

TRACCIA 2

- 1) **Illustrare la sanatoria del Provvedimento Amministrativo invalido con particolare riferimento alla cosiddetta sanatoria processuale dei vizi procedurali;**
- 2) **Descrivere il ciclo di Bilancio e il principio della Programmazione;**
- 3) **Illustrare i contenuti della Swot Analysis;**
- 4) **Descrivere la differenza tra RAM e ROM;**
- 5) **Traduzione testo: Euclid to link the largest and smallest scales;**

Amh kahn

gabriele ydell

Euclid to link the largest and smallest scales

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Untangling the evolution of the universe, in particular the nature of dark energy and dark matter, is a central challenge of modern physics. An ambitious new mission from the European Space Agency (ESA) called Euclid is preparing to investigate the expansion history of the universe and the growth of cosmic structures over the last 10 billion years, covering the entire period over which dark energy is thought to have played a significant role in the accelerating expansion. The 2 tonne, 4.5 m tall and 3.1 m diameter probe is undergoing final tests in Cannes, France, after which it will be shipped to Cape Canaveral in Florida and inserted into the faring of a SpaceX Falcon 9 rocket, with launch scheduled for July.

Euclid, which was selected by ESA for implementation in 2012 with a budget of about €600 million, has four main objectives. The first is to investigate whether dark energy is real, or whether the apparent acceleration of the universe is caused by a breakdown of general relativity on the largest scales. Second, if dark energy is real, Euclid will investigate whether it is a constant energy spread across space or a new force of nature that evolves with the expansion of the universe. A third objective is to investigate the nature of dark matter, the mass of neutrinos and whether there exist other, so-far undetected fast-moving particle species, and a fourth is to investigate statistics and properties of the early universe that seeded large-scale structures. To meet these goals, the six-year Euclid mission will use a three-mirror system to direct light from up to a billion galaxies across more than a third of the sky towards a visual imager for photometry and a near-infrared spectrophotometer. Competitive survey: Euclid's main scientific objectives also align closely with CERN's physics challenges. "Galaxy surveys have been happening for decades and have grown in scale, but we didn't hear much about it because the CMB was, until now, more accurate," says theorist Marko Simonović of CERN. "With Euclid there will be a competitive survey that is big enough to be comparable to CMB data."