WIND PROPERTIES OF YOUNG STARS

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The statistical properties of winds form young stars are summarized and discussed. One and the same mechanism, possibly related to the process of star formation, appears to be responsible for mass loss in all pre-main-sequence stars. Moreover, evidence is found that the ionization and the acceleration of the winds of very young stars are produced by processes different from those operating in main sequence and more evolved stars.

A MECHANISM FOR VARIABILITY OF COMETARY NEBULAE

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A model is suggested to explain the variability of the optical structure and the integral brightness of cometary nebulae (CN) occurring at timescales of several years and tens of years (Gyulbudaghian *et al.* 1977, Cohen *et al.*1977, 1981, Magakyan 1981, Gyulbudaghian 1982). A CN is assumed to be a reflection nebula;it is a wall of a conical cavity in the circumstellar gas-and-dust torus illuminated by the central star (Cohen 1974). I explain the CN's variability by the presence of small tilted circumstellar disc of gas-and-dust, located inside the internal channel of the large circumstellar torus (see Figure 1). A similar model was put forward by Ward-Thompson *et al.* (1985) to account for a tilt angle of about 30° between the direction of short optical jets (stellar wind, channelled by the small disc) and the large-scale bipolar outflow (focused by the large torus) in the CN NGC 6729 associated with the star R CrA. Tilt angles of about 30° between optical and radio structures exist in CN NGC 2261(Cantó *et al.* 1981) and GM 1-29 (Levreault 1984).

The small tilted disc will precess in the gravitational field with potential U of the large torus. Thereby the stellar light, emerging from the disc's poles, will illuminate consecutively, like a projector beam, different parts of the torus' internal wall, causing variability of the CN. The precession angular speed (Papaloizou and Pringle 1983) is given by

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