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Teaching Astrophysical Concepts with the Open Source Physics Collection TODD TIMBERLAKE, Berry College, OPEN SOURCE PHYSICS COLLABORATION — Students often have a hard time visualizing how physics principles govern the behavior of real-world physical systems. This problem becomes even worse when physics principles are applied to astronomical situations with which students have little familiarity. Computer simulations can help to solve this problem by providing dynamic visualization of astrophysical systems. Simulations are most effective when they incorporate interactivity and, if possible, multiple simultaneous perspectives. I will present simulations from the Open Source Physics collection that incorporate these key elements to demonstrate orbital dynamics, motion in non-inertial reference frames, and differential galactic rotation. I will briefly discuss how these simulations can be used for teaching audiences of non-science majors as well as physics majors.

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