

PRAD HYCAL repair and testing procedure

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1 Mechanical tests and repair of the optical fibers

Always wear nitrile gloves when working on the optical fiber testing and repair. Always wear safety glasses or goggles when using Quartz Fiber Cutter. Always wear safety glasses or goggles when working with a UV curing machine.

1. Open the HYCAL front side and check the fiber entrance to see which ones need to be repaired. For this, we need to check with our hand and move the fiber to check if the fiber is loose or already removed from the plexiglass retainer.
2. Record all the fibers that need to be repaired.
3. Remove plexiglass retainers loosely attached to the PMTs with light manual pressure.
4. If we need to remove fibers from the plexiglass retainers, we will need to cut them using Quartz Fiber Cutter to ensure a uniform cut.
5. Clean the surface if there is residual glue on the surface.
6. Insert fibers to new plexiglass retainer.
7. Glue it using UV-cured glue.
8. Let the glue set
9. Cover the plexiglass with black tape/cover.
10. Note which repairs have been made
11. Close the HyCal front.