

## A MOLECULE WITH A ROTATING CAP: THE ROTATIONAL SPECTRUM OF TETRAFLUOROMETHANE-PYRIDINE

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The rotational spectrum of pyridine-tetrafluoromethane has been investigated by molecular beam Fourier transform microwave spectroscopy in a supersonic expansion. The  $\text{CF}_4$  moiety is positioned as a cap over the pyridine nitrogen, and it is freely rotating. For this reason, in the  $m=0$  state, only the pyridine ring is rotating along the a-axis, and the value of rotational constant  $A'$  is coinciding with that of the constant  $A$  of pyridine. The  $\text{N} \cdots \text{C}_{\text{CF}_4}$  distance is 3.33(2) Å. The dissociation energy has been estimated, from the centrifugal distortion, to be ca. 10 kJ/mol.

