

“Aerosols – The X-Factor?”
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Prof. Reid has been involved in researching the properties of aerosols, which he defined as a suspension of solid or liquid particles in a gas. He then gave many examples such as sea spray, fogs, dust storms, smoke and fuel injection engines. In domestic use it is the spray not the can that is the aerosol. They also have medical and religious implications such as in pollen sensitivity, drug inhalers and incense.

Although natural aerosols have always been around, the first recorded man-made application as a medical inhaler was patented by Dr. Chambers in 1848. More recent examples have been London smog in 1952 and heavy air pollution affecting the Beijing Olympics in 2008. Other detrimental effects of aerosols include Acid Rain, ozone depletion, greenhouse gas enhancement and unprotected sneezing. On a more positive note they help to trap heat globally and indirectly gather water particles thus encouraging rainfall.

Current research that involves the analysis of the physical and chemical properties of aerosols and employs, inter alia, mathematics and photometry is resulting in the development of many practical applications from the small scale to the wider global scale. For example the Chinese amongst others are actually trying to affect their climate, encouraging rain, by seeding the atmosphere to encourage the settling out of larger water particles, especially in arid areas.

Prof. Reid concluded by saying that he had invoked the X-factor in terms of the unknown and unpredictable effects and uses of aerosols in the future.

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