

HARVARD UNIVERSITY

FACULTY OF ARTS AND SCIENCES

SUMMER SCHOOL
Pre-College Program



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Cambridge, Massachusetts
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Niklas Hubertus Muennighoff

From Stars to Planets: Are We Alone in the Universe? ASTR P-17200 (33620)
July 24 - August 4, 2017

This course is an introduction to stars, planets, and life in the universe. Topics include the main properties of stars, their formation and evolution, the detection, characterization, and formation of planets and their potential to host life, both outside and in our solar system, and the search for extra-terrestrial intelligence. It conveys some of the main physical concepts such as gravity, electromagnetic radiation, and energy, which are relevant for the study of the universe and that are also used in everyday life. The course covers the techniques and telescopes, on the ground and in space, used by astronomers to investigate the universe, as well as the most recent discoveries in this field. One of the goals of the course is to give a sense of the main challenges, and attempts to solve them, in the search for extra-terrestrial life in the universe.

Niklas was one of the very best students of the course. He showed an excellent comprehension of the course material and full engagement with the course requirements and activities. He did an exceptionally good job with all the homework assignments during the course, showing a high-level mastery of the subject.

Niklas was one of the most active and participating students of the course, showing a high level of interest for Physics and Astronomy, especially on the subject of exo-planets, which also facilitated the discussion with the other students. In the most challenging questions I posed to the classroom, not only did he often give the correct answer, but also his comments were so enlightening that they facilitated the comprehension of many of his peers.

I am sure that if he continues with this level of commitment in this discipline, he will be able to achieve a successful career in Physics or Astronomy.

Overall, it was a pleasure to have Niklas in my class.

Luca Ricci
Postdoctoral Fellow, Rice University