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Photodetachment of K^- CHIEN-NAN LIU, Kansas State University — Eigenchannel R-matrix calculation results are presented for the photodetachment of K^- in the energy region between the K(5s) and K(7p) thresholds. Present results are compared with prior theoretical and experimental studies, including the recent relative K(5s) partial cross section measurements of Kiyan *et al.*[1], and resonances observed in electron-potassium scattering. Detailed analyses and identifications of $^1P^o$ resonance structures are presented. Comparisons with H^- and other alkali negative ions provide further information on the structure and dynamics of these systems. The induced dipole potential model proposed to describe resonance positions[2] and widths[3] are also discussed.

[1]I. Yu. Kiyan, U. Berzinsh, J. Sandström, D. Hanstorp, and D. J. Pegg, Phys. Rev. Lett. **81**, 2874 (2000).
[2]I. Yu. Kiyan, U. Berzinsh, D. Hanstorp and D. J. Pegg, Phys. Rev. Lett. **81**, 2874 (1998).
[3]I. Yu. Kiyan, Phys. Rev. Lett. **84**, 5975 (2000).

☐ Prefer Oral Session
☒ Prefer Poster Session

Chien-Nan Liu
cnliu@phys.ksu.edu
Kansas State University

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