A MOLECULAR BEAM OPTICAL STARK STUDY OF THE [15.8] AND [16.0] $^2\Pi_{1/2} - X^4\Sigma^-$ (0,0) BAND SYSTEMS OF RHODIUM MONOXIDE, RhO.

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A supersonic molecular beam sample of rhodium monoxide, RhO, has been generated using a laser ablation/chemical reaction generation scheme and probed using near natural line width limited optical Stark spectroscopy utilizing laser induced fluorescence detection. Stark splittings in the $^SR_{11}(0)$ and $^SR_{11}(1)$ lines of the [15.8] and [16.0] $^2\Pi_{1/2} - X^4\Sigma^-$ (0,0) transitions were observed upon application of static electric fields up to 2400 V/cm. Comparisons of the determined field-free molecular parameters is made with previous work[a,b,c]. Progress on the analysis of the Stark effect will be reported.

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