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Cleaning of Optical Components

A method of cleaning and protecting optical surfaces using a new aerosol spray is described

J R Powell

D M Jackson

(Royal Greenwich Observatory)

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Cleaning of Optical Components

A frequent question by users of telescope and instrument optics is 'How do I clean the mirror or lens?' In the past it has been necessary to use distilled water and alcohol, which is messy. Experiments with collodion showed promising results, but there were objections on safety grounds, particularly where large primary mirrors are to be cleaned.

There is now available an aerosol spray composed of a plastic base dissolved in solvent. When sprayed onto a dusty or greasy mirror, the solvent lifts the dirt from the coated surface and suspends it in the plastic film. When the solvent has evaporated, the film can be easily peeled off, taking the contamination with it. Provided the coating has not been attacked chemically, the original performance should be restored.

The technique is applicable to large telescope mirrors, although respirators should be worn simply because of the large amounts of solvent involved. The plastic spray can also be used to protect new mirrors and lenses from atmospheric attack during transportation and storage, and before they are coated.

A similar plastic material is in use in the optical industry, but it is painted on with a brush. Ours is the first (so far as is known) aerosol application in this country. A similar product is in use in America for just this purpose.

Further details may be obtained from Dr J R Powell or D Jackson (RGO)O