

## RADIO FLARES IN THE CIRCINUS X-1 SYSTEM

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### Abstract

The 16.6 day periodic radio flares in Circinus X-1 have been observed at 6 cm wavelength from February 1978 to May 1979. Two strong flares occurred in February 1978 followed by a long period of quiescence until flaring recurred in January 1979. The onset of the flares was however 18 hours earlier in the 16.6 day cycle than previous flares. Similar behaviour has been reported for the X-ray emission and it is concluded that both the X-ray and radio emission are caused by mass transfer at peristron in an eccentric binary with a 16.6 day period. Each radio flare generally shows a multi-peaked structure with the first maximum being the strongest. There is also a systematic trend for the subsequent peaks to become weaker with each cycle and this suggests that the compact object precesses in relation to an accretion disc.

### DISCUSSION FOLLOWING NICOLSON

Zuiderwijk: I was rather surprised by the accuracy you give for your periods. Can you be sure that the onset of a flare has a fixed timing in the orbital phase?

Nicolson: The time of onset of a flare can be determined to within 1 hour. For 1979 the flares apparently all begin at a well-defined phase. Assuming that this is always so then errors quoted are correct but refer to mean period over many orbits.