

# Stanford

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## Peter Michelson

Senior Associate Dean for the Natural Sciences and the Luke Blossom Professor in the School of Humanities and Sciences

Physics

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### Bio

#### ACADEMIC APPOINTMENTS

- Professor, Physics

### Teaching

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#### COURSES

##### 2018-19

- Introduction to Cosmology and Extragalactic Astrophysics: PHYSICS 161, PHYSICS 261 (Spr)
- Thinking About the Universe: What do we know? How do we know it?: THINK 45 (Spr)

##### 2017-18

- Classical Mechanics Laboratory: PHYSICS 42 (Win)
- Frontiers of Physics Research: PHYSICS 59 (Aut)
- Introduction to Cosmology and Extragalactic Astrophysics: PHYSICS 161, PHYSICS 261 (Spr)
- Thinking About the Universe: What do we know? How do we know it?: THINK 45 (Spr)

##### 2016-17

- Frontiers of Physics Research: PHYSICS 59 (Aut)
- Introduction to Cosmology and Extragalactic Astrophysics: PHYSICS 161, PHYSICS 261 (Spr)
- Thinking About the Universe: What do we know? How do we know it?: THINK 45 (Spr)

##### 2015-16

- Classical Mechanics Laboratory: PHYSICS 42 (Win)
- Thinking About the Universe: What do we know? How do we know it?: THINK 45 (Win)

#### STANFORD ADVISEES

##### Doctoral Dissertation Reader (AC)

Mae Hwee Teo

##### Doctoral Dissertation Advisor (AC)

Alice Allafort

## Publications

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### PUBLICATIONS

- **Multimessenger observations of a flaring blazar coincident with high-energy neutrino IceCube-170922A** *SCIENCE*  
Aartsen, M. G., Ackermann, M., Adams, J., Aguilar, J. A., Ahlers, M., Ahrens, M., Al Samarai, I., Altmann, D., Andeen, K., Anderson, T., Anseau, I., Anton, G., Argüelles, et al  
2018; 361 (6398): 146+
- **Einstein@Home discovers a radio-quiet gamma-ray millisecond pulsar** *SCIENCE ADVANCES*  
Clark, C. J., Pletsch, H. J., Wu, J., Guillemot, L., Kerr, M., Johnson, T. J., Camilo, F., Salvetti, D., Allen, B., Anderson, D., Aulbert, C., Beer, C., Bock, et al  
2018; 4 (2)
- **SPECTROSCOPY OF THE LARGEST EVER gamma-RAY-SELECTED BL LAC SAMPLE** *ASTROPHYSICAL JOURNAL*  
Shaw, M. S., Romani, R. W., Cotter, G., Healey, S. E., Michelson, P. F., Readhead, A. C., Richards, J. L., Max-Moerbeck, W., King, O. G., Potter, W. J.  
2013; 764 (2)
- **SPECTROSCOPY OF BROAD-LINE BLAZARS FROM 1LAC** *ASTROPHYSICAL JOURNAL*  
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2012; 748 (1)
- **Fermi Gamma-Ray Space Telescope** *OPTICAL ENGINEERING*  
McEnergy, J. E., Michelson, P. F., Paciasas, W. S., Ritz, S.  
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- **Fermi Gamma-ray Space Telescope: high-energy results from the first year** *REPORTS ON PROGRESS IN PHYSICS*  
Michelson, P. F., Atwood, W. B., Ritz, S.  
2010; 73 (7)
- **OPTICAL SPECTROSCOPY OF BRIGHT FERMI LAT BLAZARS** *ASTROPHYSICAL JOURNAL*  
Shaw, M. S., Romani, R. W., Healey, S. E., Cotter, G., Michelson, P. F., Readhead, A. C.  
2009; 704 (1): 477-484
- **THE LARGE AREA TELESCOPE ON THE FERMI GAMMA-RAY SPACE TELESCOPE MISSION** *ASTROPHYSICAL JOURNAL*  
Atwood, W. B., Abdo, A. A., Ackermann, M., Althouse, W., Anderson, B., Axelsson, M., Baldini, L., Ballet, J., Band, D. L., Barbiellini, G., Bartelt, J., Bastieri, D., Baughman, et al  
2009; 697 (2): 1071-1102
- **A celestial gamma-ray foreground due to the albedo of small solar system bodies and a remote probe of the interstellar cosmic-ray spectrum** *ASTROPHYSICAL JOURNAL*  
Moskalenko, I. V., Porter, T. A., Digel, S. W., Michelson, P. F.  
2008; 681 (2): 1708-1716
- **CGRaBS: An all-sky survey of gamma-ray blazar candidates** *ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES*  
Healey, S. E., Romani, R. W., Cotter, G., Michelson, P. F., Schlafly, E. F., Readhead, A. C., Giommi, P., Chaty, S., Grenier, I. A., Weintraub, L. C.  
2008; 175 (1): 97-104
- **Window on the extreme universe** *SCIENTIFIC AMERICAN*  
Atwood, W. B., Michelson, P. F., Ritz, S.  
2007; 297 (6): 54-61
- **The VLBA imaging and polarimetry survey at 5 GHz** *ASTROPHYSICAL JOURNAL*  
Helmboldt, J. F., Taylor, G. B., Tremblay, S., Fassnacht, C. D., Walker, R. C., Myers, S. T., Sjouwerman, L. O., Pearson, T. J., Readhead, A. C., WEINTRAUB, L., Gehrels, N., Romani, R. W., Healey, et al  
2007; 658 (1): 203-216
- **The large area telescope 1st GLAST Symposium**  
Michelson, P. F.  
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- **GLAST large area telescope multiwavelength planning** *Conference on the Multi-Messenger Approach to High Energy Gamma-Ray Sources/3rd Workshop of the Nature of Unidentified High-Energy Sources*  
Reimer, O., Michelson, P. F., Cameron, R. A., Digel, S. W., Thompson, D. J., Wood, K. S.  
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- **VLBA imaging polarimetry of active galactic nuclei: An automated approach** *ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES*  
Taylor, G. B., Fassnacht, C. D., Sjouwerman, L. O., Myers, S. T., ULVESTAD, J. S., Walker, R. C., Fomalont, E. B., Pearson, T. J., Readhead, A. C., Gehrels, N., Michelson, P. F.  
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- **A northern survey of gamma-ray blazar candidates** *ASTROPHYSICAL JOURNAL*  
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2005; 626 (1): 95-103
- **Q0906+6930: The highest redshift blazar** *ASTROPHYSICAL JOURNAL*  
Romani, R. W., Sowards-Emmerd, D., Greenhill, L., Michelson, P.  
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- **Blazar counterparts for 3EG sources at 40 degrees < decl. < 0 degrees: Pushing south through the bulge** *ASTROPHYSICAL JOURNAL*  
Sowards-Emmerd, D., Romani, R. W., Michelson, P. F., Ulvestad, J. S.  
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- **Variability of EGRET gamma-ray sources** *ASTROPHYSICAL JOURNAL*  
Nolan, P. L., Tompkins, W. F., Grenier, I. A., Michelson, P. F.  
2003; 597 (1): 615-627
- **The gamma-ray blazar content of the northern sky** *ASTROPHYSICAL JOURNAL*  
Sowards-Emmerd, D., Romani, R. W., Michelson, P. F.  
2003; 590 (1): 109-122
- **Developments in gamma-ray astronomy: A report on the non-thermal universe** *21st Texas Symposium on Relativistic Astrophysics*  
Michelson, P. F.  
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- **Results from the beam test of the engineering model of the GLAST large area telescope** *NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT*  
Silva, E. D., Anthony, P., Arnold, R., Arrighi, H., BLOOM, E., Baughman, B., Bogart, J., Bosted, P., Bumala, B., Chekhtman, A., Cotton, N., Crider, A., Dobbs-Dixon, et al  
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- **Phase-dependent spectral variability in 4U 1907+09** *ASTROPHYSICAL JOURNAL*  
Roberts, M. S., Michelson, P. F., Leahy, D. A., Hall, T. A., Finley, J. P., Cominsky, L. R., Srinivasan, R.  
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- **EGRET spectral index and the low-energy SED peak position in EGRET-detected blazars** *Meeting on BL Lac Phenomenon*

- Lin, Y. C., Bertsch, D. L., Bloom, S. D., Dingus, B. L., Esposito, J. A., Hartmann, R. C., Hunter, S. D., Jones, B. B., Kanbach, G., Kniffen, D. A., Mayer-Hasselwander, H. A., Michelson, P. F., Mukherjee, et al  
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  - **EGRET observations in X-ray binaries** *4th Compton Symposium*  
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  - **EGRET observations of pulsars** *3rd Compton Symposium*  
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  - **Supplement to the second EGRET catalog of high-energy gamma-ray sources** *ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES*  
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  - **GLAST: A detector for high-energy gamma rays** *Conference on Gamma-Ray and Cosmic-Ray Detectors, Techniques, and Missions*  
Michelson, P. F.  
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  - **Gamma-ray emission from extragalactic radio sources: EGRET observations of active galactic nuclei** *175th Symposium of the International-Astronomical-Union on Extragalactic Radio Sources*  
Michelson, P. F.  
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  - **SPHERICAL RESONANT-MASS GRAVITATIONAL-WAVE DETECTORS** *PHYSICAL REVIEW D*  
Zhou, C. Z., Michelson, P. F.  
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  - **EGRET observations of the diffuse galactic and extragalactic gamma-ray backgrounds** *NATO Advanced Study Institute on the Gamma Ray Sky with Compton GRO and SIGMA*  
Michelson, P. F.  
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  - **THE LUMINOSITY FUNCTION OF EGRET-DETECTED GAMMA-RAY LOUD ACTIVE GALACTIC NUCLEI** *2nd Compton Symposium*  
Chiang, J., Fierro, J. M., Lin, Y. C., Michelson, P. F., Nolan, P. L., Willis, T. D., Bertsch, D. L., Dingus, B. L., Esposito, J. A., Fichtel, C. E., Hartman, R. C., Hunter, S. D., Mattox, et al  
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  - **THE UNIDENTIFIED GAMMA-RAY SOURCE GRO J1837+59** *2nd Compton Symposium*  
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  - **EGRET OBSERVATIONS OF MRK421 IN PHASE-1 AND PHASE-2 OF THE COMPTON-OBSERVATORY'S VIEWING PROGRAM - A SUMMARY** *2nd Compton Symposium*  
Lin, Y. C., Chiang, J., Michelson, P. F., Nolan, P. L., Bertsch, D. L., Dingus, B. L., Esposito, J. A., Fichtel, C. E., Hartman, R. C., Hunter, S. D., Mattox, J. R., Sreekumar, P., Thompson, et al  
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  - **VARIABILITY OF EGRET-DETECTED ACTIVE GALAXIES AND ACCELERATION MECHANISMS** *2nd Compton Symposium*  
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- **High energy gamma ray emission from active galaxies: Egret observations and implications** *1st Stromlo Symposium on the Physics of Active Galaxies*  
Michelson, P. F.  
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- **GAMMA-RADIATION FROM BLAZAR PKS 0537-441** *ASTROPHYSICAL JOURNAL*  
Thompson, D. J., Bertsch, D. L., Fichtel, C. E., Hartman, R. C., Hunter, S. D., Kanbach, G., Kniffen, D. A., KWOK, P. W., Lin, Y. C., Mattox, J. R.,  
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- **CONSTRAINTS ON THE COSMIC-RAYS IN THE SMALL MAGELLANIC CLOUD** *PHYSICAL REVIEW LETTERS*  
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- **RESULTS FROM THE 1ST YEAR OF OBSERVATIONS WITH THE ENERGETIC GAMMA RAY EXPERIMENT TELESCOPE ON THE COMPTON-OBSERVATORY** *International Conference on Fluid Mechanics and Theoretical Physics, in Honor of Professor Pei-Yuan Chou's 90th Anniversary*  
Michelson, P. F.  
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- **ULTRALOW TEMPERATURE RESONANT-MASS GRAVITATIONAL RADIATION DETECTORS - CURRENT STATUS OF THE STANFORD PROGRAM** *International Conference on Fluid Mechanics and Theoretical Physics, in Honor of Professor Pei-Yuan Chou's 90th Anniversary*  
Michelson, P. F., Aldcroft, T., Chiang, J., Henderson, J., Hu, E. K., Mann, L., Mckenzie, D., Paik, H. J., PENNY, R., Stevenson, T., Zhou, C.  
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- **PERFORMANCE OF THE EGRET ASTRONOMICAL GAMMA-RAY TELESCOPE** *1991 NUCLEAR SCIENCE SYMP AND MEDICAL IMAGING CONF*  
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- **INDEPENDENCE OF SHORT-TIME SCALE FLUCTUATIONS OF QUASI-PERIODIC OSCILLATIONS AND LOW-FREQUENCY NOISE IN GX 5-1** *ASTROPHYSICAL JOURNAL*  
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- **DETERMINING THE PROPERTIES OF ACCRETION-GAP NEUTRON-STARS** *ASTROPHYSICAL JOURNAL*  
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- **METHOD FOR CALIBRATING RESONANT-MASS GRAVITATIONAL-WAVE DETECTORS** *REVIEW OF SCIENTIFIC INSTRUMENTS*  
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- **DELAYED GRAVITY-WAVE EMISSION FROM SUPERNOVAE - APPLICATION TO SN 1987A** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*  
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- **ON DETECTING STOCHASTIC BACKGROUND GRAVITATIONAL-RADIATION WITH TERRESTRIAL DETECTORS** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*  
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- **RESONANT-MASS DETECTORS OF GRAVITATIONAL-RADIATION** *SCIENCE*  
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- **MECHANICALLY MODULATED MICROWAVE CAVITY FOR DETECTION OF LOW-FREQUENCY GRAVITATIONAL-RADIATION** *PHYSICAL REVIEW D*  
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- **CAN A RESONANT-MASS GRAVITATIONAL-WAVE DETECTOR HAVE WIDEBAND SENSITIVITY** *PHYSICAL REVIEW D*  
Michelson, P. F., TABER, R. C.  
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- **OBSERVATIONS WITH A LOW-TEMPERATURE, RESONANT MASS, GRAVITATIONAL-RADIATION DETECTOR** *ASTROPHYSICAL JOURNAL*  
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- **STATUS OF THE STANFORD GRAVITATIONAL-WAVE EXPERIMENT** *PHYSICA B & C*  
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- **INELASTIC TUNNELLING AND THE PAIR-QUASIPARTICLE INTERFERENCE CURRENT IN JOSEPHSON-JUNCTIONS** *PHYSICS LETTERS A*  
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Whitten, R. C., CAPONE, L. A., MCCULLEY, L., Michelson, P. F.  
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- **9 GIGAHERTZ IMPEDANCE MEASUREMENTS ON TA AND NB POINT CONSTANTS** *IEEE TRANSACTIONS ON MAGNETICS*  
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