Going forward (Chip)

Thank-you for participating! We have 158 registered participants.

Two primary goals for the meeting:

- Gain an understanding of the current knowledge of lidar ratio observations, theory and utilization to aid in planning for a CALIPSO Version 5 Level 2 data product (e.g., revise lidar ratio catalogue, revise scheme to use lidar ratios in CALIPSO data processing system).
- Determine if sufficient community interest to continue discussions on lidar ratio and, perhaps, elevate the discussion beyond a one-time virtual workshop into a regular community discussion (e.g., meetings, publications, etc)

On the first bullet I see these findings:

1) The CALIPSO Lidar Ratio catalogue should be reviewed in light on the new findings in literature.
2) Identify which 'lidar types' need revision in CALIPSO data processing. Could be a change and or addition of Lidar Ratio values to catalogue, develop an alternative scheme for selecting lidar ratios, or a combination of both. No time line for CALIPSO V5.
3) Explore ways to mix aerosol lidar ratio types
4) Engage in broader conversation with community on definition of aerosol typing (optical vs chemical). Lidars are a prominent observing system for climate, air quality, and weather and will be into the future.

On the second bullet I see these findings:

1) ~150 people registered for this virtual workshop – and highlights interest across the lidar and modeling community for greater engagement in this discussion.
2) Desire to engage east Asian communities (follow on meeting within next 3 or so months)
3) Desire to set up face-to-face meetings for more involved discussions. Ideally through international organization to facilitate discussion and exchange of information
4) Desire to link more closely with EarthCare activities – and with ACCP instrument systems to identified in near future.

Going forward (Greg)

Thank-you for participating! We have 158 registered participants.

Logistics

- Some participants are not registered — register to stay on distribution. https://forms.gle/WSy2BnMjUy7hddxb7
- We are seeking feedback on our workshop format (post to board or email gregory.l.schuster@nasa.gov). In particular, we would like to know if this format allow you to voice your ideas, and your thoughts on how we might improve the experience.

Continuing the Discussion

- Continue conversations on boardnet until March 26. Then we will download and distribute. If the board is still active at that time, we will find NASA-approved alternatives for a long-term tool.
- We'll be working toward placing talks on a public-facing website (targeting April 1). Speakers have edit permissions to upload versions that they would like to make public (e.g., can add notes and finalize for friendly reading) or they can delete their talks from the drive.
- 2nd workshop soon (within 6 months) at a time of day friendly to the Orient (i.e., probably East Coast evenings).
- We would like to form Working Groups and coordinate with EarthCare team (watch Boardnet). Possibilities include (but are not limited to):
  - Regional approaches to informing aerosol type and lidar ratios
  - Model approaches for informing aerosol type and lidar ratios
  - Multi-wavelength approaches for determining aerosol type
  - Type-specific groups (e.g., groups that focus exclusively on one aerosol type, like marine, dust, etc.)
  - Computational lidar ratio methods and verification
  - YOUR ideas that motivate your work, especially ideas that you are interested in leading. Send to gregory.l.schuster@nasa.gov.

CALIPSO was a game-changer for vertically profiling the atmosphere when it was launched. There may be additional launches of backscatter and/or HSRL lidars to space, and continuing this discussion will benefit the new missions.