

Prof. Dr. Hans Jockers
Institut für Physik
jockers@uni-mainz.de

Prof. Dr. Concettina Sfienti
Institut für Kernphysik
sfienti@uni-mainz.de

JOHANNES GUTENBERG
UNIVERSITÄT MAINZ



Physikalisches Kolloquium

Dec. 8, 2020 at 4:15 p.m.
None

Sherry Suyu
TU München

Cosmology with Gravitational Lens Time Delays

Strong gravitational lenses with measured time delays between the multiple images can be used to determine the Hubble constant (H_0) that sets the expansion rate of the Universe. An independent determination of H_0 is important to ascertain the possible need of new physics beyond the standard cosmological model, given the tension in current H_0 measurements. I will describe techniques for measuring H_0 from lensing with a realistic account of systematic uncertainties, and present the latest results from a program aimed to measure H_0 from lensing. Search is underway to find new lenses in imaging surveys. An exciting discovery of the first strongly lensed supernova offered a rare opportunity to perform a true blind test of our modeling techniques. I will show the bright prospects of gravitational lens time delays as an independent and competitive cosmological probe.

Contact:
Caroline Hoffmann
Sekretariat Prof. Dr. Hans Jockers
Institut für Physik
choffman@uni-mainz.de

Sibylle Wittek
Sekretariat Prof. Dr. Concettina
Sfienti
Institut für Kernphysik
swittek@uni-mainz.de

