

Materials List for:

Experimental Methods of Dust Charging and Mobilization on Surfaces with Exposure to Ultraviolet Radiation or Plasmas

Xu Wang^{1,2}, Joseph Schwan^{1,2}, Noah Hood^{1,2}, Hsiang-Wen Hsu^{1,2}, Eberhard Grün^{1,2}, Mihály Horányi^{1,2}

¹Laboratory for Atmospheric and Space Physics, University of Colorado

²NASA/SSERVI's Institute for Modeling Plasma, Atmospheres and Cosmic Dust

Correspondence to: Xu Wang at xu.wang@colorado.edu

URL: <https://www.jove.com/video/57072>

DOI: [doi:10.3791/57072](https://doi.org/10.3791/57072)

Materials

Name	Company	Catalog Number	Comments
Vacuum chamber	Any	NA	
Vacuum electrode feedthrough	Lesker	EFT0113053	
Tungsten filament (0.1 mm thick)	Goodfellow	W055250	Thoriated
Power supply #1 (0-8V, 3A)	Agilent	E3610A	Or equivalent
Power supply #2 (0-140V, 0.5A)	Agilent	E3612A	Or equivalent
UV lamp	Osram	XERADEX L40/120/SB-SX48/ KF50HV	Or equivalent
Dust sample	Any	Mars or Lunar simulants or other types	Irregularly-shaped, sieved, insulating
Insulating plate	Any	NA	Thickness> 1 cm
Rubber sheet	Any	NA	Thickness> 1 mm
Metal plate	Any	NA	
Ceramic stands	McMaster	94335A130	1/2" diameter
Video camera (consumer)	Panasonic	HC-VX870	Or equivalent
Video camera (high-speed)	Phantom	V2512	> 1000 fps
LED lamp	Any	NA	> 500W Tungsten Equivalent