1104-14-274 **Aaron Bertram** and **Cristian Martinez*** (martinez@math.utah.edu), 155 South 1400 East Room 233, Salt Lake City, UT 84112. *Change of polarization for moduli spaces of sheaves on surfaces as Bridgeland wall-crossing.* Preliminary report.

The notion of stability for torsion-free sheaves on a smooth projective complex surface S depends on the choice of an ample class $H \in \mathrm{Amp}(S)$. The moduli spaces $M_H(v)$ of H-semistable sheaves with Chern character v are projective and can be constructed via GIT. There is a wall and chamber decomposition of $\mathrm{Amp}(S)$ defined by the condition that $M_H(v)$ and $M_{H'}(v)$ are isomorphic for H and H' in the same chamber. In the 90's there was a great deal of interest in studying how moduli spaces relate for polarizations in different chambers. Results obtained independently by Matsuki and Wentworth, Ellingsrud and Göttsche, and Friedman and Qin, show that when crossing a wall in $\mathrm{Amp}(S)$, the moduli space $M_H(v)$ goes through a sequence of Thaddeus flips in the category of moduli spaces of twisted sheaves. We give an interpretation of this result in terms of stability conditions. Indeed, every wall in $\mathrm{Amp}(S)$ corresponds to a finite sequence of Bridgeland walls, each producing a single Thaddeus flip of the corresponding moduli space. (Received September 02, 2014)