

ASTR 100 Review Sheet for Final Exam

The Sun: Our Star

- composition
- structure (interior & exterior)
- surface features
- energy production
- solar Neutrinos

Properties of Stars

- flux, luminosity
- apparent, absolute magnitudes
- distances
- spectral type/temperature

HR Diagram

- axes
- locations of different types of stars
- Mass-Luminosity relationship
- radii

How Do We Know About Stellar Properties

- binaries
- variable stars

The Life Cycle of a Star

- interstellar matter
- star formation
- stellar evolution (1 solar mass)
- end products of stellar evolution (white dwarfs, neutron stars, black holes)

Our Galaxy (The Milky Way)

- structure
- stellar populations
- formation of the galaxy
- formation of spiral arms

Galaxies

- historical perspective
- hubble's classification scheme
- rotation curves and the dark matter problem
- galaxy clusters

Active Galaxies

- radio galaxies
- sefvert galaxies
- quasars
- gravitational lensing

Cosmology

- expansion of the universe (Doppler effect, Hubble's law)
- cosmic microwave background radiation
- fate of the universe
- inflationary universe
- acceleration
- dark energy

flux
luminosity
hydrostatic equilibrium
photosphere
chromosphere
corona
radiative zone
convective zone
sunspot
prominences
solar flares
Maunder minimum
nuclear fusion
pp chain
neutrino
magnitudes
parallax
spectral classification
visual binary
spectroscopic binary
eclipsing binaries
Cepheid
RR Lyrae
Mira
Period-Luminosity Relationship
cataclysmic variables
reflection nebula
zero age main sequence
strong nuclear force
electromagnetic
weak nuclear force
gravitation
protostar
main sequence
white dwarf
red giant
red supergiant
blue supergiant
planetary nebula
Chandrasekhar limit
supernova
neutron star
black hole
general relativity
globular cluster
disk (Milky Way)
halo (Milky Way)
nucleus (Milky Way)

population I
population II
turnoff point
horizontal branch
spiral density wave
elliptical galaxy
spiral galaxy
irregular galaxy
rotation curve
dark matter
radio galaxies
Seyfert galaxies
quasars
gravitational lensing
doppler effect
redshift
blueshift
Hubble's Law
cosmic microwave background radiation
Big Bang
critical density
cosmological constant
parsec
arcsecond
neutral hydrogen
ionized hydrogen
dust
superclusters
voids
MACHOs
WIMPs
MOND
accretion disk