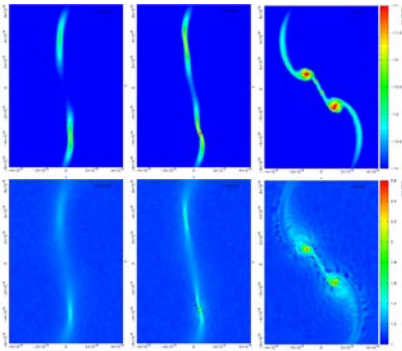




## HIGHLIGHTS: this week in A&A

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### In section 2. Astrophysical processes

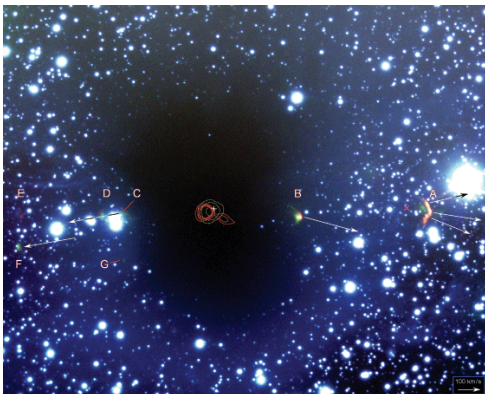
**“Radiative transfer and the energy equation in SPH simulations of star formation”** by D. Stamatellos, A.P. Whitworth, T. Bisbas, S. Goodwin, *A&A* 475, p. 37

This paper explores new techniques for treating radiative transfer and energy balance in the framework of SPH (smoothed particle hydrodynamics) simulations of protostellar evolution. As an example, the authors follow the evolution of a 1 solar-mass protostar.

### In section 4. Extragalactic astronomy

**“VCC 2062: an old tidal dwarf galaxy in the Virgo cluster?”** by P.A. Duc, et al., *A&A* 475, p. 187

The authors have carried out a multi-wavelength study of the dwarf galaxy VCC 2062 in the Virgo Cluster, which belongs to an HI gas tidal tail linked to the parent galaxy NGC 4694. The high metallicity of the dwarf and the detection of CO emission in it both suggest that it is an old Tidal Dwarf Galaxy (TDG), formed in the merger between two spirals whose remnant is NGC 4694. These new dwarf galaxies, recycled from old material from massive spirals, can be used as a test of dark matter: they should be free of dissipationless CDM, while they could still contain some dark baryons. Detailed kinematical studies are now required to settle this issue.



### In section 6. Interstellar and circumstellar matter

**“Herbig-Haro flows in B335”** by M. Gálfalk, G. Olofsson, *A&A* 475, p. 281

This paper reports the discovery of no less than 6 new HH objects in the well-studied outflow from the young protostar in B335. The results suggest the presence of a binary outflow, hence of a proto-binary.

### In section 12. Atomic, molecular, and nuclear data

**“Energy levels, radiative rates, and excitation rates for transitions in Ni XI”** by K. M. Aggarwal, F. P. Keenan, *A&A* 475, p. 393

This paper reports radiative and excitation rates for transitions of Ni XI obtained using two independent codes, thus confirming the accuracy and ruling out the possibility of significant errors when determining this type of data. The results of this work will be fundamental to a wide community working not only on astrophysical but also on fusion applications.