

UCT: Galactic/Extragalactic Course

Program 2015

Introduction

- Week 1:* Classification
Global Galaxy properties
Galaxy Luminosity Function (GLF)
- Week 2:* Galaxies Luminosity profiles: ellipticals, spirals & Dwarfs
Interstellar Matter (ISM)
Neutral Hydrogen (HI), Ionized Hydrogen (HII)
& Molecular Hydrogen (H₂)
- Week 3:* Kinematics (elliptical & spiral galaxies)
Mass distribution (spiral & dwarf galaxies)
Dark Matter (DM) in galaxies
Semester Homework (mass models)
- Week 4* Milky Way & its satellites
Bulge, bar, thin & thick disk, ISM
Globular cluster system, halo
Stellar populations (abundance & kinematics)
- Week 5:* Distance Scale, Distance Indicators, TF & FJ
Galaxy Evolution
Environmental mechanisms: interactions, mergers, tidal Effects, warps, dynamical friction, ram pressure
- Week 6:* High z galaxies
HDF – HST optical & IR – HUDF (other surveys)
Hierarchical galaxy formation

Final Exam

Evaluation

	Back	%
➤ Classification	September 7	20%
➤ Semester homework	October 16	40%
➤ Final Exam		40%

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