1.2   WRFDA 2018 update.

Liu, Zhiquan, Juanzhen Sun, Jamie Bresch, Michael Kavulich, Junmei Ban, Jonathan Guerrette, and Ying Zhang, *National Center for Atmospheric Research*

In this talk, the new features from the latest release of WRFDA version 4.0 will be presented, including GOES-Imager radiance data assimilation, GPSRO excess phase data assimilation, large-scale analysis constraint, and divergence constraint. Moreover, WRFPlus code (i.e., tangent linear and adjoint version of WRF) is now fully integrated into the WRF code master, which shall ease its future maintenance and further development. Other important updates and bug-fixes will also be highlighted. Some ongoing research and developments and plans for future release will then be described.