

Recent Developments in Astronomy.

- Astronomy is undoubtedly the oldest of all Sciences.
- It is concerned with the whole of the universe -
Size, Composition, Various phenomena at various distances and times
Questions regarding origin, source of energy, origin of space and time and the variety of phenomena witnessed in the sky at various times
- From ancient times to the time of Galileo (17th. Century) -
Naked Eye Astronomy. - Sun, Moon, Planets, Meteors, Stars, Constellations.
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Fixed Stars Universe. Movement of Planets, Eclipses, Conjunctions, Blazing Meteor, Comets
- Telescope Astronomy - Galileo to Hubble and beyond. - Space Teles.
1" dia telescope - ~ 6000 Stars in a clear night.
100", 200' - ~ 200 billion Stars in one galaxy
~ 200 billion galaxies in the Universe

(Slide 2)

Andromeda Galaxy.

Main Features of Optical Astronomy Today

- (i) Birth of Stars & Birth of galaxies.
- (ii) Exploding Stars - Cosmic Astronomy. (Cos)
- (iii) Super Novae
- (iv) Spectroscopy of Stars (SARA's thing.)
Spectroscopy
- (v) External Cosmos. Matter
- (vi) Expanding Universe.

Visible Astronomy

① 1934 - Radio Astronomy - ~~Main~~ Findings

Main Findings

(i) Radio Sources, 21cm radiation

(ii) Quasars - Power about energy 10^{48} ergs/sec!

(iii) Pulsars - ~~Binary~~ Pulsars Neutron Stars

(iv) Binary Pulsar - accretion bi-crit - Neutron

(v) Black holes - Great Black Hole (Quasars)

PRE (vi) Universal Microwave Radiation - Separate to Big Bang events.

(vii) Structure of Microwave Radiation

② X-ray and γ -ray Astronomy - Ballou and Schlichte.

(.) Short duration bursts - in X-rays and γ -rays.

③ Neutrino Astronomy - background and bit of facts, under JG.

④ Gravitational Astronomy -
(Stardust)

Slides
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