

UNIVERSITY OF MISSISSIPPI
Department of Physics and Astronomy
Electromagnetism II (Phys. 402) — Prof. Leo C. Stein — Spring 2020

Problem Set 9

Due: Sunday, May 3, 2020, by 5PM

As with research, feel free to collaborate and get help from each other! But the solutions you hand in must be your own work. All book problem numbers refer to the third edition of Griffiths, unless otherwise noted. I know we don't all have the same edition, so I also briefly describe the topic of the problem.

1. Griffiths 11.15 (Peak emission angle and ultrarelativistic limit)
2. Griffiths 11.31 (Radiation and reaction for a particle in hyperbolic motion)
3. Griffiths 12.5 (“Seeing” vs. “observing” a row of synchronized clocks)
4. Griffiths 12.7 (Observed lifetime of a muon)
5. Griffiths 12.26: Find the invariant product of the 4-velocity with itself, $\eta^\mu \eta_\mu$.