

## PROTON THE DUCK RETURNS

Contributed by Martin Mugerian

Proton the Duck came back to her favorite accelerator late this June to hatch nine more eggs! Ducks lay eggs from March to July and sometimes have two batches in one year. The mom can lose up to half her weight during hatching, so Proton has had an interesting spring.

Proton and her ducklings (Maverick, Goose, Ice Man, Phoenix, Payback, Hangman, Bob, Jester, and Viper) were assisted out of the courtyard north of the Atrium and down to the river bank by wingmen Frank Cuccia and Luc Swanson. They used the sidewalks to arrive safely at the Red Cedar.

## REA UPDATE

Contributed by Samuel Nash and Antonio Villari

The ReAccelerator is currently in a maintenance shutdown period. The main goal of this shutdown is the cryogenic warmup of the Linac cryomodules, cryogenic transfer lines, and 900 W cryoplant, for the purpose of cryoplant maintenance. This began several weeks ago, and all superconducting magnets and SRF cavities have now reached room temperature. In parallel, several maintenance and upgrade activities are in progress or planned for the ReA beamlines. Currently, the alignment group is completing measurements of the alignment monuments and fiducials in the ReA3 platform area, with the end goal of verifying the alignment of the low energy beam transport devices which haven't been measured since a beamline reconfiguration in September 2014. Once the alignment network in this area is re-validated, the alignment of RFQ electrode/rod structure is also planned for re-verification.

## EXTENSION CORD SAFETY

Contributed by Becky DeZess

Improper extension cord use continues to be an issue found during routine inspections performed by the



**Figure 1: Proton the Duck and her babies were escorted from the laboratory courtyard to the Red Cedar River by Frank Cuccia and Luc Swanson.**



**Figure 2: A closeup of Proton and her nine ducklings, the second group this year!**

Safety Office. Extension cords can contribute to several hazards, include tripping hazards and fire hazards. Tripping hazards are caused by the extension cords being run across walkways/aisles and fire hazards are due to short circuits, overloading, damage and/or misuse of extension cords. Below are guidelines for the proper use of extension cords to help prevent such hazards:

- Use extension cords on a temporary basis only (less than 90 days). Do not use extension cords in place of permanent wiring.
- Do not daisy chain extension cords together; if a longer cord is needed, get another extension cord that is long enough for the equipment to be safely plugged in.

- Do not daisy chain extension cords into surge protectors or surge protector into surge protector. If you need a longer cord, find one that is long enough for the equipment to be plugged in.
- Do not remove the prongs of an electrical plug. If plug prongs are missing, loose, or bent, replace the entire plug or tag and remove it from service.
- Do not use an adapter or extension cord to defeat a standard grounding device. Place three-prong plugs only in three-prong outlets; do not alter them to fit in a two-prong outlet.
- Use extension cords that are the correct size or rating for the equipment used. The diameter of the extension cord should be the same or greater than the cord of the equipment in use.
- When using a cord outside, make sure it is rated for outdoor use.
- Do not run cords above ceiling tiles or through walls.
- Do not nail or staple electrical cords to walls or baseboards.
- Insert plugs fully so that no part of the prongs is exposed when the extension cord is in use.
- Keep electrical cords away from areas where they may be pinched and areas where they may pose a tripping or fire hazard - doorways, walkways, or under carpet.
- Never unplug an extension cord by pulling on the cord - pull on the plug.

- Inspect the cord for cut or damaged insulation prior to use. Discard damaged cords, cords that become hot, or cords with exposed wiring.
- Ensure that all extension cords are certified by a Nationally Recognized Testing Laboratory (NRTL), such as Underwriters Laboratories (UL).

## SUMMER REU STUDENTS VISIT

Students attending the Physics Research Experience for Undergraduates (REU) at MSU and the University of Notre Dame visited FRIB this week for a laboratory tour followed by ice cream. The Physics departments at both schools have a long-standing tradition to bring REUs to visit each other's campuses. The REU students in MSU Physics traveled to Notre Dame two weeks ago for tours and a "Physics Olympics" competition.

## ANNOUNCEMENT

Zach Constan will finish his temporary job as editor of the Greensheet after the publication of this issue. The FRIB Communications group will take over the Greensheet and make a few changes. As the transition happens there will be a hiatus before the next Greensheet is published by a new editor.



**Figure 2: Students and mentors from the summer Research Experience for Undergraduates (REU) at the MSU and University of Notre Dame physics departments.**

[The Greensheet archive is available here](#)