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The effects of parrafin and drifilm coatings on the depolarization of rubidium at stainless steel surfaces MARK ROSENBERRY, SEAN GILL, MICHAEL WICKHAM, Siena College — Some applications of optical pumping (e.g. polarized electron generation[1]) require high rubidium polarizations at low buffer gas pressures. A coated surface is clearly desirable for such applications. Furthermore the details of the relaxation mechanisms are not fully understood, despite earlier work by the groups of Bouchiat[2] and Swenson.[3] Work is in progress to fully characterize the surface effects of tetracontane and OTS coatings on stainless steel substrates to obtain depolarization time constant(s) for different temperatures and how they change with time. [1] H. Batelaan, A.S. Green, B.A. Hitt, T.J. Gay, Phys. Rev. Lett. **82**, 4216 (1999) [2] M.A. Bouchiat and J. Brossel, Comp. Rend. **254**, 3828 (1962) [3] D.R. Swenson and L.W. Anderson, Nucl. Instr. Meth B **29**, 627 (1988)

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