



**Airborne Mineral Dust Contaminants:
Impacts on Human Health and the Environment**
The University of Arizona
The Westin La Paloma Resort & Spa
May 20-21, 2013

Sunday, May 19, 2013

- 1:00 - 7:00 p.m. Hotel Check-in
- 7:00 - 9:00 p.m. Welcoming Reception, The Westin La Paloma Resort & Spa
Terrace Level Patio & Foyer

Monday, May 20, 2013

- 7:15 - 8:00 a.m. Breakfast, Sonoran II
- 8:00 - 8:30 a.m. Opening Remarks, Sonoran I
- Jennifer K Barton, Ph.D.
Associate Vice President for Research, The University of Arizona
- Danielle Carlin, Ph.D.
Program Administrator, NIEHS Superfund Research Program
- Eric Betterton, Ph.D.
Head, Department of Atmospheric Sciences and Conference Host, The University of Arizona

Topic Area I. Airborne Mineral Dust in the Environment

Session Chair: Eric Betterton

- 8:30 - 9:00 a.m. *The physics of mineral dust aerosol emission*
Jasper F. Kok, Cornell University
- 9:00 - 9:30 a.m. *Saharan dust impacts and climate change*
Zhibao Dong, Chinese Academy of Sciences
- 9:30 - 10:00 a.m. *An ecological perspective of dust emissions and environmental consequences*
Sujith Ravi, Stanford University
- 10:00 - 10:30 a.m. Break

Topic Area II. Natural and Anthropogenic Sources of Dust

Session Chair: David DuBois

- 10:30 - 11:00 a.m. *Natural & anthropogenic sources of dust in the US Southwest*
Jayne Belnap, USGS
- 11:00 - 11:30 a.m. *Relationship of horizontal sediment flux to vertical dust flux*
Jeffrey J. Whicker, LANL
- 11:30 - 12:00 p.m. *Temporal and spatial distributions and transportation of dust and anthropogenic aerosol*
Dulam Jugder, WMO



- 12:00 - 12:30 p.m. *Techniques for measurement and characterization of sources of fugitive dust*
Vicken Etyemezian, Desert Research Institute
- 12:30 - 2:00 p.m. Lunch, La Paloma Dining Room @ La Paloma Country Club

Topic Area III: Physical and Chemical Composition of Dust

Session Chair: William A. Sprigg

- 2:00 - 2:30 p.m. *Size fractionation and characterization of arsenic in fine-grained gold mine wastes: implications for bioaccessibility*
Christopher Kim, Chapman University
- 2:30 - 3:00 p.m. *Mineralogical characteristic of airborne particles in Asia*
Long Yi Shao, China University Mining & Technology
- 3:00 - 3:30 p.m. *Evaluating health risks of atmospheric dust from understanding the sources, compositions, and transport pathways of dust*
Richard Reynolds, USGS
- 3:30 - 4:00 p.m. *High wind events and metal and metalloid contaminants in atmospheric aerosols around mining operations*
Janae Csavina, NEON

Poster Session

- 4:00 - 4:30 p.m. Moderated Poster Session, Sonoran I
- 4:30 - 6:00 p.m. Open Poster Session, Sonoran II
- 6:00 p.m. Adjourn
- 7:00 p.m. Dinner, Terrace Level Patio & Foyer

Tuesday, May 21, 2013

- 7:45 - 8:30 a.m. Breakfast, Sonoran II

Topic Area IV: Observations and measurements of Airborne Mineral Dust

Session Chair: Eduardo Sáez

- 8:30 - 9:00 a.m. *Impact of long range transported dust on clouds and precipitation*
Kimberly A Prather, UC San Diego
- 9:00 - 9:30 a.m. *The role of land cover, land use, and landforms in determining the sources of dust storms*
Thomas E. Gill, University of Texas at El Paso
- 9:30 - 10:00 a.m. *Modeling wind-blowing desert dust in the southwestern United States for public health warning: a case study*
William A Sprigg, University of Arizona
- 10:00 - 10:30 a.m. *Licensed to pollute but not to poison: Contaminant emissions across Australian mining and smelting communities*
Mark P Taylor, Macquarie University
- 10:30 - 11:00 a.m. *Break*

Topic Area V. Bioavailability and Health Aspects of Dust

Session Chair: R. Clark Lantz

- 11:00 - 11:30 a.m. *Faster, better, cheaper - Using bioavailability and bioaccessibility data in risk assessment*
David Thomas, EPA
- 11:30 - 12:00 p.m. *Combining molecular-scale speciation with in vitro bioassay to interrogate the bioaccessibility of As and Pb in mine tailings*
Rob Root, University of Arizona
- 12:00 - 12:30 p.m. *Rapid inter-disciplinary assessment of the potential airborne health hazard of dusts generated by quarrying volcanic deposits*
Sabina Michnowicz, Durham University
- 12:30 - 2:00 p.m. *Lunch, Cottonwood*
- 2:00 - 2:30 p.m. *Recent trends in dust deposition and the role of dust storms in total particle concentrations in the Southwestern US*
Jason Neff, UC Boulder
- 2:30 - 3:00 p.m. *Toxicologically relevant characteristics of atmospheric particulate matter from diverse geogenic, geanthropogenic, and anthropogenic sources*
Geoff Plumlee, USGS
- 3:00 - 3:30 p.m. *Physical Chemical Properties of Particles which Drive Health Effects upon Inhalation*
Vince Castranova, CDC/NIOSH

Conference comments: Eric Betterton

- 3:30 - 4:00 p.m. Aeolian Research Journal
- 4:00 - 4:30 p.m. Final outcomes and remarks
- 4:30 p.m. Adjourn
- 6:00 p.m. Dinner, El Charro Café (shuttle to off-site location)