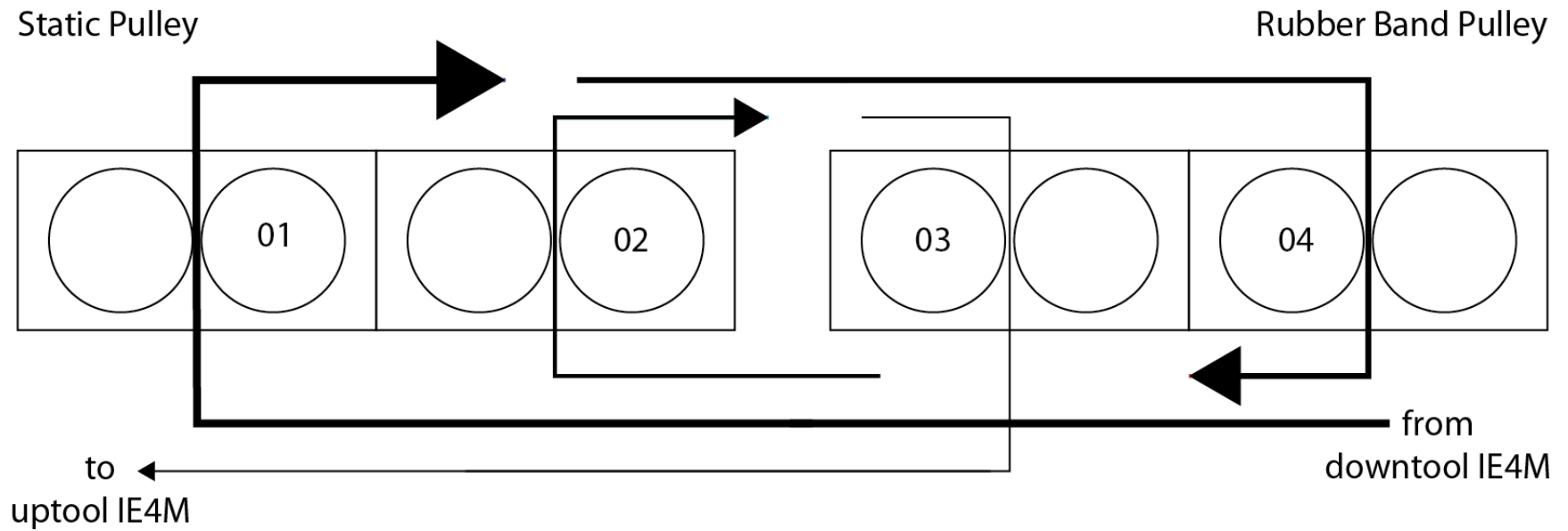


## Appendix 1. Stringing the tether into the pulley.

1. Begin with:
  - a. Two fully assembled pulleys lying flat on the ground, nose-to-nose with the downtool pulley (with hose barb) on the right.
  - b. Neatly coiled tether lying off to the side with approximately 10 feet lying in front of you.
2. Tools you will need are:
  - a. 3/32", 1/8", and 5/32" Allen wrenches
    - i. Five-slot guide clamp set screws, pulley cover screws, and pulley wheel screws respectively
  - b. 7/16" crescent wrench
3. Use the following diagram (Figs 2 and 3) to string the two pulleys. String the cable through all four sets of pulleys before attempting to string the cable through the 5-slot guide.
  - a. From downtool IE4M (T2P) to Pulley 01
  - b. Pulley 01 to Pulley 04
  - c. Pulley 04 to Pulley 02
  - d. Pulley 02 to Pulley 03
  - e. Pulley 03 to uptool IE4M (ERS)
4. Once the tether is passed through all the pulleys, grasp the outside of the pulleys (holding the cables one either end) and pull taught. You will see the tether lines naturally group together in between the pulleys into one group of three and one group of two (Fig 3).



\*Numbers refer to the pulley positions referenced in the text\*

Figure 1. Tether pulley assembly schematic. Pulley wheels are actually slightly offset to avoid cable friction.

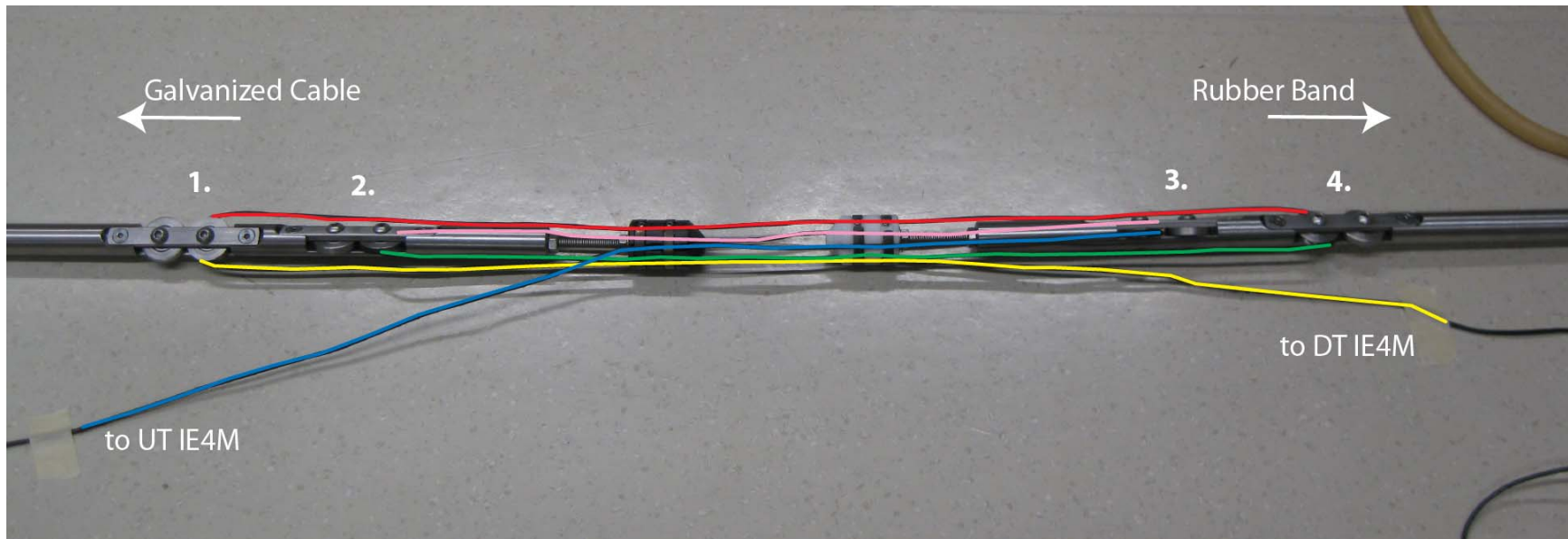
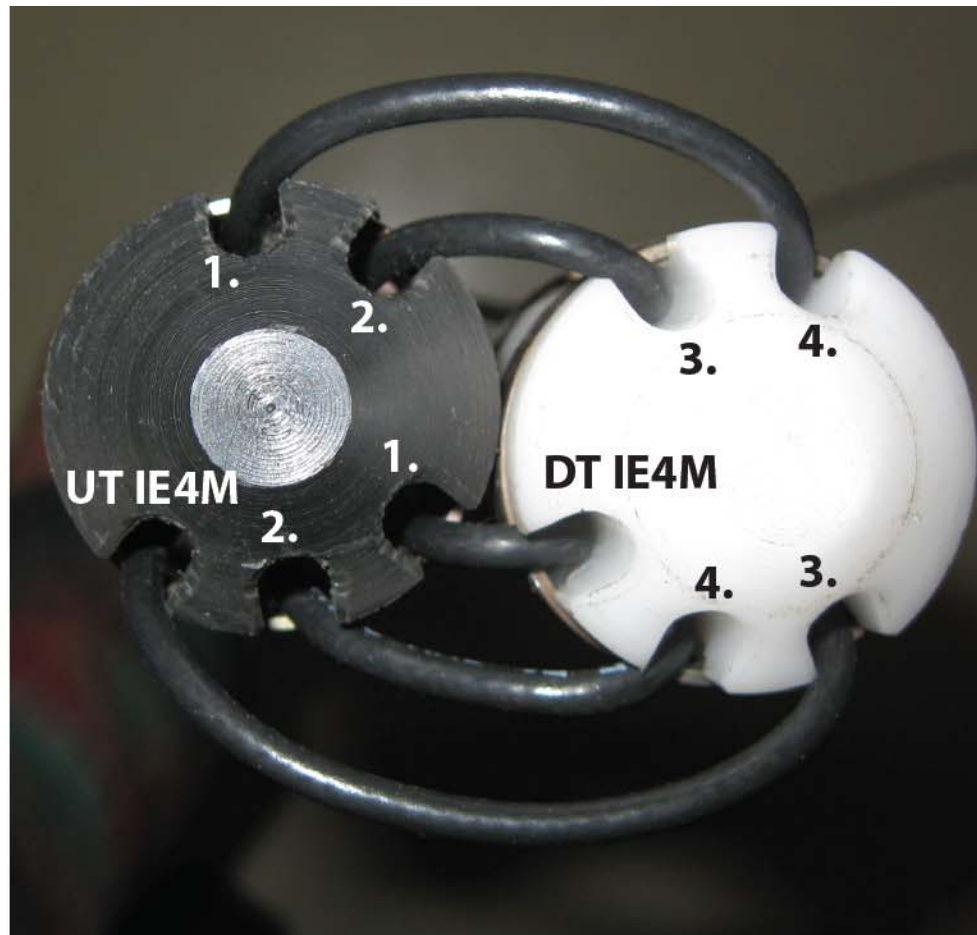


Figure 2. Schematic of tether assembly pulleys. The downtool (DT) IE4M passes through bearing 1, to bearing 4, to bearing 2, to bearing 3, to uptool (UT) IE4M.

Galvanized Cable  
(upper pulley)



Rubber Band  
(lower pulley)

Figure 3. Tether passing through Delrin five-slot guide. Numbers refer to the pulley/bearing number, UT and DT refer to uptool and downtool respectively.