

Stanford



Susan E. Clark

Assistant Professor of Physics

Bio

ACADEMIC APPOINTMENTS

- Assistant Professor, Physics

Teaching

COURSES

2021-22

- Special Topics in Astrophysics: Physics of The Interstellar Medium and Intergalactic Medium: PHYSICS 367 (Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Elise Darragh-Ford, Anthony Flores, Richie Wang

Postdoctoral Faculty Sponsor

Sergio Martin Alvarez, Mehrnoosh Tahani

Doctoral Dissertation Advisor (AC)

George Halal, Minjie Lei

Publications

PUBLICATIONS

- **The width of Herschel filaments varies with distance** *ASTRONOMY & ASTROPHYSICS*
Panopoulou, G., Clark, S. E., Hacar, A., Heitsch, F., Kainulainen, J., Ntormousi, E., Seifried, D., Smith, R. J.
2022; 663
- **A Study of 90 GHz Dust Emissivity on Molecular Cloud and Filament Scales** *ASTROPHYSICAL JOURNAL*
Lowe, I., Mason, B., Bhandarkar, T., Clark, S. E., Devlin, M., Dicker, S. R., Duff, S. M., Friesen, R., Hacar, A., Hensley, B., Mroczkowski, T., Naess, S., Romero, et al
2022; 929 (1)
- **The Simons Observatory: Galactic Science Goals and Forecasts** *ASTROPHYSICAL JOURNAL*
Hensley, B. S., Clark, S. E., Fanfani, V., Krachmalnicoff, N., Fabbian, G., Poletti, D., Puglisi, G., Coppi, G., Nibauer, J., Gerasimov, R., Galitzki, N., Choi, S. K., Ashton, et al
2022; 929 (2)
- **A Comparison of Multiphase Magnetic Field Tracers in a High Galactic Latitude Region of the Filamentary Interstellar Medium** *ASTROPHYSICAL JOURNAL*

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- Campbell, J. L., Clark, S. E., Gaensler, B. M., Marchal, A., Van Eck, C. L., Deshpande, A. A., George, S. J., Gibson, S. J., Ricci, R., Stil, J. M., Taylor, A. R.
2022; 927 (1)
- **GASKAP-HI pilot survey science I: ASKAP zoom observations of HI emission in the Small Magellanic Cloud** *PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF AUSTRALIA*
Pingel, N. M., Dempsey, J., McClure-Griffiths, N. M., Dickey, J. M., Jameson, K. E., Arce, H., Anglada, G., Bland-Hawthorn, J., Breen, S. L., Buckland-Willis, F., Clark, S. E., Dawson, J. R., Denes, et al
2022; 39
 - **The Hough Stream Spotter: A New Method for Detecting Linear Structure in Resolved Stars and Application to the Stellar Halo of M31** *ASTROPHYSICAL JOURNAL*
Pearson, S., Clark, S. E., Demirjian, A. J., Johnston, K., Ness, M. K., Starkenburg, T. K., Williams, B. F., Ibata, R. A.
2022; 926 (2)
 - **GASKAP Pilot Survey Science. II. ASKAP Zoom Observations of Galactic 21 cm Absorption** *ASTROPHYSICAL JOURNAL*
Dickey, J. M., Dempsey, J. M., Pingel, N. M., McClure-Griffiths, N. M., Jameson, K., Dawson, J. R., Denes, H., Clark, S. E., Joncas, G., Leahy, D., Lee, M., Miville-Deschenes, M., Stanimirovic, et al
2022; 926 (2)
 - **The width of Herschel filaments varies with distance** *ASTRONOMY & ASTROPHYSICS*
Panopoulou, G., Clark, S. E., Hacar, A., Heitsch, F., Kainulainen, J., Ntormousi, E., Seifried, D., Smith, R. J.
2022; 657
 - **Extragalactic Magnetism with SOFIA (Legacy Program)-II: A Magnetically Driven Flow in the Starburst Ring of NGC 1097*** *ASTROPHYSICAL JOURNAL*
Lopez-Rodriguez, E., Beck, R., Clark, S. E., Hughes, A., Borlaff, A. S., Ntormousi, E., Grosset, L., Tassis, K., Beckman, J. E., Subramanian, K., Dale, D., Diaz-Santos, T.
2021; 923 (2)
 - **The Global Magneto-Ionic Medium Survey (GMIMS): the brightest polarized region in the southern sky at 75 cm and its implications for Radio Loop II** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Thomson, A. M., Landecker, T. L., McClure-Griffiths, N. M., Dickey, J. M., Campbell, J. L., Carretti, E., Clark, S. E., Federrath, C., Gaensler, B. M., Han, J. L., Haverkorn, M., Hill, A. S., Mao, et al
2021; 507 (3): 3495-3518
 - **Extragalactic Magnetism with SOFIA (Legacy Program). I. The Magnetic Field in the Multiphase Interstellar Medium of M51*** *ASTROPHYSICAL JOURNAL*
Borlaff, A. S., Lopez-Rodriguez, E., Beck, R., Stepanov, R., Ntormousi, E., Hughes, A., Tassis, K., Marcum, P. M., Grosset, L., Beckman, J. E., Proudfit, L., Clark, S. E., Diaz-Santos, et al
2021; 921 (2)
 - **The Atacama Cosmology Telescope: Microwave Intensity and Polarization Maps of the Galactic Center** *ASTROPHYSICAL JOURNAL*
Guan, Y., Clark, S. E., Hensley, B. S., Gallardo, P. A., Naess, S., Duell, C. J., Aiola, S., Atkins, Z., Calabrese, E., Choi, S. K., Cothard, N. F., Devlin, M., Duivenvoorden, et al
2021; 920 (1)
 - **The Origin of Parity Violation in Polarized Dust Emission and Implications for Cosmic Birefringence** *ASTROPHYSICAL JOURNAL*
Clark, S. E., Kim, C., Hill, J., Hensley, B. S.
2021; 919 (1)
 - **Evidence for line-of-sight frequency decorrelation of polarized dust emission in Planck data** *ASTRONOMY & ASTROPHYSICS*
Pelgrims, Clark, S. E., Hensley, B. S., Panopoulou, G., Pavlidou, Tassis, K., Eriksen, H. K., Wehus, I. K.
2021; 647
 - **The Atacama Cosmology Telescope: a measurement of the Cosmic Microwave Background power spectra at 98 and 150 GHz** *JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS*
Choi, S. K., Hasselfield, M., Ho, S., Koopman, B., Lungu, M., Abitbol, M. H., Addison, G. E., Ade, P. R., Aiola, S., Alonso, D., Amiri, M., Amodeo, S., Angile, et al
2020
 - **The Atacama Cosmology Telescope: DR4 maps and cosmological parameters** *JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS*
-

- Aiola, S., Calabrese, E., Maurin, L., Naess, S., Schmitt, B. L., Abitbol, M. H., Addison, G. E., Ade, P. R., Alonso, D., Amiri, M., Amodeo, S., Angile, E., Austermann, et al
2020
- **Mapping the Magnetic Interstellar Medium in Three Dimensions over the Full Sky with Neutral Hydrogen** *ASTROPHYSICAL JOURNAL*
Clark, S. E., Hensley, B. S.
2019; 887 (2)
 - **Small-scale H I Channel Map Structure Is Cold: Evidence from Na I Absorption at High Galactic Latitudes** *ASTROPHYSICAL JOURNAL LETTERS*
Peek, J. G., Clark, S. E.
2019; 886 (1)
 - **Through thick or thin: multiple components of the magneto-ionic medium towards the nearby H II region Sharpless 2-27 revealed by Faraday tomography** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Thomson, A. M., Landecker, T. L., Dickey, J. M., McClure-Griffiths, N. M., Wolleben, M., Carretti, E., Fletcher, A., Federrath, C., Hill, A. S., Mao, S. A., Gaensler, B. M., Haverkorn, M., Clark, et al
2019; 487 (4): 4751-4767
 - **The Physical Nature of Neutral Hydrogen Intensity Structure** *ASTROPHYSICAL JOURNAL*
Clark, S. E., Peek, J. G., Miville-Deschenes, M.
2019; 874 (2)
 - **A New Probe of Line-of-sight Magnetic Field Tangling** *ASTROPHYSICAL JOURNAL LETTERS*
Clark, S. E.
2018; 857 (1)
 - **Galactic neutral hydrogen and the magnetic ISM foreground**
Clark, S. E., Jelic, VanDerHulst, T.
CAMBRIDGE UNIV PRESS.2018: 146-150
 - **The GALFA-HI Survey Data Release 2** *ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES*
Peek, J. G., Babler, B. L., Zheng, Y., Clark, S. E., Douglas, K. A., Korpela, E. J., Putman, M. E., Stanimirovic, S., Gibson, S. J., Heiles, C.
2018; 234 (1)
 - **The Weakly Nonlinear Magnetorotational Instability in a Local Geometry** *ASTROPHYSICAL JOURNAL*
Clark, S. E., Oishi, J. S.
2017; 841 (1)
 - **The Weakly Nonlinear Magnetorotational Instability in a Global, Cylindrical Taylor-Couette Flow** *ASTROPHYSICAL JOURNAL*
Clark, S. E., Oishi, J. S.
2017; 841 (1)
 - **Three-dimensional orientation of compact high velocity clouds** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Heitsch, F., Bartell, B., Clark, S. E., Peek, J. G., Cheng, D., Putman, M.
2016; 462 (1): L46-L50
 - **Matching dust emission structures and magnetic field in high-latitude cloud L1642: comparing Herschel and Planck maps** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Malinen, J., Montier, L., Montillaud, J., Juvela, M., Ristorcelli, I., Clark, S. E., Berne, O., Bernard, J., Pelkonen, V., Collins, D. C.
2016; 460 (2): 1934-1945
 - **Neutral Hydrogen Structures Trace Dust Polarization Angle: Implications for Cosmic Microwave Background Foregrounds** *PHYSICAL REVIEW LETTERS*
Clark, S. E., Hill, J., Peek, J. G., Putman, M. E., Babler, B. L.
2015; 115 (24): 241302
 - **Quantifying the Magnetic Alignment of HI and Dust in the Diffuse ISM**
Clark, S. E., Peek, J. G., Hill, J., Putman, M. E., Jablonka, P., Andre, P., VanDerTak, F.
CAMBRIDGE UNIV PRESS.2015
 - **MAGNETICALLY ALIGNED HI FIBERS AND THE ROLLING HOUGH TRANSFORM** *ASTROPHYSICAL JOURNAL*

Clark, S. E., Peek, J. G., Putman, M. E.
2014; 789 (1)

● **PHYSICAL PROPERTIES OF COMPLEX C HALO CLOUDS** *ASTRONOMICAL JOURNAL*

Hsu, W., Putman, M. E., Heitsch, F., Stanimirovic, S., Peek, J. G., Clark, S. E.
2011; 141 (2)