Abstract Submitted
for the OSS17 Meeting of
The American Physical Society

Developing an Opyical System for Laser Tattoo Removal ALEXANDRA MONTESANO, SILAS IFEANYI, PEIFANG TIAN, Physics Department, John Carroll University — Tattoo removal is a big market in the US. Doctors choose a laser with the peak wavelength matching the color of the tattoo; use it to locally heat the tattoo, breaking it into small pieces and then removing from the skin. However, tattoos of the same color may have very different absorption peaks, thus using visual inspection to determine the optimal wavelength sometimes fails to work. We developed an optical reflectance spectroscopic system to detect the peak absorption wavelength in 2015. Here, we reduced the footprint of the system making it portable and controllable with a smartphone. The absorption peaks obtained from the portable system are consistent with those from 2015. The next step is to test human subjects to see if real skin produces similar data to the phantoms.

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Date submitted: 14 Apr 2017 Electronic form version 1.4