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Present Position: Astrophysicist Emeritus

Dr. Gezari joined the Goddard Space Flight Center in Greenbelt, Maryland in 1978. He received the NASA Medal for Exceptional Scientific Achievement in 1989 for his work on infrared array cameras and his research on the Galactic Center. Dr. Gezari has been a pioneer in the development of several new fields of observational astronomy, including:

1. First application of speckle interferometry (measuring diffraction limited stellar diameters in images blurred by the Earth's atmosphere).
2. First 350 μm observations, and the study of cool star forming clouds.
3. Pioneered the use of array detectors for infrared astronomical imaging, especially at thermal infrared wavelengths (5-25 μm).
4. Produced the only infrared astronomical catalog in the field of observational astronomy.
5. Active in new experimental tests of special relativity.

Educational Background

A.B. (Physics), Cornell University, 1966
M.S. (Physics), New York University, 1969
Ph.D. (Astronomy), S.U.N.Y. at Stony Brook, 1973
Post-doctoral Fellow, California Institute of Technology, 1974-1976

Research Interests

Infrared astrophysics
Star formation/interstellar medium
Galactic Center
Mid-infrared array camera development
Optical spatial interferometry
Direct detection of extra-solar planets
Experimental tests of special relativity

Current Projects

Physical conditions and very young stellar objects in Orion BN/KL
Energy balance and luminous sources in the Galactic Center
Direct detection of extra-solar planets
Tests of Lorentz invariance by two-way lunar laser ranging
Search for evidence of a preferred reference frame for the propagation of light by one-way laser ranging.

Selected Publications

- D.Y. Gezari, A. Labeyrie, and R.V. Stachnik, "Speckle Interferometry: Diffraction Limited Measurements of Nine Stars with the 200-inch Telescope," *Ap.J. (Letters)*, 173, L1, 1972.
- A. Labeyrie, D. Bonneau, R.V. Stachnik, and D.Y. Gezari, "Speckle Interferometry III: High Resolution Measurements of Twelve Close Binary Systems," *Ap.J. (Letters)*, 194, L147, 1974.
- R.R. Joyce, D.Y. Gezari, N.Z. Scoville, and I. Fuerenlid "2.12 H₂ Emission: High Spectral Resolution Observations of the Orion Nebula," *Ap.J. (Letters)*, 219, L29, 1978.
- D.Y. Gezari, "The Remarkable 400 mm Source NGC 6334/(North)," *Ap.J. (Letters)*, 259, L29, 1982.
- M.G. Hauser, R.F. Silverberg, M.T. Stier, T. Kelsall, D.Y. Gezari, E. Dwek, D. Walser, J.C. Mather, and L.H. Cheung, "Submillimeter Survey of the Galactic Plane from $l = -5^\circ$ to $+62^\circ$: Energetics of the Inner Disk," *Ap.J.*, 285, 74, 1984.
- R. Stachnik, P. Melroy, E. McCormack, D. Arnold, and D.Y. Gezari "Multiple Spacecraft Michelson Stellar Interferometer," *Proc. S.P.I.E.*, 445, 358, 1984.
- D.Y. Gezari, R. Tresch-Fienberg, G. Fazio, W. Hoffmann, I. Gatley, G. Lamb, P. Shu, and C. McCreight "8.3 and 12.4 mm Imaging of the Galactic Center Source Complex with the Goddard IR Array Camera" *Ap.J.*, 299, 1007, 1986.
- D. Gezari, M. Mumma, F. Espenak, D. Deming, G. Bjoraker, L. Woods, and W. Folz, "New Features in Saturn's Atmosphere Revealed by High Resolution Thermal Infrared Images," *Nature*, 342, 777, 1989.
- C. Roddier, F. Roddier, and D.Y. Gezari "Bibliography of Astronomical Optical Interferometry," NASA Reference Publication, NASA RP #1245, 1990.
- D. Aitkin, D.Y. Gezari, C.H. Smith, J.M.J. McCaughrean, and P.F. Roche, "Polarimetric Imaging of the Galactic Center at 12.4 microns: the Detailed Magnetic Field Structure of the Northern Arm and East-West Bar," *Ap.J.*, 380, 419, 1991.
- D.Y. Gezari, W.C. Folz, L.A. Woods, and F. Varosi, "A 5 - 18 μm Array Camera for High Background Astronomical Imaging," *P.A.S.P.*, 104, 191, 1991.
- D.Y. Gezari, "Mid-infrared Imaging of Orion BN/KL: Astrometry of IRc2 and the SiO Maser," *Ap.J. (Letters)*, 363, L43, 1991.
- C.N. Telesco and D.Y. Gezari, "High Resolution 12.4 μm Images of the Starburst Region in M82," *Ap.J.*, 395, 461, 1992.
- D.Y. Gezari, J.M. Mead, and M. Schmitz, "Catalog of Infrared Observations (Parts I & II) - 3rd Edition," NASA RP#-1294, 1993.
- D.Y. Gezari, L.M. Ozernoy, F. Varosi, C. McCreight, and R.R. Joyce, "A New Upper Limit for the 20 mm Emission from SgrA*," (for submission to *Ap.J. Letters*).
- D.Y. Gezari, D. Backman, and M.W. Werner, "Mid-infrared Imaging of Orion BN/KL - II: Luminosity Sources, Extinction Distribution and the Role of IRc2," *Ap. J.* 509, 283, 1998.
- Greenhill, L. J.; Gezari, D. Y.; Danchi, W. C.; Najita, J.; Monnier, J. D.; Tuthill, P. G., "High Angular Resolution Mid-Infrared Imaging of Young Stars in Orion BN/KL," *Ap.J.* 605, L57 (2004)
- Fazio, G. G.; Hora, J. L.; Allen, L. E.; Ashby, M. L. N.; Barmby, P.; Deutsch, L. K.; Huang, J.-S.; Kleiner, S.; Marengo, M.; Megeath, S. T.; (and 55 coauthors), "The Infrared Array Camera (IRAC) for the Spitzer Space Telescope", *Ap. J. Suppl.* 154 (2004)

Stolovy, S.; Ramirez, S.; Arendt, R. G.; Cotera, A.; Yusef-Zadeh, F.; Law, C.; Gezari, D.; Sellgren, K.; Karr, J.; Moseley, H.; Smith, H. A. "A Mid-infrared Survey of the Inner 2×1.5 Degrees of the Galaxy with Spitzer/IRAC", J. Phys. Conf. Ser., 54, 176 (2006).

Arendt, R. G.; Gezari, D. Y.; Smith, R.; Stolovy, S.; Yusef-Zadeh, F.; Law, C.; Smith, H. A.; Moseley, H.; Ramirez, S.; Karr, J.; Coters, A., and Sellgren, K.; "Comparison of Spitzer/IRAC Galactic Center 3.6-8.0 μm survey results with X-ray emission in the central 40×40 parsecs", J. Phys. Conf. Ser., 54, 171 (2006).

Gezari, D. Y., Vinkovic, D., Elitzur, M., Varosi, F., Dwek, E., Greenhill, L. J., Danchi, W., Physical Properties of the "Pre-Protostellar" object IRc7 and Mid-infrared Emission Sources in the Orion BN/KL Complex", (2009, submitted to Ap. J.).

Gezari, D. Y., Varosi, F., Dwek, E., Telesco, C. , "Physical Conditions in the Galactic Center Modeled from Mid-infrared Imaging Photometry of the Central Parsec", (2010, in preparation for Ap. J.).

Gezari, D. Y., "Experimental Basis for Special Relativity in the Photon Sector", 2009, <http://arxiv.org/abs/0912.3818>

Gezari, D. Y., "Lunar Laser Ranging Test of the Invariance of c", 2009, <http://arxiv.org/abs/0912.3934>

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