identification in FOCUS*, Nucl. Instrum. Methods **A 484** (270) 2002.

41. J.M. Link *et al.* (FOCUS), *Evidence for new interference phenomena in the decay* $D^+ \to K^-\pi^+\mu^+\nu$, Phys. Lett. **B535** (43) 2002.

42. J.M. Link *et al.* (FOCUS), *New measurements of the* D^0 *and* D^+ *lifetimes*, Phys. Lett. **B537** (192) 2002.

43. E.M. Aitala *et al.* (E791), *Differential cross sections, charge production asymmetry, and spin-density matrix elements for* $D^{*\pm}(2010)$ *produced in 500 GeV/c* π^- *– nucleon interactions*, Phys. Lett. **B539** (218) 2002.

44. E.M. Aitala *et al.* (E791), *Dalitz Plot Analysis of the Decay* $D^+ \to K^-\pi^+\pi^+$ *and Indication of a Low-Mass Scalar* $K\pi$ *Resonance* Phys. Rev. Lett. **89** (121801) 2002.

45. J.M. Link *et al.* (FOCUS), *Measurements of relative branching ratios of* Λ_c^+ *decays into states containing* Σ, Phys. Lett. **B540** (25) 2002.

46. J.M. Link *et al.* (FOCUS), *A new measurement of the* Ξ_c^0 *lifetime*, Phys. Lett. **B541** (211) 2002.

47. J.M. Link *et al.* (FOCUS), *Measurements of the* D^+ *and* D_s^+ *decays into* $K^+K^-K^+$, Phys. Lett. **B541** (227) 2002.

48. J.M. Link *et al.* (FOCUS), *New measurements of the* $\frac{\Gamma(D^+ \to \overline{K}^{*0}\mu^+\nu)}{\Gamma(D^+ \to K^-\pi^+\pi^+)}$ *and* $\frac{\Gamma(D_s^+ \to \phi\mu^+\nu)}{\Gamma(D_s^+ \to \phi\pi^+)}$ *branching ratios*, Phys. Lett. **B541** (243) 2002.

49. J.M. Link *et al.* (FOCUS), *New measurements of the $D^+ \to \overline{K}^{*0}\mu^+\nu$ form factor ratios*, Phys. Lett. **B544** (89) 2002.

50. J.M. Link *et al.* (FOCUS), *Observation of a 1750 MeV/c^2 enhancement in the diffractive photoproduction of K^+K^-*, Phys. Lett. **B545** (50) 2002.

51. J.M. Link *et al.* (FOCUS), *Study of the Cabibbo-suppressed decay modes $D^0 \to \pi^-\pi^+$ and $D^0 \to K^-K^+$*, Phys. Lett. **B555** (167) 2003.

52. **J.M. Link *et al.* (FOCUS), *Charm system tests of CPT and Lorentz invariance with FOCUS*, Phys. Lett. B556 (7) 2003.**

53. J.M. Link *et al.* (FOCUS), *Measurement of the Ω_c^0 lifetime*, Phys. Lett. **B561** (41) 2003.

54. J.M. Link *et al.* (FOCUS), *Study of hadronic five-body decays of charmed mesons*, Phys. Lett. **B561** (225) 2003.

55. J.M. Link *et al.* (FOCUS), *Studies of correlations between D and $\overline{D}$ mesons in high energy photoproduction*, Phys. Lett. **B566** (51) 2003.

56. J.M. Link *et al.* (FOCUS), *Measurements of Ξ_c^+ branching ratios*, Phys. Lett. **B571** (139) 2003.

57. J.M. Link *et al.* (FOCUS), *Search for rare and forbidden 3-body di-muon decays of the charmed mesons D^+ and D_s^+*, Phys. Lett. **B572** (21) 2003.

58. J.M. Link *et al.* (FOCUS), *Study of the decay mode $D^0 \to K^-K^-K^+\pi^+$*, Phys. Lett. **B575** (190) 2003.

59. **J.M. Link *et al.* (FOCUS), *The target silicon detector for the FOCUS spectrometer*, Nucl. Instrum. Methods A 516 (364) 2004.**

60. J.M. Link *et al.* (FOCUS), *Charm-anticharm baryon production asymmetries in photon-nucleon interactions*, Phys. Lett. **B581** (39) 2004.

61. J.M. Link *et al.* (FOCUS), *Dalitz plot analysis of D_s^+ and D^+ decay to $\pi^+\pi^-\pi^+$ using the K-matrix formalism*, Phys. Lett. **B585** (200) 2004.

62. J.M. Link *et al.* (FOCUS), *Measurement of masses and widths of excited charm mesons D_2^* and evidence for broad states*, Phys. Lett. **B586** (11) 2004.

63. J.M. Link *et al.* (FOCUS), *Measurements of six-body hadronic decays of the D^0 charmed meson*, Phys. Lett. **B586** (21) 2004.

64. J.M. Link *et al.* (FOCUS), *New measurements of the $D_s^+ \to \phi\mu^+\nu$ form factor ratios*, Phys. Lett. **B586** (183) 2004.

65. J.M. Link *et al.* (FOCUS), *Study of hadronic five-body decays of charmed mesons involving K_S^0*, Phys. Lett. **B586** (191) 2004.

66. J.M. Link *et al.* (FOCUS), *Measurement of the ratio of the vector to pseudoscalar charm semileptonic decay rate $\frac{\Gamma(D^+\to\overline{K}^{*0}\mu^+\nu_\mu)}{\Gamma(D^+\to\overline{K}^0\mu^+\nu_\mu)}$*, Phys. Lett. **B598** (33) 2004.

67. J.M. Link *et al.* (FOCUS), *Study of the doubly and singly Cabibbo suppressed decays $D^+ \to K^+\pi^+\pi^-$ and $D_s^+ \to K^+\pi^+\pi^-$*, Phys. Lett. **B601** (10) 2004.

68. J.M. Link *et al.* (FOCUS), *Measurement of the branching ratio of the decay $D^0 \to \pi^-\mu^+\nu$ relative to $D^0 \to K^-\mu^+\nu$*, Phys. Lett. **B607** (51) 2005.

69. J.M. Link *et al.* (FOCUS), *A study of $D^0 \to K_S^0K_S^0X$ decay channels*, Phys. Lett. **B607** (59) 2005.

70. J.M. Link *et al.* (FOCUS), *Analysis of the semileptonic decay $D^0 \to \overline{K}^0\mu^+\nu$*, Phys. Lett. **B607** (67) 2005.

71. J.M. Link *et al.* (FOCUS), *Measurements of the q^2 dependence of the $D^0 \to K^- \mu^+ \nu$ and $D^0 \to \pi^- \mu^+ \nu$ form factors*, Phys. Lett. **B607** (233) 2005.

72. J.M. Link *et al.* (FOCUS), *Study of the $D^0 \to K^+ K^- \pi^+ \pi^-$ decay*, Phys. Lett. **B610** (225) 2005.

73. **J.M. Link *et al.* (FOCUS), *Measurement of the doubly Cabibbo suppressed decay $D^0 \to K^+ \pi^-$ and a search for charm mixing*, Phys. Lett. B618 (23) 2005.**

74. J.M. Link *et al.* (FOCUS), *Measurement of the D_s^+ lifetime*, Phys. Rev. Lett. **95** (052003) 2005.

75. J.M. Link *et al.* (FOCUS), *Hadronic mass spectrum analysis of $D^+ \to K^- \pi^+ \mu^+ \nu$ decay and measurement of the $K^*(892)^0$ mass and width*, Phys. Lett. **B621** (72) 2005.

76. **J.M. Link *et al.* (FOCUS), *Search for a strongly decaying neutral charmed pentaquark*, Phys. Lett. B622 (229) 2005.**

77. J.M. Link *et al.* (FOCUS), *Search for T violation in charm meson decays*, Phys. Lett. **B622** (239) 2005.

78. J.M. Link *et al.* (FOCUS), *Study of Λ_c^+ Cabibbo favored decays containing a Λ baryon in the final state*, Phys. Lett. **B624** (22) 2005.

79. J.M. Link *et al.* (FOCUS), *Search for $\Lambda_c^+ \to p K^+ \pi^-$ and $D_s^+ \to K^+ K^+ \pi^-$ using genetic programming event selection*, Phys. Lett. **B624** (166) 2005.

80. J.M. Link *et al.* (FOCUS), *Application of genetic programming to high energy physics event selection*, Nucl. Instrum. Methods **A 551** (318) 2005.

81. E.M. Aitala *et al.* (E791), *Model independent measurement of S-wave $K^- \pi^+$ systems using $D^+ \to K \pi \pi$ decays from Fermilab E791,* Phys. Rev. **D73** (032004) 2006.

82. J.M. Link *et al.* (FOCUS), *A non-parametric approach to the $D^+ \to \overline{K}^{*0} \mu^+ \nu$ form factors*, Phys. Lett. **B633** (183) 2006.

83. J.M. Link *et al.* (FOCUS), *Study of the decay asymmetry parameter and CP violation parameter in the $\Lambda_c^+ \to \Lambda \pi^+$ decay*, Phys. Lett. **B634** (165) 2006.

84. J.M. Link *et al.* (FOCUS), *New measurement of $\frac{BR(D^+ \to \rho^0 \mu^+ \nu)}{BR(D^+ \to \overline{K}^{*0} \mu^+ \nu)}$ branching ratio*, Phys. Lett. **B637** (32) 2006.

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5. "CP Violation in Charm" at the International workshop on Heavy Quarks and Leptons 2002, Vietri sul Mare, Salerno, Italy – May 2002. Proceedings in: G. Cataldi, F. Grancagnolo, R. Perrino, and S. Spagnolo, editors, *Proceedings of Heavy Quarks and Leptons 2002, Frascati Physics Series 28*, INFN Laboratori Nazionali di Frascati, 2002.

6. "Recent Results in Charm Physics" at the American Physical Society April Meeting 2003, Philadelphia, PA – April 2003.

7. "Charm Physics from FOCUS" at the 19th International Workshop on Weak Interactions and Neutrinos, Lake Geneva, WI – October 2003.

8. "A FOCUS Search for Charm Mixing" at the 2004 Meeting of the Division of Particles and Fields of the American Physical Society, University of California, Riverside, CA – August 2004. Proceedings in: Int. J. Mod. Phys. **A20** (2005) 3689.

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