1146-57-441   **Kyle Hayden** and **Lisa Piccirillo*** (`lpiccirillo@math.utexas.edu`). *Exotic Mazur manifolds.* Preliminary report.

A primary goal of low-dimensional topology is the detection of exotic smooth structures on the simplest 4-manifolds. From the perspective of handlebody theory, the simplest compact contractible 4-manifolds (other than the four-ball) are Mazur manifolds. In this talk, I'll present the first examples of absolutely exotic Mazur manifolds, i.e. pairs of homeomorphic Mazur manifolds such that every boundary homeomorphism does not extend smoothly. This work also provides the first examples of integer homology spheres which do not admit property R, resolving a question from Problem 1.16 in Kirby's list. This is joint work in progress with Kyle Hayden. (Received January 28, 2019)