Sequence of Events ; One Cycle

1. Rotating Mirror requests laser fire.

2. Laser fires. Sensed by fast photodiode within laser box.

3. After short (10's of ns) delay, APD array gated (biased) on.

4. Calibration photons strike APD array (returning from telescope).

5. APD gate shuts down a fixed (~100ns) time after turning on.

6. A logic pulse says: "The next clock pulse is the one to pay attention to."

7. About 25 ms later, with the lunar photons inbound (from a much earlier pulse), the APD gate opens for ~100ns.

8. Lunar photons strike APD array

9. APD gate closes, marking another "special" time

10. Another ~25ms elapses before the rotating mirror demands another fire.

Our goal is to:

A) Measure time interval between events 4&6, and 8&9 to high precision

B) Count all intervening clock pulses

C) Reference measurements to event 2

D) Dynamically determine appropriate time for event 7

E) Collect relevant data at ~25 ms intervals