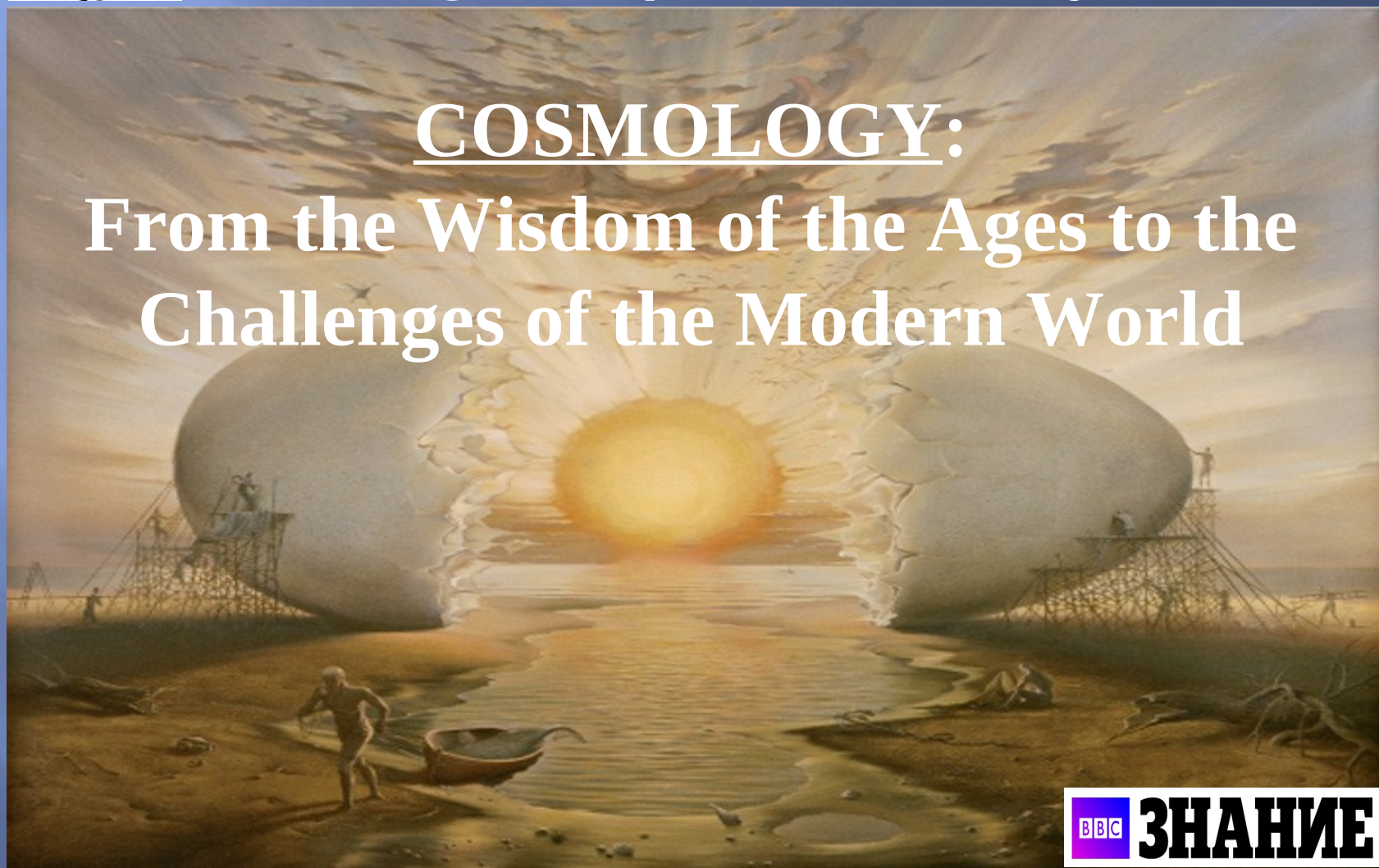




3rd FIG Young Surveyors European Meeting in Sofia on 16th May 2015

COSMOLOGY:

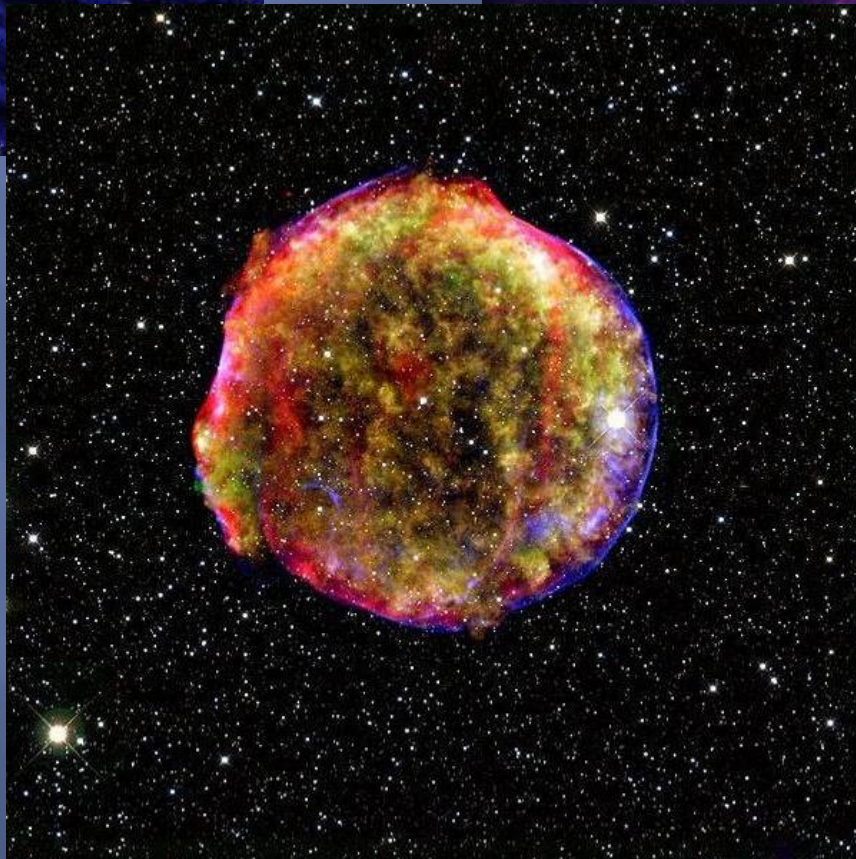
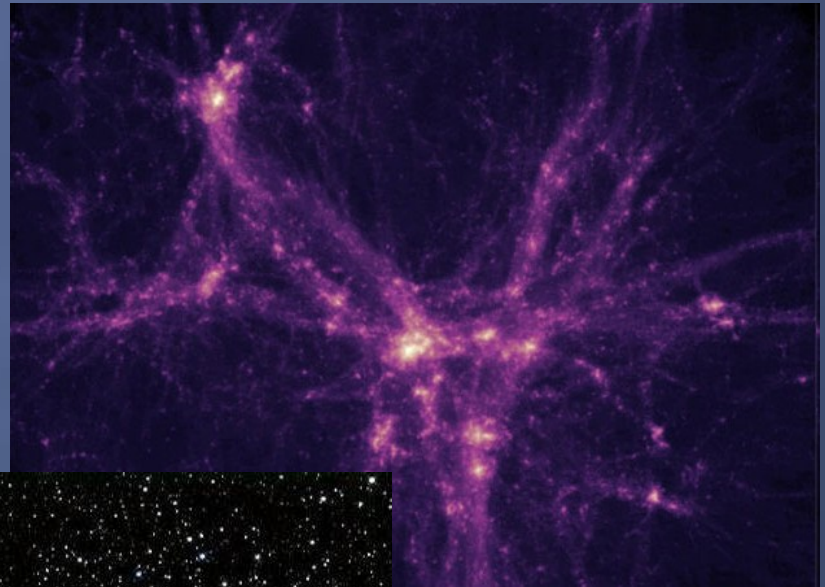
From the Wisdom of the Ages to the Challenges of the Modern World



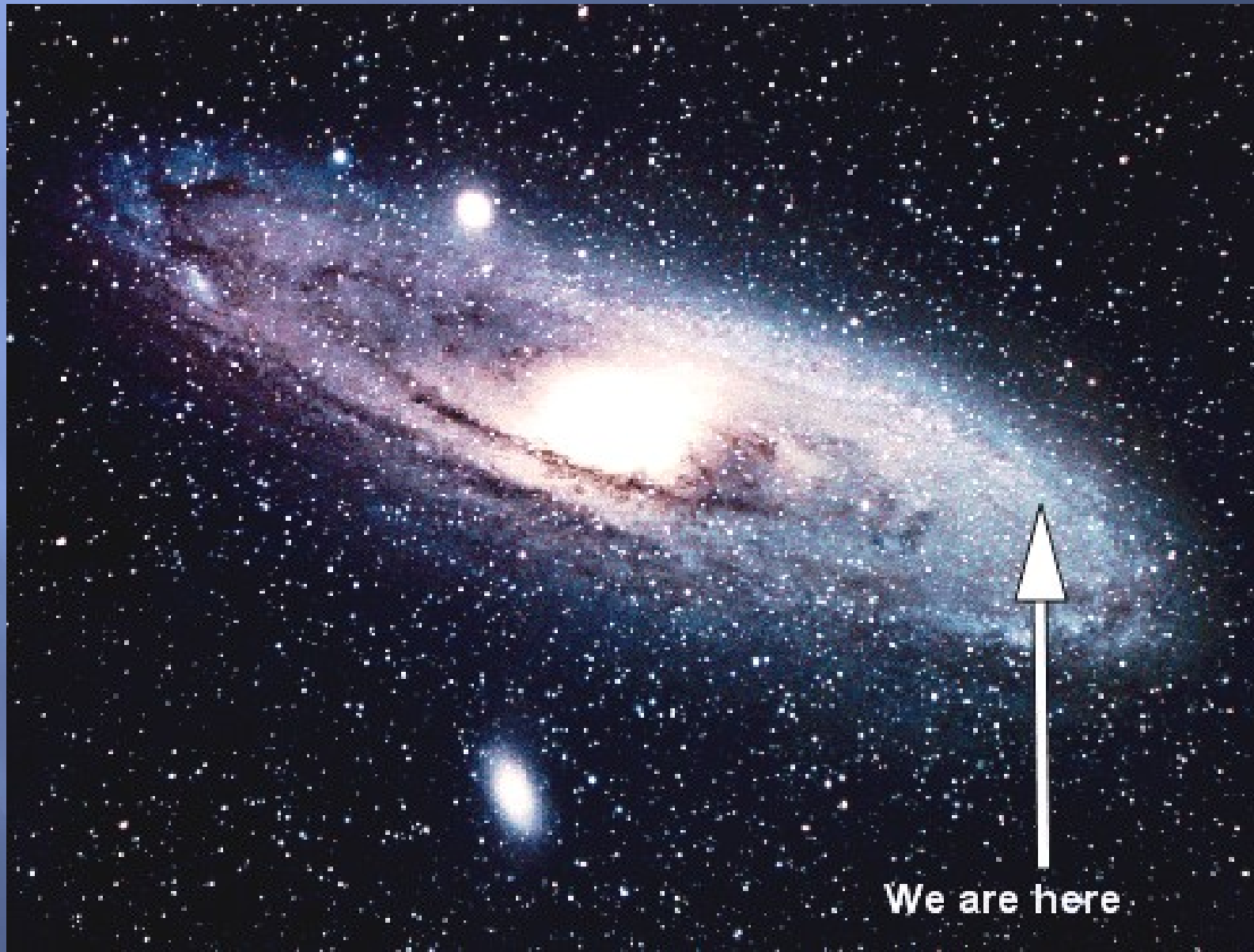
Presenter: Dr. Vladimir BOZHILOV, Dept. of Astronomy, Faculty of Physics, Sofia University, email: vbozhilov@phys.uni-sofia.bg

How BIG and RICH is our Universe?





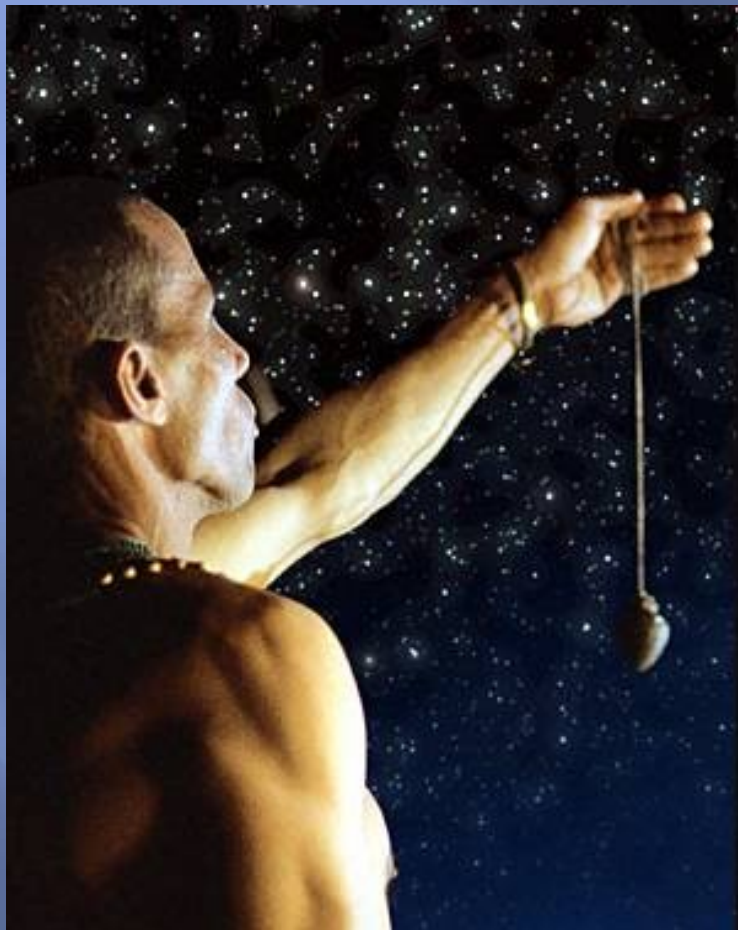
Where is our place?



The Evolution of Cosmology



Navigation: A Driving Force for Studying the Stars



The Telescopes of Bulgaria

NAO ROZHEN:

- 2m RCC Telescope
- 50/70 cm Schmidt Telescope
- 60 cm Cassegrain Telescope
- Solar Coronagraph
- Visitor's center with 30 cm telescope for observations



The Telescopes of Bulgaria

**SAO PLANA (operated by the Dept. of Astronomy,
Faculty of Physics, Sofia University)**

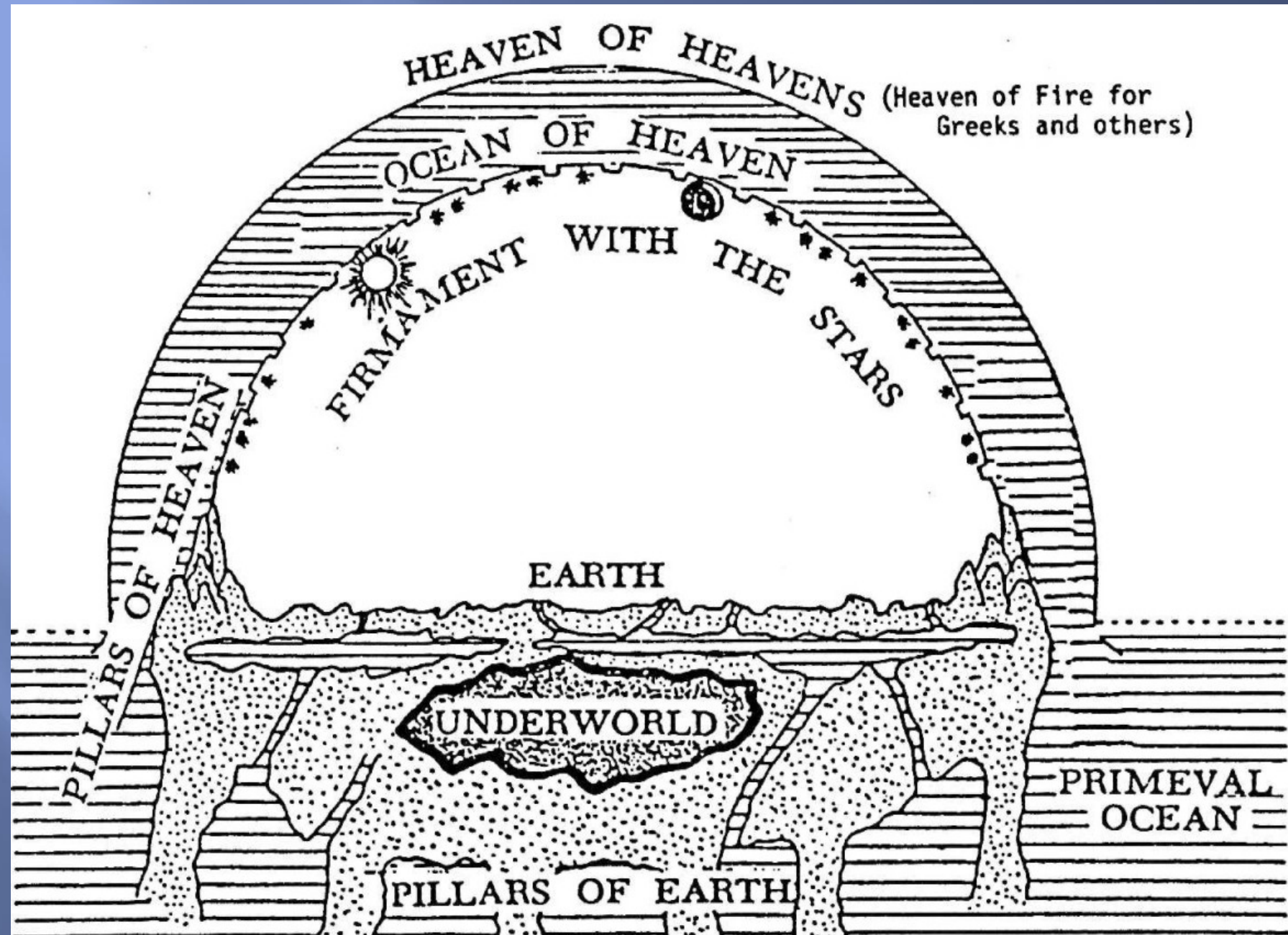
- 35 cm Newton Telescope used for scientific and educational purposes



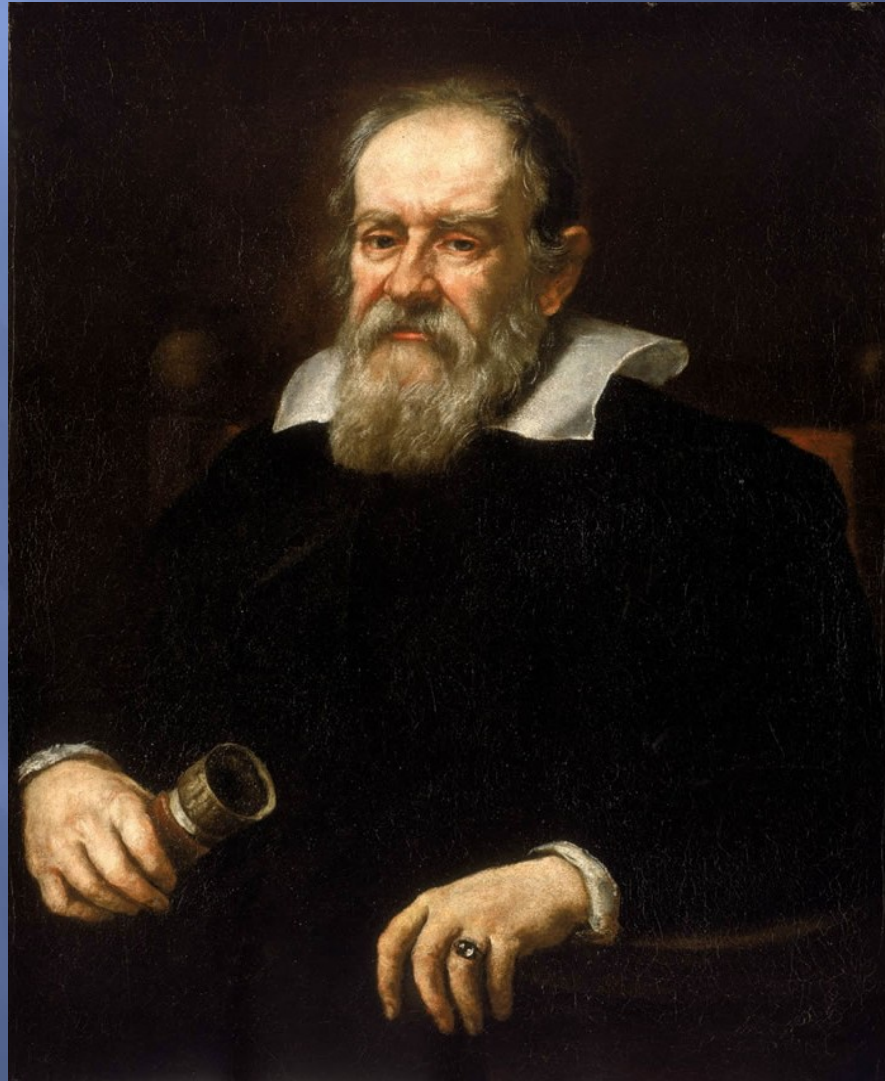
Let's go back in time...

The first understanding of the Cosmos is a mix between myth, science and religion.



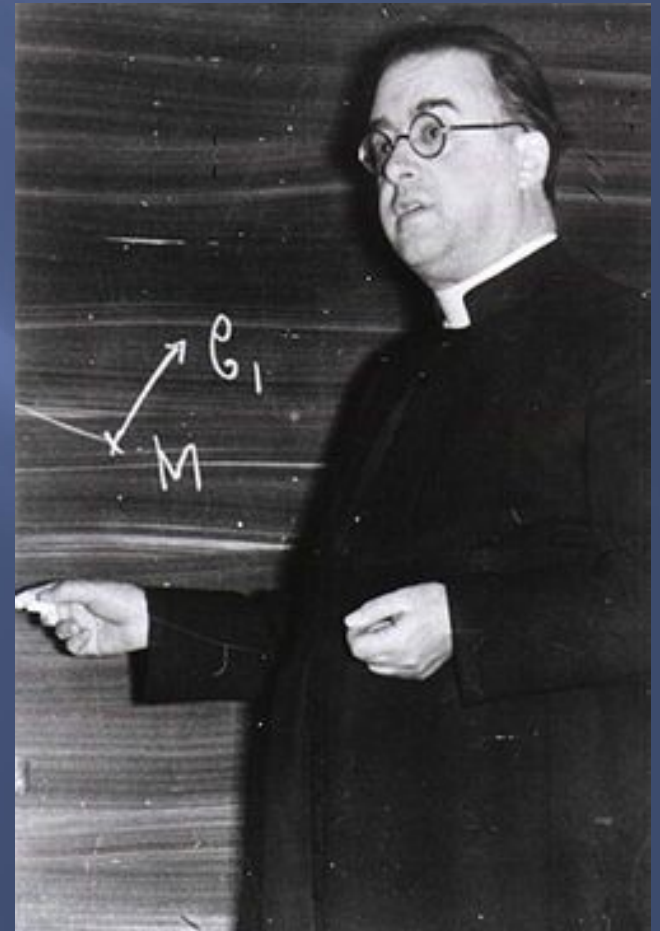
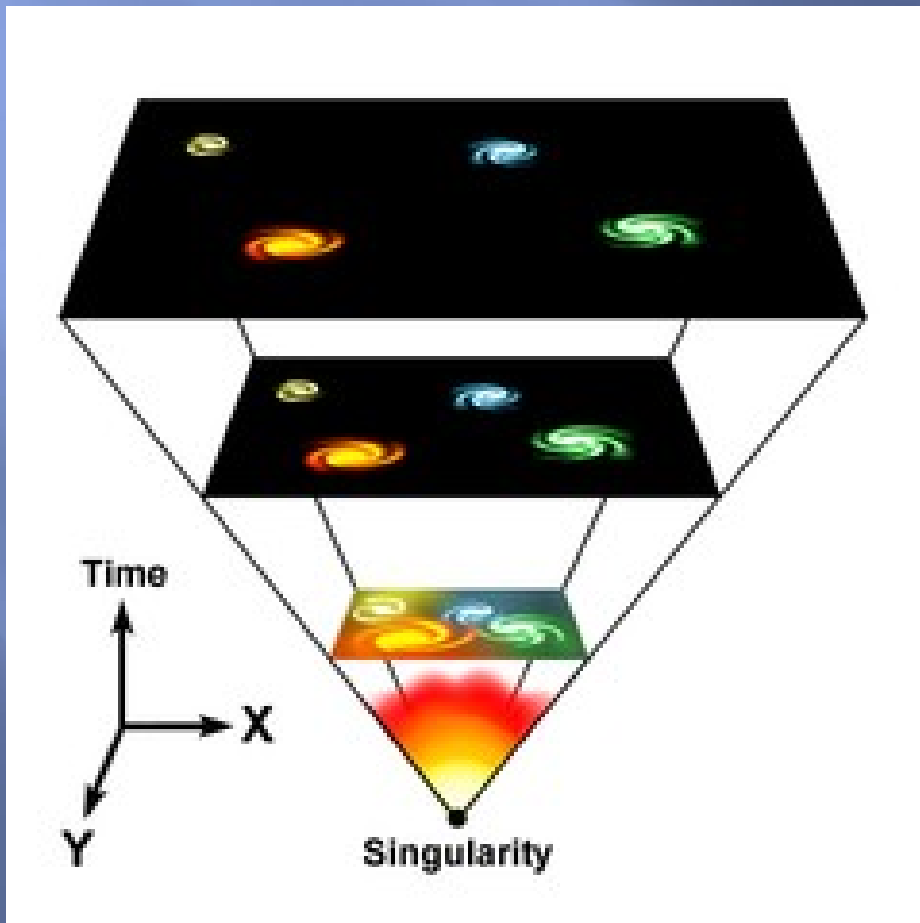


Modern science started just 400 years ago with Galileo...

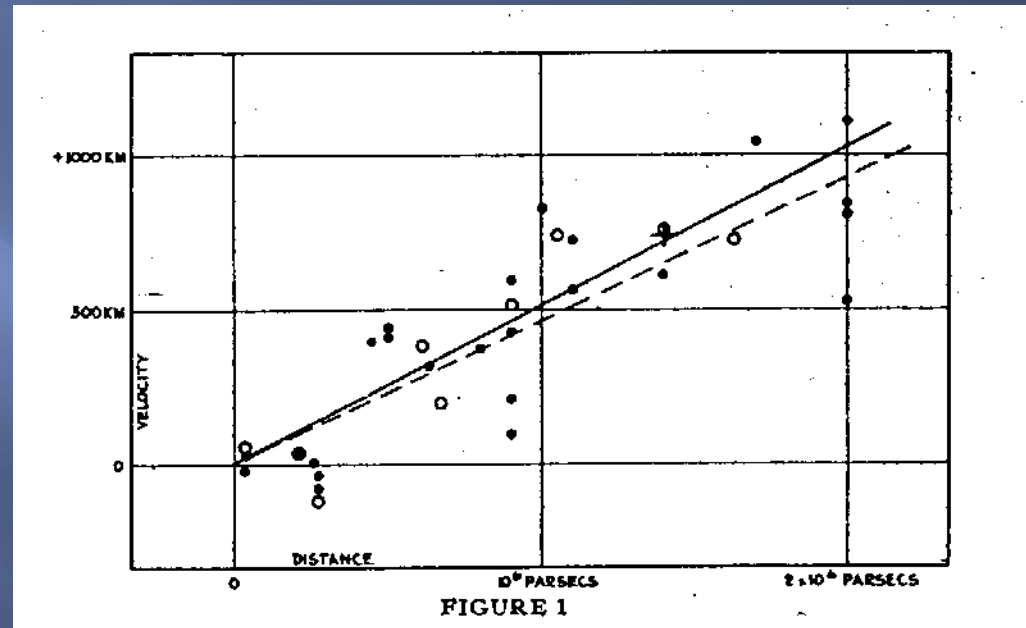


The first Cosmologists

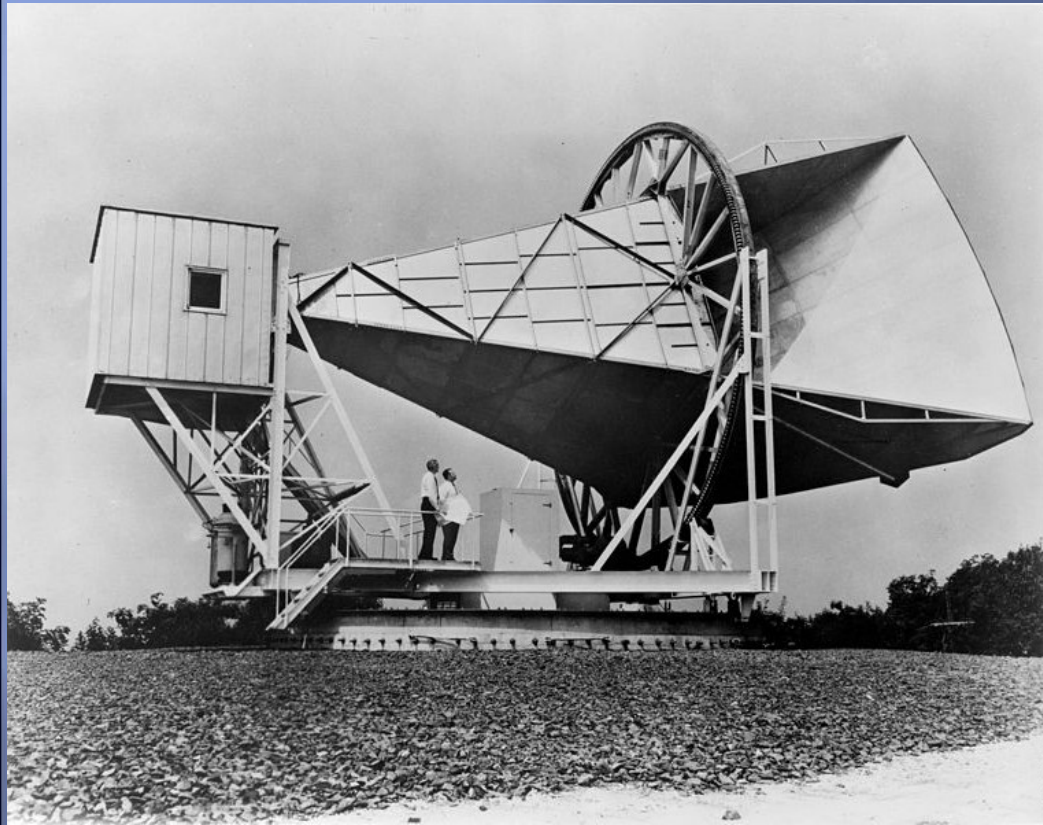
GEORGES LEMAITRE (1894-1966)



1929 - Edwin HUBBLE proves the expansion of the Universe

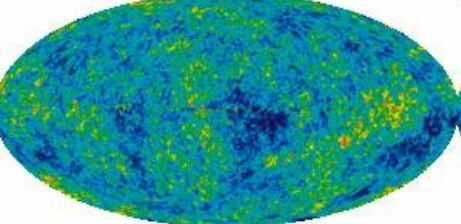


The Big Bang Theory - PROVEN!



**1964 – Penzias and Wilson
prove the existense of the
Cosmic microwave
background (CMB). This is
the final proof that of the
Big Bang Theory.**

Nobel prize –1978



PLANCK MISSION 2009-2013

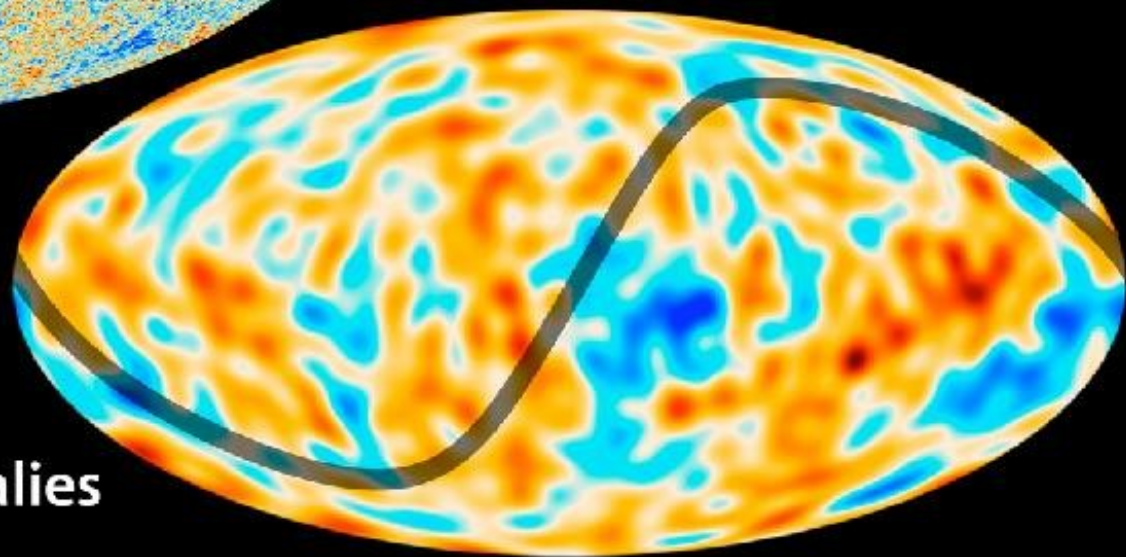


Full-Sky Map

Age of the Universe
is...13.82 Gyr!

Are we seen the
fingerprint of *another*
Universe?

Anomalies



Nobel Prize in Physics 2011

"The expansion of the Universe is...accelerating!"



Enter DARK ENERGY



When we map the History of the expansion,
we see a big surprise

