

# Russian Rockets and American Comets

Last Messenger issue featured different types of objects in the sky over La Silla and other observatories, including two sightings of "strange" phenomena, one supposed to be connected to a Russian rocket and the other of unknown nature (Messenger 67, page 56-58).

It is always a special pleasure for an editor to learn that the journal he works on is read by other people! This was certainly the case in connection with the mentioned articles, and quite a few commentaries were received. The fact that many Messenger articles with scientifically much more "valuable" content remain without such reactions may have something to do with human nature and the attitude towards the unknown...

Like a good detective story, the solution of the mystery comes at the end, in this case on the following pages. It was indeed a Russian rocket, but who would have guessed the true nature of the second object?

I am most thankful to Drs. Bönnhardt, Ferrin, Johnson and Rast, for having contributed to the de-mystification of these events. Each of the following four articles cast their own light on them.

It also appears that these (and other similar) cases have now led Richard Rast to seriously consider the establishment of a non-profit "Center for Analysis of Satellite Interference with Astronomy (CASIA)". As former Chief of the Orbital Analysis Division at NORAD in Colorado and later at NASA's Johnson Space Center in Texas, he is in an excellent position to judge what such a Center could do for astronomers. The a-posteriori identification of satellite trails on photographic plates and in CCD frames may be of little consolation for the unhappy observers, but the day might be near when particularly critical observations will benefit from a-priori knowledge of the sighting directions of the roughly 30,000 artificial objects in known orbits. In such cases, it may become possible to predict exactly when the shutter can be opened without risk of discovering a dense trail on top of the object of interest, at the end of the exposure several hours later. And dramatic events experienced by the public like the ones described here, could quickly be explained in the correct way, if the information were passed on in real time. This would undoubtedly have an important educational value.

Further information about the CASIA project may be obtained from:

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The Editor

## New ESO Preprints

(March - May 1992)

### Scientific Preprints

824. M. Olberg, Bo Reipurth and R.S. Booth: A Molecular Outflow Associated with Herbig-Haro Jet HH 46/47. *Astronomy and Astrophysics*.
825. E. Palazzi, N. Mandolesi and Ph. Crane: CN Rotational Excitation. *Astrophysical Journal*.
826. M. Della Valle: Nova Rate in M 33 and in the Galaxy. Invited paper presented at the Workshop on "Cataclysmic Variable Stars", July 15-19, 1991, Viña del Mar, Chile.
827. 1. F. Murtagh: A New Approach to Point Pattern Matching. *Publications of the Astronomical Society of the Pacific*.  
2. F. Murtagh: Multivariate Analysis and Classification of Large Astronomical Databases (followed by discussion). *Statistical Challenges in Modern Astronomy*, G.J. Babu and E.D. Feigelson (Eds.), Springer-Verlag, New York.  
3. F. Murtagh: Contiguity-Constrained Clustering for Image Analysis. *Pattern Recognition Letters*.  
4. F. Murtagh: Cosmic Ray Discrimination on HST WF/PC Images: Object Recognition-By-Example. First Annual Conference on Astronomical Data Analysis Software and Systems. J. Barnes, C. Biemesderfer and D. Worrall (Eds.), Astronomical Society of the Pacific.
828. P. Padovani: Is there a Relationship Between BL Lacertae Objects and Flat Spectrum Radio Quasars? *M.N.R.A.S.*
829. M. Della Valle and J. Melnick: The Distance to NGC 5253 and the Absolute

- Magnitude at Maximum of SN 1972 E. *Astronomy and Astrophysics Letters*.
830. G. Mathys: The Inhomogeneous Distribution of Oxygen on the Surface of the Magnetic Ap Star HD 125248.
831. S.M. Viegas and M. A. Prieto: Probing Photoionization Models in Two Well Studied Extended Emission-Line Regions: Cen A and 3C 227. *M.N.R.A.S.*
832. A. Jorissen and H.M.J. Boffin: Evidences for Interaction Among Wide Binary Systems: To Ba or Not To Ba? To appear in "Binaries as Tracers of Stellar Formation", Eds. A. Duquennoy and M. Mayor, Cambridge University Press, 1992.
833. B. Barbuy et al.: Light Element Abundances in Barium Stars. *Astronomy and Astrophysics*.
834. H. Van Winckel, J.S. Mathis, C. Waelkens: Unusual Chemical Abundances in Some Peculiar Stars Due to Fractionation. *Nature*.
835. D.G. Yakovlev et al.: Photoionization Cross Sections of Atoms and Ions from He to Zn. *Astronomy and Astrophysics*.
836. E.D. Feigelson and F. Murtagh: Public Software for the Astronomer: An Overview. *Publications of the Astronomical Society of the Pacific*.
837. A. Moneti, I. Glass and A. Moorwood: Infrared Imaging of IRAS Sources Near the Galactic Centre. *M.N.R.A.S.*
838. R. Pallavicini, L. Pasquini and S. Randich: Optical Spectroscopy of Post-T Tauri Star Candidates. *Astronomy and Astrophysics*.
839. R. Liseau et al.: Star Formation in the Vela Molecular Clouds: I. The IRAS-Bright Class I Sources. *Astronomy and Astrophysics*.
840. F. Matteucci and P. François: Oxygen

- Abundances in Halo Stars as Tests of Galaxy Formation. *Astronomy and Astrophysics Letters*.
841. J. Einasto, M. Gramann and E. Tago: Power Spectrum of the Matter Distribution in the Universe on Large Scales.
842. T. Theuns: Hydrodynamics of Encounters and Molecular Clouds. I. Code Validation and Preliminary Results. II. Limits on Cluster Lifetimes. *Astronomy and Astrophysics*.
843. L.B. Lucy: Resolution Limits for Deconvolved Images. *Astronomical Journal*.  
L.B. Lucy: Statistical Limits to Superresolution. *Astronomy and Astrophysics*.

### Technical Preprints

43. M. Faucherre: Summary of the session on Methods for Optical Pathlengths Compensation. To be published in the Proc. of ESO Conf. on "High Resolution Imaging by Interferometry", Garching, Oct. 14-18, 1991.
44. A. Wallander: Remote Control of the ESO new Technology Telescope. Paper presented at the Workshop on "Remote Observing", held in Tucson, USA, April 21-23, 1992.
45. O. von der Lühe: Ground-Based High Angular Resolution Observation of the Sun by Interferometry in the Visible. Paper presented at the ESA Workshop "Solar Physics and Astrophysics at Interferometric Resolution", ESA HQ, Paris, 17-19 February 1992.
- O. von der Lühe et al.: Interferometry with the Very Large Telescope. Invited paper at ESA Workshop "Solar Physics and Astrophysics at Interferometric Resolution", ESA HQ, Paris, 17-19 February 1992.