Atmospheric Retrieval of Exoplanets 26min

Ryan MacDonald U of Cambridge Institute of Astronomy: detailed discussion on methods used to determine characteristics of exoplanets, focusing on atmospheric conditions.

<https://www.youtube.com/watch?v=ZnLg4YFMfDQ>

Professor Dave Explains - The Alpha Centauri System <https://www.youtube.com/watch?v=39VKA8vPXGg>

National geo exoplanets 101 4min

<https://www.youtube.com/watch?v=EUU0-ZpFoK4>

spacetime- The Treasures of Trappist-1 12min

<https://www.youtube.com/watch?v=h871oE5QkTU>

Astronomy #27 - Exoplanets: Crash Course 12min

<https://www.youtube.com/watch?v=7ATtD8x7vV0>

How the Universe Works - Exoplanets From Hell   78min

<https://www.youtube.com/watch?v=8lZNyAH2L6k>

How the Universe Works - Another Earth 104min

<https://www.youtube.com/watch?v=Z0oP8sDIoqs>

Finding Life Beyond Earth.. COSMIC JOURNEY 105min

<https://www.youtube.com/watch?v=OYXUWJ0_ncw&list=PL1JkYHSB01YDttKNDF_8Z8HhhhiAOKyWo&index=37>

EXOPLANETS size Comparison | 3D Animation 2min

<https://www.youtube.com/watch?v=ZmyI_NberMU>

Exoplanets Update with Professor Paul Delaney 78min

Presentation, January 15th, 2020 at the Ontario Science Centre.

<https://www.youtube.com/watch?v=HrQmHz6RS84>

How the Universe Works - The Search For A Second Earth 115min

<https://www.youtube.com/watch?v=tr2sNeiPErU>

Virtual Planetarium: Exploring Exoplanets 27min

Rochester Museum and Science Center April 1, 2020

<https://www.youtube.com/watch?v=duBfw7VEv6E>

The most habitable Exoplanets we know of 6min

<https://www.youtube.com/watch?v=HhLwEjiQFaY>

Wheel of Science - Exoplanets | Neil deGrasse Tyson 11min

<https://www.youtube.com/watch?v=sTndbwrN1mo>

Standing on Proxima b - Closest Exoplanet to the Earth 5min

<https://www.youtube.com/watch?v=ionwRI5T9V8>

4000 Exoplanets 1min

animated timeline of discovery, plotted on chart

<https://www.youtube.com/watch?v=aiFD_LBx2nM>

<https://www.youtube.com/watch?v=0zAo_CXPncY> ?/

Space Time  - Habitable Exoplanets Debunked! 10min

<https://www.youtube.com/watch?v=9Q_0vOdzw4Y>

Virtual Reality tour of six exoplanets 11min

<https://www.youtube.com/watch?v=qhLExhpXX0E>

Exoplanets: A Search for New Worlds 72min

Nestor Espinoza, Space Telescope Science Institute- March 3, 2020

<https://www.youtube.com/watch?v=hnAwLra9Kh8>

<https://www.youtube.com/watch?v=wwGeCfWc100>

<https://www.youtube.com/watch?v=OfOuBx6XW3Q>

<https://www.youtube.com/watch?v=_tmMKQ4kp_I>

Michio Kaku: Future of Humans, Aliens, Space Travel & Physics | Lex Fridman Podcast #45 60min

<https://www.youtube.com/watch?v=kD5yc1LQrpQ>

0:00 - Introduction

1:14 - Contact with Aliens in the 21st century

6:36 - Multiverse and Nirvana

9:46 - String Theory

11:07 - Einstein's God

15:01 - Would aliens hurt us?

17:34 - What would aliens look like?

22:13 - Brain-machine interfaces

27:35 - Existential risk from AI

30:22 - Digital immortality

34:02 - Biological immortality

37:42 - Does mortality give meaning?

43:42 - String theory

47:16 - Universe as a computer and a simulation

53:16 - First human on Mars

When will Alien Life be Found on Exoplanets? Ryan MacDonald 29min

<https://www.youtube.com/watch?v=0zAo_CXPncY>

0:00 - Introduction

1:15 - Worlds Beyond Earth

2:26 - Early Exoplanet Discoveries

4:10 - Transiting Exoplanets

5:26 - Transmission Spectroscopy

6:24 - Exoplanet Atmospheres

9:15 - The James Webb Space Telescope

10:33 - Signatures of Life on Earth

14:57 - Exoplanet Biosignatures

16:34 - The Small Star Opportunity

17:52 - Case Study: TRAPPIST-1

19:44 - When Stars Die

20:51 - White Dwarfs

22:27 - The Discovery of WD 1856b

24:04 - Earth-like Planets Around White dwarfs

25:10 - The White Dwarf Opportunity

<https://www.annualreviews.org/doi/abs/10.1146/annurev-astro-082214-122238>

<https://www.liebertpub.com/doi/10.1089/ast.2017.1729>

<https://www.astro.umd.edu/~miller/teaching/astr380f09/lecture14.pdf>