Abstract Submitted
for the FWS15 Meeting of
The American Physical Society

The effects of lipid membrane mobility on microtubule gliding. JOSEPH LOPES, LINDA HIRST, JING XU, Univ of California - Merced — Motor proteins, discovered in recent decades, are critical for the transport of intra-cellular cargo. Single motor transport properties have been documented in experiments involving transport of silica beads, but their group function with lipid vesicles similar to intracellular cargo remains unknown. In these experiments the geometry of motor transport is inverted, with microtubules gliding on motors bound to the surface of a lipid bilayer. Fluorescence recovery after photo bleaching was used to characterize the diffusion of lipid compositions with two different phases, and microtubule velocity is compared between the lipid membranes and bare glass gliding.

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Date submitted: 28 Sep 2015 Electronic form version 1.4