

# Aquarius Sees the Gulf of Mexico Transcription

So this is pretty much the state of where we are in terms of the average salinity field. What we can also do is look at some particular details in terms of how salinity is changing from month to month. So we have four monthly average data sets to show you. Let's open the September one. Here we took all of the data from the month of September. If you open that image again you see something pretty similar to what I showed you before. Move your cursor up to the Gulf of Mexico, and you see that there is pretty high salinity in the Gulf of Mexico except right off of the Florida panhandle there is a little blue zone. It was actually more apparent during the beginning of September than later on in the month.

If you go to the next figure we're going to show you a blow-up of that area; we're going to show you two different time periods. One is going to be the first week of data that we collected from August 28 to September 3<sup>rd</sup>. You see a strong blue signature there just to the east of the Mississippi River delta. Then if you go down to the next image below sometime in late October that low salinity signature is gone.

We're quite certain that that is a real feature of the ocean, and it's related to a couple of things. Right at the early part of September Hurricane Lee crossed over the Gulf of Mexico and right up the Mississippi valley. It followed almost the same trajectory Hurricane Katrina did a few years ago, but it was a much less intense storm. But it still left a lot of rainfall falling on southern Louisiana and Alabama and Mississippi and so forth, and also on the surface of the water. You see that signature there in that low salinity. Within a few weeks that salinity signature was gone.

We can also look at some river discharge data, and we have a chart there to show some of that. This is the data as it changes over time. The blue fuzzy line that you see there are actual observations of the river discharge of the Mississippi River. You can see the time where Tropical Storm Lee crossed over the coastline, and just after that you see a bump in the discharge rate, the high discharge. This is clearly what we see in the signature of the Aquarius data. So already now we're able to look at some very important features of the coastal ocean that we didn't expect to see when we launched Aquarius. This is a very positive development, and I'm sure we're going to be able to look at more events like this as time goes on.