

Message ID: 7 Entry time: **Fri Jul 8 11:53:02 2005**

Author:	Jeff and Yuri
Type:	Routine
Category:	
Subject:	Glue Day 1 and 2

7.7.05: We are testing two different types of epoxy, RTV 157(gray) and RTV 103 (black). This epoxy is going to be used to attach the collar to the PMT. We are looking for an epoxy that is as strong as possible, but can still be removed if necessary. We tested the epoxy in different amounts on four PMTs. We did two PMTs for each glue type. We also tested a small and a large bead size for each type of glue. We did a small and large beaded black and a small and large beaded gray, and let them dry for 24 hours. We applied the glue to the inside of the collar and then put more glue around the outside edge of the collar after putting the collar onto the PMT.

Once again we are using four PMTs. Two for each type of glue with different bead size for each type of glue. For our first PMT, we used a large amount of black glue(same as large amount last time) because we wanted to test this once again. For our second PMT we tested an even larger amount of black glue. For our third PMT we retested using a small amount of gray glue and for our fourth PMT we retested using a large amount of gray glue because it did not cure in the last experiment. This time we put the glue on the PMT instead of the collar, because this cut down on the amount of glue that was squeezed onto the glass of the PMT. We hypothesize that a large amount of black glue will have the same effect as a small amount of gray glue.

Message ID: 11 Entry time: **Mon Jul 11 14:07:25 2005**

Author:	Yuri
Type:	Routine
Category:	General
Subject:	Glue Testing Day 3

Today, I obtained the results from the PMTs we glued last time and glued more PMTs. The PMT with a medium amount of black glue had the most promising results. The glue on the outside had to be scraped off and a screwdriver had to be inserted between the collar and the PMT. After the screwdriver was used to loosen the bonds, the collar was taken off quite easily. The PMT with a large amount of black glue was easy to separate from the collar after the outside bead was scraped off. The collar on the PMT with a small amount of gray glue was pulled off by Greg without any scraping of outside glue. Finally, the PMT with a medium amount of gray glue was separated easily after the outside glue was scraped off.

For tomorrow, I glued 4 PMTs. Two of the PMTs have a medium amount of black glue

to make sure that these results are consistent. A third PMT has a large amount of black glue and the fourth has a medium amount of gray glue. I hypothesize that the medium amount of black glue will again do the best, but the medium amount of gray and the large amount of black will also hold the PMT with the collar sufficiently.

Message ID: 18 Entry time: Tue Jul 12 14:46:35 2005

Author: Yuri and Jeff

Type: Routine

Category:

Subject: Glue Testing Day 4

Today we tested the results from the PMT's glued yesterday. The PMT with a large amount of black glue was easy to take off when the outside glue was scraped off. Both PMT's with a medium amount of black glue were easy to take off with bare hands even with the outside glue still on. The PMT with a medium amount of gray glue was the hardest to get off. The outside glue had to be scraped off and the screwdriver was used to pry in between the collar and the PMT, then Greg was able to take it off. We are going to use a large amount of black glue because the black glue will serve the purpose and it has proven to have the most consistent results.