

Abstract Submitted
for the TSF21 Meeting of
The American Physical Society

Data Analysis of Mask Effectiveness Against Atomized Particles with Python Detection Code¹ ERIC GARCIA, University of Texas at Arlington — The viral outbreak of the Virus Covid-19 took the world by surprise as no country, whether third nor first world, could keep up with the virus's rampant spread. Deployed by the Center of Disease Control (CDC), as well as other advanced countries in the world, masks were the beginning of the fight against Covid-19 before the access of vaccinations and a hope of herd immunity. In this experiment, a linear actuator was used to force a syringe filled with fluorescent fluid through an atomizer in order to test mask efficiency in a controlled environment to minimize unpredictable variables. Python code derived from an OpenCV procedure that can measure with correct dimensions and calculate accurate areas was used to find an exact quantifiable amount of atomized particles that have gotten past the CDC approved masks.

¹HEP University of Texas of Arlington

Eric Garcia
University of Texas at Arlington

Date submitted: 27 Sep 2021

Electronic form version 1.4