Dr Christiane Helling on a new centre that links humanities and science in search of the meaning of life

Throughout history, prevailing human-centric world views have been challenged repeatedly. However, with thousands of planets orbiting stars other than the Sun known by now, planet Earth still looks special.

The new Centre for Exoplanet Science at the University of St Andrews, inaugurated on 23 Jan 2017 and innovatively linking science and humanities, aims to resolve this apparent dilemma.

Researchers at the centre combine long-standing expertise from astronomy, geoscience, philosophy and social anthropology to explore the wider context of exoplanets, the processes that lead to their formation and to the emergence of life in the universe, and reflect about humanity’s role.

The centre is building bridges between the sciences and humanities, complementing each other to address big questions by exploring, investigating, and making sense of what we discover and what it implies. We invite everybody to join us on this journey.

The University of St Andrews has been playing a leading role in the detection and characterisation of planets that orbit stars other than the Sun, finding hot Jupiters with the Wide Angle Search For Planets (WASP), measuring planet masses and bulk densities of planets using the HARPS-North spectrograph, and the detection of the small cold world OGLE-2005-BLG-390Lb by gravitational microlensing. Researchers in the School of Physics & Astronomy and the Department of Earth and Environmental Sciences have strongly overlapping interests in studying natural processes within planetary environments.

St Andrews has pioneered the understanding of cloud formation in exoplanet atmospheres, where clouds are made of sparkling gemstones instead of water droplets, while geochemical efforts demonstrate how biological activity affects rocks.

The vast diversity of other worlds provides us with an unprecedented opportunity to learn more about planet Earth. Ultimately, the development of life on Earth is closely linked to its geology and formation history. Scientists are working with philosophers to shed light on fundamental questions about human existence, meaning and value: by looking into the universe, we can understand more about our place within it.

Let us remember that astronauts are the only humans to have seen Earth from Space, and all of them share one observation with us univocally: “Earth is fragile and we need to protect it, we need to take responsibility for life on Earth.”

http://www.st-andrews.ac.uk/exoplanets

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