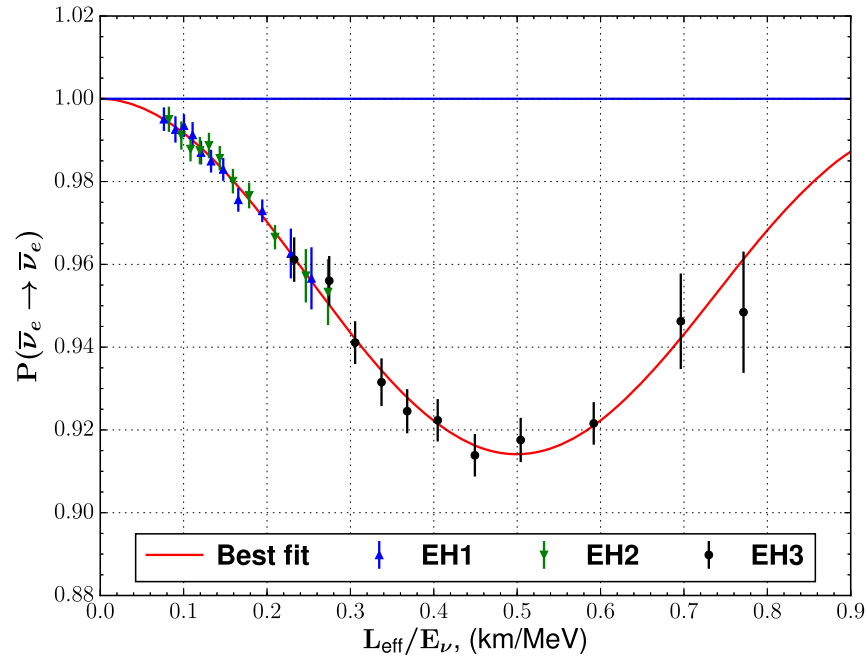


Due at 5pm to the Grader on Thursday 1 Oct 2020

(1) MQM3e Problem 2.4, but rather than using Figure 2.2 in the textbook, estimate the values of $\Delta m^2 c^4$ and θ from the following figure, taken from Phys.Rev. D 95 (2017) 072006:



(2) MQM3e Problem 2.9

(3) MQM3e Problem 2.12

(4) MQM3e Problem 2.16

(5) MQM3e Problem 2.22. If you use MATHEMATICA to solve this problem, you will find it useful to refer to MQM3e Appendix B.4 for the harmonic oscillator wave functions.