

## Offset Voltage

- the  $V_{os}$  measurement is simple.
- Assuring that it represents something useful is Not.
- $V_{os}$  for Balanced Diff Amps ideally is 0.
- Monte Carlo analysis in Spectre®
  - does both Process and Mismatch parameter randomization
  - No tie to Layout, or identification of “pairs”
  - Requires fancy Model work to make “useful”
  - Matched Pair Pcell & inline Circuits would help
- Corners Analysis with special models could be easier.
- Parametric Analysis can work with variables for  $v_t$  and  $w$  &  $L$  shifts.