Loretta Bartolini* (bartolini@math.okstate.edu), Department of Mathematics, Oklahoma State University, 401 Mathematical Sciences, Stillwater, OK 74078. One-sided Heegaard splittings of 3-manifolds.

While two-sided Heegaard splittings are well known and understood in 3-manifold topology, their one-sided counterpart is much less common. Rather than splitting a manifold along an orientable surface to get a pair of handlebodies, a one-sided splitting cuts along an embedded non-orientable surface to yield a single handlebody.

Until recently, little has been known about such splittings, with standard two-sided techniques and results not being directly applicable. We will discuss the context and distinguishing behaviour of one-sided splittings, along with recent results in the area. (Received September 21, 2009)