

Scientific Messenger - Presentations

David Delene, Atmospheric Sciences Department, University of North Dakota



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<http://www.openscienceassociates.com/delene/>

Remember a Presentations or Anything

Build a Funny Picture or Story (Visualization)

Experience:
(White Hair – Yellow?)

Know the Audience:
Korea Flag



Time in Minutes – 10 % = # of Slides



Experience Helps a Lot ☺

- 23 University Courses.
23 course * 15 weeks * 3 hours
= 1,035 hours
- >157 National or International Presentations
- > 25 Regional Presentations
- > 73 Local Presentations

What do you do if you do not have
a lot of experience giving
presentations?



Know the Audience

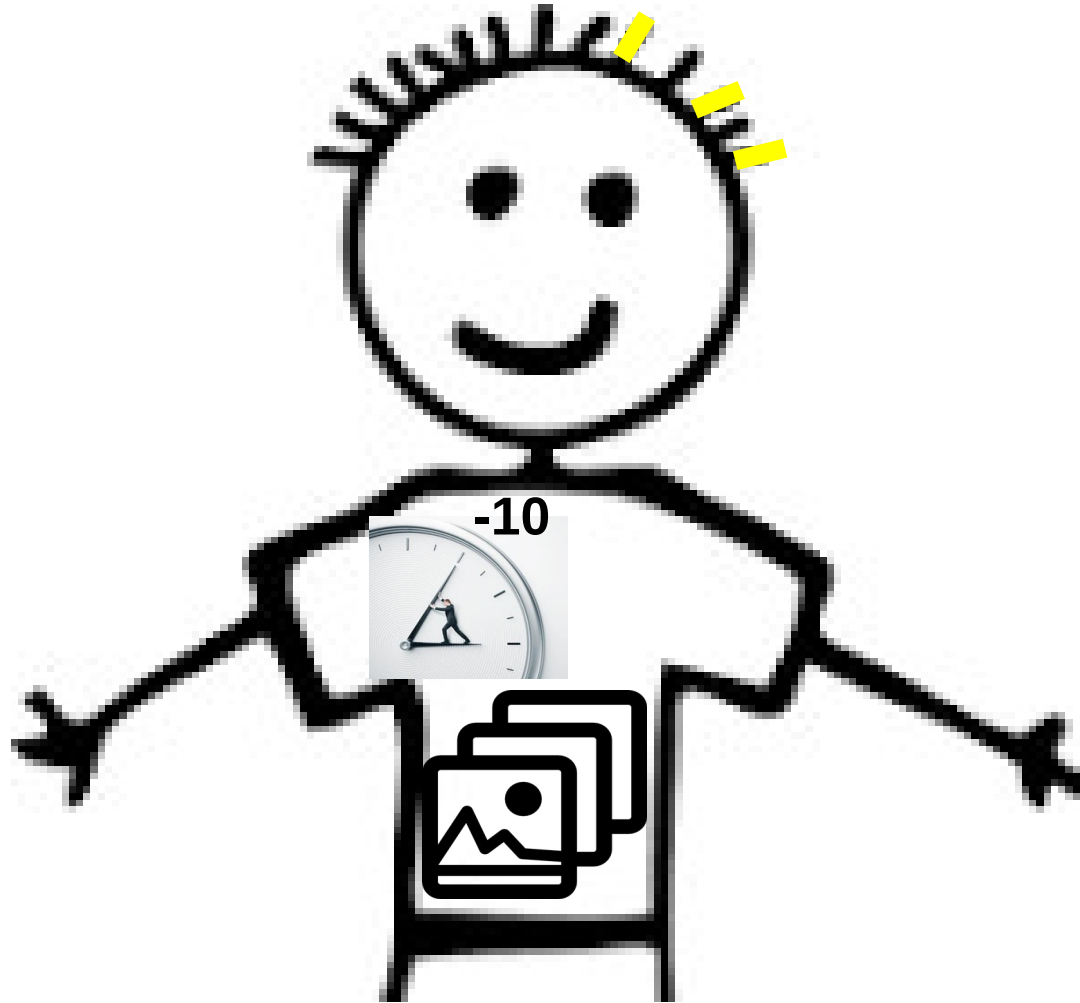


- Adjust presentation for different audiences.
- Typically, you can assume that your audience is scientists with an undergraduate educational level in atmospheric science.
- Understand what your audience expects, what options you have.



Dr. Raina demonstrating pesticide sampling at the Glacialridge field site on October 10, 2012.

What is the Number of Slides to Include?



Number of Slides to Include

- A rule of thumb for the upper limit on number of slides is the number of minutes minus 10 % and then round down.
- For example, 15 minutes minus 10 % = $15 - 1.5 = 13.5$ slides.
- Give more time for data, less time for text. Between one to two minutes per slide.



David Delene talking to a group of students about the instruments on the left wing of the North Dakota Citation Research Aircraft.

Text Tips

- Use style formatting to define all text.
- Do not use abbreviation unless necessary to fit on the slide.
- Do not assume audience knows what the abbreviation represents.
- Use 5 lines with 5 words per line.
- No more the 6 or 7 lines per slide.
- Make sure sentences end with period.
- Capitalize major words in header.



Have you seen any presentation with very poor text?

Clarify Your Presentation

- Simplify your phrases.
- Tighten your sentences.
- Never use a long word, if a short one will do.
- Keep technical language as straightforward and uncomplicated as possible.
- If you can delete a word without losing meaning, delete it.
- Use equations, math, and symbols sparingly and carefully.
- Scientific talks contain many facts and data, so it is important to summarize. Visual summaries are particularly effective.



Organize Your Presentation

- Use introduction, methods, results, discussion, conclusions, and significance segments. Only need outline if you are not using this organization for you presentation.
- Consider the central message in every presentation segment.
- Indicate why anyone should care about your results.
- Use words that are simple, direct, and active.
- The primary purpose for giving the scientific talk is to inform or instruct.
- The topic should be defined within the context of the rest of the program and within your invitation to speak.

Generating Excitement and Interest

- Why would other scientists be interested?
- Think about how to generate excitement for the subject in someone without knowledge and involvement?
- How might other disciplines or other research areas within my own discipline use this information?
- Is there a research or teaching anecdotes that can add emphasis, interest or humor?



Use Your Voice

- Speak slowly and clearly.
- Modulate your voice somewhere between a monotone and sing-song.
- Look up and make eye contact periodically.
- Work hard to eliminate nervous sounds (uh, um). Better to pause and not say anything than to say uh or um.
- Emphasize certain words to get your meaning across.

7 Tips on How to Use Your Voice Effectively in a Presentation

1. Intonation and rhythm
2. Volume
3. Emphasis
4. Clarity and enunciation
5. Pause
6. Pace
7. Emotion and expression



Visit Activia Training to read more www.activia.co.uk

Style of Delivery

- Write the text in short, uncomplicated sentences.
- Avoid jargon and fancy verbiage. Read verbatim, don't change the wording.
- Additionally, you MUST walk your audience through the graphs in the Results section.
- Tell them the important points.
- Let the slides cue your speech. You must really know your material well.
- You will almost have memorized your slide order. Be careful about exceeding your time frame.

Adhere to the Time Limit

- Allow time for questions. If necessary indicate how you like to take questions.
- To assure success in this area... practice, practice, practice.
- Don't make your session moderator take “police action”!

What would you think/do if this presentation took 75 minutes?



Practice, Practice, and More Practice

- Rehearse with accessories, including microphone, pointer, and screen.
- Try it out on your peers, family, pets, in the mirror, or recording.
- Practice early to accommodate revisions.
- Too long, cut stuff instead of talk faster.
- If possible, practice or test your presentation on the computer system and in the presentation room.
- **To get really good at something, need to put in 10,000 hours of really hard, uncomfortable practice.**



Conclusion

- Get better with experience.
- Revise previous presentations.
- Not all scientists give “good” presentations.
- See Presentation Guide at <http://www.openscienceassociates.com/delene/whitepapers.html>.
- Example slides for Atmospheric Aerosols follow, example presentations at <http://aerosol.atmos.und.edu/seminars.html>.

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Research Professor (University Page)

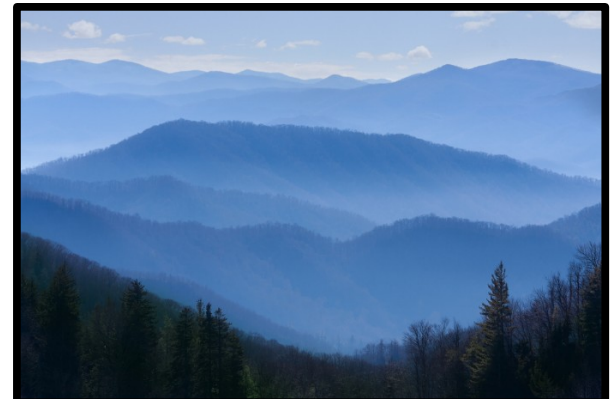
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Remember Take Away

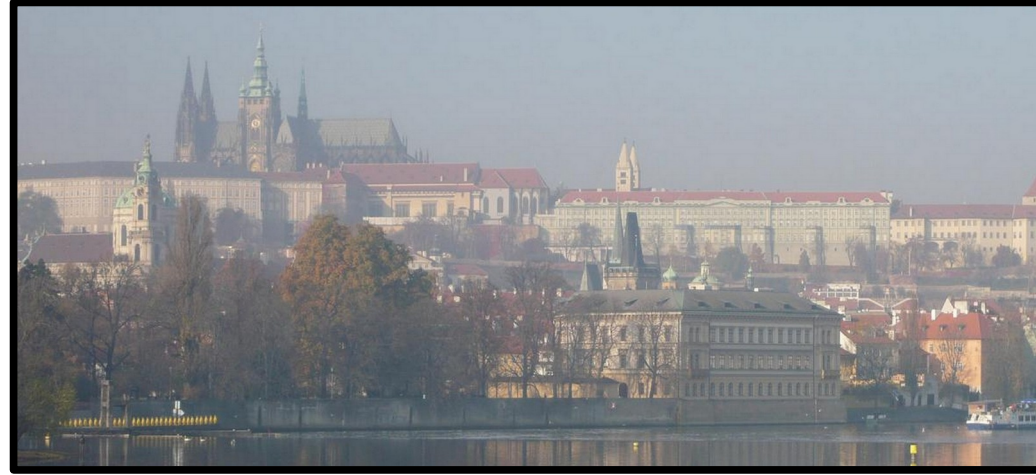
What comes to mind with this Picture



Atmospheric Aerosols (Particles)

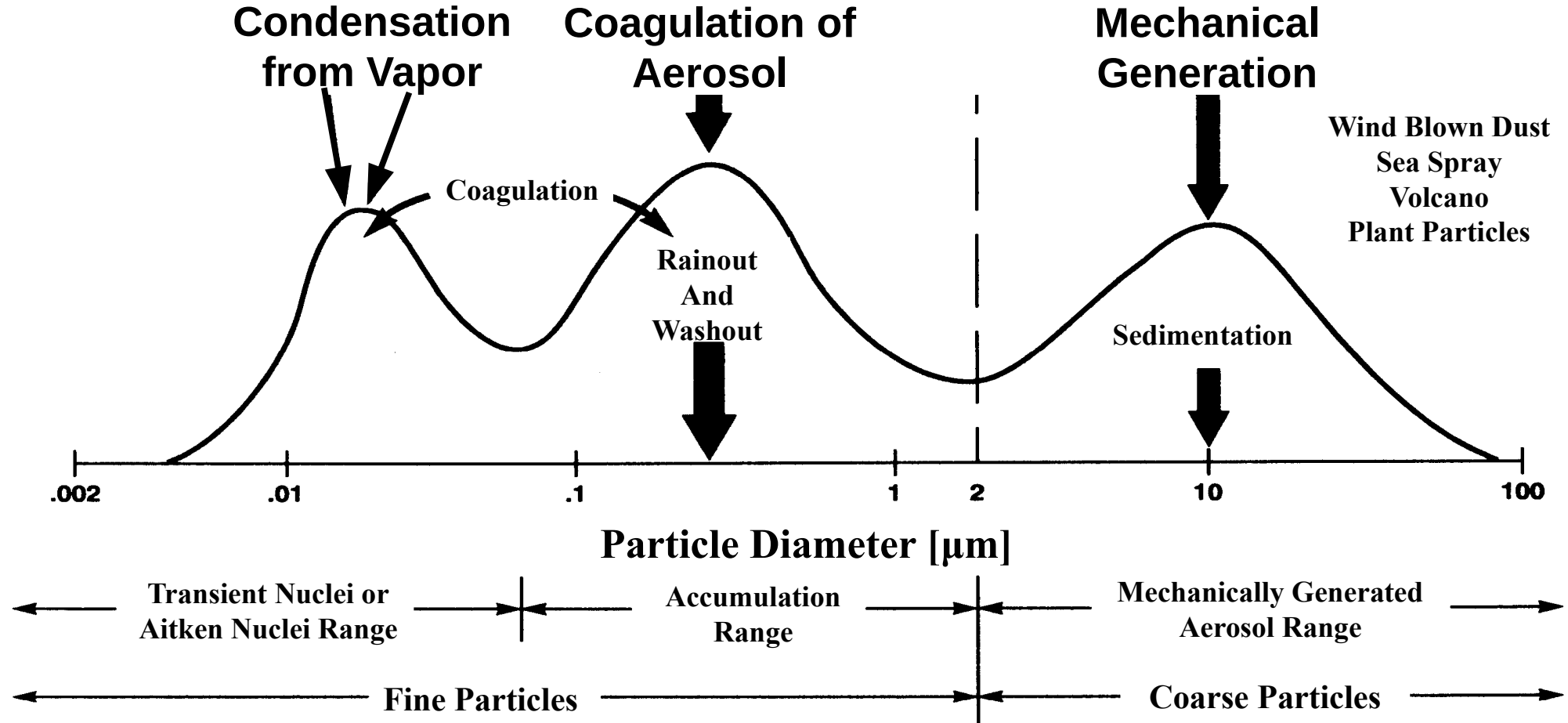


Atmospheric Aerosols (Particles)



Prague Castle, Czech Republic

Sources of Atmospheric Aerosols



Adapted from Singh: Figure 5.4

Sources of Atmospheric Aerosols



Volcanic Dust



Forest Fires



Sea Salt



Fuel Combustion



Transportation