Heidi Jo Newberg

Professor, Physics, Applied Physics, and Astronomy at Rensselaer Polytechnic Institute

Troy, NY, US

Studies the formation and structure of the Milky Way and other galaxies

Biography

Professor Newberg is a participant in the Sloan Digital Sky Survey, which will image 10,000 square degrees of the north galactic cap in five optical filters over the next five years. Additionally, the surey will obtain a million spectra of the galaxies (and hundreds of thousands of QSOs and stars) detected in the imaging survey. Newberg's current research is primarily related to understanding the structure of our own galaxy through using A stars as tracers of the galactic halo, and using photometrically determined metallicities of main sequence F-K stars to determine whether the thick disk is chemically distinct from the thin disk and galactic halo of our galaxy. She hopes that these studies will contribute to our understanding of how the Galaxy formed. Newberg has worked in many areas of astronomy over the course of my career. She did her PhD with the Berkeley Automated Supernova Search, which measured the supernova rates as a function of supernova type in Virgo-distance galaxies; and the Supernova Cosmology Project, which is measuring the cosmological parameters Omega and Lambda using the light curves of distant supernovae. She has published papers in diverse areas of galactic and extragalactic astronomy, including: supernova phenomenology, measuring cosmological parameters from supernovae, galaxy photometry, color selection of QSOs, properties of stars, and the structure of our galaxy.

Areas of Expertise

Physics, Color Selection of QSOs, Supernova Phenomenology, Astronomy, Galaxy Photometry, Properties of Stars, Physics and Astronomy

Affiliations

Division H Interstellar Matter and Local Universe : Member

Education

University of California, Berkley
Ph.D.

Accomplishments

Breakthrough Prize in Fundamental Physics
2015

Gruber Prize in Cosmology

2007

[Please click here to view the full profile.](#)