



2024 A-RIP PLANNING WORKSHOP • 22-24 JULY 2024 • BOULDER, COLORADO, USA

Zoom Meeting ID: 981 1277 9509 | cuboulder.zoom.us/j/98112779509

OBJECTIVES

This workshop brings together scientists developing and using reanalyses to share research and plan the next phase of systematic reanalysis evaluations under the Atmospheric Processes and their Role in Climate (APARC) Reanalysis Intercomparison Project (A-RIP). Workshop topics include updates on the newest and forthcoming reanalyses and planning for topical studies. New and continuing topics for intercomparison include the Brewer-Dobson circulation; the tropospheric circulation (e.g., jets, storm tracks, teleconnections, extreme weather events) and its links to the stratosphere; monsoons; transport and composition in the extra-tropical and tropical upper troposphere and lower stratosphere (UTLS); tropical UTLS / tropical tropopause layer; the upper stratosphere, mesosphere, and lower thermosphere; quasi-biennial oscillation; the stratospheric polar vortex (dynamics & variability; composition & chemistry); and tropospheric composition and air quality.

LOCAL ORGANIZING COMMITTEE

Sean M. Davis • NOAA Chemical Sciences Laboratory

V. Lynn Harvey • Laboratory for Atmospheric and Space Physics

Gloria L. Manney • NorthWest Research Associates

Adam Schneider • Cooperative Institute for Research in Environmental Sciences

A-RIP STEERING COMMITTEE

Jonathon S. Wright (co-lead) • Tsinghua University (jswright@tsinghua.edu.cn)

Gloria L. Manney (co-lead) • NorthWest Research Associates (manney@nwra.com)

Masatomo Fujiwara (co-lead) • Hokkaido University (fiji@ees.hokudai.ac.jp)

Sean M. Davis • NOAA Chemical Sciences Laboratory

Mohamadou Diallo • Forschungszentrum Jülich

V. Lynn Harvey • Laboratory for Atmospheric and Space Physics

K. Emma Knowland • NASA GMAO and Morgan State University

Patrick Martineau • Japan Agency for Marine-Earth Science and Technology

Felix Ploeger • Forschungszentrum Jülich

Krzysztof Wargan • NASA GMAO and Universities Space Research Association

WORKSHOP SUPPORT PROVIDED BY





APARC
Reanalysis
Intercomparison
Project



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DAY 1 • 22 JULY 2024

9:00-9:20	Welcome and Workshop Objectives	A-RIP leads
SESSION 1 REANALYSIS UPDATES		
9:20-9:40	NASA Global Modeling and Assimilation Office	Kris Wargin
9:40-10:00	NOAA / NCEP Climate Prediction Center	Laura Ciasto
10:00-10:20	European Centre for Medium-Range Weather Forecasts	Hans Hersbach (online)

~ 10:20-11:00 coffee break ~

SESSION 2	A-RIP TOPIC INTRODUCTIONS	
11:00-11:30	Dynamics Overview	Masatomo Fujiwara
11:30-12:10	Gravity Waves	Laura Holt

~ 12:10-14:00 lunch break ~

SESSION 3	DATA & DIAGNOSTICS	
14:00-14:20	Earth System Model Validation Tool (ESMValTool)	Birgit Hassler
14:20-14:40	Model Diagnostics Task Force (MDTF)	Rich Neale
14:40-15:00	Reanalysis Intercomparison Dataset (RID)	Patrick Martineau
15:00-15:10	Documentation and Website	Jonathon Wright
15:10-15:30	Open Discussion	Jonathon Wright

~ 15:30-16:00 coffee break ~



Sponsors: Atmospheric Processes and their Role in Climate (APARC), a core project of the World Climate Research Programme; Cooperative Institute for Research in Environmental Sciences (CIRES); NorthWest Research Associates, Inc.; Laboratory for Atmospheric and Space Physics (LASP)



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SESSION 4	REANALYSIS UPDATES	
16:00-16:20	The JAGUAR-DAS Whole neutral Atmosphere Reanalysis	Dai Koshin
16:20-16:40	NOAA-CIRES-DOE Twentieth Century Reanalysis	Laura Slivinski
16:40-17:00	Unified Forecast System (UFS)-based coupled model replay	Adam Schneider
17:00-17:20	CSIRO Oceans and Atmosphere (CAFE)	Terence O'Kane (online)
17:20-17:40	Japan Meteorological Agency	Yuki Kosaka (online)
17:40-18:00	New global historical reanalysis from 1850 to 2015: OCADA	Masayoshi Ishii (online)

A-RIP RESOURCES



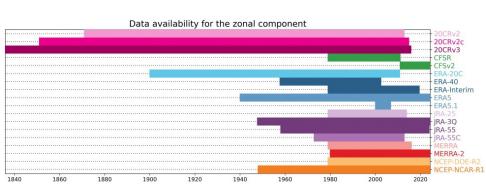
[S-RIP Final Report](#)
SPARC Report No10
Published January 2022



A-RIP: ACP & WCD
2023–
[Link](#)



S-RIP: ACP & ESSD
2015–2022
[Link](#)



[Reanalysis Intercomparison Dataset](#)
Patrick Martineau
Hosted by JAMSTEC





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DAY 2 • 23 JULY 2024

SESSION 5	REANALYSIS UPDATES: COMPOSITION	
9:00-9:20	Copernicus Atmosphere Monitoring Service (CAMS)	Antje Inness (online)
9:20-9:40	Realtime Air Quality Modeling System (RAQMS)-Aura	Brad Pierce (online)
9:40-10:00	NASA GMAO Composition Reanalyses	Kris Wargan
10:00-10:20	BASCOE Reanalysis of Aura MLS (BRAM)	Daniele Minganti

~ 10:20-10:50 coffee break ~

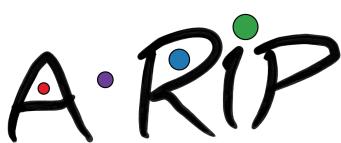
SESSION 6	A-RIP TOPIC INTRODUCTIONS	
10:50-11:10	Tropospheric Chemistry Reanalysis	Kazuyuki Miyazaki
11:10-11:40	Composition Overview	Kris Wargan, Sean Davis
11:40-12:20	Aerosols and Air Quality	Zeeshaan Shahid

~ 12:20-14:00 lunch break ~

SESSION 7	A-RIP TOPIC INTRODUCTIONS	
14:00-14:50	Brewer-Dobson Circulation	Beatriz Monge-Sanz (online), Moha Diallo
14:50-15:30	Quasi-Biennial Oscillation	Moha Diallo

~ 15:30-16:00 coffee break ~





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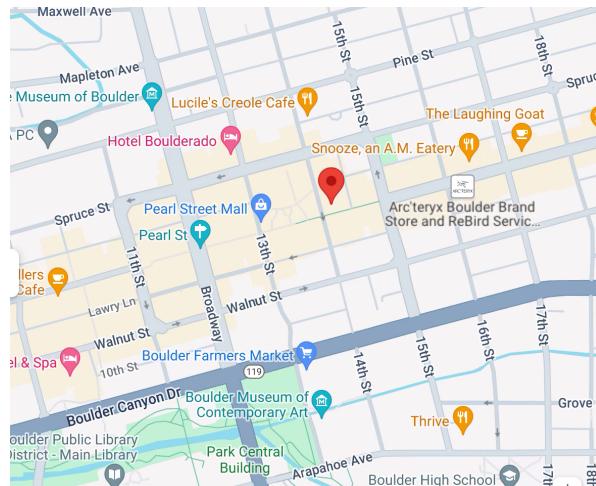
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SESSION 8	A-RIP TOPIC INTRODUCTIONS	
16:00-16:40	Upper Stratosphere, Mesosphere, and Lower Thermosphere	Lynn Harvey
16:40-17:20	Polar Vortex: Dynamics & Variability and Composition & Chemistry	Michelle Santee, Gloria Manney
17:20-18:00	Monsoons + Tropical Tropopause Layer (TTL)	Jonathon Wright, Mengchu Tao

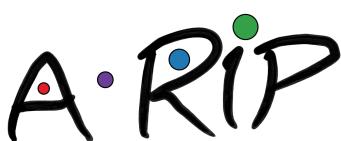
GROUP DINNER

~ 19:00-21:00 ~

Avanti Food & Beverage Boulder
<https://boulder.avantifandb.com>
1401 Pearl Street, Boulder, CO



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DAY 3 • 24 JULY 2024

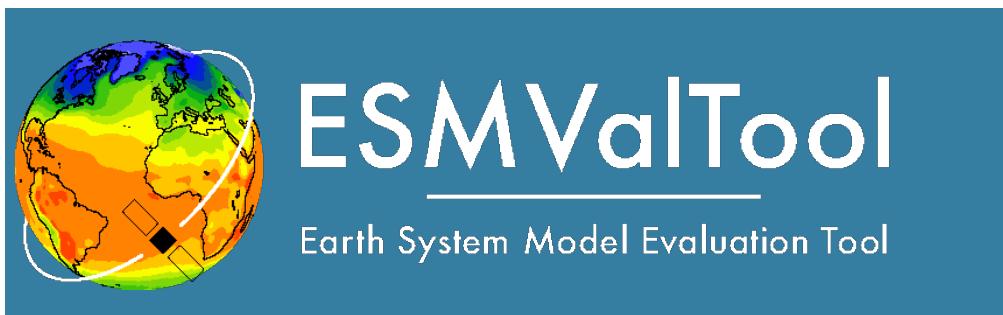
SESSION 9		A-RIP TOPIC INTRODUCTIONS
9:00-9:30	TTL + UTLS Composition & Transport	Luis Millan, Mengchu Tao
9:30-10:40	Tropospheric Circulation: Jets & Storm Tracks, Teleconnections, and Extreme Events	Froila Palmeiro Nuñez

~ 10:40-11:00 coffee break ~

SESSION 10		SUMMARY AND OUTLOOK
11:00-11:20	ECS Event Report and Capacity Building Plans	Moha Diallo
11:20-12:00	Summary and Open Discussion	A-RIP leads

~ 12:00-13:00 lunch break ~

POST-WORKSHOP TUTORIAL		
13:00-17:00	ESMValTool Tutorial (sign up on day 1) - maximum 20 participants	Birgit Hassler and ESMValTool Team





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VENUE

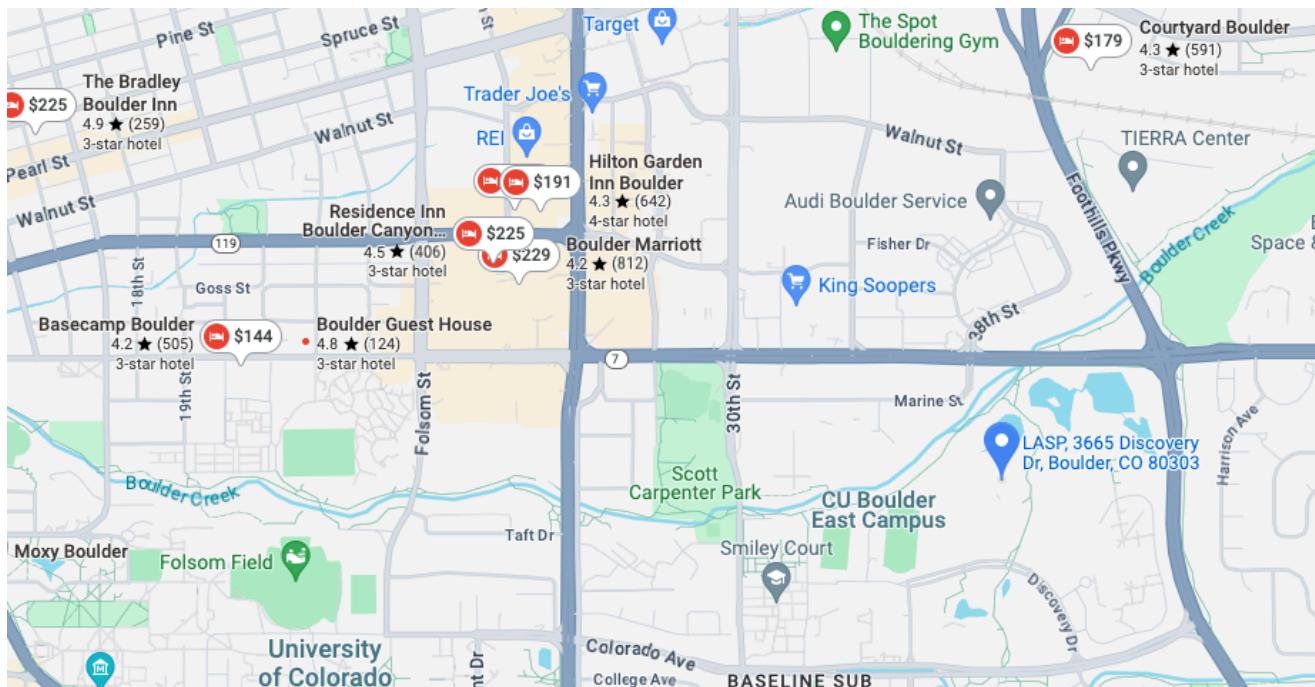
Laboratory for Atmospheric and Space Physics

LASP Space Science Center (SPSC)

3665 Discovery Drive

Boulder, Colorado 80303

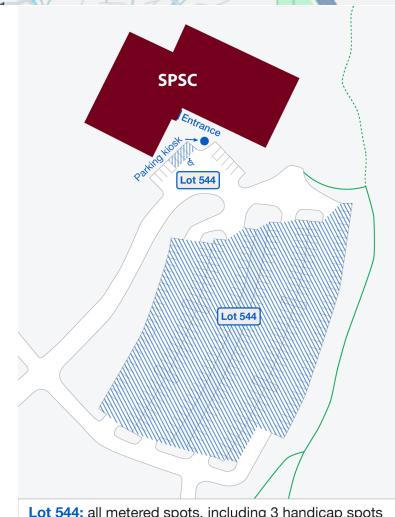
The workshop will be held in the LASP Space Science Building (SPSC) on the East Campus of the University of Colorado at Boulder in Room W120. Enter the building, pass the front desk, and turn left before the stairs.



Parking: Daily parking costs \$10 and is available in lot 544 in front of the Space Sciences building. Permits can be purchased via the kiosk near the entrance of the building or via the [ParkMobile app](#).



Laboratory for Atmospheric and Space Physics
University of Colorado **Boulder**



Lot 544: all metered spots, including 3 handicap spots



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VIRTUAL MEETING INFORMATION

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Dial by your location:

Find your local number: cuboulder.zoom.us/u/abQwDLtybM

Join by SIP: 98112779509@zoomcrc.com

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213.244.140.110 (Germany)
103.122.166.55 (Australia Sydney)
103.122.167.55 (Australia Melbourne)
149.137.40.110 (Singapore)
64.211.144.160 (Brazil)
159.124.132.243 (Mexico)
159.124.168.213 (Canada Toronto)
65.39.152.160 (Canada Vancouver)
207.226.132.110 (Japan Tokyo)
149.137.24.110 (Japan Osaka)

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