

entific names, highly appreciates the names given to species by local people. It appears that the writer is unaware that such names for species, except in the case of well-known higher vertebrates, do have only local value or existence and, in many cases, such 'local names' are very confusing as more than one or a few species are known to exist under a local (vernacular) name at many places. As such, not much significance is attached to the local names or common names in the taxonomic identification of the species as exemplified by the common names such as 'The common Indian crow' and 'striped tiger' for butterflies, better known to scientists as *Euploea core* and *Danaus genutia* respectively.

The 'field ecologists' have to realize that taxonomy is not just 'an art of naming the species' but rather it is a task

of segregating a new taxon from the known taxa with its proof of efficiency being the aptness of the description in achieving this objective.

The view doubted by the writer that taxonomists are to, sometimes, please their bosses is also highly skewed. In fact, the taxonomist who describes a species enjoys much more liberty in coining the name of a species as he (not his boss) has to shoulder the onus of taxonomic authenticity and identity of the newly described species and, at times, it is respect or dedication to a person, not necessarily to one's boss, that is reflected while naming a species after a person.

To put it briefly, the arguments put forward by the writer have no *locus standi* in the scientific parlance of species naming in accordance with the principles of taxonomy.

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## NEWS

## First Indian observation of the optical transient of a gamma-ray burst

Gamma-ray bursts (GRBs) are short and intense flashes of cosmic high energy (~100 keV-1 MeV) photons. Since its discovery in late sixties, several dedicated satellites have been launched to observe the bursts and numerous theories were put forward to explain their origin. However, only after launching of the Italian-Dutch satellite BeppoSAX in mid 1996, has it been possible to obtain positions of GRBs with an accuracy better than 3-5 arcminutes within hours of occurrence. The follow-up observations of relatively long lasting afterglows in X-ray (few hours), optical (few days) and radio (few weeks) wavelengths have now therefore become routine. Such multi-wavelength observations have contributed significantly to our understanding of GRBs. All these leave little doubt now that some, and most likely all GRBs are cosmological. They release  $\sim 10^{51}$ - $10^{54}$  ergs or more in a few seconds and thus are the most (electromagnetically) luminous objects in the Universe.

The first Indian observations of the optical transient of GRB 990123 were made at the Uttar Pradesh State Observatory, Manora Peak, Nainital on 23 January 1999, at UT 21:00 h, approximately 12 h after the trigger of the event. This type of successful observation has

been carried out for the first time at an Indian observatory. The observations were carried out in Johnson B, V and Cousins R passbands using a 1024 x 1024 size CCD chip mounted at the f/13 Cassegrain focus of the 104 cm Sampurnanand telescope. The observations were being continued till the first week of February 1999 at the Observatory. The results of the first three nights of observations are given in Table 1.

These observations in combination with the published data have been used to derive light curves of the optical transient in B, V and R passbands which follow the following linear relations:

$$B(t) = (21.02 \pm 0.12) \pm (2.8489 \pm 0.17) \log(t),$$

$$V(t) = (20.44 \pm 0.18) + (2.8314 \pm 0.05) \log(t),$$

$$R(t) = (20.40 \pm 0.22) + (2.6487 \pm 0.13) \log(t),$$

where  $t$  is the time in units of days after the trigger of the gamma-ray event. The coefficients and their errors are obtained by fitting least square linear regressions to the observed magnitudes as a function of time. The flux decay of the optical transient is well characterized by a power law,  $F(t) \propto t^{-\alpha}$ , where  $F$  is the flux at

Table 1. Results of the first three nights of observations of the optical transient of GRB 990123

Time in UT	Filter	Magnitude
January 99		
23.958	B	20.31 ± 0.08
24.000	R	19.61 ± 0.03
24.940	R	20.83 ± 0.05
24.987	B	21.71 ± 0.11
25.028	V	21.08 ± 0.15
25.940	R	21.34 ± 0.10
25.990	V	21.89 ± 0.10

time  $t$  and  $\alpha$  is the decay constant. Allowing for the factor -2.5 involved in converting the flux to magnitude scale, the values of  $\alpha$  are  $1.14 \pm 0.07$ ,  $1.13 \pm 0.02$  and  $1.06 \pm 0.05$  in the B, V and R passbands respectively. In the K passband, the decay constant has been found to be  $1.14 \pm 0.08$  by Bloom *et al.* (GCN circular 240). Thus, we conclude that the flux decay constants are independent of wavelengths at least in the range of 0.4 to 2.5 micron. Such decay is quite consistent with the fireball models for the optical transient of GRBs.

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