1 2D squall line demonstration 2 ATM 419/563 Fall 2024 -- Fovell 3 4 * Preliminaries 5 6 • Make a directory called SQUALL in your lab space, move into it, and copy into it: 7 cp \$LAB/SQUALL/run WRF SQUALL.ipynb. 8 9 • In ARCC Jupyterlab, spawn a process on batch or burst-daes 10 \rightarrow minimal resources suffice 11 • Move to your SQUALL directory and launch the notebook 12 13 _____ ------14 * A 6-h simulation using the Purdue Lin scheme (mp_physics = 2) _____ 15 16 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. 17 18 • No editing needed at this time. 19 20 _____ 21 * Class ensemble 22 _____ 23 * You will be assigned a microphysics configuration to provide to the class ensemble 24 * I suggest you select Kernel > Restart Kernel and Clear All Outputs before continuing 25 26 \rightarrow Cell #3 is where your name and the scheme name will be entered 27 \rightarrow Cell #4 is where your member option(s) will be specified 28 29 \rightarrow Plots will be created using your name and scheme name 30 please copy these to \$LAB/SQUALL ensemble/ 31 32 \rightarrow When executed last cell will report two statistics: 33 MAXIMUM NEAR-SURFACE WIND SPEED (m/s) 34 TOTAL SIMULATED PRECIPITATION (mm) 35 • please enter these into the online spreadsheet linked here: 36 37 https://docs.google.com/spreadsheets/d/1p1ClQTfWYHhJPa4LS xLd s2YN-38 WLcpg2HDxadlGvu8/edit?usp=sharing 39 -or- https://tinyurl.com/zrku47ad 40 41 42 <u>NOTES</u>: The NTU scheme (mp_physics = 56) runs rather slowly, so be advised. 43 MP schemes 1, 3, 5, 11, 13, 30, and 56 do not generate radar reflectivity fields. 44 The bin scheme (mp physics = 30) is extremely slow.

	Ugrad or		
Last Name	Grad	name	mp_physics
Fovell	[class]	MP02	2
Howard	UG	MP01	1
Kramer	UG	MP03	3
Meglio	UG	MP04	4
Moynihan	UG	MP06	6
Palladino	UG	MP07	7
Ramos	UG	MP08	8
Woods	UG	MP09	9
Zhu	UG	MP10	10
Belash	GRAD	MP11	11
Colgate	GRAD	MP13	13
Ghosh	GRAD	MP16	16
Giove	GRAD	MP18	18
Haas	GRAD	MP24	24
Marcial	GRAD	MP26	26
Miranda	GRAD	MP50	50
Vile	GRAD	MP56	56
Fovell	[class]	MP30	30