

**Subject:** Today's Class notes 5/13  
**From:** Erich Herzig <eherzig@uw.edu>  
**Date:** 5/13/20, 17:05  
**To:** Ed Waddington <edw@uw.edu>

Hi Ed,

Here is my summary for today's class:

First we reviewed the issues arising from advecting a signal with too coarse a separation between points.

Then we looked at how some of this might apply to SH earthquake waves. First we went over the concepts behind a model of SH waves. Then, we looked at a Matlab code that modelled them in different scenarios. For example, we saw how quickly things got messy with a diagonal change in transmissivity or the inclusion of a fluid inclusion.

As we looked at more complex scenarios, we saw the effect of "false diffusion". This is caused by flow going at an angle to the grid orientation causing them to go in wavy paths. This wavy motion artificially diffuses the flow as it travels though and can be reduced by decreasing the grid spacing.

Best,

Erich