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Knots with Keen Weakly Reducible Bridge Spheres.

A bridge sphere for a knot is a sphere transverse to the knot separating the maxima of the knot from the minima. Some simple closed curves on the bridge sphere will bound essential disks in the knot complement on at least one side. In this talk, I will exhibit infinitely many examples of knots, whose canonical bridge spheres admit a unique disjoint pair of simple closed curves bounding essential disks on distinct sides. Such a bridge sphere is said to be keen weakly reducible. This is joint work with Daniel Rodman. (Received September 15, 2019)