

Lecture Overview - Preliminary Time Plan

14.10.	Introduction, Particle Physics Refresher	<i>F. Simon</i>
21.10.	Introduction to Cosmology I	<i>B. Majorovits</i>
28.10.	Introduction to Cosmology II	<i>B. Majorovits</i>
04.11.	Particle Collisions at High Energy	<i>F. Simon</i>
11.11.	The Higgs Boson	<i>F. Simon</i>
18.11.	The Early Universe: Thermal Freeze-out of Particles	<i>B. Majorovits</i>
25.11.	The Universe as a High Energy Laboratory: BBN	<i>B. Majorovits</i>
02.12.	Particle Colliders	<i>F. Simon</i>
09.12.	The Universe as a High Energy Laboratory: CMB	<i>B. Majorovits</i>
16.12.	Primary cosmic rays and cosmic ray acceleration	<i>B. Majorovits</i>
Christmas Break		
13.01.	Detectors for Particle Colliders	<i>F. Simon</i>
20.01.	Ultra-high energy (UHE) cosmic rays and gamma astronomy	<i>B. Majorovits</i>
27.01.	Searching for New Physics at the Energy Frontier	<i>F. Simon</i>
03.02.	Physics beyond the Standard Model in the Early Universe	<i>B. Majorovits</i>



Journal Club: 1st session: 28. Oct. 2019 16:45

Have a look at the following publications about determination of the Hubble constant H_0

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| A) W. Freedman et al The Astrophys. J., 882:34 (29pp), 2019, | arxiv:1907.05922 |
| B) A. Riess et al., The Astrophys. Journal, 876:85 (13pp), 2019, | arxiv:1903.07603 |
| C) Planck Collaboration, | arxiv:1807.06209 |

- 1) What is the “distance ladder”
- 2) How to “climb up the distance ladder”?
- 3) What are Cepheids?
- 4) What is the red giant branch?
- 5) What are the main differences between determination of H_0 for the different publications?
- 6) What is the prospect to resolve the inconsistency?