Analysis of the data from the 11/07.
We modulated at the FSR (13MHz) and FSR-δ and 2δ.

In the bottom right a Fourier transform of the windowed signal in the bottom left is shown.
The first large peak is the first bath mode after the hybridized mode. It has a distance from the second bath mode of 12.83MHz.
The second and third peaks have a distance of 12.94MHz, hence the first bath mode also hybridizes with the small loop! In the second half of the trace
up top we can see that the first bath mode is broader the n the second and so on, corroborating this interpretation. From there we can also surmise that the decay rate
of the hybridized mode is about 3.5 times that of the bath modes. Using this, we can estimate the amplitude of the hybridized mode and its width, which we then plot as
a lorentzian. (If the bath mode was excited to the same degree as the third bath mode which is unlikely.)

The width of the thrid peak is 0.18MHz. The estimated decay rate of the hybridized mode is 0.90MHz.