Name(s)	Project Number
Bruno Maranhao	**S0710**

Project Title

The Signal Attenuation Coefficient of Fiber Optic Cable

Abstract

Objectives/Goals
To calculate the signal attenuation coefficient of a particular fiber optic cable, and demonstrate why it is that red light of a wavelength between 650 and 660 nm is used to transmit signals along industrial fiber optic networks.

Methods/Materials
Using: one, two, three, and five meter Industrial Fiber Optics Super Eska SH4001 cable I calculated the attenuation coefficient for three different wavelengths emitted from a green, red, and infrared light emitting diode (LED).

Results
The infrared wavelength signal showed the greatest attenuation, while the green wavelength signal showed the least attenuation. However, the red wavelength signal had the highest optical power at the signal termination.

Conclusions/Discussion
When transmitting signals across large distance a red light of wavelength between 650 and 660 nm is most frequently used because though red light may not have the lowest attenuation coefficient, it has a significantly greater launch power and hence greater optical power at the signal's termination.

Summary Statement
My project deals with calculating the signal attenuation coeffiecient for a particular fiber optic cable.

Help Received
I would like to thank my mother for helping me put my project backboard together, and my father for financially supporting my project.