

Introduction to Argo Transcription

So let's talk about the ARGO floats. By the way, with these wave gliders, in case you're interested—I'm not going to show this now, I don't have time—there's a really interesting discussion by the principal investigator, the person who does the wave gliders. He talks about what they are doing with them and how they work. It's really good. I strongly encourage you to take a look at it.

Anyway, now let's talk about the ARGO floats. As I said, ARGO floats are somewhat like drifters in that they don't have their own power; they don't move by themselves anywhere; they just drift along wherever they are going. ARGO is a giant global program of which we're a little teeny blip. There's about 3000 ARGO floats in the world's oceans. This is an ARGO float here. It's got a radio antenna to communicate with the satellite. It's got a salinity and temperature sensor right here. It's got all of the electronics inside of it, plus the baffle to allow it to become more or less buoyant, to come up to the surface and go back down.

As I said there's over about 3000 of these floats in the ocean at any one time. It's a giant international program that we're just a small part. You can see the little cluster of floats that we deployed right here. The ARGO program is really revolutionizing our view of the ocean, and how the ocean works, and our ability to measure it. To see the ocean at this larger scale and at this frequency is really amazing. Here at SPURS we're looking at a small part of it.

This is a schematic of how ARGO floats work. They spend about 9 days drifting around at about 1000 meters depth. Then they descend down to 2000 meters depth, then rise to the surface and take a profile. They send their information up to a satellite, and then drift around for a few hours until they've made sure their information has been recorded. Then they go back down to a 1000 meters. The ARGO floats spend most of their time at 1000 meters depth. They're really following the currents in the water at that depth in the ocean. It's pretty deep.

In SPURS we deployed about 16 of these things—a couple more than that, but basically 16. What you can see here, the red markers show the final position of a particular float as of 14 January, so a couple of months ago. You can see that the tracks that the floats took over time. Floats are a lot like drifters in that they have these really interesting tracks like this one here. It seems to have gone in practically one complete circle, whereas all of these others sort of did this strange checkmark type path there similar to these.