

Figure 1: Comparison of wavefield nodal lines in a rectangular prism cavity. The figure is divided into two main sections for time delays  $t = 50$  ms and  $t = 150$  ms. Each section contains four subplots arranged in a 2x2 grid. The top row shows the wavefield for a point source in an air-filled, elastic whole space. The bottom row shows the wavefield for a point source centered in an air-filled, rectangular prism cavity (half\_length=48 m). The left column shows the wavefield for a point source in an air-filled, vertical ellipsoid cavity (a=48 m, x=150m, w=150m). The right column shows the wavefield for a point source centered in an air-filled, rectangular prism cavity (half\_length=48 m). The wavefield nodal lines are color-coded: red for positive and blue for negative. The spatial gridding induces S-waves at the spherical interface. The wavefield nodal lines emanating from cavity corners are visible. The diagnostic of cavity shape is shown.