

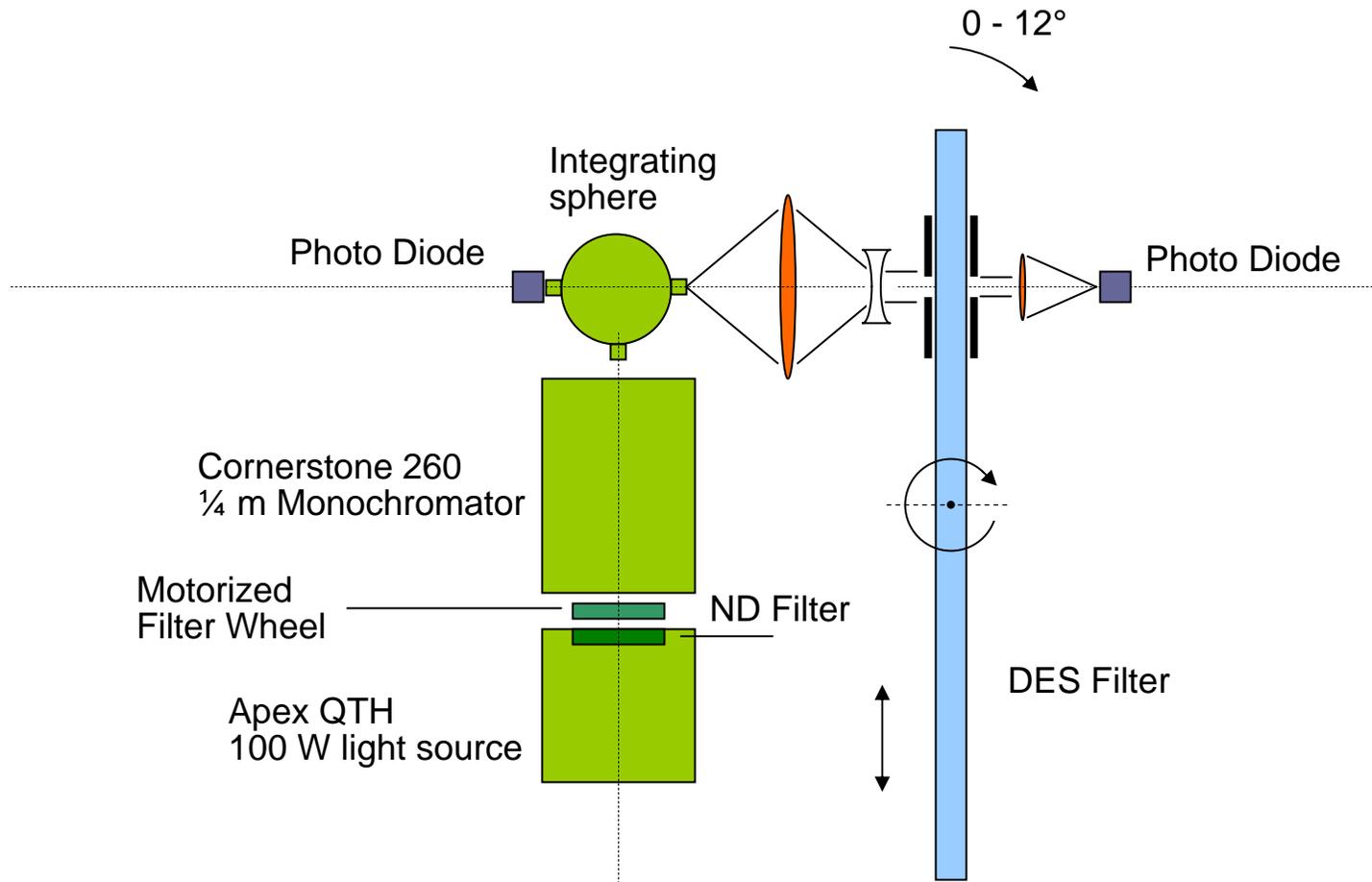
# Filter Measurements, Status and Plans

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**DES Filter Meeting**  
**July 20, 2007**

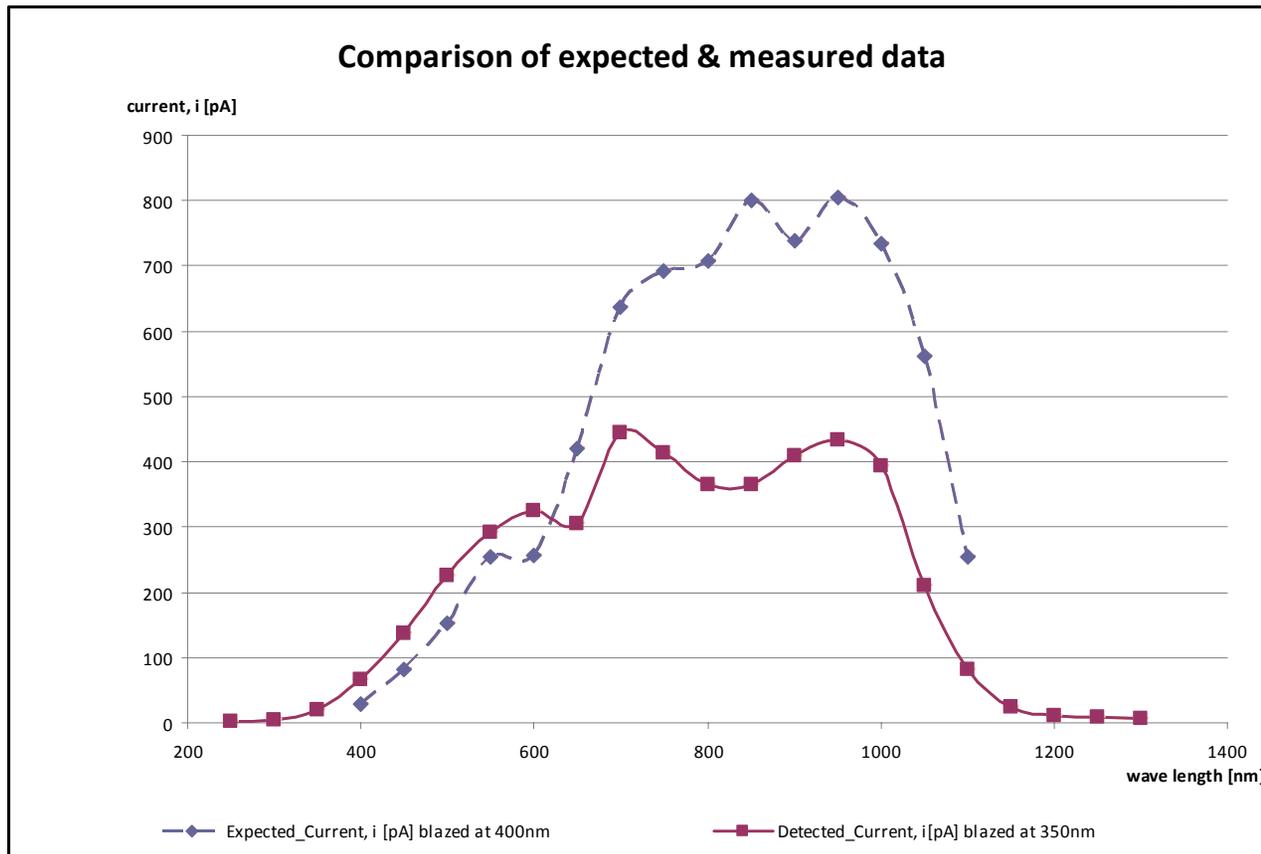
# Status of Filter Test Setup

- Light source, monochromator, integrating sphere, 2 Si Photodiodes, picoammeters up and running.
- With light source off and room lights on, light leaks are at the  $\sim 1$  nA level. With good light tight procedures, can achieve  $\sim 0.5$  pA.
- LabVIEW interface to monochromator complete and working.
- LabVIEW interface to picoammeters in progress
- Current in PD attached to currently hundreds of pA. See graph.
- Wrong light source received! Wanted F/4 light source focused on monochromator input slit to match F/3.7 monochromator input. Received collimated light source instead. Roughly factor of  $\sim 400$  less light. Correct light source to be delivered August 20.
- Collimating lens system under design, now that we know we will have sufficient light.

# Schematic Drawing of Final DES Filter Test Setup



# First Monochromator Scan (w/collimated light source)



- Expected light calculation is crude (many uncertainties and assumptions) and monochromator throughput for grating blazed at 400 nm, not 350 nm. Uncertainty in how collimated light source fills the aperture at the input slit.
- Still, factor of two isn't bad and gives us confidence that the final setup will work well. Ultimately this curve is measured by the PD on the integrating sphere.