

Sea Glider Data Visualization Transcription

This is the path that the Seaglider would take. It communicates with the satellite, and the satellite will allow it to communicate with scientists on land. Then the scientists on land would give it a command, and it would dive down to however deep they decided to send it. In the case of the SPURS experiment it was about a 1000 meters depth. So we would go down to about a 1000 meters depth, or maybe a little more than half a mile, and then it would come right back up. It would do this undulating path. It would come up, it would go down, it would come up in a different place, and go down and come up, and do an undulating path to get itself from point A to point B.

This is the track of the Seagliders over time after they were deployed. The Seagliders worked very well. There was an issue with Seaglider # 189. It apparently got some fouling involved. It stopped being able to be controlled very well. They had to send it to this place right here. That's the last place where it was. It's there sitting and waiting for the science group to come in March to come get it and pull it out. Hopefully they can fix whatever is wrong with it, and put it back in again.

This is some of the kind of information that we get from the Seaglider. We get a look at the deep ocean at least down to 1000 meters depth. You can see from the Seaglider survey that the deep ocean doesn't change a whole lot during the course of the few months that it was out there sampling. It changes a little bit, but not very much.

The difference between this figure and the previous one is that the previous one goes down to about a 1000 meters depth; this figure goes down to only 200 meters depth. It's the same information, but it's only the surface part of it. What's colored here is the density of the water. As the fall and the winter progress the water gets more and more dense. So it's very light here. It gets denser and denser as time goes on. That's mainly because the temperature of the water is decreasing. The water as it gets colder gets denser. We also know that the salinity of the water was decreasing. The decrease in salinity tends to make the water less dense.

Obviously the effected temperature over time—over these few months—was outweighing the effective salinity, at least in terms of this density. You can also see the mixed layer that I talked about earlier getting deeper and deeper from fall into winter. Now that winter is coming along it's probably going to get shallower back again some time about the time when we get out there with the ship again.