

username

LOGIN

[New Account »](#)
[Forgot Password?](#)

alumina particle size

GO

[Advanced Search »](#)

[Ads by Google](#)

Download Google Chrome

A free browser that lets you do more of what you like on the web
www.google.com/chrome



Aviation Test Facilities, Equipment and Methods

Laser Velocimeter Seed Particle Sizing by the Whisker Particle Collector and Laser Aerosol Spectrometer Methods

Authors: [F. L. Crosswy](#); [M. K. Kingery](#); [H. J. Schafer](#); [H. J. Pfeifer](#); [ARNOLD ENGINEERING DEVELOPMENT CENTER ARNOLD AFS TN](#)

[Ads by Google](#)

FrontPoint Security®
The Reviews Say It All. Go With The Company Consumers Rave About
www.FrontPointSecurity.com

Abstract: Two different aerosol **particle** sizing systems, the whisker **particle** collector (WPC) and the laser aerosol spectrometer (LAS), were evaluated for sizing aerosol **particles** in the **size** range 0.1 to 3.0 mm. The evaluation tests were conducted using an aerosol of **alumina** (Al2O3)

particles, an aerosol commonly used to provide light-scattering **particles** for laser velocimeter measurements in high-temperature flows. The measurement accuracy of the LAS was certified by comparison of its measurements to known **particle sizes** in test aerosols of precisely **size**d polystyrene latex spheres. The LAS and WPC measurements were then compared for samples taken from the **alumina particle** aerosols. Some difficulty was encountered in directly comparing these measurements because of the differences in the operating principles of the LAS (laser light scattering) and the WPC (**particle** capture/electron microscope analysis) and the consequent differences in the way the two systems account for prime **particles** and aggregates or agglomerates of prime **particles**. Other operational aspects of the two systems are also compared in this report including on-line/off-line data presentation capabilities, field portability, and measurement limitations at the small **particle** end of the **size** range of interest. Keywords: Laser velocimeter; **Particle** sizing; Laser aerosol spectrometer; Aerosol spectrometer; Whisker **particle** collector. (jhd)

Adobe PDF - \$23.95

Printed Format - \$26.95

ADD TO CART

Please check the box for the format you wish to order.

[Shipping Terms](#)
[About Electronic Delivery](#)

[Email This Abstract](#)

Limitations: APPROVED FOR PUBLIC RELEASE
Description: Final rept. 1 Oct 84-30 Sep 87
Pages: 85
Report Date: JUL 89
Report Number: A019012

Keywords relating to this report:

- ✦ [*AEROSOLS](#)
- ✦ [*ALUMINUM OXIDES](#)
- ✦ [*MEASUREMENT](#)
- ✦ [*PARTICLE SIZE](#)
- ✦ [ACCURACY](#)
- ✦ [FLOW](#)
- ✦ [HIGH TEMPERATURE](#)
- ✦ [LASER VELOCIMETERS](#)
- ✦ [LASERS](#)
- ✦ [LATEX](#)
- ✦ [LIGHT SCATTERING](#)
- ✦ [METHODOLOGY](#)
- ✦ [POLYSTYRENE](#)
- ✦ [SPECTROMETERS](#)
- ✦ [SPHERES](#)
- ✦ [TEST AND EVALUATION](#)

[« Back to search](#)