Non-obvious controls:

- Change the amplitudes by dragging the amplitude bar, clicking where you want it to go, or typing a number into the text box above each bar. Use tab or shift-tab to move between text boxes.
- The **Explanation** in the **Help** menu describes the kind of optical pulse shaping experiment that this simulation models.
- The **Cheat** option in the **Help** menu shows the amplitudes needed to break the molecule apart.
- If you are doing a lecture demonstration, set your screen resolution to 1024x768 so the simulation will fill the screen and be seen easily.

Important modeling notes / simplifications:

- Most real optical pulse shaping experiments involve manipulation of the phase as well as the **amplitude**. For simplicity, we neglect the phase.
- The shapes of the molecules and the pulses needed to break them apart do not correspond to real molecules or pulses.

Insights into student use / thinking:

- This simulation will probably require more guidance than most PhET simulations for students to understand the physics behind it.

Suggestions for sim use:

- For tips on using PhET sims with your students see: **Guidelines for Inquiry Contributions** and **Using PhET Sims**
- The simulations have been used successfully with homework, lectures, in-class activities, or lab activities. Use them for introduction to concepts, learning new concepts, reinforcement of concepts, as visual aids for interactive demonstrations, or with in-class clicker questions. To read more, see **Teaching Physics using PhET Simulations**
- For activities and lesson plans written by the PhET team and other teachers, see: **Teacher Ideas & Activities**
- This simulation is designed to be used as a demo for outreach projects explaining optical pulse shaping research to the general public.