Astronomy & Astrophysics

HIGHLIGHTS: this week in A&A

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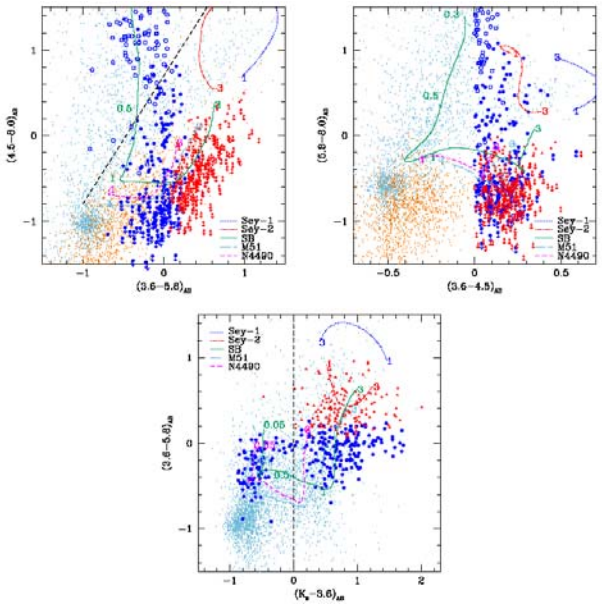

In section 4. Extragalactic astronomy

"The contribution of very massive high-redshift SWIRE galaxies to the stellar mass function"
by S. Berta, C.J. Lonsdale, M. Polletta, A. Cimatti, et al., A&A 476, p. 151

It is well known now that star formation activity was much stronger in the past, 10 times higher at z=1 than today, and was possibly peaking at z=2. It has been also observed that most of the star formation today is occurring in small-mass objects, while it occurred in more massive objects at z=2, which is called "downsizing". But the question remains as to when the massive galaxies were assembled. With the help of the mid-IR emission observed with SWIRE on Spitzer, the authors have been able to explore the stellar mass function of galaxies in its high-mass tail. They show that the number of massive galaxies (M>10**11 Mo) was 10 times lower at z=2-3 than today. Apparently, the high-mass galaxies are assembled progressively according to the hierarchical scenario.

In section 14. Online catalogs and data

"Water maser variability over 20 years in a large sample of star-forming regions: the complete database" by M. Felli, J. Brand, R. Cesaroni, C. Codella, G. Comoretto, S. Di Franco, F. Massi, L. Moscadelli, R. Nesti, F. Palagi, D. Panella, and R. Valdettaro, A&A 476, p. 373

Felli *et al.* present 22 GHz water maser emission for a large sample of star-forming regions observed regularly over a 20-year period. The authors present this enormous data set in an easily accessible and useful format that allows maser variability over this long period to be appreciated.