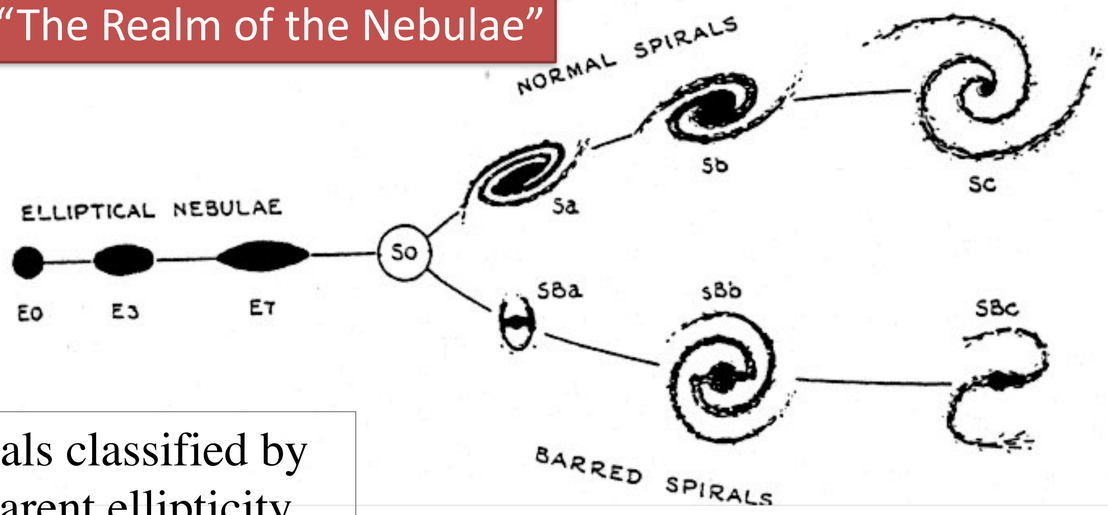
Ay21

Slides Shown 1/9/2020

Hubble's Classification Scheme

E. Hubble 1936, "The Realm of the Nebulae"



Ellipticals classified by the apparent ellipticity

Spirals classified by the prominence of the spiral arms, and the presence of bars

Hubble thought (incorrectly) this was an evolutionary sequence, so ellipticals are called "early-type" and spirals "late-type" galaxies

Elliptical Galaxies

M87 in Virgo

M84 and M86

Lenticular (S0) Galaxies

- Transition class between ellipticals and spirals are the S0 galaxies, also called **lenticulars**
- S0 galaxies have a rotating disk in addition to a central elliptical bulge, but the disk lacks spiral arms or prominent dust lanes, i.e., no active star formation

- Lenticulars can also have a central bar, in which case they are labeled SB0
-

Sombrero galaxy

M31 (Andromeda)

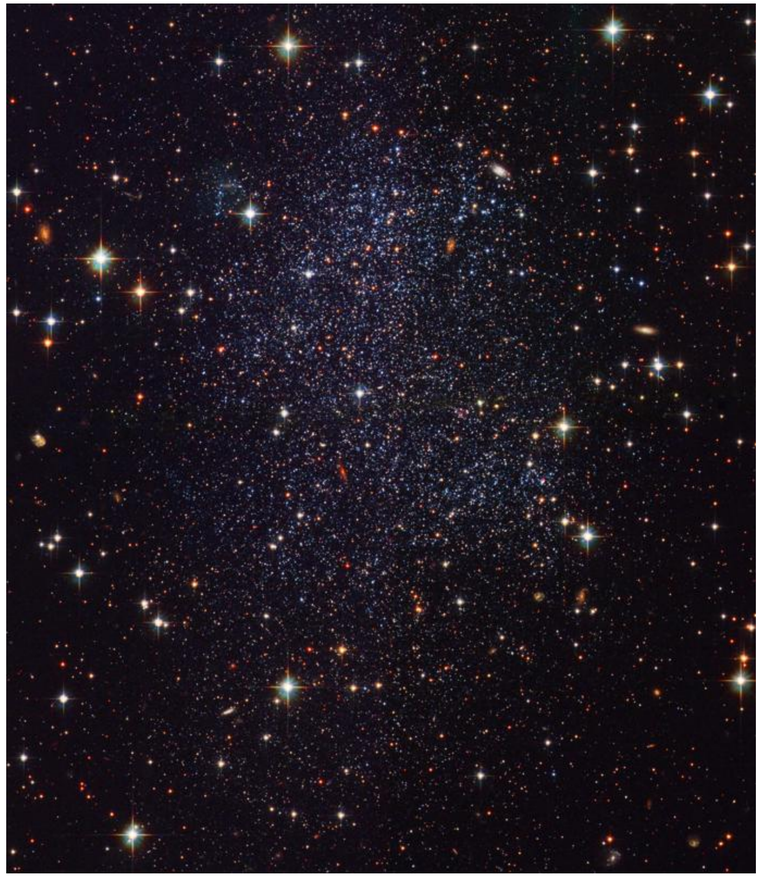

M51

NGC 1300, Barred Spiral Galaxy


Large Magellanic Cloud
dIrr


I Zw 18
Gas-rich dwarf
(very young)

Sagittarius Dwarf Spheroidal →



← NGC 205

Dwarf Elliptical