1039-05-172        **Iain Gordon**, **Emil Horozov** and **Milen Yakimov\*** (`yakimov@math.ucsb.edu`), Department of Mathematics, University of California, Santa Barbara, CA 93106. *Calogero-Moser spaces, representations of rational Cherednik algebras, and the Shapiro Conjecture.*

We will describe a criterion for the reality of irreducible representations of the rational Cherednik algebras $H_{0,1}(S_n)$. It will be applied to study the real loci of the Calogero-Moser spaces. As a consequence, we will give a second (independent) proof of the the Shapiro Conjecture for Grassmannians, proved by Mukhin, Tarasov, and Varchenko. (Received March 11, 2008)