The PMOS Transistor

- Like Many Xistor types: n & P

- MOS: named after the type of Channel they form

- PMOS: **h** form the channel Region
  h inversion

- All doping types in the PMOS are flipped → the opposite type
  $n \rightarrow p$
  $p \rightarrow n$

- Voltages in the PMOS also "flipped"
  - NMOS $V_g >> 0+$ for inversion
  - PMOS $V_g << 0-$ for inversion

- We will use NMOS for rest of Course
  - PMOS still examinable
    - Eqn.s still Same
    - flip V, flip doping

e.g.

NMOS: $\phi_{FP} = \frac{kT}{q} Ln\left(\frac{N_A}{n_i}\right)$ P-type

PMOS: $\phi_{FP} = -\frac{kT}{q} Ln\left(\frac{N_D}{n_i}\right)$ N-type