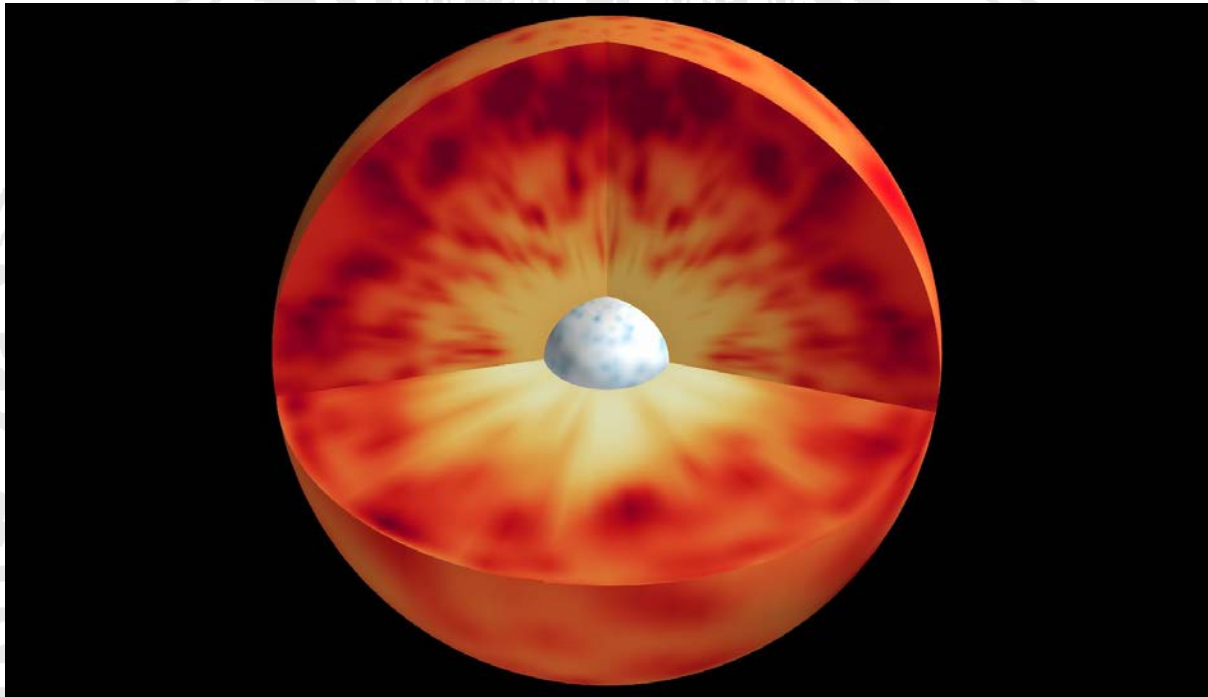




PHYSIKALISCHES KOLLOQUIUM

AM 15. JANUAR 2018 UM 17 UHR C.T.

IM GROßEN HÖRSAAL



THE INTERIOR ROTATION AND CHEMICAL MIXING OF STARS FROM GRAVITY-MODE ASTEROSEISMOLOGY

PROF. DR. CONNY AERTS

UNIVERSITY OF LEUVEN, BELGIUM

RADBOUD UNIVERSITY NIJMEGEN, THE NETHERLANDS

The 4-year long uninterrupted high-precision data from the NASA Kepler space mission led to a revolution in stellar physics. This is particularly the case for gravity-mode asteroseismology of young stars, which requires years of continuous monitoring. In this seminar, we first explain how asteroseismology allows to deduce the interior physics of stars at a level that is impossible to reach in any other way. We focus on the capability of the Kepler data to derive the interior rotation properties of stars born with a convective core. We also highlight the most recent findings on chemical mixing in the deep interior of stars and discuss its implications for stellar evolution theory. Finally, we provide an outlook for future projects in asteroseismology to illustrate the bright future of this research domain.