2D squall line demonstration
ATM 419/563 Spring 2024 -- Fovell

* Preliminaries

- Make a directory called SQUALL in your lab space, move into it, and copy into it:
  
  ```
  cp $LAB/SQUALL_snow/run_WRF_SQUALL_snow.ipynb .
  ```

- In ARCC Jupyterlab, spawn a process on Snow, NOT BATCH
  
  → if you are NOT given the drop-down menu
  
  - go to File > Hub Control Panel, then select Stop My Server
  
  - then select Start My Server when it appears
  
  - Select “Snow 4 cores 32 GB 8 hours” (the smallest resource request on offer)
  
  - Move to your SQUALL directory and launch the notebook

* A 6-h simulation using the Purdue Lin scheme (mp_physics = 2)

- The notebook is pre-configured to make a 6 h simulation using microphysics

- scheme #2, the Purdue Lin scheme, with 10-min output, and make plots.

- No editing needed at this time.

* Class ensemble

- You will be assigned a microphysics configuration to provide to the class ensemble

- I suggest you select Kernel > Restart Kernel and Clear All Outputs before continuing

  → Cell #3 is where your name and the scheme name will be entered

  → Cell #4 is where your member option(s) will be specified

  → Plots will be created using your name and scheme name
  
  - please copy these to $LAB/SQUALL_ensemble/

  → When executed last cell will report two statistics:
  
  - Maximum near-surface wind speed (m/s)
  
  - Total simulated precipitation (mm)

  - please enter these into the online spreadsheet linked here:

  ```
  https://docs.google.com/spreadsheets/d/1JTupaOu8I1I9OcJkiQiiMHj-jEPcpb0hxygPVBOhMEI/edit?usp=sharing
  ```

NOTES: The NTU scheme (mp_physics = 56) runs rather slowly, so be advised.

MP schemes 1, 3, 5, 11, 13, 30, and 56 do not generate radar reflectivity fields.