5.1   GPU developments for the WRF and MPAS Models.

Adie, Jeff, Carl Ponder, and Alexey Romanenko, *NVIDIA Corporation*

This talk will examine progress of GPU developments for the WRF and MPAS models using programming procedures of OpenACC directives. The WRF project based on ARW, was led by NVIDIA in collaboration with NCAR MMM, and demonstrates substantial GPU performance gains over CPU-only computing. The GPU implementation includes the complete ARW dynamics, and enough physics modules to deploy a full WRF model on a GPU-based cluster. The MPAS project was led by NCAR CISL who built a cross-organizational partnership that included NVIDIA and PGI. This topic will describe NVIDIA and PGI contributions to the overall objectives that were achieved, and present performance results that were reported by NCAR CISL at the NVIDIA GPU Technology Conference during March 2018.