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Development of light detector for Michelson Interferometer experiment Instrument

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We developed a supplement instrument for Michelson Interferometer experiment instrument. In this experiment, we have to count numbers of fringes to determine wavelength of He-Ne laser. Without this extra instrument, the counting is hard and easy to make error because the fringes are very small. This instrument serves as light counting device. It composes of light sensor, comparable circuit, microcontroller and LCD panel. This device is designed to count only high intensity light and specific wavelength (600-1,000 nm). When there is a constructive fringe pass the light sensor, this device will count the fringes. We found that using this device can improve experiment results compared to using only by eyes. We calculated the wavelength of He-Ne laser to be 669.2 nm which was only 0.18% error. This device is a part of interactive multimedia for advance physics lab. This research was supported by Rajamangala University of Technology Thanyaburi Research Fund.

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