

Schedule of B3.17 live chat (6 May, 2~6 pm CEST)

The Role of Fire in the Earth System: Understanding Interactions with the Land, Atmosphere, and Society

- 2:00-2:10** What paleofire records can say about the present and future of fire on Earth (highlight)
Jennifer Marlon, Anne-Laure Daniau, Patrick Bartlein, and Andry Rajaoberison
- 2:10-2:20** The contribution of fire to a global increase in forest loss (highlight)
Dave van Wees and Guido van der Werf
- 2:20-2:27** The 2019/20 eastern Australian mega forest fires - a global forest perspective
Matthias Boer, V ́ctor Resco De Dios, and Ross Bradstock
- 2:27-2:34** High frequency fire drives forest species change: impacts on ecohydrology and ecosystem functioning
Patrick Lane, Richard Benyon, Shyanika Lakmali, Assaf Inbar, and Gary Sheridan
- 2:34-2:41** The imprints of Indian Ocean Monsoon and West Pacific Monsoon on the spatial and temporal patterns of forest fires in Yunnan, Southwest China
Zehao Shen and Lingxiao Ying
- 2:41-2:48** Impacts of wildfire aerosols on global energy budget and climate: The role of climate feedbacks
Yiquan Jiang, Xiu-Qun Yang, and Xiaohong Liu
- 2:48-2:55** Underestimated Role of Fires in Providing Nutrients for Biogeochemical Cycles
Douglas Hamilton, Anne Barkley, J. Keith Moore, Almut Arnecht, Tami Bond, Kenneth Carslaw, Cassandra Gaston, Stijn Hantson, Akinori Ito, Jed Kaplan, Keith Lindsay, Lars Nieradzick, Joseph Prospero, Sagar Rathod, Rachel Scanza, and Natalie Mahowald
- 2:55-3:02** Re-assessment of pre-industrial fires in CMIP6 models and the implications for radiative forcing
Ken Carslaw, Cat Scott, Masaru Yoshioka, Douglas Hamilton, Fiona O'Connor, Gerd Folberth, Jane Mulcahy, Mohit Dalvi, Yves Balkanski, Ramiro Checa-Garcia, Dirk Olivie, Michael Schulz, Martine Michou, Pierre Nabat, Lars Nieradzick, Twan van Noije, and Tommi Bergman
- 3:02-3:05** Fire frequency influenced grazed grasslands' resistance and resilience to extreme drought
Xiran Li, Olivia Hajek, Jillian LaRoe, Kate Wilkins, Alan Knapp, and Melinda D. Smith

- 3:05-3:08** Post-fire regeneration strategies contribute to plant growth dynamics and habitat selection in subtropical monsoon fire-prone ecosystem
Caifang Luo, Yiyang Li, Kang Yang, Jie Han, Youxu Jiang, and Zehao Shen
- 3:08-3:11** Effects of prescribed burning on soil fertility and carbon dynamics in pre-littoral Mediterranean mountain pastures
José Manjón-Cabeza, Mercedes Ibáñez, Antonio Rodríguez, Maria Josep Broncano, Josepa Plaixats, and Maria Teresa Sebastià
- 3:11-3:14** Historical (1700-2012) global multi-model estimates of the fire emissions from the Fire Modeling Intercomparison Project (FireMIP)
Fang Li and the FireMIP
- 3:14-3:17** Effects of meteorology on forest fires in India: A modeling study
Anasuya Barik and Somnath Baidya Roy
- 3:17-3:20** Influence of Atmospheric Teleconnections on Interannual Variability of Boreal Fires
Zhiyi Zhao, Zhongda Lin, and Fang Li
- 3:20-3:23** Burned area trends in the Brazilian Cerrado: the roles of climate and anthropogenic drivers
Patrícia S. Silva, Julia A. Rodrigues, Filipe L. M. Santos, Joana Nogueira, Allan A. Pereira, Leonardo F. Peres, Duarte Oom, Carlos C. DaCamara, José M. C. Pereira, and **Renata Libonati**
- 3:23-3:26** Spatial variability in biomass burning in the northern extratropics since the Last Glacial Maximum
David Kesner, Sandy Harrison, Tatiana Blyakharchuk, Mary Edwards, Michelle Garneau, Gabriel Magnan, and Colin Prentice
- 3:26-3:29** First evidence of prehistoric humans-induced fire in India: clues from macro-charcoal, biomarkers distribution and compound-specific stable isotopes
Deepak Kumar Jha, Rahul Samrat, and Prasanta Sanyal
- 3:29-3:32** Fire history in China during the Holocene and its response to the changes in environmental and anthropogenic factors
Xin Xu, Fang Li, Zhongda Lin, and Xiang Song
- 3:32-3:35** Oxidation kinetics of Jurassic coal in Northwest China at low temperature by TG and FTIR analysis
Kai Wang, Haohao Fan, Yunzhong He, Jun Deng, and Yanni Zhang
- 3:35-3:38** Photo- and Biolability of Pyrogenic Dissolved Organic Matter: A Laboratory study of Thermal Series of Laboratory-Prepared Char Leachates

Andrew R. Zimmerman, Kyle Bostick, Aleksandar Goranov, Siddhartha Mitra, Patrick Hatcher, and Andrew Wozniak

3:38-3:41 What do anhydrosugars in up to 420 kyrs old Lake El'gygytgyn sediments tell us about low-temperature fires of northeastern Siberia?

Elisabeth Dietze, Kai Mangelsdorf, Andrei Andreev, Georg Schwamborn, Martin Melles, Volker Wennrich, Grigory Fedorov, Stuart Vyse, and Ulrike Herzschuh

3:41-3:44 Late Holocene fire history documented at Lake Khamra, SW Yakutia (Eastern Siberia)

Ramesh Glückler, Ulrike Herzschuh, Luidmila Pestryakova, Stefan Kruse, Stuart Vyse, Andrei Andreev, and Elisabeth Dietze

3:44-3:47 Role of vegetation on fire behaviour in Fennoscandia forests during the Holocene

Chiara Molinari, Richard H.W. Bradshaw, Christopher Carcaillet, Gina Hannon, and Veiko Lehsten

3:47-3:50 Disentangling the effect of thermal and microbial degradation on the distribution pattern of n-alkanes in sediments: Implication for paleo-fire studies

Vijayananda Sarangi, Sayak Basu, and Prasanta Sanyal

Break

4:15-4:22 Extensive fires in southeastern Siberian permafrost linked to preceding Arctic Oscillation

Jin-Soo Kim, Jong-Seong Kug, Su-Jong Jeong, Hotaek Park, and Gabriela Schaepman-Strub

4:22-4:29 Mapping and comparing wildfire progressions using freely available, multi-source satellite data

Morgan Crowley, Jeffrey Cardille, Joanne White, and Michael Wulder

4:29-4:36 Fires can overwinter in boreal forests of North America

Rebecca Scholten and Sander Veraverbeke

4:36-4:43 Biomass burning decline causes large reductions in NO₂ burden over north equatorial Africa in spite of growing fossil fuel use

Jonathan Hickman, Niels Andela, Money Ossouhou, Corinne Galy-Lacaux, Kostas Tsigaridis, and Susanne Bauer

4:43-4:50 The role of plant traits in shaping fire regimes in different ecosystems across the world

Mara Baudena, Rubén Díaz-Sierra, Antonello Provenzale, Luke Sweeney, and Marta Magnani

- 4:50-4:57 The FIREX-AQ 2019 Dataset Is Public (poster highlight)**
Joshua Schwarz and the FIREX-AQ Science Team
- 4:57-5:00** Wildfire Detection Probability of MODIS Fire Products under the Constraint of Environmental Factors: A Study Based on Confirmed Ground Wildfire Records
Lingxiao Ying, Zehao Shen, Mingzheng Yang, and Shilong Piao
- 5:00-5:03** The spatio-temporal characteristics of forest fires in China: observations from hybrid remote sensing data
Lei Fang, Zeyu Qiao, and Jian Yang
- 5:03-5:06 Wildfires promoted by contrasting soil moisture anomalies in humid versus arid regions**
Sungmin Oh, Xinyuan Hou, and Rene Orth
- 5:06-5:09** New simple approach to understand the spatial and vertical distribution of biomass burning CO emission based on the MOPITT vertical measurements
Chuyong Lin and Jason Cohen
- 5:09-5:12** Assessment of the impacts of PM10 due to wildfires on human mortality in Portugal
Pedro Jiménez-Guerrero, Sofia Augusto, Laura Palacios-Peña, Nuno Ratola, and **Patricia Tarín-Carrasco**
- 5:12-5:15** Coupling interactive fire with atmospheric composition and climate in the UK Earth System Model (UKESM)
João Teixeira, Fiona O'Connor, Nadine Unger, and Apostolos Voulgarakis
- 5:15-5:18** Toward a UK fire danger rating system: Understanding fuels, fire behaviour, and impacts
Gareth Clay, Claire Belcher, Stefan Doerr, Andy Elliott, Mark Hardiman, Nick Kettridge, Gail Millin-Chalabi, James Morison, Cristina Santin, and Thomas Smith
- 5:18-5:21** Unusual fire seasons in a changing climate - A Bayesian approach.
Douglas Ian Kelley, Chantelle Burton, Rhys Whitley, Chris Huntingford, Ioannis Bistinas, Megan Brown, Ning Dong, and Toby R. Marthews
- 5:21-5:24** Characterising vegetation fuel moisture conditions from microwave satellite observations for fire danger prediction at continental to global scales
Matthias Forkel, Niels Andela, Wouter A. Dorigo, Markus Drüke, Sandy P. Harrison, Leander Moesinger, Luisa Schmidt, and Marta Yebra
- 5:24-5:27** The Importance of Vegetation Build Up for Burnt Area Seasonality
Alexander Kuhn-Regnier, **Apostolos Voulgarakis**, Sandy Harrison, and Colin

Prentice

- 5:27-5:30** Assessment of the relationship between pre-fire fuel estimates and Fire Radiative Power in Portugal
Catarina Alonso, Cécilia M. Gouveia, and Patrícia Páscoa
- 5:30-5:33** Characterizing two distinct biomass burning regimes over Southeast Asia and their impacts on regional air quality
Margaret Marvin, Paul Palmer, Fei Yao, Barry Latter, Richard Siddans, and Brian Kerridge
- 5:33-5:36** In situ ammonia measurements in wildfire and agricultural fire plumes in the US
Laura Tomsche, Tomas Mikoviny, John B. Nowak, Felix Piel, and Armin Wisthaler
- 5:36-5:39** Airborne measurements of trace gas emissions from African biomass burning during the MOYA Campaign
Patrick Barker, Grant Allen, Thomas Bannan, Joseph Pitt, Stephane Bauguitte, Euan Nisbet, and James Lee
- 5:39-5:42** Climatological Biomass Burning CO – Where it comes from and where it goes.
Nikos Daskalakis, Maria Kanakidou, Mihalis Vrekoussis, and Laura Gallardo
- 5:42-5:45** Carbon emissions from wildfires in larch forest ecosystems of Northeast Siberia
Clement J. Delcourt, Brian Izbicki, Elena A. Kukavskaya, Michelle C. Mack, Trofim C. Maximov, Roman E. Petrov, Brendan M. Rogers, Rebecca Scholten, Tatiana Shestakova, Guido van der Werf, Dave van Wees, and Sander Veraverbeke
- 5:45-5:48** Fire-vegetation feedbacks in JULES-INFERNO
Chantelle Burton, Richard Betts, Chris Jones, and Douglas Kelley
- 5:48-5:51** Future fires in the Coupled Model Intercomparison Project (CMIP) phase 6
Gitta Lasslop, Stijn Hantson, Victor Brovkin, Fang Li, David Lawrence, Sam Rabin, and Elena Shevliakova
- 5:51-6:00** Discussion