MARK LACY

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PROFILE
I am an observational astronomer with interests in galaxy and quasar formation in the high redshift Universe, observatory data management and multi-wavelength surveys.

POSITIONS HELD
SERC Postdoctoral Fellowship 11/92--09/94, held at the University of Oxford

Fixed-term lecturer in Astrophysics, University of Oxford and Tutorial Fellow in Physics, St Hugh's College Oxford. 10/94--09/99.

Postdoctoral Researcher, Lawrence Livermore Laboratory and University of California, Davis. 09/99 -- 01/02

Assistant Research Scientist, California Institute of Technology, Pasadena. 01/02 to 05/04, member of the IRAC instrument support team.

Associate Research Scientist, California Institute of Technology 05/04 to 08/09; the Spitzer Uplink Scientist 10/04 - 08/09; the Spitzer Archive Scientist 05/05 - 08/09

Scientist, National Radio Astronomy Observatory 09/09 - present; data services lead, North American ALMA Science Center 2010-2018; subsystem scientist for NRAO archive/pipeline processing interface 2013-2018, project scientist for the VLA Sky Survey 2016-2022, project director 2022-present. Operations Manager for Science Ready Data Products 2018-present. *Research Professor*, University of Virginia, 2011 - present.

EDUCATION

MA Cambridge (UK) 1989 Natural Sciences

PhD Cambridge (UK) 1993 Radio Astronomy

GRANTS AND AWARDS
$860k for the SERVS Spitzer project, numerous smaller PI awards for successful Spitzer proposals; HST and Chandra PI grants. $564k for DeepDrill Spitzer Exploration Science program.

Six NASA group achievement awards for aspects of the Spitzer mission.

RESEARCH EXPERTISE
Galaxy and quasar surveys, quasar astronomy, high redshift galaxies, radio and submm astronomy, infrared ground and space-based astronomy. Astronomical databases and user interfaces, data management. Python, IDL and fortran programming.

TEACHING EXPERIENCE
Undergraduate observational cosmology course, University of Oxford. Miscellaneous 1st and 2nd year physics classes, optics laboratory and graduate lectures, University of Oxford. Graduate student advisor for all or major part of PhD thesis: Margrethe Wold (Stockholm; later an ESO and Marie-Curie Fellow), Robin Stevens (Oxford), Anna Sajina (UBC; now faculty at Tufts), Kristen Jones (UVa, now faculty at Arizona Western College).

MAJOR PROJECTS AS PRINCIPAL INVESTIGATOR
The SERVS Spitzer Exploration Science program (and the follow-on DEEPDRILL program) to survey 35deg^2 of sky to microJy depths at 3.6 and 4.5 microns in the near-infrared, using 2800hr of telescope time, leading an international collaboration of over 100 astronomers.

The Spitzer mid-infrared AGN survey, a survey of 786 AGN and quasars selected in the mid-infrared, the first large systematic survey for dust-obscured quasars at mid-infrared wavelengths.

COMMITTEE AND WORKING GROUP MEMBERSHIPS
NSF AST and Cyberinfrastructure panelist.

JWST, HST, Chandra, Spitzer, IRTF, NASA-Keck and NOAO/NOIRLab time allocation committee memberships. (Chaired IRTF panel.)

Member of LSST AGN science collaboration and LSST Deep Drilling interest group.

Member of the Astronomical Data Analysis and Software Systems (ADASS) program organizing committee (2014-2019).

Member of the Herschel Extragalactic Legacy Project Science Advisory Board.

Member of the Infrared Science Archive Users Panel (2016-2018)

Member of the NASA Extragalactic Database (NED) Users Panel (2018-present)

Member of the NRAO Science Performance Review Committee (2016-2018).

Member of the NRAO Jansky Fellowship selection committee (2018-2020).

Science Board Member of the Canadian Initiative for Radio Astronomy Data Analysis project.

International Virtual Observatory (IVOA) Executive Committee (2019-2022)

IVOA Committee for Science Priorities (2017-present)

IVOA Radio Interest group lead (2019-2022)

PROFESSIONAL MEMBERSHIP
American Astronomical Society

PUBLICATIONS
Author of 239 refereed publications, including 39 as first author. H-index of 67. Highlighted publications:

Obscured and Unobscured Active Galactic Nuclei in the Spitzer Space Telescope First Look Survey
Lacy, M., Storrie-Lombardi, L. J., Sajina, A., Appleton, P. N., Armus, L., Chapman, S. C., Choi, P. I., Fadda, D., Fang, F., Frayer, D. T., Heinrichsen, I., Helou, G., Im, M., Marleau, F. R., Masci, F., Shupe, D. L., Soifer, B. T., Surace, J., Teplitz, H. I., Wilson, G. & Yan, L., 2004, ApJS, 154, 166

The Infrared Array Camera Component of the Spitzer Space Telescope Extragalactic First Look Survey
Lacy, M., Wilson, G., Masci, F., Storrie-Lombardi, L. J., Appleton, P. N., Armus, L., Chapman, S. C., Choi, P. I., Fadda, D., Fang, F., Frayer, D. T., Heinrichsen, I., Helou, G., Im, M., Laine, S., Marleau, F. R., Shupe, D. L., Soifer, B. T., Squires, G. K., Surace, J., Teplitz, H. I. & Yan, L. 2005, ApJS, 161, 41

The Spitzer Extragalactic Representative Volume Survey (SERVS): Survey Definition and Goals
Mauduit, J.-C., Lacy, M., Farrah, D., Surace, J.A., Jarvis, M., Oliver, S., Maraston, C., Vaccari, M., Marchetti, L., Zeimann, G. et al. 2012, PASP, 124, 714

The Spitzer mid-infrared AGN survey. II The demographics and cosmic evolution of the AGN population
Lacy, M., Ridgway, Sajina, A., S.E., Petric, A.O., Gates, E.L., Urrutia, T. & Storrie-Lombardi, L.J., 2015, ApJ, 802, 102

ALMA Observations of the Interaction of a Radio Jet with Molecular Gas in Minkowski's Object
Lacy, M., Croft, S., Fragile, C., Wood., S. & Nyland, K. 2017, ApJ, 838, 146

Direct detection of quasar feedback via the Sunyaev-Zeldovich effect
Lacy, M., Mason, B., Sarazin, C., Chatterjee, S., Nyland, K., Kimball, A., Rocha, G., Rowe, B. & Surace, J. 2019, MNRAS, 433, L22

The Karl G. Jansky Very Large Array Sky Survey (VLASS). Science Case and Survey Design
Lacy, M., Baum S.A., Chandler C.J. et al. 2020, PASP, 132, 5001