Metadata Rivas et al. Malvern Results

Table 1. Describes the results from laser diffraction for particle size analysis from dust events included in the study.

Title of dataset	Laser diffraction (using Malvern Mastersizer 2000) particle size results for dust/sediment samples.
URL of dataset	datarepo.bioinformatics.utep.edu/ getdata?acc=ACIEJDV41U1ZN5I
Abstract	Samples were analyzed via laser diffraction to quantify particle size, generally following protocols of Sperazza et al. (2004). These results show the average particle size analysis of collected sediment samples (n-15). From this data we were able to calculate the percentage of dust (defined as particles with grain size 50 μm) per event and compare particle size to propagule size.
Keywords	Malvern Mastersizer 2000, laser diffraction, particle size analysis
Dataset lead author	Jose A. Rivas Jr.
Position of data author	Graduate Student
Address of data author	Biological Sciences, 500 W University Ave, El Paso, TX 79902
Email address of data author	jarivas@utep.edu
Primary contact person for dataset	Thomas E. Gill
Position of primary contact person	Professor
Address of primary contact person	Department of Geological Sciences 500 W University Ave, El Paso, TX 79968
Email address of primary contact person	tegill@utep.edu
Organization associated with the data	University of Texas at EL Paso
Usage Rights	Publicly available and free to use
Geographic region	Samples analyzed included Texas, New Mexico, and China
Geographic coverage	HTSPHS= Hueco Tanks State Park and Historic Site; 31.926927 N, -106.041183 W; 1384 m University of Texas El Paso; 31.76873 N, -106.504067 W; elevation 1170 m White Sands Missile Range; 32.437503 N, -106.168744 W; 1249 m: 32.542026 N, -106.194941 W; 1222 m Yellow Lake playa 33.823477 N, -102.459967 W; 1040 m Jornada, LTER 32.608625, -106.730238; 1327 m
Temporal coverage - Begin date	3/25/2002
Temporal coverage - End date	3/24/2016
--General study design	Subsamples were taken from dust collected from various events and were prepped for particle size analysis on the Malvern Mastersizer 2000, following protocols of

	Sperazza et al. (2004). .
Methods description	Approximately 0.3 grams of dust was subsampled for analysis. The sample was then placed in a clean 50 to 200 ml plastic bottle and 20 ml of sodium hexametaphosphate solution (50 g/L) is added to the sample. The mixture was placed on a reciprocating shaker for at least eight hrs. After shaking the sample was placed into the HydroG circulating fluid vessel of the Mastersizer 2000 and a standard operating protocol was initiated using settings recommended by Sperazza et al. (2004).
Laboratory, field, or other analytical methods	Included in the standard operating protocol is sonication of the sample for 60 seconds at 80 % of full sonication. Obscuration of the sample is ideally expected to be between 10 to 20 % to optimize sample analysis. Prior to dust analysis the system is flushed with ultrapure distilled water. A test analysis using a standard is conducted prior to analyzing the dust sample using ISO 12103-1, A4 Coarse Test Dust from Powder Technology Incorporated.
Quality control	Clean sterilized bottles were used to prepare the samples for analysis. Flushing of the apparatus was performed before and after analysis. Dust standards were also analyzed before and after the sample run. Analysis is performed on three subsamples per sample and checked for consistency.
Additional information	

Table 2. Describes the sample name, date of the dust event, mean particle size for each sample, size bins used for calculating size distribution of dust particles, and units associated with laser diffraction results.

Column name	**Definition**	**Units**
Sample Name	Name of the sample	N/A
Sample Date	HT 2/16-6/23/14 BRT 3/24-4/3/14 BRT 4/13-4/18/13 BRT 4/15-4/20/14 BRT 5/4-5/8/14 BRT 12/13/14-2/15/15 BRT 5/3-5/30/15 BRT 4/12-5/3/15 BRT 5/10-5/22/14 BRT 11/15-11/16/15 BRT 3/21-3/24/16 WS1510 (DUlK-V) WS11610 (Du1.k k-m) Yellow Lake 3/28/2002 Yellow Lake 5/6/03	N/A
Mean	Mean particle size for each sample	µm
Size Bins	Shows the mean particle size and volume percentage of dust.	µm, Vol %