

Physics 212 – Problem Set # 3

(due Thursday, April 22)

1. Sethna, problem 5.1.

Note that Dyson's analysis is for a universe with zero cosmological constant. Currently, astrophysicists observe a positive cosmological constant and expansion of the universe growing exponentially with time. That is a disaster for this argument. However, some people (Witten is one) believe that the true cosmological constant is indeed zero, in a vacuum state that we will eventually reach in the far future.

2. Sethna, problem 5.2.
3. Sethna, problem 5.3.
4. Sethna, problem 5.6.
5. Sethna, problem 5.12.