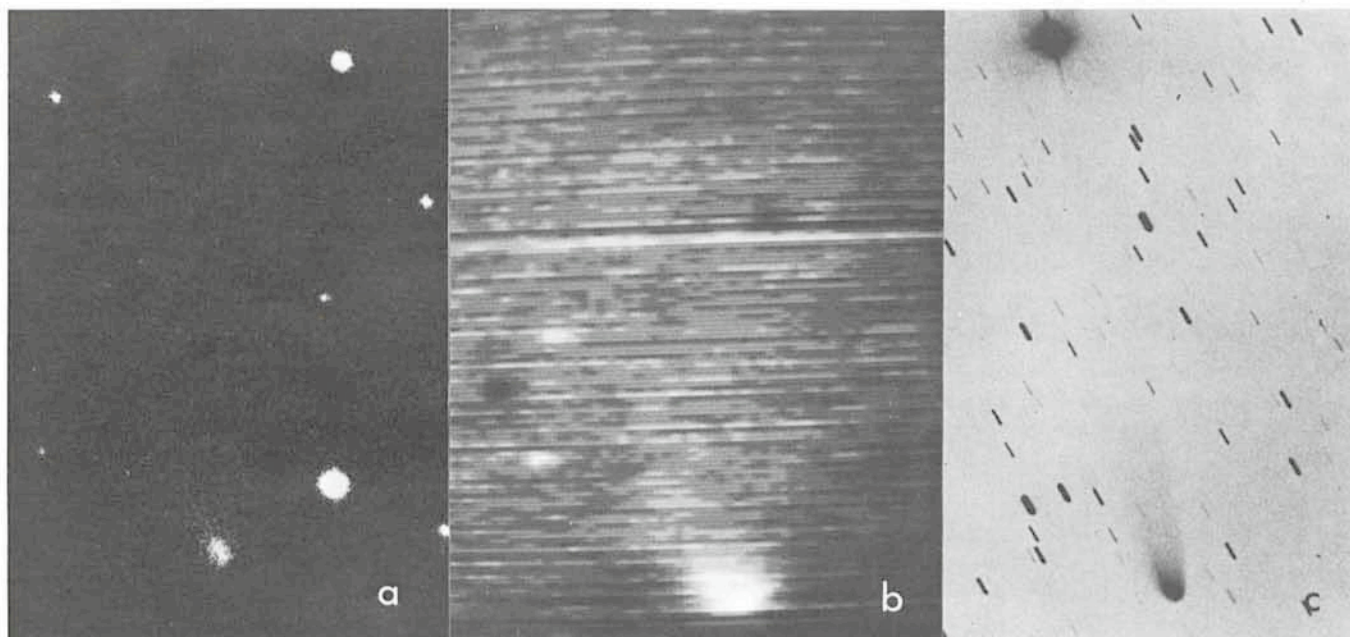


## Dust in the Milky Way

Large clouds of dust shroud the light of distant stars in the plane of the Milky Way. The clouds can be perceived directly when they are very dense (cf. the Messenger No. 10, page 5) but in most cases we only know they are there because the stars behind them are reddened. This is because they absorb much more blue than red light.

These five photos, of the same Milky Way field in the southern constellation Centaurus, offer a convincing illustration of this reddening effect. They were all obtained with the ESO Schmidt telescope and show the stars in this direction in (a) Ultraviolet light (IIa-O + UG 1, 75 min), (b) Blue light (IIa-O + GG385, 60 min), (c) Blue + Green light (IIIa-J + GG385, 75 min), (d) Red light (098-02 + RG630, 90 min) and (e) Infrared light (IV-N + RG10, 135 min). The IIIa-J, 098-02 and IV-N plates were sensitized. The ultraviolet plate is not able to penetrate very far into space, but the infrared plate shows even very distant stars.





Three ways of seeing the new comet:

(a) the discovery image on a 20-minute ESO Schmidt plate (January 12, 1978, 11a-O + GG385);

(b) on the Quantex TV screen in the control room of the 3.6 metre telescope, on January 15, and

(c) on a 50-minute 111a-J + GG385 plate obtained by Dr. J. Surdej in the prime focus of the 3.6 m telescope on January 20.

Photos (a) and (c) were reproduced from the original plates; (b) was photographed by Polaroid directly from the screen. On all photos, north is down and east to the right.

## Another Very Distant Comet Found at ESO

1977 turned out to be a record year for comet discoveries and recoveries. Not less than 20 comets were found and most of the letters of the alphabet had to be used (the latest was Comet Lovas 1977t).

The present year also got off with a good comet start. Early in January, Dr. P. Wild discovered a 14th magnitude comet with the Schmidt telescope at Zimmerwald (Switzerland) and yet another comet was discovered at ESO, La Silla, on January 12, 1978. Since the ESO comet was reported first, it received the designation 1978a (Comet West) and the Swiss comet is now known as 1978b (periodic comet Wild 2).

1978a was found in the evening of January 12 by Dr. Richard M. West, ESO astronomer, while inspecting plates obtained with the 1 m Schmidt telescope the night before, by night assistant Guido Pizarro. The object was rather faint, magnitude 17 (see the figure) and there was some doubt about the reality. However, another plate the next morning confirmed that it was indeed a comet, slowly moving northwards. It had a rather long tail for a comet of this magnitude, almost ten arcminutes long.

Plates were obtained the following nights with the Schmidt telescope and later with the 3.6 m telescope (observers: Drs. Jean and Anna Surdej). The orbit has now been computed by Dr. Brian Marsden, who finds that 1978a is very distant; at the time of discovery, it was about 900 million kilometres from the Earth. From eight plates in January it appears that it is moving in a parabolic orbit and passed through perihelion in June 1977 at a distance of approximately 850 million kilometres from the Sun. Thus, 1978a has the third largest known perihelion distance (after Comet Schuster (1975 II) and Comet van den Bergh (1974 XII)).

Two spectra were obtained with the Boller & Chivens spectrograph in the Cassegrain focus of the 3.6 m telescope. To some surprise, it appears that weak emission

bands of diatomic carbon ( $C_2$ ) may be present, a feature not found in distant comets. Moreover, the tail structure is indicative of the presence of a short (ion?) tail, in addition to the long dust tail. It is therefore possible that 1978a is "active", even at this large distance from the Sun.

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### PERSONNEL MOVEMENTS

#### (A) Staff

##### ARRIVALS

###### Garching

Secretariat: Sonngard DOBROFSKY (German), clerk-typist (telephone and telex operations)

##### TRANSFERS

Jan VAN DER VEN (Dutch), senior mechanical engineer; from Geneva to Chile, 1.1.1978  
Dietmar PLATHNER (German), mechanical engineer; from Chile to Geneva, 1.2.1978

##### DEPARTURES

###### Garching

Secretariat: Lindsay HOLLOWAY (British), clerk (short-hand-typist), 31.12.1977

#### (B) Paid Associates – Fellows – Coopérants

##### ARRIVALS

###### Geneva

Scientific Group: Daniel KUNTH (French), Fellow, 1.2.1978