List of Publications

Michael H. Montgomery

Note: Titles of papers are hyperlinked to their NASA ADS abstracts

Refereed Papers

"Hunting for Polluted White Dwarfs and Other Treasures with Gaia XP Spectra and Unsupervised Machine Learning," Kao, M. L., Hawkins, K., Rogers, L. K., Bonsor, A., Dunlap, B. H., Sanders, J. L., **Montgomery**, **M. H.**, & Winget, D. E., 2024, ApJ, 970(2), 181

"Development of improved higher-order correction for the NIF opacity spectrometer," Hobbs, B. A., Mayes, D. C., Heeter, R. F., Bradley, P. A., Dutra, E. C., Fontes, C. J., Gallardo-Diaz, E., Hohenberger, M., Johns, H. M., Opachich, Y. P., Robey, H. F., Stoupin, S., Wallace, M. S., Webster, L. G., **Montgomery**, **M. H.**, Perry, T. S., & Winget, D. E., 2024, Review of Scientific Instruments, 95(8), 083535

"Fluid Mixing during Phase Separation in Crystallizing White Dwarfs," **Montgomery**, **M. H.** & Dunlap, B. H., 2024, ApJ, 961(2), 197

"Asteroseismological analysis of the polluted ZZ Ceti star G 29 - 38 with TESS," Uzundag, M., De Gerónimo, F. C., Córsico, A. H., Silvotti, R., Bradley, P. A., **Montgomery**, **M. H.**, Catelan, M., Toloza, O., Bell, K. J., Kepler, S. O., Althaus, L. G., Kleinman, S. J., Kilic, M., Mullally, S. E., Gänsicke, B. T., Bąkowska, K., Barber, S., & Nitta, A., 2023, MNRAS, 526(2), 2846-2862

"Density measurements for the National Ignition Facility (NIF) opacity platform," Opachich, Y. P., Heeter, R. F., Johns, H. M., Dodd, E. S., Kline, J. L., Krasheninnikova, N. S., Mayes, D. C., **Montgomery**, **M. H.**, Winget, D. E., Urbatsch, T. J., & Perry, T. S., 2022, Review of Scientific Instruments, 93(11), 113515

"Measuring He I Stark Line Shapes in the Laboratory to Examine Differences in Photometric and Spectroscopic DB White Dwarf Masses," Schaeuble, M. A., Nagayama, T., Bailey, J. E., Gigosos, M. A., Florido, R., Blouin, S., Gomez, T. A., Dunlap, B., **Montgomery**, **M. H.**, & Winget, D. E., 2022, ApJ, 940(2), 181

"Quadratic Zeeman effect in hydrogen at 2-3 MG magnetic fields," Ivanov, V. V., Mancini, R. C., Huerta, N. A., Swanson, K. J., Winget, D. E., **Montgomery**, **M. H.**, Golovkin, I. E., Hariharan, H. K., & Berbel, Z. S., 2022, Phys. Rev. E, 106(4), 045206

"Kepler and TESS Observations of PG 1159-035," Oliveira da Rosa, G., Kepler, S. O., Córsico, A. H., Costa, J. E. S., Hermes, J. J., Kawaler, S. D., Bell, K. J., **Montgomery**, **M. H.**, Provencal, J. L., Winget, D. E., Handler, G., Dunlap, B., Clemens, J. C., & Uzundag, M., 2022, ApJ, 936(2), 187

"The Pulsating Helium-atmosphere White Dwarfs. I. New DBVs from the Sloan Digital Sky Survey," Vanderbosch, Z. P., Hermes, J. J., Winget, D. E., **Montgomery**, **M. H.**, Bell, K. J., Nitta, A., & Kepler, S. O., 2022, ApJ, 927(2), 158

"Simulation of Stark-broadened Hydrogen Balmer-line Shapes for DA White Dwarf Synthetic Spectra," Cho, P. B., Gomez, T. A., **Montgomery**, **M. H.**, Dunlap, B. H., Axen, M. F., Hobbs, B., Hubeny, I., & Winget, D. E., 2022, ApJ, 927(1), 70

"Hydrogen Line Shape Uncertainties in White Dwarf Model Atmospheres," **Montgomery**, **M. H.**, Dunlap, B. H., Cho, P. B., & Gomez, T. A., 2022, Frontiers in Astronomy and Space Sciences, 9

"Pulsating hydrogen-deficient white dwarfs and pre-white dwarfs observed with TESS. III. Asteroseismology of the DBV star GD 358," Córsico, A. H., Uzundag, M., Kepler, S. O., Silvotti, R., Althaus, L. G., Koester,

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"All-Order Full-Coulomb Quantum Spectral Line-Shape Calculations," Gomez, T. A., Nagayama, T., Cho, P. B., Zammit, M. C., Fontes, C. J., Kilcrease, D. P., Bray, I., Hubeny, I., Dunlap, B. H., **Montgomery**, **M. H.**, & Winget, D. E., 2021, Phys. Rev. Lett., 127, 235001

"Identifying Periodic Variable Stars and Eclipsing Binary Systems with Long-term Las Cumbres Observatory Photometric Monitoring of ZTF J0139+5245," Sanghi, A., Vanderbosch, Z. P., & **Montgomery**, **M. H.**, 2021, AJ, 162(4), 133

"I Spy Transits and Pulsations: Empirical Variability in White Dwarfs Using Gaia and the Zwicky Transient Facility," Guidry, J. A., Vanderbosch, Z. P., Hermes, J. J., Barlow, B. N., Lopez, I. D., Boudreaux, T. M., Corcoran, K. A., Bell, K. J., **Montgomery**, **M. H.**, Heintz, T. M., Castanheira, B. G., Reding, J. S., Dunlap, B. H., Winget, D. E., Winget, K. I., & Kuehne, J. W., 2021, ApJ, 912(2), 125

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"The Pulsating White Dwarf G117-B15A: Still the Most Stable Optical Clock Known," Kepler, S. O., Winget, D. E., Vanderbosch, Z. P., Castanheira, B. G., Hermes, J. J., Bell, K. J., Mullally, F., Romero, A. D., **Montgomery**, **M. H.**, DeGennaro, S., Winget, K. I., Chandler, D., Jeffery, E. J., Fritzen, J. K., Williams, K. A., Chote, P., & Zola, S., 2021, ApJ, 906(1), 7

"A White Dwarf with Transiting Circumstellar Material Far outside the Roche Limit," Vanderbosch, Z., Hermes, J. J., Dennihy, E., Dunlap, B. H., Izquierdo, P., Tremblay, P. E., Cho, P. B., Gänsicke, B. T., Toloza, O., Bell, K. J., **Montgomery**, **M. H.**, & Winget, D. E., 2020, ApJ, 897(2), 171

"Limits on Mode Coherence in Pulsating DA White Dwarfs Due to a Nonstatic Convection Zone," **Montgomery**, **M. H.**, Hermes, J. J., Winget, D. E., Dunlap, B. H., & Bell, K. J., 2020, ApJ, 890(1), 11

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"Density-matrix correlations in the relaxation theory of electron broadening," Gomez, T. A., Nagayama, T., Kilcrease, D. P., **Montgomery**, **M. H.**, & Winget, D. E., 2018, Phys. Rev. A, 98(1), 012505

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"Mixing and overshooting in surface convection zones of DA white dwarfs: first results from ANTARES," Kupka, F., Zaussinger, F., & **Montgomery**, **M. H.**, 2018, MNRAS, 474, 4660-4671

"White dwarf variability with gPhoton: pulsators," Tucker, M. A., Fleming, S. W., Pelisoli, I., Romero, A., Bell, K. J., Kepler, S. O., Caton, D. B., Debes, J., **Montgomery**, **M. H.**, Thompson, S. E., Koester, D., Million, C., & Shiao, B., 2018, MNRAS, 475, 4768-4780

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"Outbursts in Two New Cool Pulsating DA White Dwarfs," Bell, K. J., Hermes, J. J., **Montgomery**, **M. H.**, Gentile Fusillo, N. P., Raddi, R., Gänsicke, B. T., Winget, D. E., Dennihy, E., Gianninas, A., Tremblay, P.-E., Chote, P., & Winget, K. I., 2016, ApJ, 829, 82

"Effect of higher-order multipole moments on the Stark line shape," Gomez, T. A., Nagayama, T., Kilcrease, D. P., **Montgomery**, **M. H.**, & Winget, D. E., 2016, Phys. Rev. A, 94, 022501

"A comparative analysis of the observed white dwarf cooling sequence from globular clusters," Campos, F., Bergeron, P., Romero, A. D., Kepler, S. O., Ourique, G., Costa, J. E. S., Bonatto, C. J., Winget, D. E., **Montgomery**, **M. H.**, Pacheco, T. A., & Bedin, L. R., 2016, MNRAS, 456, 3729-3742

"Variability in Hot Carbon-dominated Atmosphere (Hot DQ) White Dwarfs: Rapid Rotation?," Williams, K. A., **Montgomery**, **M. H.**, Winget, D. E., Falcon, R. E., & Bierwagen, M., 2016, ApJ, 817, 27

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"Radius Constraints from High-speed Photometry of 20 Low-mass White Dwarf Binaries," Hermes, J. J., Brown, W. R., Kilic, M., Gianninas, A., Chote, P., Sullivan, D. J., Winget, D. E., Bell, K. J., Falcon, R. E., Winget, K. I., Mason, P. A., Harrold, S. T., & **Montgomery**, **M. H.**, 2014, ApJ, 792, 39

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"Discovery of Pulsations, Including Possible Pressure Modes, in Two New Extremely Low Mass, He-core White Dwarfs," Hermes, J. J., **Montgomery**, **M. H.**, Winget, D. E., Brown, W. R., Gianninas, A., Kilic, M., Kenyon, S. J., Bell, K. J., & Harrold, S. T., 2013, ApJ, 765, 102

"A New Timescale for Period Change in the Pulsating DA White Dwarf WD 0111+0018," Hermes, J. J., **Montgomery**, **M. H.**, Mullally, F., Winget, D. E., & Bischoff-Kim, A., 2013, ApJ, 766, 42

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