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A polarizing beam splitter for dipolar molecules OMJYOTI DUTTA, MARKKU JÄÄSKELÄINEN, PIERRE MEYSTRE, OSC, University of Arizona — We analyze a coherent beam splitter for polarized heteronuclear molecules based on a STIRAP scheme that uses a tripod linkage of electro-translational molecular states. We show that for strongly polarized molecules the rotational dynamics imposes significantly larger Rabi frequencies than would be otherwise be expected, but within this limitation, a full transfer of the molecules to two counter propagating ground-state wave packets is possible.

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