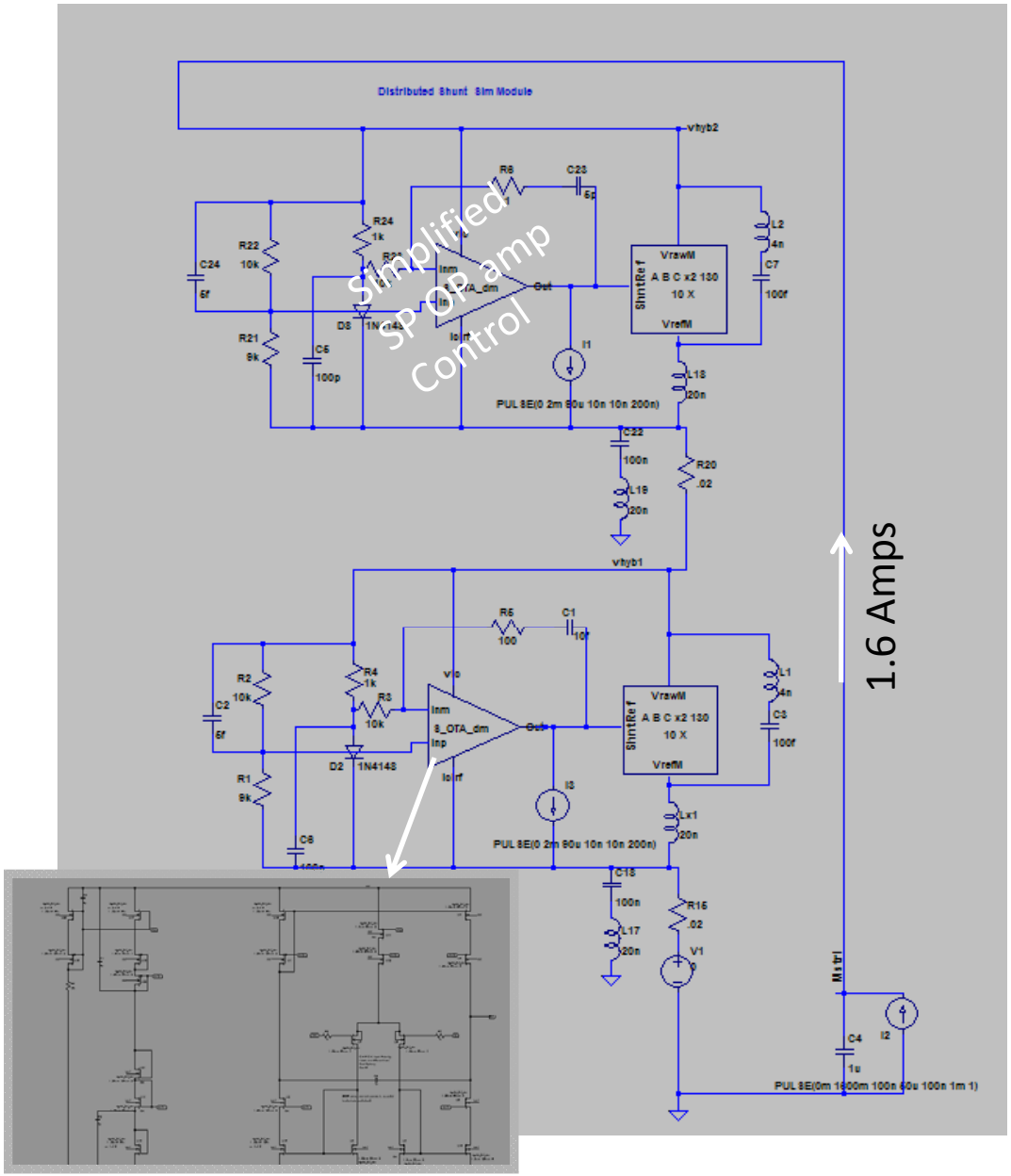
Modeling Distributed Shunt SP Two Series Connected Modules

March 2010

Mitch Newcomer

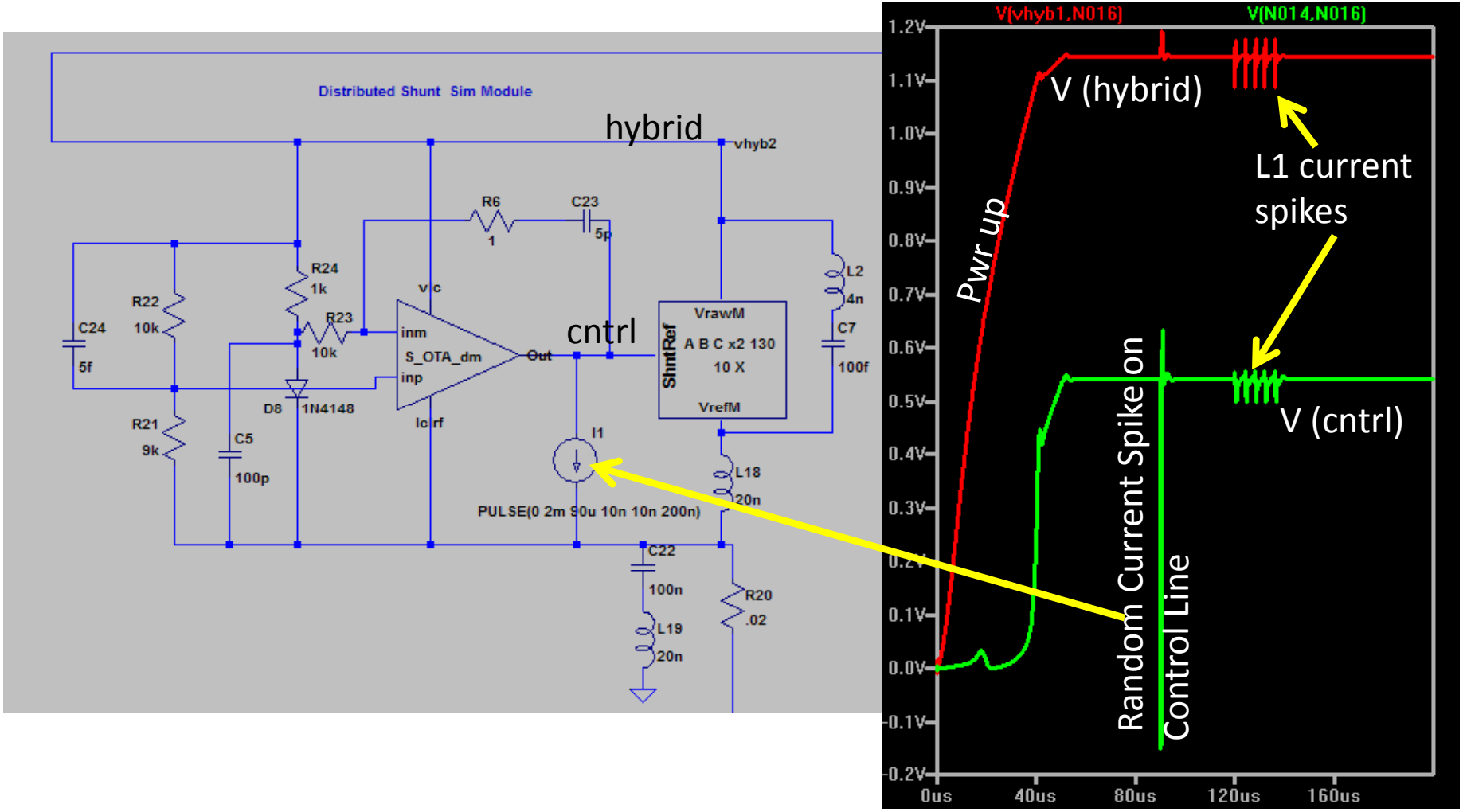
Top Level Two Simplified SP Hybrids



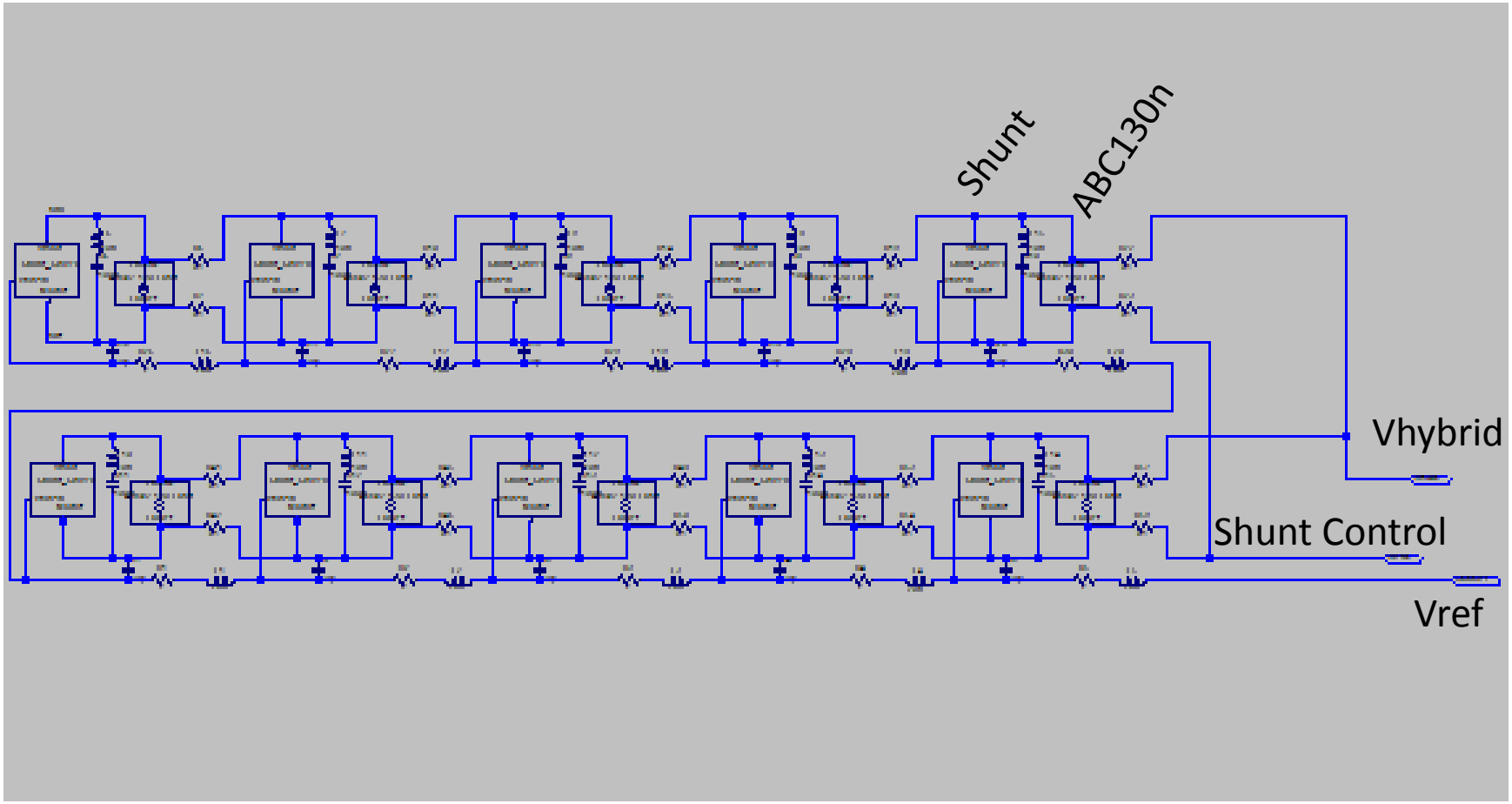
SPICE simulations of the Serial Power & Protection chip with a somewhat realistic model of an ABC130nm Hybrid take a significant amount of resources and time for a 12 or 24 hybrid simulation.

For this reason a simplified distributed shunt control and module load was developed that eliminates most of the Complexity of the SPP ASIC while Retaining a realistic Shunt Reg. Function. A typical simulation Involves 10 Simplified modules And 2 fully implemented SPP Controlled modules.

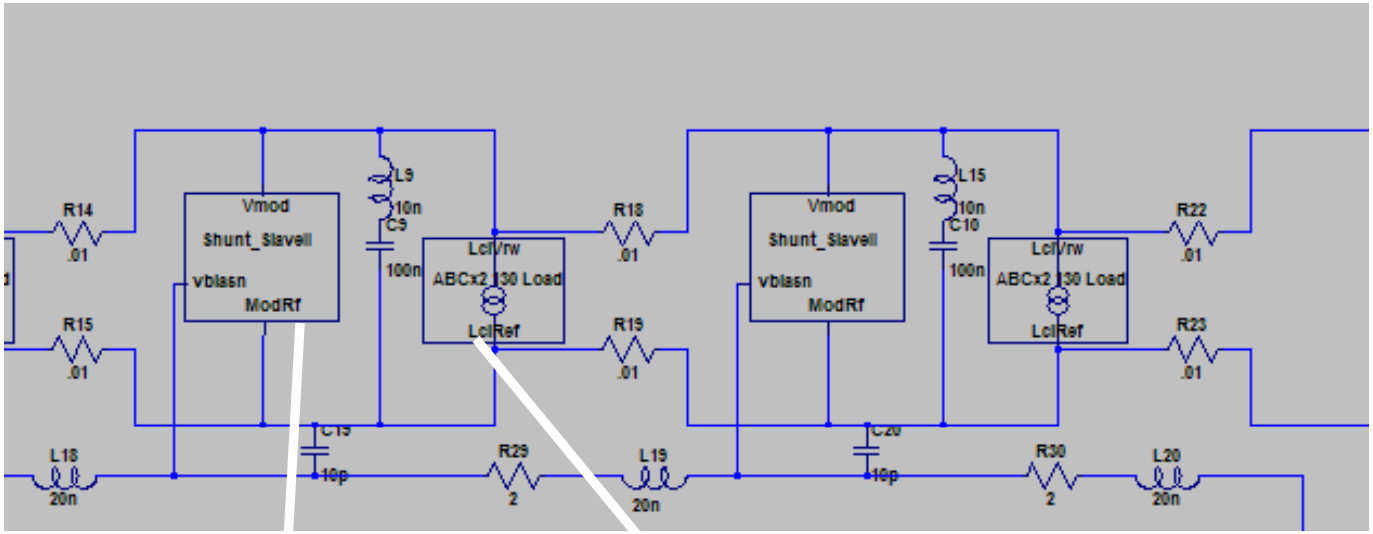
Hybrid Voltage Serial Power
Control Line Voltage with aggressors

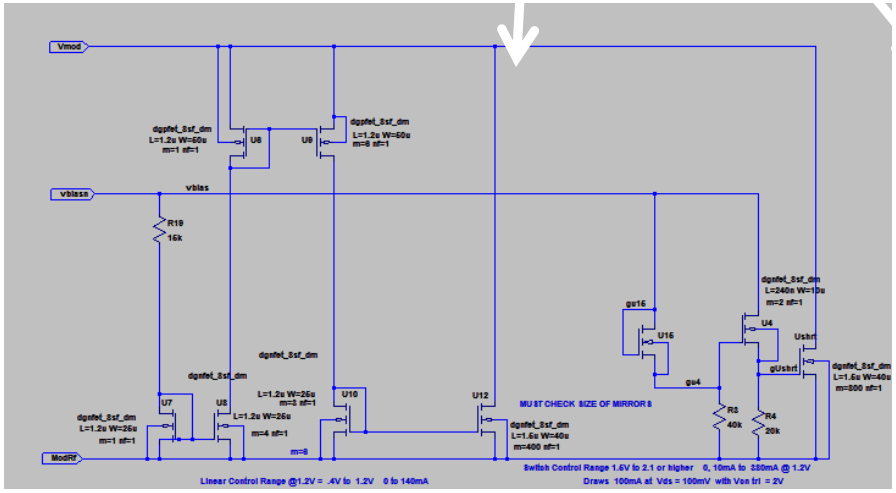


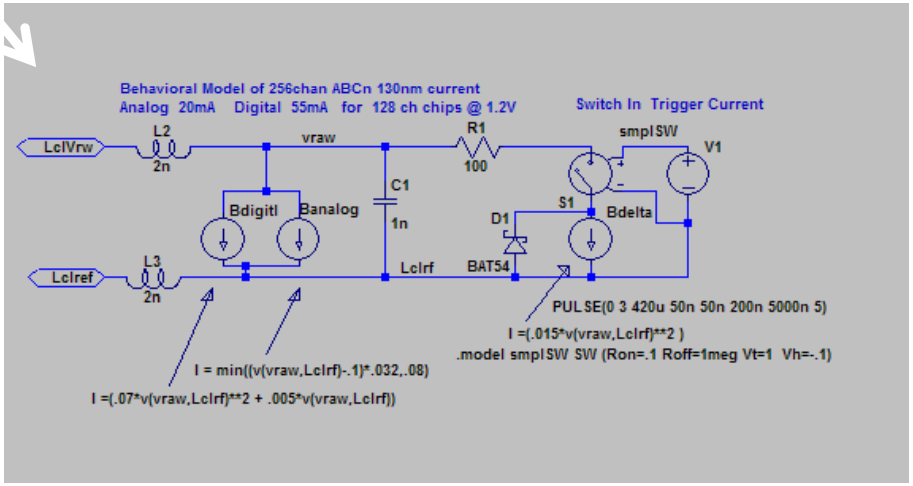
Hybrid with 10- 256chan ABC 130nm



Hookup of Two of 10 ABCn ASICs







ABC 130nm 256 Channel Behavioral Model