1123-35-256   **Gabriela Jaramillo***, gjaramillo@math.arizona.edu, and **Shankar Venkataramani**, shankar@math.arizona.edu. *2-D array of oscillators with nonlocal coupling.* Preliminary report.

We study a toy model describing a 2-d array of oscillators with nonlocal diffusive coupling, and with a nonlocal nonlinearity. The assumptions on the type of coupling and nonlinearity help draw comparisons to an eikonal equation which models the phase of oscillatory chemical reactions. Guided by the results obtained for the eikonal equation and using the Fredholm properties of the linearization we show that a small patch of oscillators, modeled here as a localized perturbation, can lead to either target patterns or contact defects depending on the sign of the perturbation. (Received August 28, 2016)