The Life Cycle of Dust in Galaxies

M. Meixner

1Space Telescope Science Institute, Johns Hopkins University, Baltimore, U.S.A.

The life cycle of dust in galaxies touches all aspects of galaxy evolution and has moved into the main stream of galaxy evolution models. In this review talk, I will cover the key stages of this life cycle: dust production by dying stars, dust destruction in the interstellar medium by star formation (astration) and supernova shock waves, and growth of dust in the interstellar medium. I will review recent work on this topic and discuss the promise of new and future observatories for this topic.