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Eriko Hironaka* (ehironaka@gmail.com) and **Sarah Koch**. *A disconnected deformation space of rational maps*. Preliminary report.

This talk concerns the deformation space $\text{Def}(f)$ of rational maps of pairs $f : (\mathbb{P}^1, A) \rightarrow (\mathbb{P}^1, B)$ where $A \subset B$, A and B are finite, and B contains the critical points of f . The space $\text{Def}(f)$ was first defined by A. Epstein as a generalization of the space of combinatorially equivalent post-critically finite mapping classes studied by W. Thurston. In the post-critically finite case, Thurston showed that $\text{Def}(f)$ is connected. In this talk I present joint work with Sarah Koch, showing that in general $\text{Def}(f)$ may be disconnected by giving an explicit example where $\text{Def}(f)$ has infinitely many connected components. (Received September 01, 2016)