Review of "The Aerosol Characterization from Polarimeter and Lidar (ACEPOL) airborne field campaign" by Knobelspiesse et al.

## General:

This manuscript documents collection of atmospheric aerosols using 4 polarimeters and 2 lidars onboard ER-2 during ACEPOL. The CPL lidar has a horizontal resolution of about 200m and a vertical resolution of 30m, while the HSRL\_2 has a horizontal resolution of 1-2 km, and a vertical resolution of 15m.

The 4 polarimeters onboard ER-2 contains spatial sampling from about 42.9 km, 9 km, 280 m per pixel, to 6-degree cross track. The resolutions range from about 10 m at ground to 1 km.

There were 9 ACEPOL flights conducted in October-November 2017. Dates of calibration of ACEPOL data were described in Table 2. There are 9 days with calibration days specified: 10/19, 10/23, 10/25, 10/26, 10/27, 11/01, 11/03, 11/07, 11/09.

Test of data accessibility (see below) indicates that the data is not user friendly. Please refer to the NASA GTE project, which contains lots of flights of data. The GTE data are very easy to use and user friendly.

Comments:

- Calibrations: The calibrations effect, before and after the calibration of the observational data, is not clear. The details of flights are outlined in Table 4. Please provide results (in figures, etc) comparing raw data with the calibrated data.
- 2. What are the variables observed during the 9 flights? What are the time resolution of data of each observed variable?
- 3. Test of data accessibility from Table 3:

ASDC: <u>https://eosweb.larc.nasa.gov/10.5067/SUBORBITAL/ACEPOL2017/DATA001</u>



## AirMSPI

https://eosweb.larc.nasa.gov/project/airmspi/airmspi\_table/10.5067/AIRCRAFT/AIR MSPI/ACEPOL/RADIANCE/ELLIPSOID\_V006



https://eosweb.larc.nasa.gov/project/airmspi/airmspi\_table/10.5067/AIRCRAFT/AIR MSPI/ACEPOL/RADIANCE/TERRAIN\_V006



GroundMSPI :

https://eosweb.larc.nasa.gov/project/airmspi/airmspi\_table/10.5067/GROUND/GRO UNDMSPI/ACEPOL/RADIANCE\_v009



## AERONET https://aeronet.gsfc.nasa.gov/



Q: Where to find data relevant to the calibration of the 9 ER-2 flights described in Table 2?

CARB https://www.arb.ca.gov/adam/index.html

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	PROGRAM LINKS • Frequently Asked Questions	Trends Summaries:	Air Quality Trends Summaries Select any number of years to see year-to-year trends in key air quality statistics		
	Resources O Contact Us	Top 4 Summary:	Top 4 Measurements and Days Above the Standard Choose any three year window of annual top 4 measurements and key annual statistics		
		Hourly Listing:	24 Hourly Measurements for a Site and Day Choose any date, location, and pollutant to view all hourly measurements in a moveable 24-hour window		
		Weekly Listing:	Daily Statistics in a 10-Week Listing Display the daily statistic of your choice in a moveable 10- week window		
		Greenhouse Gas Listing:	24 Hourly Measurements for a Site and Day Choose any date, location, and greenhouse gas substance to view all hourly measurements in a moveable 24-hour window		
		Toxics Summaries:	Statewide & Site-by-Site Toxics Summary Statistics View comprehensive listings of statewide and site-by-site statistics for substances in ARB's toxics monitoring program		
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Q: Where to get data relevant to 9 ER-2 flights in this work from this page?

4. Test of data accessibility from Abstract and reference ACEPOL Science Team, 2017:

doi:10.5067/SUBORBITAL/ACEPOL2017/DATA001

Test results: I was not able to find data from input above line to google.

But I was managed to find data from following link:

https://asdc.larc.nasa.gov/project/ACEPOL/ACEPOL AircraftRemoteSensing CPL Data 1



After trying to Get Dataset, with OPENDATA selected in Additional Options, following page poped up:



Even in here, it is still unclear where and how to view the flight data?