

## FG Sge as a New-Born Carbon Star

TAKASHI IIJIMA

*Astronomical Observatory of Padova, Asiago, Italy*

The spectral type of the post-AGB star FG Sagittae rapidly changed from B4 I in the 1950s to K2 Ib in the 1980s. The Swan bands of the C<sub>2</sub> molecule have been detected in some spectra taken in 1981 and later. This star seems to have become a carbon star as expected in theories of the evolution of post-AGB stars. The recent spectra, however, are much different from those of normal carbon stars. The absorption lines of Ba II, Sr II, La II *etc.* are unusually deep, while those of the iron group are weak. In most spectra the CN bands are absent even when the C<sub>2</sub> bands are easily visible. Since a weak CN band at 4215 Å was detected in a spectrum taken on 23 April 1994, the absence of CN bands in the other spectra may not have been due to a lack of nitrogen atoms. There might have been a peculiar atmospheric condition in which the C<sub>2</sub> molecule was formed, but not the CN molecule. Large spectral variations have been observed during the photometric decline which started in August 1992.

The full text has appeared in *MNRAS* 283, 141, 1996.