

# Aquarius/SAC-D Salinity Data Visualization Transcription

Aquarius, after the satellite is out of the rocket and the antenna deployed, the radiometers sweep out these measurements over the earth in about a 300 km wide swath. You can see that it's flying on the separation between night and day looking at the dark side. Every 90 minutes it makes its way around the planet, and we knit all these swaths together over 7 days to make one map of the surface salinity of the ocean. Then we further go forward to take all these one week maps and average 4 of them together to get a monthly view. All this we use a number of observations to try and average out noise. There is a lot of noise because this a very delicate measurement. There are many sources of the l-band microwave radiation including many hot spots in the galaxy. We have to take a map of the galaxy off the surface of the ocean.

We're going to see a movie of our first year of Aquarius data from around the globe. Go ahead and play it. You'll see the high salinity in the subtropical gyres. You could see the Amazon there. We've already had publications on the tropical instability waves in the tropical Pacific Ocean. You can see this big fresh and salt difference in the northern Indian Ocean, the high salinity of the Mediterranean Sea going by there. Maybe we can play it one more time there Annette.

Oceanographers can watch this stuff over and over again. You zero in on certain places and see the variations over time. It's magical because you know just a few decades ago oceanographer's view of the ocean circulation was very static. Not much was changing out there because the whole view of the planet was developed over a 100 years. You average that altogether. Having a map made in a week instead of 100 years gives you a lot different view of the ocean.