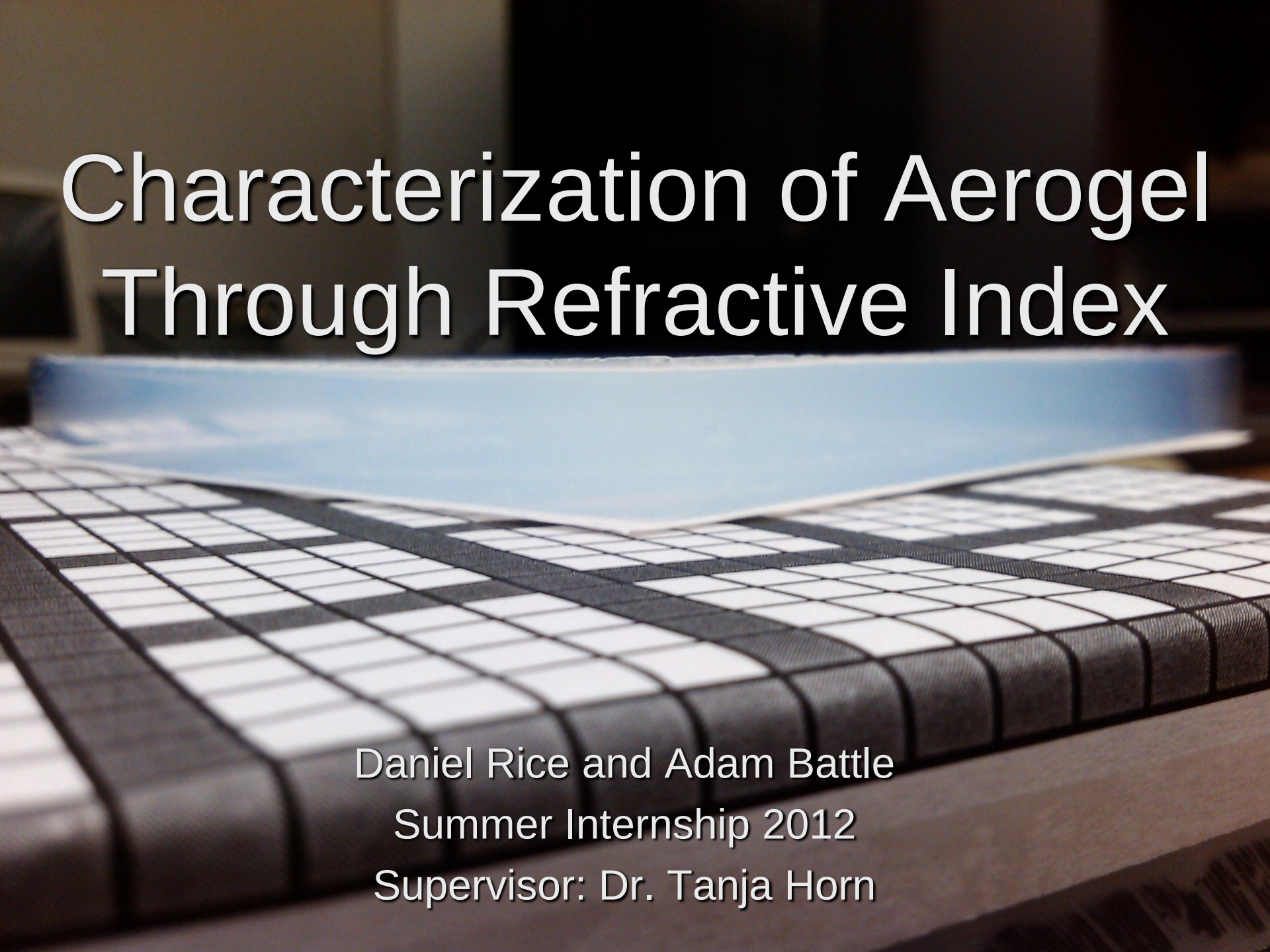
Characterization of Aerogel Through Refractive Index



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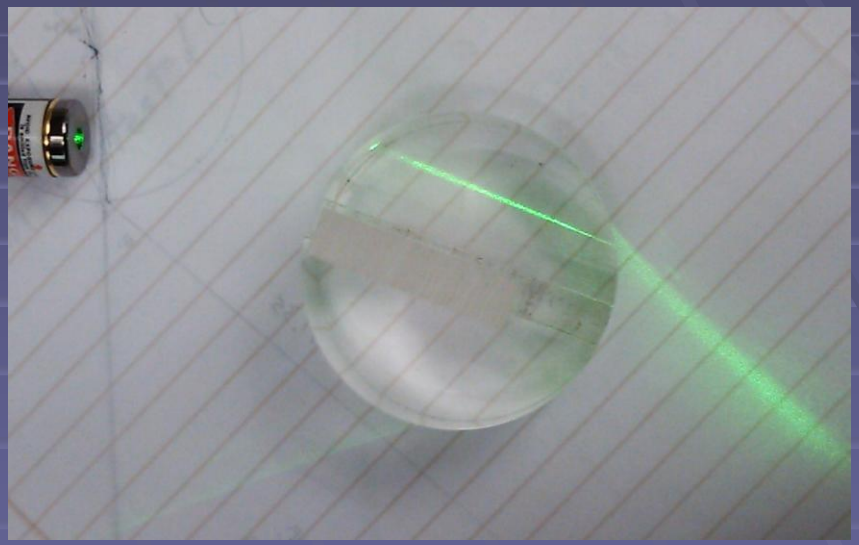
Objective

- Perfecting a method for handling aerogel and measuring its refractive index
- Measuring the transparency of aerogel
- Providing consistent data for aerogel's properties so that the Kaon Aerogel Detector may be built more precisely

Background: Index of Refraction

- The index of refraction is a property of a material which dictates how quickly light travels through that material



- Different indices indicate the amount of “bend”
- Distinguish between Kaons and Protons according to their momenta

Background: Aerogel

- Silica Aerogel is most common
- Supercritical drying to remove liquid from gel
- Very strong for its density; nevertheless, it is extremely fragile