

PHILOSOPH ____

PHILOSOPHY OF COSMOLOGY

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A number of challenging questions arise in contemporary cosmology, and philosophers can contribute constructively to answering them. Over the last century cosmologists have debated whether, for example, this field requires a distinctive methodology due to the unusual nature of its subject matter. In what sense is cosmology a "special case," in terms of its aims, the nature of cosmological theories, or the ability to establish theories empirically? New cosmological theories have also prompted new theories of how science works, with scientists revisiting basic questions about evidence and method. For example, "anthropic reasoning" is sometimes thought to require new rules for using evidence. Cosmology also has implications for various foundational problems in physics. For example, does modern cosmology support a neo-Boltzmannian account of the arrow of time? How should we understand "spacetime geometry" in alternative theories of gravitation, or in theories according to which spacetime "emerges"? This seminar will provide a survey of several central questions, based on a book manuscript by Smeenk and Weatherall, with some topics explored in more depth. These topics connect with different areas of philosophy: philosophy of physics, general issues in philosophy of science (confirmation theory, modelling), and metaphysics (modalities). The choice of questions will be dictated in part by the interest and background of seminar participants.