

X-Labs finally had a productive project build day! Today several X-Labs members met at the trailer to work on the Y1 Weight Release System. We started at around 1p.m. and finished at 6:30p.m. The build WAS A SUCCESS! We now have a prototype weight release system for testing purposes that works surprisingly well.

The whole design is meant to release weights that carry the Y1 sensor payload to the bottom of the ocean so that the sensor payload can float back up to the surface for recovery. This weight release system is a huge design challenge because the ocean floor has the consistency of pudding; this means that there is very little difference between the bottom of the ocean and the whole trip down to the bottom. We needed a way to release the weights without electronics, explosives, heat, or chemicals because of problems with huge pressures and extreme temperatures. The goal was to make the system ridiculously simple and foolproof. We came up with a wing design that uses the force of the water to hold the weights to the payload during the trip down and then release the weights once the payload has reached the bottom and the force of the water is gone.

We will be using this prototype for initial testing in the pool. The X-Labs meeting next Friday may be held at a USF pool for the first tests. We will post updates if this becomes a reality. There are also other designs for the weight release system that we may build and test that would allow the whole weight release system to return to the surface with the sensor payload. Below is a video of the system and some pictures of the build process.

Besides work, the day did include a fun trip to Harbor Freight where we had plunger fights and decided that Harbor Freight is in fact the perfect place to be when the impending zombie apocalypse arrives. Pizza was also provided by Alex for lunch.



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Written by Administrator

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Completed this good work! Hope today (Especially Steven for buying everything needed!).