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NEW PUBLICATIONS

Papers published between January 2022 and June 2022



Gomes Alves et al.

Seasonal shifts in isoprenoid emission composition from three hyperdominant tree species in central Amazonia[↗], *Plant Biology*

We don't fully understand yet under what conditions trees emit more or fewer isoprenoids. Therefore, Eliane Gomes Alves and her team measured the isoprenoid emission capacities of three Amazonian hyperdominant tree species across seasons and environmental gradients in the ATTO area. They found that trees emit more monoterpenes and sesquiterpenes in response to heat and drought.



Franco et al.

Occurrence and growth of sub-50nm aerosol particles in the Amazonian boundary layer[↗], *Atmospheric Chemistry and Physics*

Marco A. Franco and his colleagues analyzed when and under what conditions aerosols grow to a size relevant for cloud formation. Such growth events are relatively rare in the Amazon rainforest and follow pronounced diurnal and seasonal cycles. The majority take place during daytime, and during the wet season, but there are some remarkable exceptions. Future studies are needed to explain them.



Cava et al. & Mortarini et al.

Vertical propagation of submeso and coherent structure in a tall and dense Amazon Forest in different stability conditions

PART I: Flow structure within and above the roughness sublayer[↗]

PART II: Coherent structures analysis[↗]

Agricultural and Forest Meteorology

Daniela Cava, Luca Mortarini, Cleo Quaresma and their colleagues defined the different regimes of atmospheric turbulence or stability (Part 1) and describe the spatial and temporal scales of turbulent structures (Part 2).





Workshop 2022

Time
3 - 7 OCTOBER

Place
INPA, MANAUS

Visit ATTOproject.org/workshop-2022 to

REGISTER NOW!

Presenters must register by Sept. 3rd



Photo: © M. Hertel / MPI-BGC

ATTO WORKSHOP

PROJECT MEETING 2022 IN MANAUS AND ONLINE THIS OCTOBER



This year, we will meet again in person in Manaus for our annual workshop!

It takes place from October 3 to 6, followed by a voluntary excursion to ATTO on October 7-8. We are also working on a hybrid version, and hope to offer most sessions online as well, for those who cannot make it to Brazil this time. The details are still being worked out.

In light of the Brazilian election taking place on October 2, the program will only start Monday afternoon to allow Brazilians to vote before traveling to Manaus.

The program will consist of a few plenary sessions with invited speakers covering science and adjacent topics. The majority of the workshop will once again be dedicated to thematic poster sessions with short PICO-style talks for each poster.

Presenters can choose if they want to present in English or Portuguese, but everyone's poster should include a short summary in the other language to increase exchange across language barriers.

There will also be lots of time for breakout and discussion groups.

If you have questions or suggestions about the program, please get in touch with Viviana Horna (vhorna@bgc-jena.mpg.de)

The registration deadline for those who wish to present is September 3rd. Everyone else can register until September 30.

For more details, updates and registration, please check the ATTO website at ATTOproject.org/workshop-2022



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MEET THE TEAM

Introducing new and "old" ATTO members



Anna Moraes at INPA⁷

Anna is a new Ph.D. student at the National Institute of Amazonian Research (INPA) in Manaus, in the group of Dr. Eliane Gomes Alves. She got to know ATTO by helping Debora Pinheiro during fieldwork, and got hooked. Her project now focuses on herbivore-induced plant volatiles (HIPVs). She will be taking foliar level measurements of these compounds using the canopy walkways and the INSTANT tower.



Viviana Horna at MPI-BGC⁷

Viviana is the new scientific coordinator of ATTO at MPI-BGC, taking over from Jost Lavric after he left last year. She studied Tropical Forestry in Peru, where she comes from, and has since worked as a scientist on several projects in temperate and tropical ecosystems in America, Africa and Asia. She is now looking forward to help coordinate ATTO and strengthen our international collaboration.



Stefanie Hildmann at Uni Mainz⁷

Stefanie is a new PhD student at the University of Mainz, where she works in the group of Thorsten Hoffmann. She has a Bachelor degree in Chemistry and a Master degree in Analytical Chemistry. Now in her PhD project, she chemically characterizes secondary organic aerosols (SOA) at the molecular level. In addition, she investigates biogenic volatile components (BVOCs), as precursors of aerosols.



COMMUNITY EDUCATION PROJECT

Collaboration with near-by river-community schools

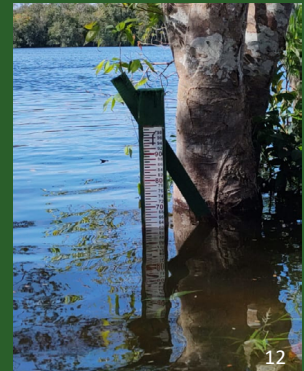


After a long pause due to the Covid pandemic, we could finally restart our collaboration with the communities of Macacaboia, Maracarana and Bela Vista near ATTO. Cybelli Barbosa and several other ATTO members, supported by INPA, are working together with the Secretary of Education of Presidente Figueiredo, as well as with teachers and school coordinators to plan our activities for the school. They recently visited ATTO and signed a cooperation agreement.

We have also now started a first hands-on project with the students. Our team installed several limnimetric scales for the students to make daily readings of the water levels across one full year. We want to follow up on this with further projects in the next years. In addition, we will give regular talks in the schools, both those aligned with the school project, but also about other topics from ATTO research.

Would you like to contribute?

We are looking for volunteers to help organize this effort, but also for people to volunteer to give talks during their stay at ATTO. Please contact Cybelli Barbosa at c.barbosa@mpic.de for more information.



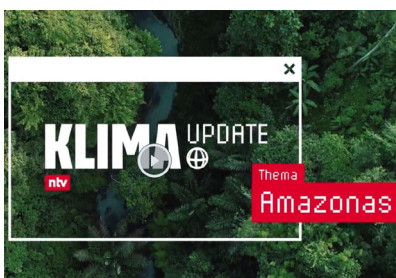
MEDIA DIGEST

HIGHLIGHTS FROM THE REPORTING ABOUT OUR RESEARCH IN THE MEDIA



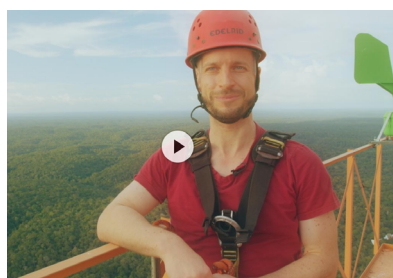
“Klima-Update” zum Amazonas

The Amazon rainforest is threatened through deforestation. Brazil's Amazon rainforest not only has a gigantic biodiversity and „flying rivers“. It is also essential in the fight against the climate crisis. This episode, the „Climate Update“ on the German TV channel ntv, focuses on the situation in the Amazon basin and visit ATTO.



hallo deutschland – Deutscher Meteorologe im Amazonas

The German show „hallo deutschland“ on the TV channel ZDF features Germans living and working abroad. In this episode, they follow Stefan Wolff to his workplace in the Amazon rainforest, but also show what his private life in Manaus is like.



Projeto na Amazônia pesquisa influência da Floresta no clima

The Brazilian TV Channel Globo News aired a detailed report from ATTO, explaining our research both at the tall tower and the Campina site. It features interviews with Beto Quesada, Bruno Takeshi, Delano Campos and Fernando Gonçalves Moraes.



GRADUATIONS

Congratulation to all Master's and PhD students on finishing their thesis



Murielli Garcia Caetano (INPA)

Master thesis: „Biogenic volatile organic compound (BVOC) emissions from decomposing leaf-litter in central Amazonia.“

Supervisors: Eliane Gomes Alves & Juliana Schietti



Ingrid Chanca (MPI-BGC/UFF)

PhD thesis: „Theoretical and experimental approaches using $\Delta^{14}\text{C}$ for estimating system diagnostic times in the central Amazon rainforest.“

Supervisors: Carlos Sierra & Kita Macario



Polari Batista Corrêa (INPA)

PhD thesis: „Gravity Waves in the Amazon Nocturnal Boundary Layer: Interactions with scalars, energy and momentum“

Supervisors: Cléo Quaresma Dias-Júnior & Antonio Manzi



UPCOMING EVENTS



September 4-9, 2022, Athens, Greece OR online
International Aerosol Conference[↗]
Late registration closes: August 18

September 4-9, 2022, Bonn, Germany and online
European Meteorological Society Annual Meeting[↗]
Normal registration closes: September 2

October 3-6, Manaus, Brazil
ATTO Workshop[↗]
Presenter registration deadline: September 3

December 12-16, Chicago, USA & online
AGU Fall Meeting[↗]
Early Bird registration closes: November 2

December 2022 & January 2023, Brazil
CAFE Brazil campaign



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