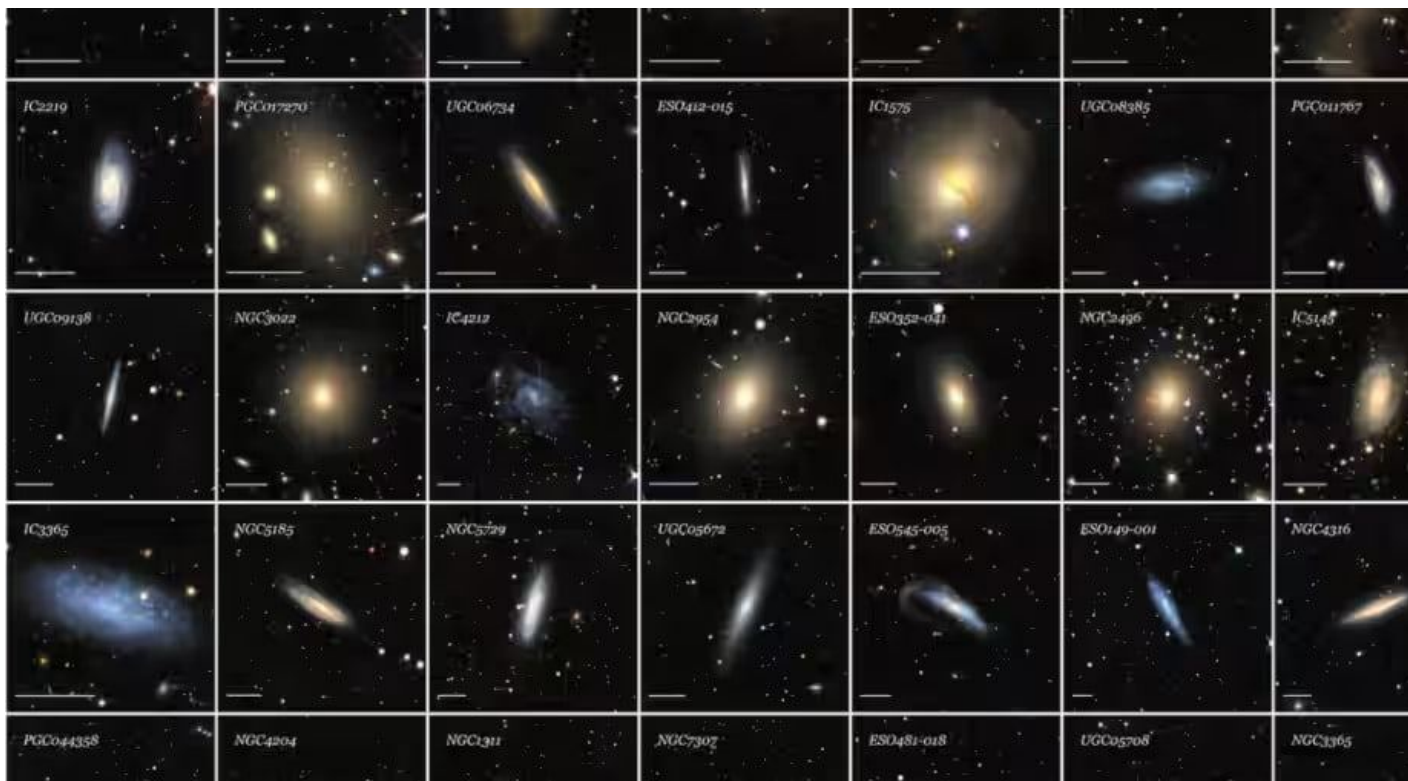


Siena Galaxy Atlas (SGA)

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About Siena Galaxy Atlas

- It is a digital atlas that was created to get to know our universe better through several of the known galaxies.
- It was created using data from three astronomical surveys collected between 2014 and 2017 at Cerro Tololo Inter-American Observatory (CTIO) and Kitt Peak National Observatory (KPNO). Together these surveys are known as the DESI Legacy Surveys.
- How is it different from other atlases?
 - It is dependent on state-of-the-art digital images captured by advanced technology, unlike previous atlases which relied on antiquated equipment and photographic plates.
 - As it is built on the images captured with highly sensitive instruments, it boasts of having the most accurate data.
 - It is also the first cosmic atlas to feature the light profiles of galaxies - a curve that describes how the brightness of the galaxy changes from its brightest point to its dimmest.
- Significance
 - Cosmic atlases help astronomers spot patterns that help categorise new discoveries, such as stars that suddenly flare and then disappear (thus called 'transients').

- These atlases also allow astronomers to identify which objects are contenders for detailed follow-up studies.
 - It helps in investigate everything from the births and evolutions of galaxies to the distribution of dark matter and propagation of gravitational waves through space.
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Q1) What is the Milky Way?

The Milky Way is the galaxy in which our solar system is located. It is a barred spiral galaxy, which means it has a central bar-shaped region made up of stars, surrounded by spiral arms that contain stars, gas, dust, and other celestial objects.

Source: See 400,000 galaxies near Milky Way in this amazing 'galactic atlas'

Source: <https://vajiramandravi.com/current-affairs/sga/>

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