Deep Impact

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Visual obstruction of the edge of the comet by the ejecta

- T = 0.001(s)
- T = 1.747(s)
- T = 3.615(s)
- T = 5.482(s)
Comparing light intensity before and after impact

$\frac{I}{I_0} = e^{-\tau}$

$\tau = \text{Optical Depth}$
Graph of the results: Line A

- Fit 1
- Fit 2

I/I_0 vs. time (s)
Graph of the results: Line D
Conclusions

The data will be used to determine properties of the cometary nucleus:

- Determine stratification in the nucleus
- Resolve where the ice lies
  - Use reflectivity derived from brightness and optical depth

Current research indicates:

- Layered nucleus evidenced by appearance of rayed ejecta (Schultz et al., 2005) (A’Hearn et al., 2005)
- The water ice lies within the first few centimeters to meters below the surface (Groussin et al., 2007)
Works Cited

