flux density for any pulsar at 408 MHz. The flux density measured in August 1972 was 2.2 ± 0.1 f.u. and it has been in the range ~ 2 to 4 f.u. for observations made since its discovery in 1968 (ref. 8). The recent increase is presumably due to enhanced activity at the source because the observing bandwidth (2.5 MHz) and the time scale of the variations rule out effects due to scintillation.

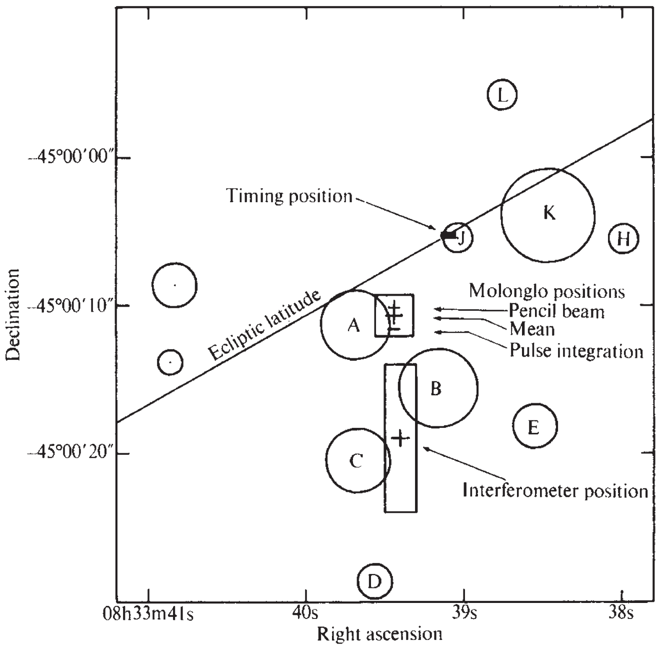

Fig. 1 The optical field of PSR 0833–45. The objects are labelled A to L as in Fig. 1 of ref. 7. The circles indicating the optical magnitude show the diameter of the star image on the deep plate of ref. 6. Error rectangles of 1 standard deviation are given for the three radio position measurements. A line of constant ecliptic latitude is drawn through the pulsar timing position.

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Confirmation of I Zw 1727+50 as a Radio Source

Le Squéren, Biraud and Lauqué[1] have detected radio emission at 4.85 GHz from a source which they suggest may be associated with I Zw 1727+50 (I Zw 187), one of Zwicky's compact blue galaxies. Both the optical[1,2] and radio[1] features indicate that it is an object of the BL Lac (VRO 42.22.01) class. In this letter we report more accurate positional measurements at optical and radio wavelengths; these agree closely and confirm the association.

The optical position has been measured from the Palomar Sky Survey prints by means of a 'Zeiss Komess' machine. Four AGK3 reference stars in the immediate vicinity were used, the positions of which were corrected for proper motion to the epoch of the Sky Survey plates. The object is $x = 250$ mm, $y = 296$ mm, from the bottom L.H. corner of the plate and the mean of the positions derived separately from the O and E prints is:

$$\left.\begin{aligned}\alpha_{\text{opt}} &= 17\text{ h }27\text{ min }04.31\text{ s} \pm 0.04\text{ s}\\ \delta_{\text{opt}} &= 50°\ 15'\ 31.3'' \pm 0.3''\end{aligned}\right\}\ 1950.0$$

where the errors are "external standard errors"[3] which include an estimate of the uncertainties in the AGK3 positions.

The radio position at 5 GHz has been measured with the Cambridge 5 km telescope[4] as:

$$\left.\begin{aligned}\alpha_{\text{rad}} &= 17\text{ h }27\text{ min }04.33\text{ s} \pm 0.03\text{ s}\\ \delta_{\text{rad}} &= 50°\ 15'\ 31.0'' \pm 0.1''\end{aligned}\right\}\ 1950.0$$

which agrees with the optical position above to within the very small limits of error.

The flux density was $S_{(5\text{ GHz})} = 0.17 \pm 0.015 \times 10^{-26}$ W m^{-2} Hz^{-1} on December 7, 1972, which agrees with that found by Le Squéren *et al.* at 4.85 GHz for epoch 1972.45, and the source is unresolved at all position angles, corresponding to an upper limit of angular size of about 0.5 arc s.

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Ejection of Matter and Gravitational Radiation from Orbiting Bodies

IF a particle of mass m is in a circular orbit of radius r around a central body of mass $M \gg m$ and if M suddenly undergoes a decrease of mass, carried to infinity by massless particles, say, the orbit of m will be perturbed as the shell of emitted particles passes its radius. The question of the escape of m and of its exact subsequent motion has been discussed[1,2] and in this communication we turn our attention to a related question.