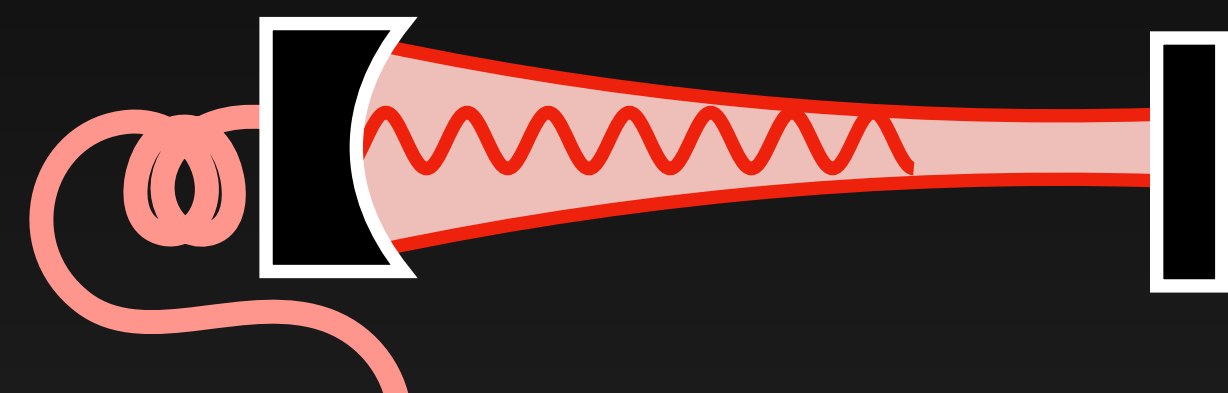


# A FIRST APPLICATION OF MACHINE AND DEEP LEARNING FOR BACKGROUND REJECTION IN THE ALPS II TES DETECTOR

**Manuel Meyer**, Katharina Isleif, Friederike Januschek, Axel Lindner, Gulden Othman, José Rubiera Gimeno, Christina Schwemmbauer, Matthias Schott, Rikhav Shah  
*for the ALPS Collaboration*

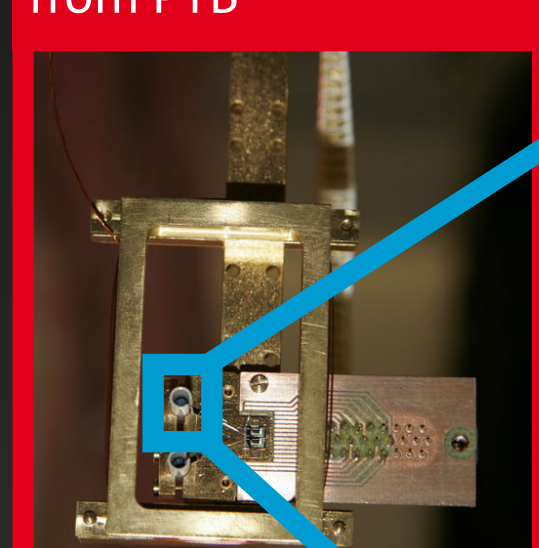
# ALPS



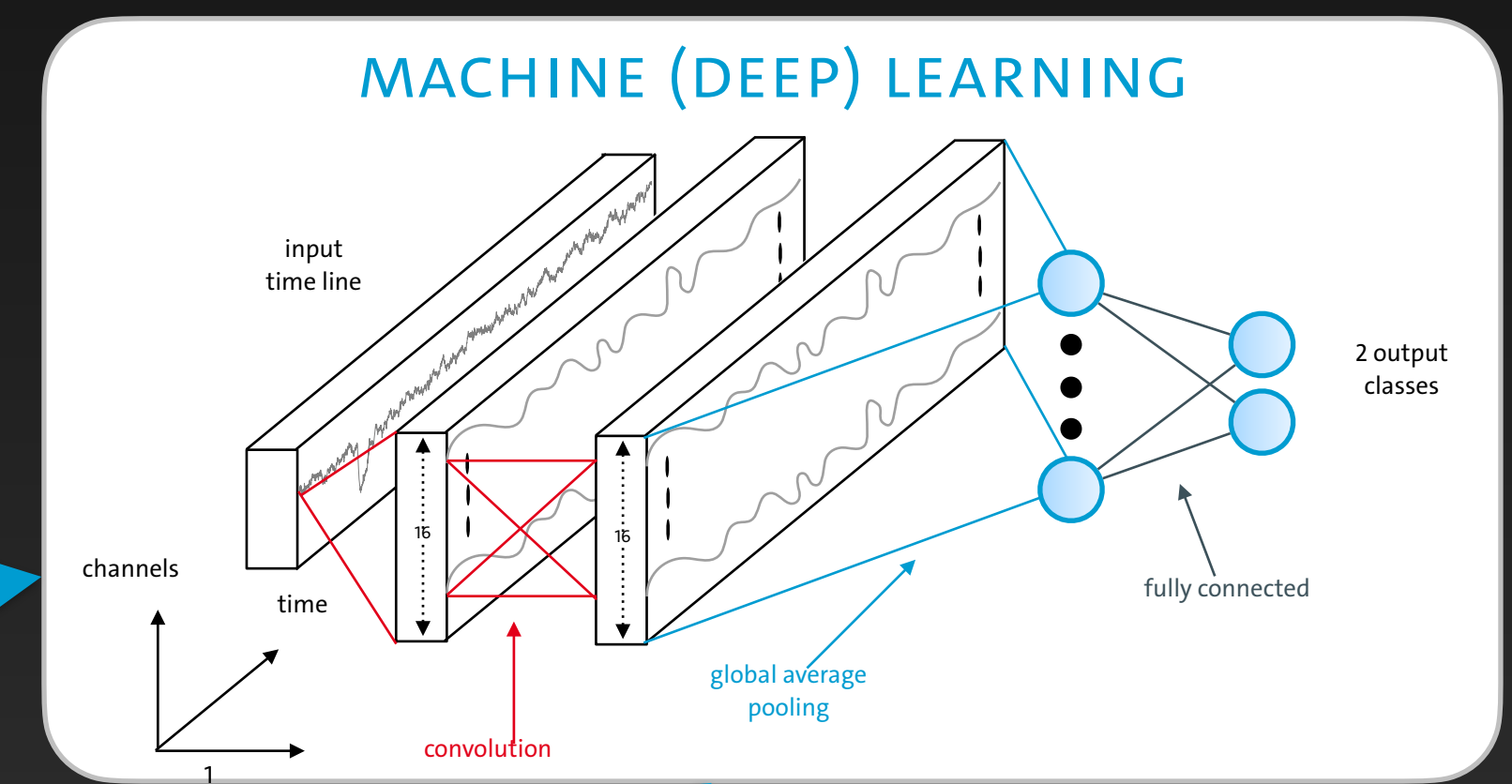
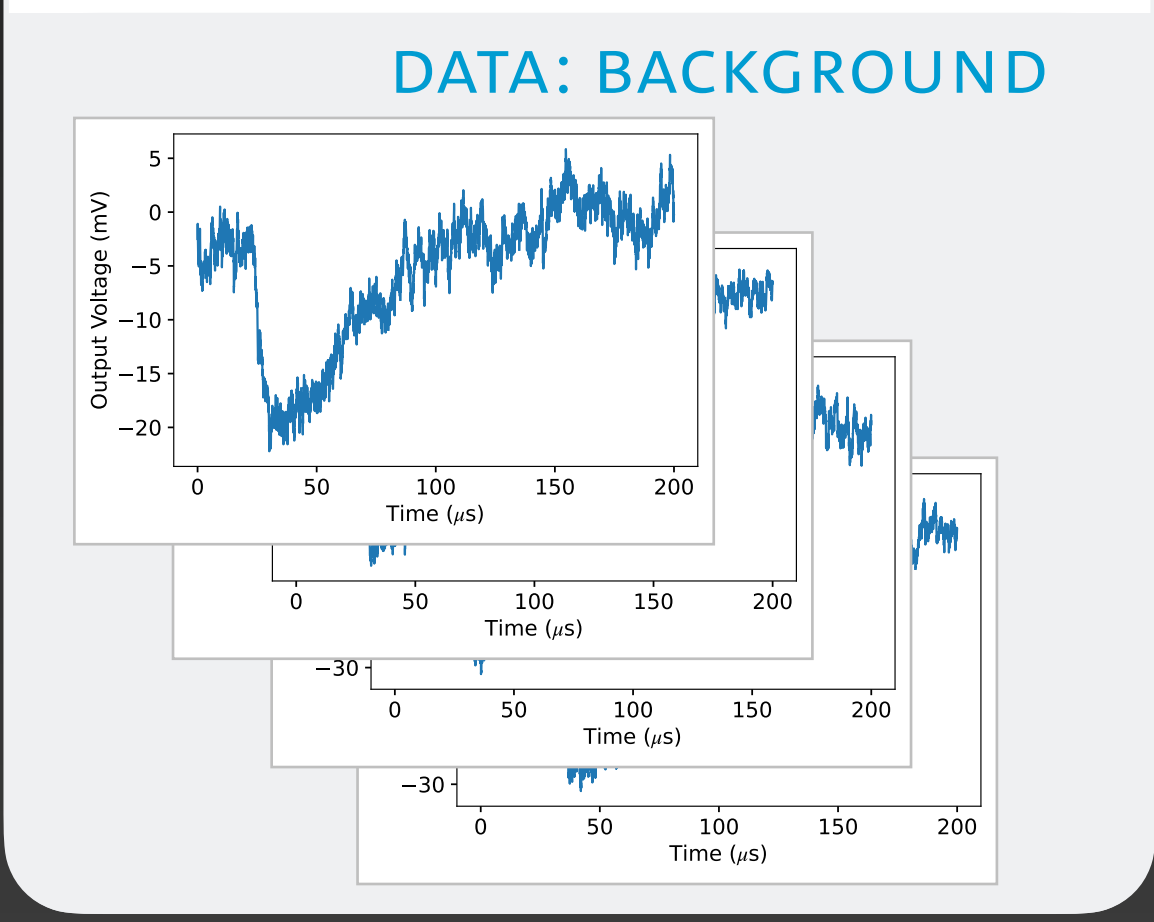
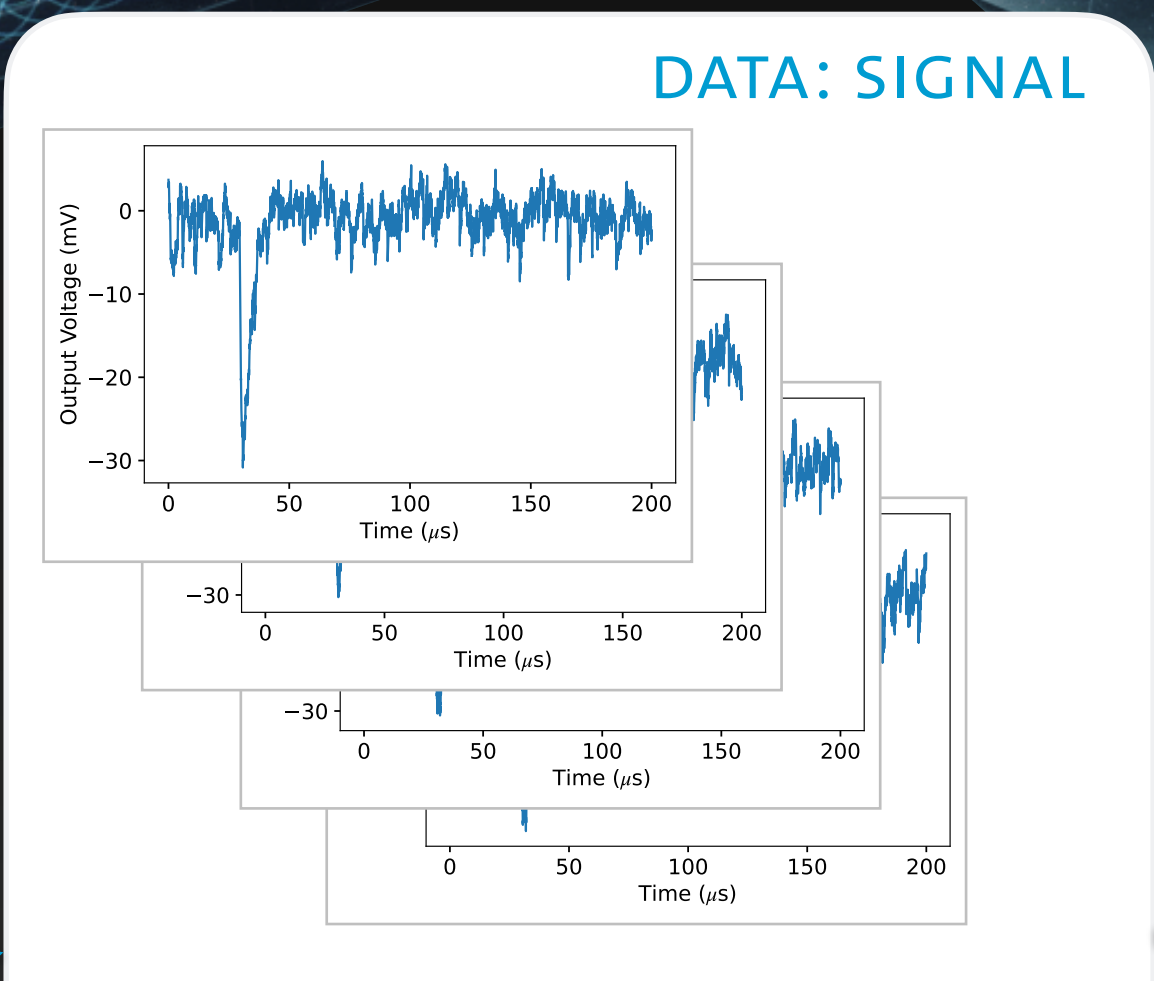
**Cryostat**  
from BlueFors



**SQUID module**  
from PTB



**TES: Tungsten microchip**  
operating at  $T_C \sim 140$  mK  
from NIST  
( $25 \mu\text{m} \times 25 \mu\text{m}$ )



**IMPROVED DISCRIMINATION**  
BETWEEN SIGNAL & BACKGROUND?