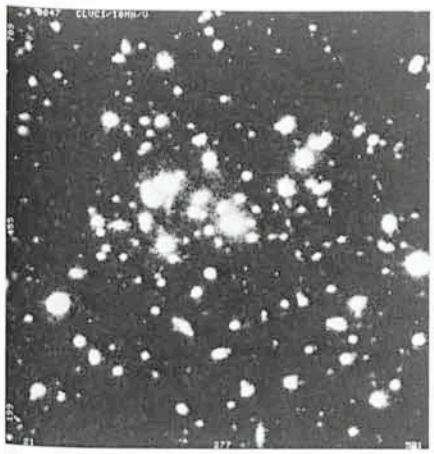

Figure 3: *CCD frame in the V band of the central part (2.8 × 2.8 arcmin) of the compact cluster Cl 2. North is up, east is left. (ESO 3.6 m + EFOSC; exposure time: 18 min.)*

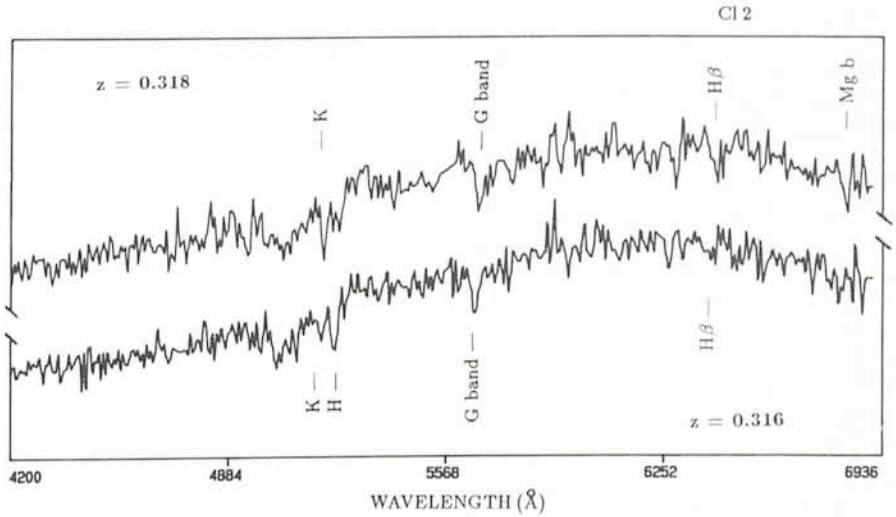

Figure 5: *Spectra of two galaxies of cluster Cl 2 extracted from the same 90-min multislit exposure as in Fig. 4. Magnitudes are V = 20.8 and V = 21.1 respectively. One of the spectra was shifted up for clarity.*

ker and D'Odorico 1985, 1986; Dupin and Dekker 1986). Results of MOS observations can be found in the Proceedings of the ESO-OHP Workshop on CCD detectors (D'Odorico and Dekker 1986) and in the *Messenger* No. 47 (Dupin et al. 1987).

The detector was ESO CCD No. 11, which is a high resolution RCA CCD (15 μm pixel). Direct images needed to prepare the masks for multi-object spectroscopy were acquired in the 2 × 2 binned mode. The masks were punched during the afternoon preceding the second observing night. Most spectra were taken through 20 arcsec slits. Round holes centred on field objects were used for the alignment of the masks on the fields. Two iterations and a final check (about 15 min) were necessary to make the alignment. The spectra were obtained with the B 300 grism, that gives a dispersion of 230 Å/mm and a total wavelength coverage of 3700–7000 Å. Wavelength calibration was accomplished with a helium lamp through the mask after each programme exposure. Spectrophotometric stars were observed for flux calibration.

The image of cluster Cl-1 presented in Figure 1 is a mosaic of CCD frames taken in the V-band. Exposure time is 12 minutes. This cluster is regular, very rich, with two giant cD type galaxies in its centre imbedded in an extended envelope and surrounded by a number of smaller elliptical or lenticular objects. The central part of the image has been dimmed by 1 mag in the image processing. Disk galaxies are found at larger angular distance from the centre. Brightest edge-on galaxies may be foreground objects. There is some evidence of subclustering around a third large galaxy 80 arcsec NNW. The apparent magnitudes of the first ranked central objects are V = 17.9 and V = 18.4. The projected separation of their centres is 8 arcsec. Reliable magnitudes can be measured down to V = 22.5. The redshift distance is z = 0.27. A spectrum of the southern central galaxy is shown in Figure 2.

This spectrum was extracted from a 75-minute multislit exposure after filtering for cosmic ray events and sky subtraction.

Cluster Cl 2 (Fig. 3) is regular, rich, compact, and has a triple core. The central galaxy (V = 19.3) is surrounded by a corona of E or S0 galaxies (V ~ 21). It has a redshift of z = 0.315 (Fig. 4). The similarity in redshift and the angular separation of CL 1 and 2 (60–70 h^{-1} Mpc) could infer that they belong to the same large-scale structure.

The central galaxy is very red (B–V = 1.6 mag). This is partly intrinsic (large 4000 Å break amplitude) and partly due to the shift of the spectral energy distribution (K term). A large amplitude of the 4000 Å break is generally suggestive of no ongoing star formation. Low val-

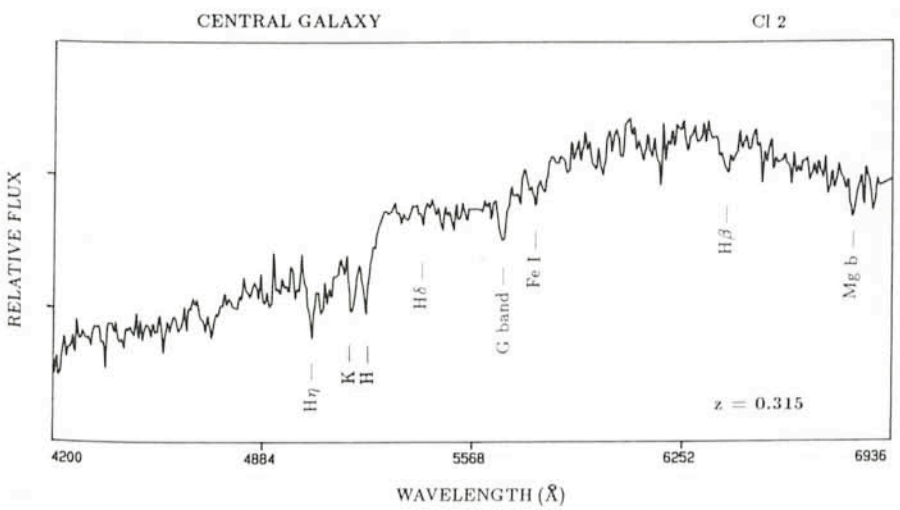

Figure 4: *A spectrum of the central galaxy of cluster Cl 2 extracted from a 90-min multislit exposure. The measured redshift is z = 0.315. Magnitude of the galaxy is V = 19.3.*

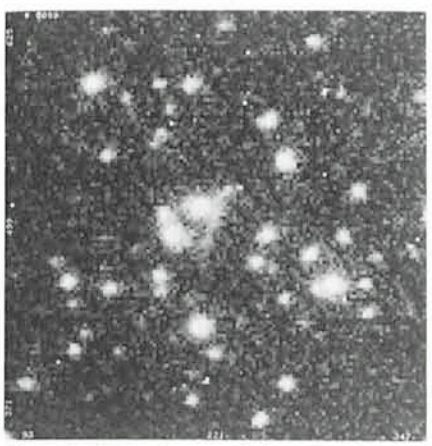

Figure 6: *A blue image of the central part of cluster Cl 2, showing an elongated structure near two large elliptical galaxies. The projected angular distance between these two galaxies is 7.5 arcsec. The arc-like structure and the centre of the nearest galaxy are separated by 2.8 arcsec in projection.*