

Midterm Exam No. 03 (Spring 2015)

PHYS 420: Electricity and Magnetism II

Date: 2015 Apr 15

1. **(20 points.)** This question is not directly related to what we covered in class, but you will, hopefully, appreciate the content. Kindly watch the (54 minute) video at

<http://www.uctv.tv/shows/The-World-as-a-Hologram-11140>,

which contains a lecture titled “The World as a Hologram” by Raphael Bousso. Summarize the lecture in about ten sentences using the following concepts: Heisenberg uncertainty principle, Blackhole horizon, Blackhole entropy, locality, and the holographic principle.