1 INTRODUCTION

ABSTRACT

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Evolution of the Radio Outburst from the Supermassive Star 4U Carmae
RESULTS

The 1997-1999 radio observations from V Stanford 811 were made using the National Radio Astronomy Observatory's Very Large Array (VLA) with a frequency of 1500 MHz. The observations were carried out in May and June 1997, and in June and July 1998. The data were processed using the AIPS software package.

The results showed that the source is a double source with a supergalactic source located in the same direction. The separation between the two sources is about 20 arcseconds. The supergalactic source is much stronger than the other component.

The time of peak brightness was between 1997 April and 1999 April, with the peak brightness occurring in 1998 February. The source was detected at a frequency of 1400 MHz.

The observed flux density was about 1 mJy at 1400 MHz. The source was detected in all four observations, with a peak flux density of about 3 mJy in 1998 February.

In summary, the source is a double source with a supergalactic component located in the same direction. The separation between the two sources is about 20 arcseconds. The supergalactic source is much stronger than the other component. The time of peak brightness was between 1997 April and 1999 April, with the peak brightness occurring in 1998 February. The source was detected at a frequency of 1400 MHz. The observed flux density was about 1 mJy at 1400 MHz. The source was detected in all four observations, with a peak flux density of about 3 mJy in 1998 February.

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The Hα ep (4-cm) emission corresponds to the optical counterpart of the radio source 680. The positional accuracy of the optical counterpart is about 4 arcsec. The optical counterpart is located near the center of the radio source, indicating a possible association between the optical and radio emissions.

The optical counterpart is a compact, elliptical object with a minor axis of about 0.5 arcsec and a major axis of about 1 arcsec. The optical counterpart is located at a distance of about 2 Mpc from the Earth. The optical counterpart is a stellar object, possibly a young, massive star or a black hole. The optical counterpart is a source of intense ultraviolet radiation, which is detected in the UV spectroscopy.

The optical counterpart is a source of intense X-ray emission, which is detected in the X-ray spectroscopy. The optical counterpart is a source of intense infrared emission, which is detected in the infrared spectroscopy. The optical counterpart is a source of intense radio emission, which is detected in the radio spectroscopy.

The optical counterpart is a source of intense gamma-ray emission, which is detected in the gamma-ray spectroscopy. The optical counterpart is a source of intense cosmic-ray emission, which is detected in the cosmic-ray spectroscopy. The optical counterpart is a source of intense neutrino emission, which is detected in the neutrino spectroscopy.
The position of the continuum emission is determined by the observed peaks of the emission, which are seen in the north-western and south-eastern portions of the map. The continuum emission is strongest in these regions, with peaks at 1.2 mm and 6 cm. The 6 cm image shows a brighter emission in the north-western part of the map, while the 3 cm image shows a brighter emission in the south-eastern part. The continuum emission is consistent with the position of the radio source, which is observed at 1.2 mm and 6 cm.

The 1997 May 1996 radio survey from CARAMEL.
Figure 2. H1663 (6-cm) hydrogen recombination-line spectrum observed in 1994 September.

Figure 3. Spectral index map of 4 Cii Aur. Map center is in Fig. 1. Broken contours indicate heavy contour zero, solid contours positive.
Figure 7: Image of H α (2-1) transition on the horizon-parallel section in 1995 December, for each of 12 adjacent epochs.

Figure 7 shows the Hα emission from the north-west source, along with the dominant and secondary components. The north-west source is identified by its continuous emission, which is brighter in the north-western part of the image. The secondary component is also visible, with a different pattern of emission.

The 1997-1999 radio outburst from Cygnus A.
1997MNRAS.290..680D

In 1996 February, the HRI detected a new compact source located near the position of the optical position of the source. The new source was identified as a compact source at the position of the optical source.

**Discussion**

The discovery of the new compact source was unexpected, as the previous observations had suggested the position of the source was stable. The new source was detected in February 1996, and its presence was confirmed by additional observations in March 1996.

The morphology of the source was studied further, and it was found to be associated with a variable component. The variable component was found to be moving at a velocity of about 300 km/s, which is consistent with the expected velocities for the compact source.

The significance of this discovery is that it provides new insights into the dynamics of compact sources in the radio continuum. The presence of a variable component suggests that the compact source may be associated with a jet or outflow, which could provide additional clues to the nature of these sources.

Further observations are planned to better understand the dynamics of this new compact source and its association with the optical source.
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In summary

The peak continuum brightness (1100 K, 6 cm) is probably the most reliable
signal that the emission reaches the far side of the comet. In 1996, the emission
profiles showed that the peak continuum brightness is a more reliable
measure of the dust brightness than the peak emission from the comet's tail.
Furthermore, the peak continuum brightness (1100 K, 6 cm) can be used to
monitor the dust continuum emission at a few different frequencies.

Although the emission from the comet's tail is not the main
component, it is still important to monitor the
peak continuum brightness to obtain
accurate measurements of the dust
brightness.

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References


Fig. 4. Emission Temperatures


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