IDENTIFICATION OF PHOSPHORUS MONOXIDE ($X^2\Pi_r$ IN THE ORION MOLECULAR CLOUD: FURTHER EVIDENCE FOR THE UBIQUITOUS P-O BOND

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The PO molecule has been identified towards the Orion-KL region based on a 3mm survey carried out with the ARO 12m. Two transitions were observed, each consisting of lambda-doublets. The estimated abundance of this species in Orion is approximately 10^{-10}, relative to molecular hydrogen. The PN molecule was also observed in the survey, suggesting PO/PN is approximately 1. Our results are consistent with the findings in other molecular clouds, and suggest that PO may be a relatively common molecule in star-forming regions.