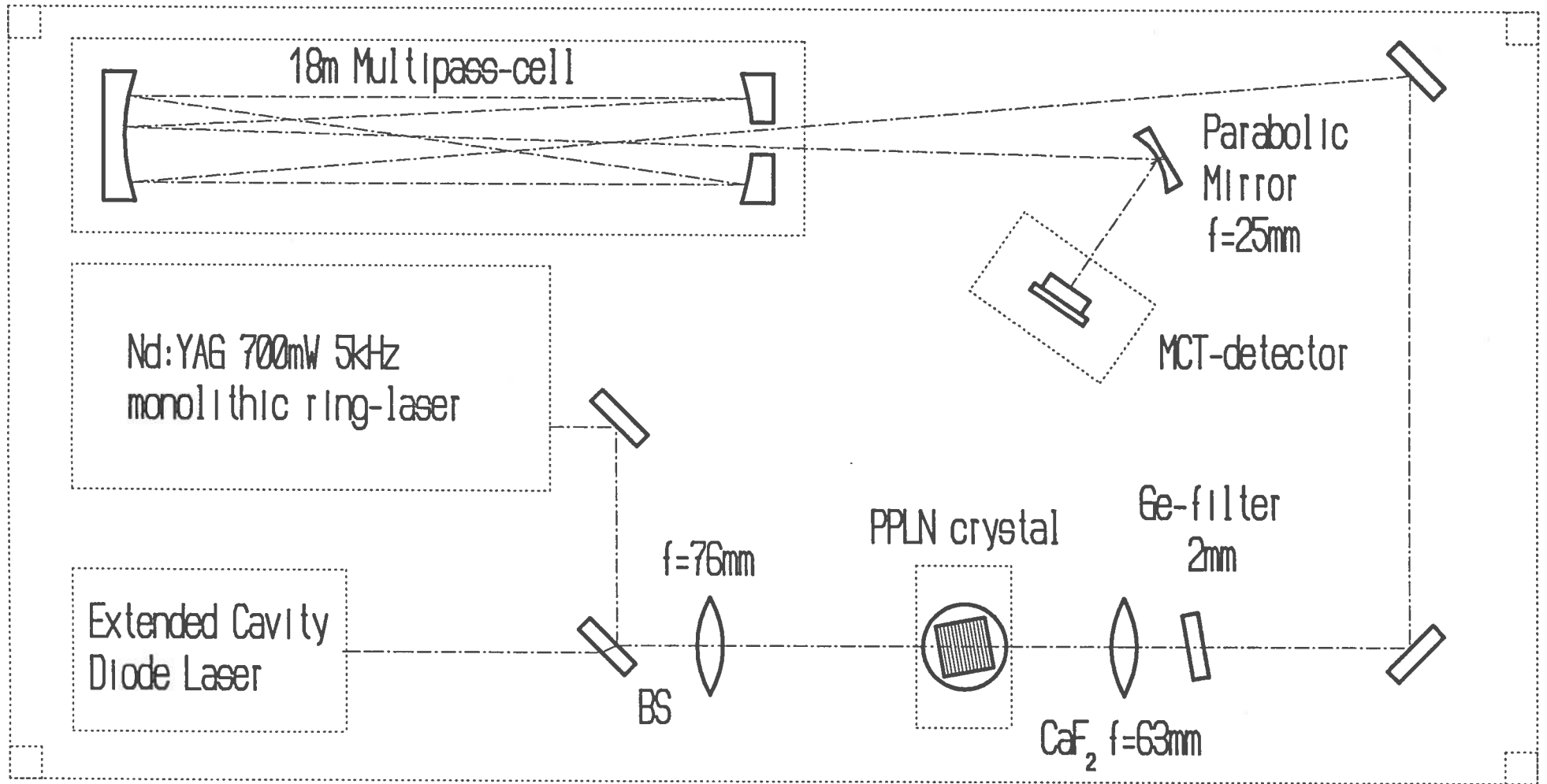


COMPACT MID-INFRARED  
LASER BASED SENSOR FOR  
TRACE GAS DETECTION

THOMAS TOEPFER  
KONSTANTIN P. PETROV  
YASUHARU MINE  
ROBERT F. CURL  
FRANK K. TITTEL

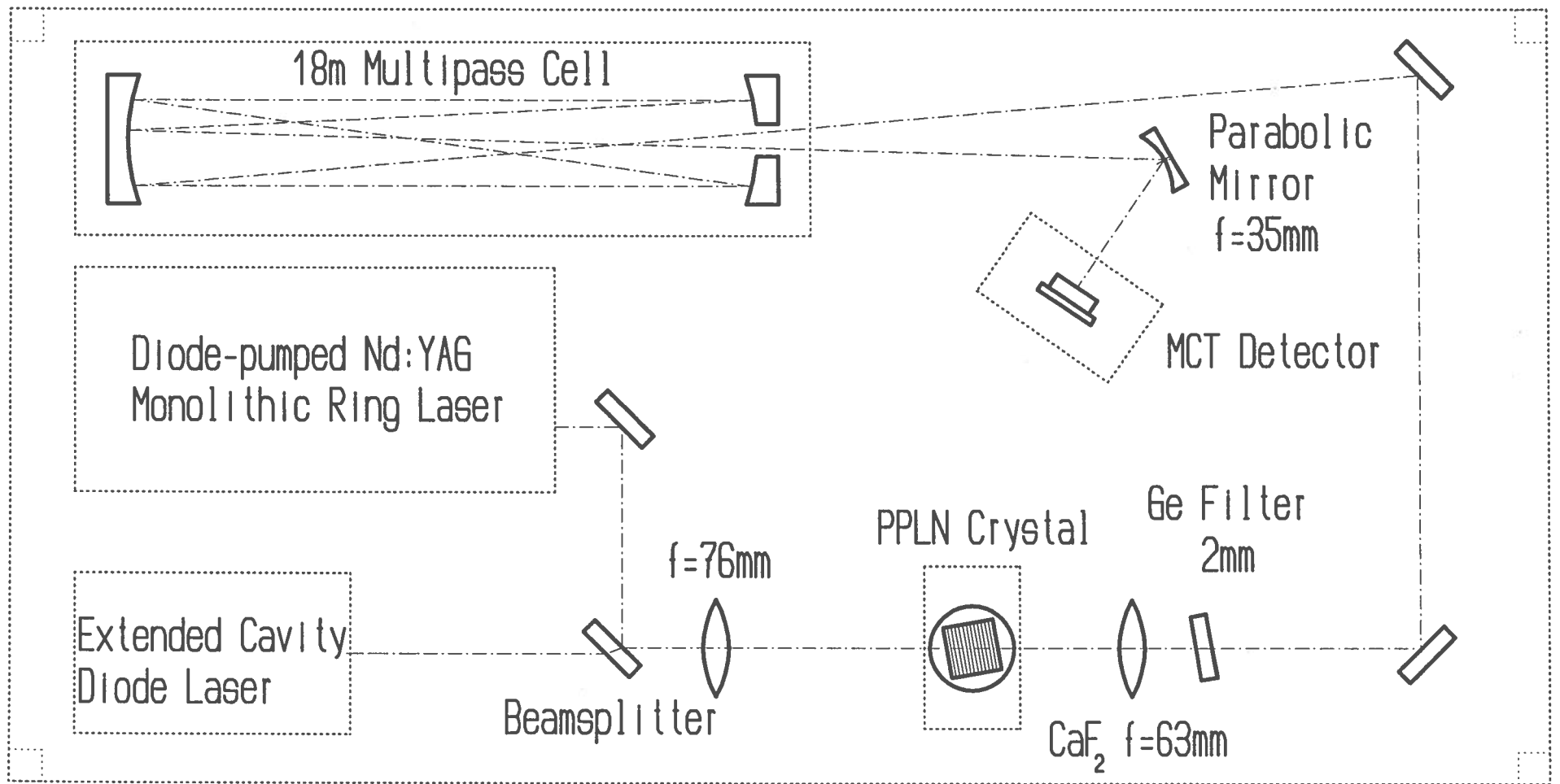
RICE QUANTUM INSTITUTE  
RICE UNIVERSITY  
HOUSTON, TX

# Experimental Setup



1 x 2 ft.

# EXPERIMENTAL SETUP



1 x 2 ft.

# CO detection at 4.6 $\mu\text{m}$ based on Difference Frequency Generation

