

Bubble signal

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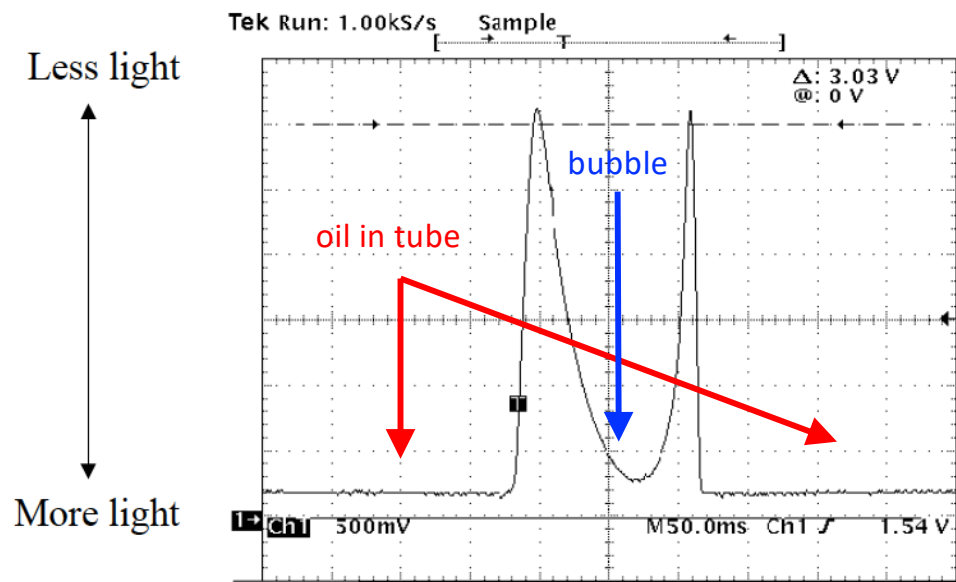
LED - photo sensor check

- Leo @ B2SW: "LED will emit red light"
- When I powered up the LEDs in the lab there was no visible light coming from the LEDs
- Leo after B2SW: "Every [LED – photosensor] model that is presently on the market has an infrared LED - this seems to be the standard wavelength (maybe because the sensor responds best at this wavelength?)."

Bubble signal shape

- Leo send an “ancient graph” that he found that shows what we can expect to see when a bubble passes through the photogate
- Note, mineral oil is transparent to IR light!
- The plastic rod we were planning to use to test the (constant) photo sensor output levels may also be transparent to IR. If so, the test won't work.
- We would need an IR absorbing rod (e.g. aluminum) or look for transient edges of bubbles with a scope

Digital Bubblers: Scope Trace



As the edges of the bubble pass through the photogates, they refract the light, causing a decrease in intensity.