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James Ruffo* (jruffo@math.tamu.edu), Department of Mathematics, Texas A&M University, Mailstop 3368, College Station, TX 77843-3368. *Equations for the space of rational curves on the Lagrangian Grassmannian*. Preliminary report.

Spaces of curves in algebraic varieties are important objects of interest in algebraic geometry. They are typically non-compact, and compactifications are introduced to facilitate their study. Drinfel'd defined a compactification when the curves are rational and the ambient variety is a homogeneous space, called the space of quasi-maps. This variety has applications to geometric representation theory, quantum cohomology, and for Grassmannians, linear systems theory. We study the space of quasi-maps for the Lagrangian Grassmannian, describing the generators of its ideal in a natural projective embedding. The form of this generating set yields interesting geometric consequences, which we describe. (Received September 26, 2006)