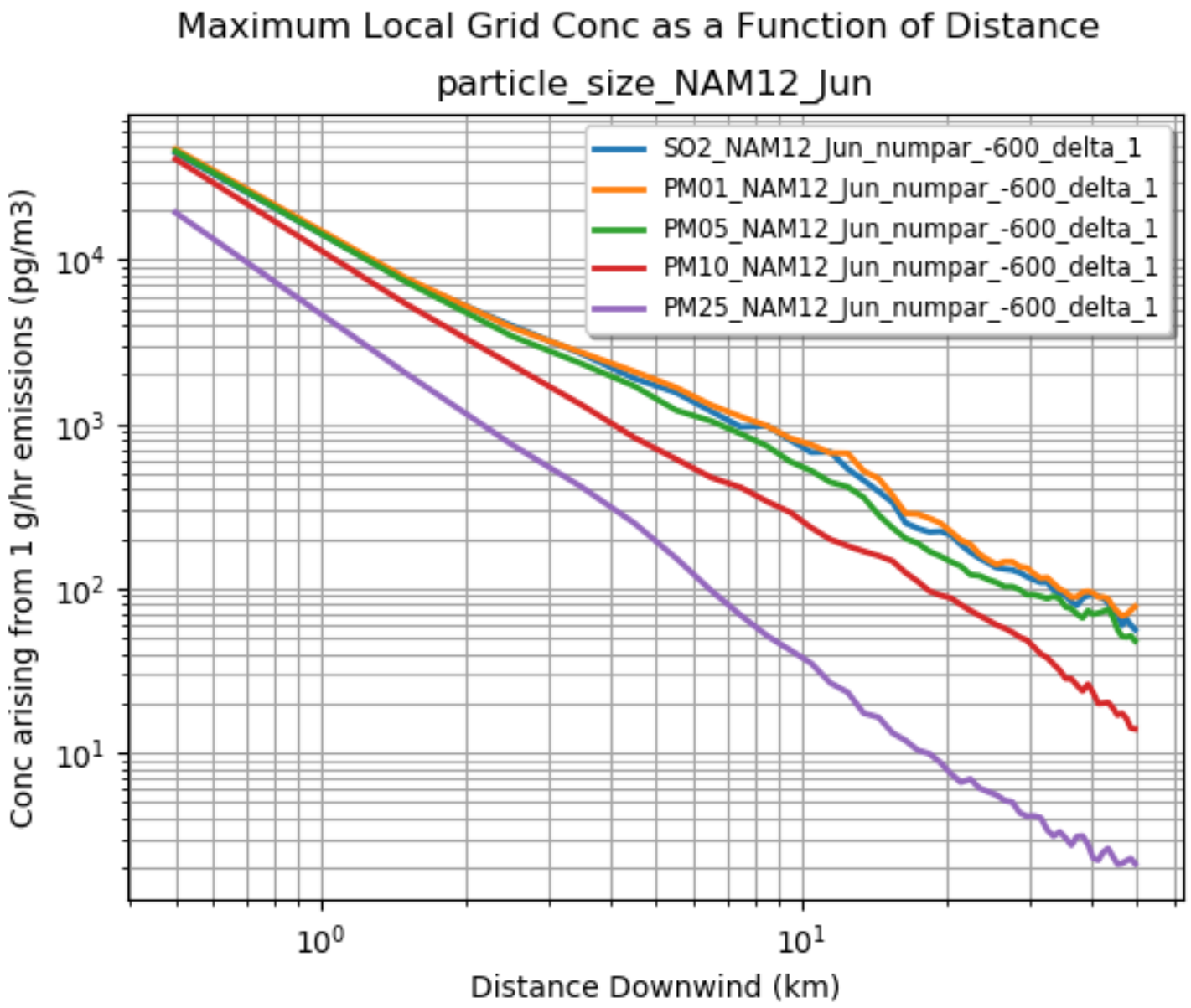
2022 Online HYSPLIT Workshop (DAY 3 of 4) Wrap-Up

Workshop Web Page:

https://www.ready.noaa.gov/register/HYSPLIT_hyagenda.php

NOAA Air Resources Laboratory
June 14-17, 2022

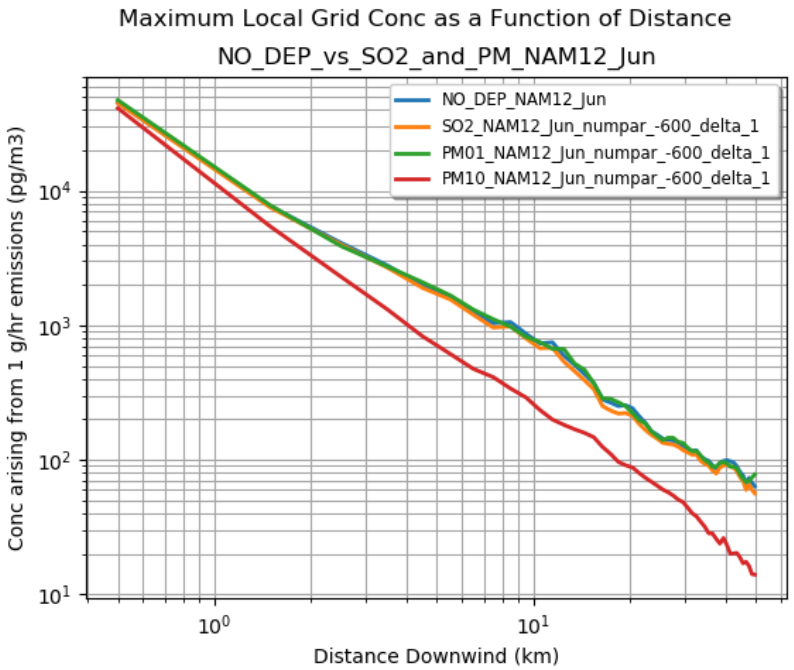


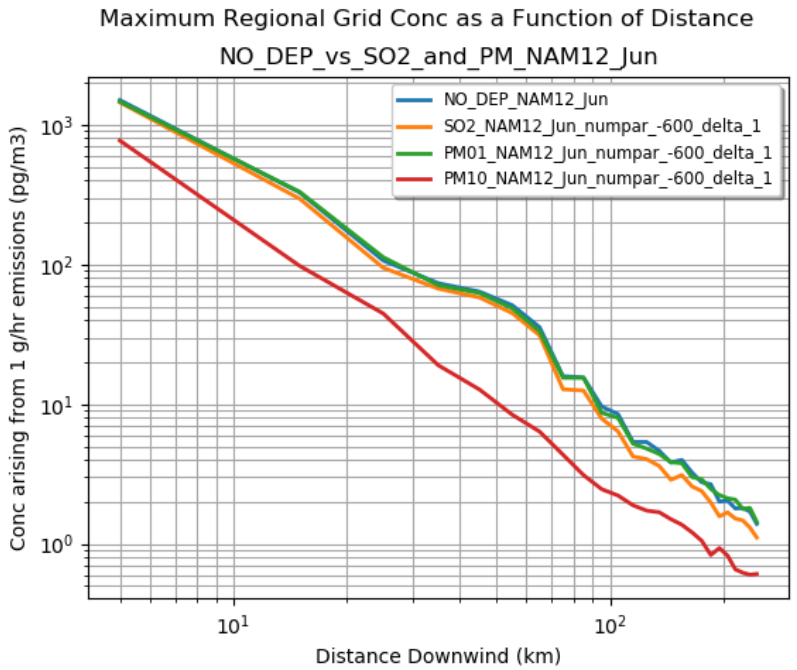
Not a very dramatic difference between gas-phase SO_2, and 1 and 5 µm particles

If pollutant partitions to atmospheric particles, most would be associated with particles less than 5 µm

Bigger differences seen with 10 and 25 µm particles

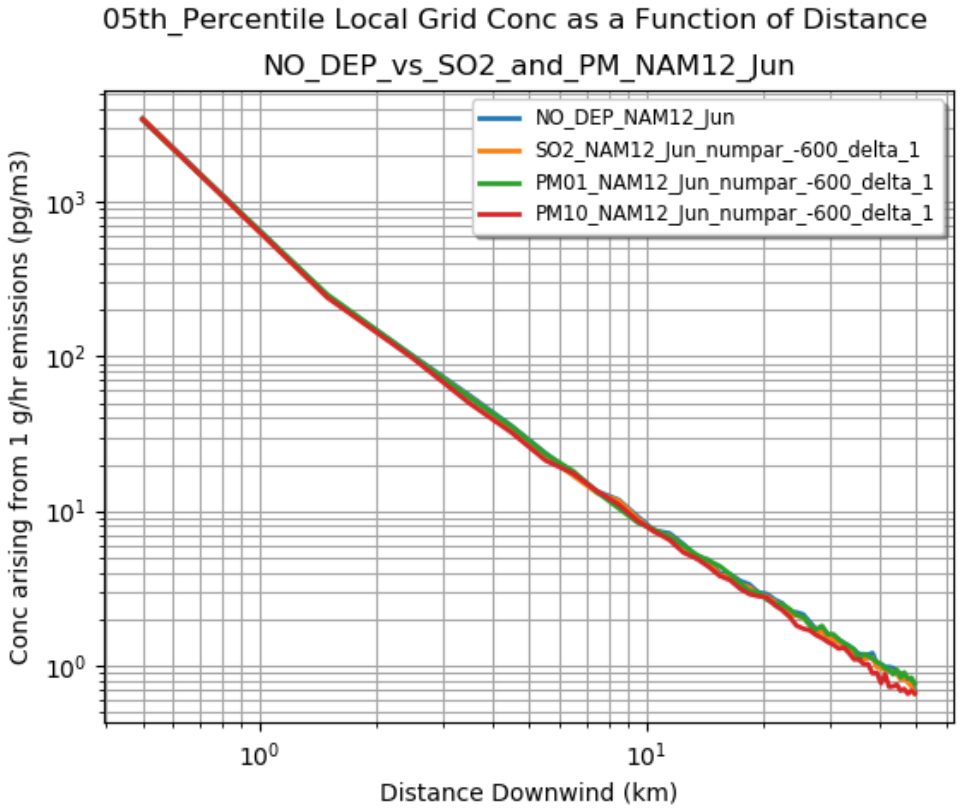
Compare simulation with no deposition with simulation of SO2, PM01 and PM10 with default deposition parameters

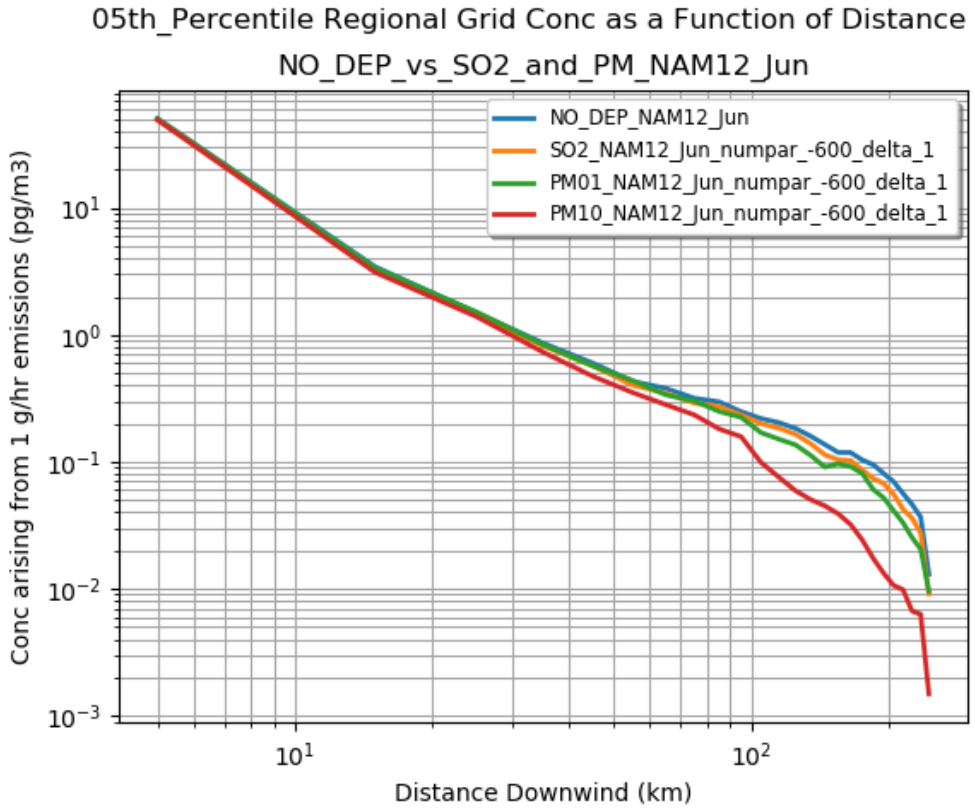




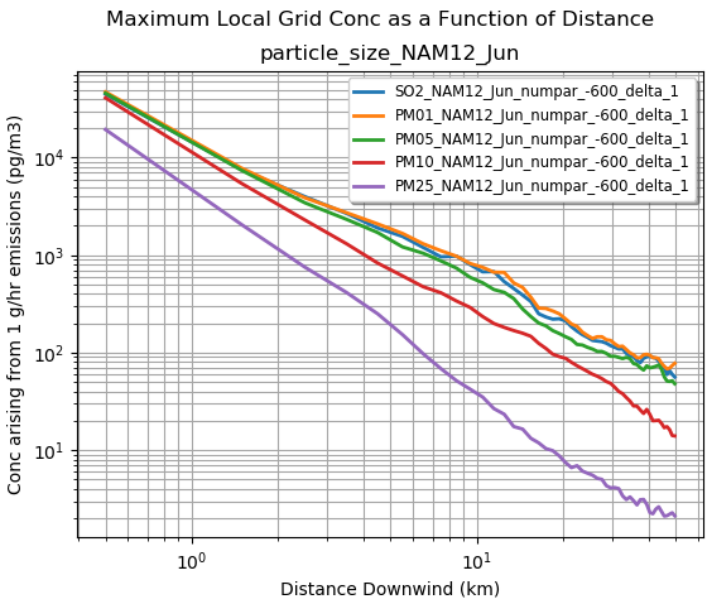
For maximum concentrations, little difference except for large particles (10 µm)

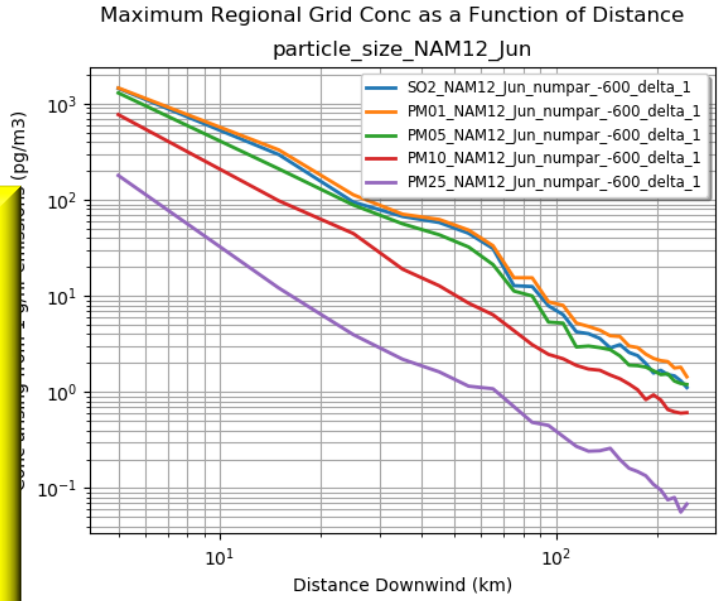
Compare simulation with no deposition with simulation of SO2, PM01 and PM10 with default deposition parameters





For 5th percentile, where one might expect to see the consequences of deposition (e.g., when it is raining), little difference except for large distances with large particles (10 µm)

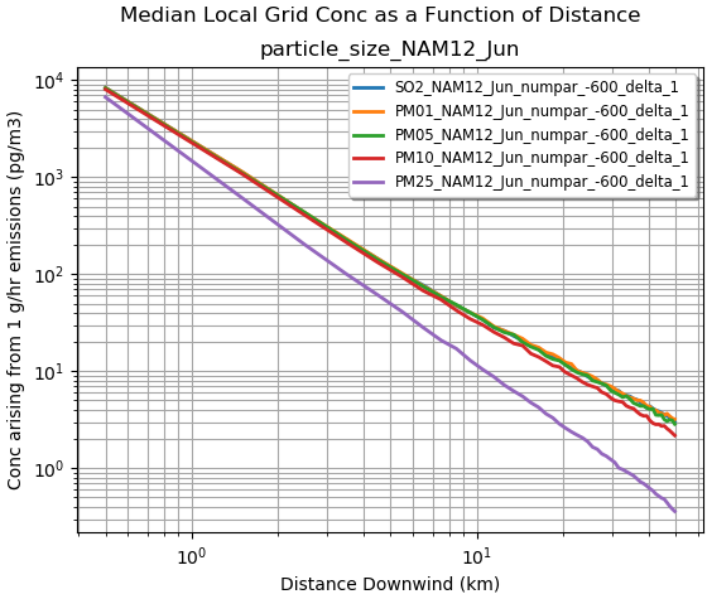


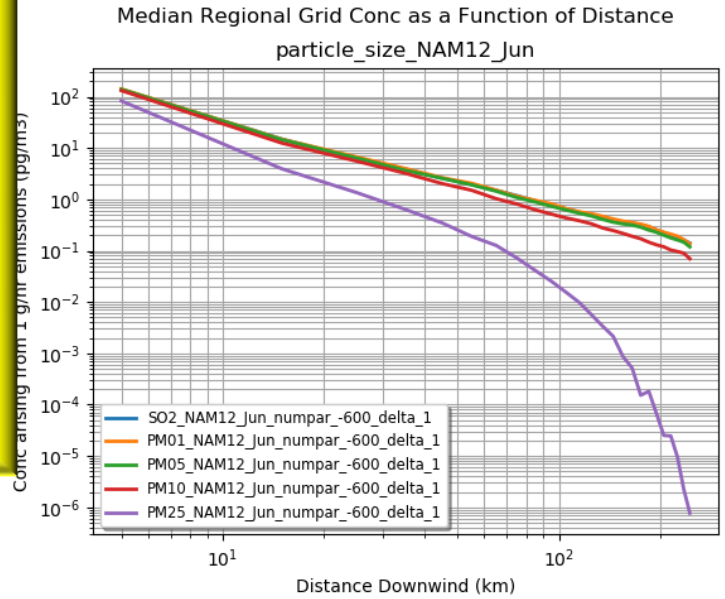


Not a very dramatic difference between gas-phase SO_2, and 1 and 5 µm particles

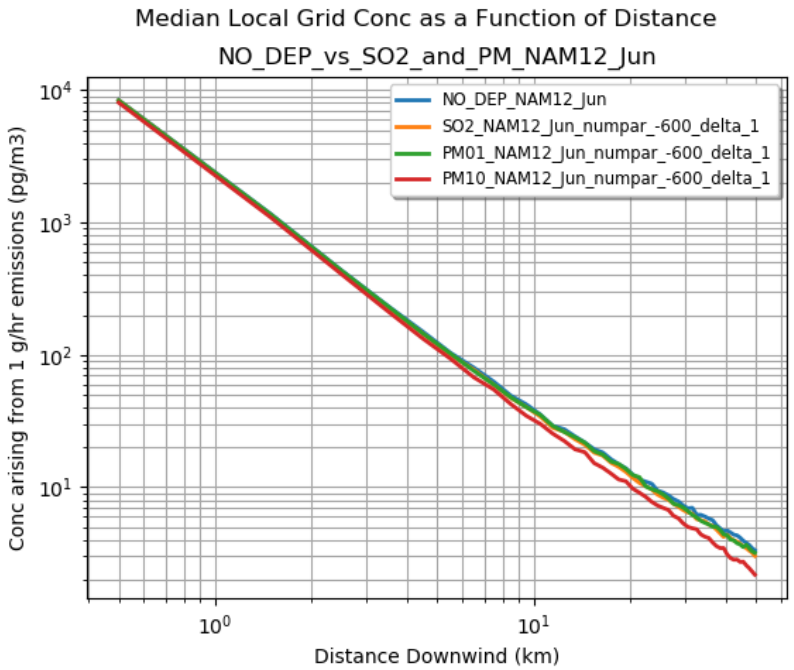
If pollutant partitions to atmospheric particles, most would be associated with particles less than 5 µm

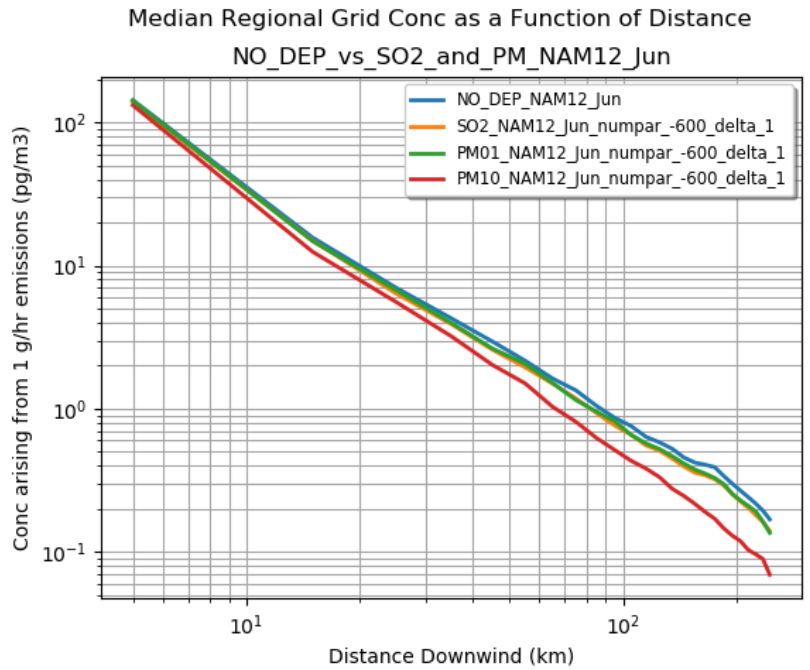
Bigger differences seen with 10 and 25 µm particles





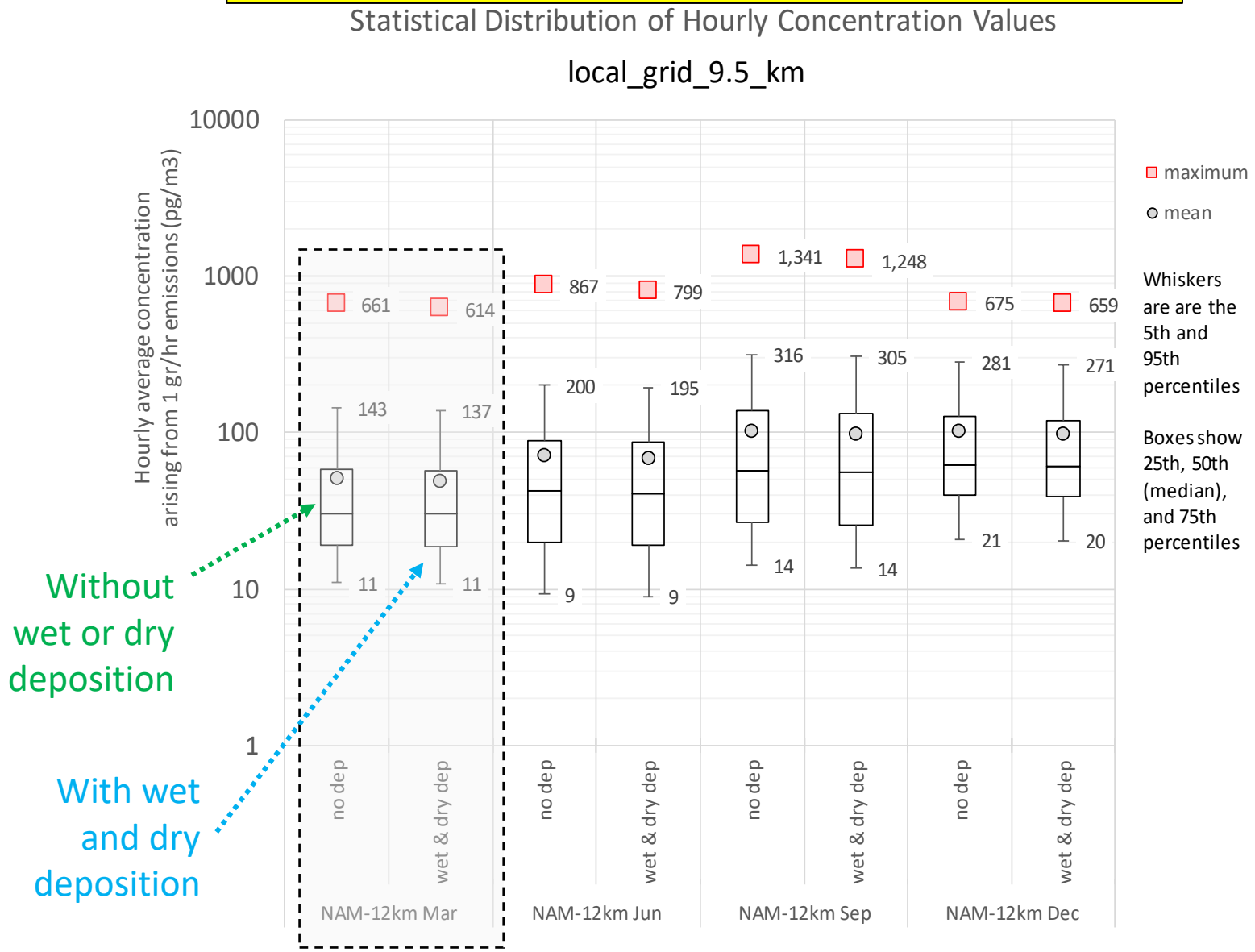
Compare simulation with no deposition with simulation of SO2, PM01 and PM10 with default deposition parameters





For median concentrations, little difference except for large particles (10 µm)

Example of overall impact of wet/dry deposition (for SO_2)



HYSPLIT
AIR RESOURCES LAB

Workshop guidance

and resources posted at

Workshop Web Page

https://www.ready.noaa.gov/register/HYSPLIT_hyagenda.php

We will update this page each day to include any new materials or links that are relevant to the Workshop

Quick Recap of Logistics

- **General questions:**
  - use Go-to-Webinar Question box and we will do our best to answer
  - We are not using the "raise hand" feature for questions
- **Detailed questions, e.g., about the model:**
  - use the HYSPLIT Forum
  - if haven't already, "register" in upper right corner of Forum web page
- **Handouts:**
  - Other documents – e.g., this presentation – provided as Handouts in Go-to-Webinar and also on the Workshop Web Page
- **Recordings:**
  - Each day's recording will be posted to the Workshop Web Page as soon as it is ready, generally 4-8 hours after the day's session ends.
- **If not installed, or if get too far behind:**
  - Perfectly ok to view one or more sessions as "demonstrations" and then go back and do the sessions on your own. The Tutorial is designed to be done on one's own in self-paced environment.

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- **Installation Day (Mon, June 13)**
  - Installation day introduction
  - Workshop video recording installation day (MP4, 266 MB) and unfinished transcript (TEXT, 49 KB). The transcript is machine-gen inaccurate captions. See the above paragraph on how to download the video file.
- **Workshop Day 1 (Tue, June 14)**
  - Day 1 handout (PDF, 4.7 MB).
  - Trajectory equation (PDF, 0.2 MB).
  - Day 1 wrap-up (PDF, 5.1 MB) without animations. Day 1 wrap-up (PPTX, 9.2 MB) with animations.
  - Workshop video recording for day 1 (MP4, 984 MB) and unfinished transcript (TEXT, 213 KB). The transcript is machine-generate captions. See the above on how to download the video file.
- **Workshop Day 2 (Wed, June 15)**
  - Day 2 handout (PDF, 4.8 MB).
  - Day 2 wrap-up (PDF, 2.8 MB) without animations and Day 2 wrap-up (PPTX, 3.0 MB) with animations.
  - Workshop video recording for day 2 (MP4, 0.99 GB). The transcript is being generated and it will posted here when it becomes a to download the video file.
- **Workshop Day 3 (Thr, June 16)**

  The exec/statmain executable in HYSPLIT v5.2.1 does not work correctly. Please update it by downloading the zip file matching yo statmain to your HYSPLIT exec directory.
  - Windows users - fix_win10.zip (ZIP, 0.5 MB). Three executable files (including txt2dbf.exe and dbf2txt.exe for shapefile generatio HYSPLIT v5.2.1 distribution for Windows are found to be defective.
  - macOS users - fix_macOS.zip (ZIP, 0.3 MB).
  - Ubuntu 20.04 users - fix_UbuntuOS20.04.zip (ZIP, 29 KB).
  - Red Hat Enterprise Linux 8 / CentOS 8 users - fix_RHEL8.5.zip (ZIP, 29 KB).
  - Red Hat Enterprise Linux 7 / CentOS 7 users - fix_CentOS7.9.zip (ZIP, 28 KB).

2022 HYSPLIT Workshop Schedule

Subject to change, depending on the progression of the course and at the discretion of the instructors

UTC	Eastern Daylight Time	Monday June 13, 2022	Tuesday June 14, 2022	Wednesday June 15, 2022	Thursday June 16, 2021	Friday June 17, 2021
13:00 - 14:00	9:00 - 10:00	*OPTIONAL** 1a. Installing HYSPLIT on Windows PC	Introduction	Introduction	Introduction	Introduction
		Break	3. Gridded Meteorological Data Files	7. Air Concentration calculations	11. Pollutant transformations and deposition	15. Radioactive pollutants and dose
14:00 - 15:00	10:00 - 11:00	*OPTIONAL** 1b. Installing HYSPLIT on MAC	Break		Break	
		Break	4. Trajectory Calculations	Break	12. Air Concentration Uncertainty	Break
15:00 - 16:00	11:00 - 12:00	*One-on-one virtual installation sessions, by appointment*		8. Configuring the CAPTEX simulation		16. Volcanic eruptions with gravitational settling
16:00 - 17:00	12:00 - 13:00	*One-on-one virtual installation sessions, by appointment*	Break	Break	Break	Break
17:00 - 18:00	13:00 - 14:00	*One-on-one virtual installation sessions, by appointment*	5. Trajectory Options	9. Air concentration parameter sensitivity	13. Source Attribution Methods	17. Custom Simulations
18:00 - 19:00	14:00 - 15:00	*One-on-one virtual installation sessions, by appointment*	Break		Break	Break
19:00 - 20:00	15:00 - 16:00	*One-on-one virtual installation sessions, by appointment*	6. Trajectory Statistics	Break	14a. Wildfire Smoke	Final Questions and Course Wrap-Up
			Day 1 Wrap-Up	10. Alternate display options	14b. Dust Storms	
20:00 - 21:00	**16:00 - 17:00**	*One-on-one virtual installation sessions, by appointment*		Day 2 Wrap Up	Day 3 Wrap Up	

Agenda – Day 3

UTC	EDT	Agenda Item
13:00 – 13:15	09:00 – 09:15	Introduction to Day 3
13:15 – 14:15	09:15 – 10:15	11. Pollutant Transformations and deposition
14:15 – 14:30	10:15 – 10:30	Break
14:30 – 16:00	10:30 – 12:00	12. Air Concentration Uncertainty
16:00 – 17:00	12:00 – 13:00	Break
17:00 – 18:45	13:00 – 14:45	13. Source Attribution Methods
18:45 – 19:00	14:45 – 15:00	Break
19:00 – 19:45	15:00 – 15:45	14a. Wildfire Smoke
19:45 – 20:30	15:45 – 16:30	14b. Dust Storms
20:30 – 20:45	16:30 – 16:45	Day 3 Wrap-up / questions

Note: all times are approximate

Agenda – Day 4

UTC	EDT	Agenda Item
13:00 – 13:15	09:00 – 09:15	Introduction to Day 4
13:15 – 14:45	09:15 – 10:45	15. Radioactive Pollutants and Dose
14:45 – 15:00	10:45 – 11:00	Break
15:00 – 16:30	11:00 – 12:30	16. Volcanic Eruptions with Gravitational Settling
16:30 – 17:30	12:30 – 13:30	Break
17:30 – 18:30	13:30 – 14:30	17. Custom Simulations
18:30 – 18:45	14:30 – 14:45	Break
18:45 – 19:45	14:45 – 15:45	Question and answer session with course instructors
19:45 – 20:00	15:45 – 16:00	Final course wrap-up

Note: all times are approximate