

# News from $z \sim 6 - 10$ galaxy candidates found behind gravitational lensing clusters

D. Schaerer<sup>1,2</sup>, A. Hempel<sup>1</sup>, R. Pello<sup>2</sup>, E. Egami<sup>3</sup>, J. Richard<sup>4</sup>,  
J.-P. Kneib<sup>5</sup> and M. Wise<sup>6</sup>

<sup>1</sup>Geneva Observatory, 51 Ch. des Maillettes, CH-1290 Sauverny, Switzerland  
email:daniel.schaerer@obs.unige.ch

<sup>2</sup>Observatoire Midi-Pyrénées, 14 Avenue E. Belin, F-31400 Toulouse, France

<sup>3</sup>Steward Observatory, University Arizona, AZ 85721, USA

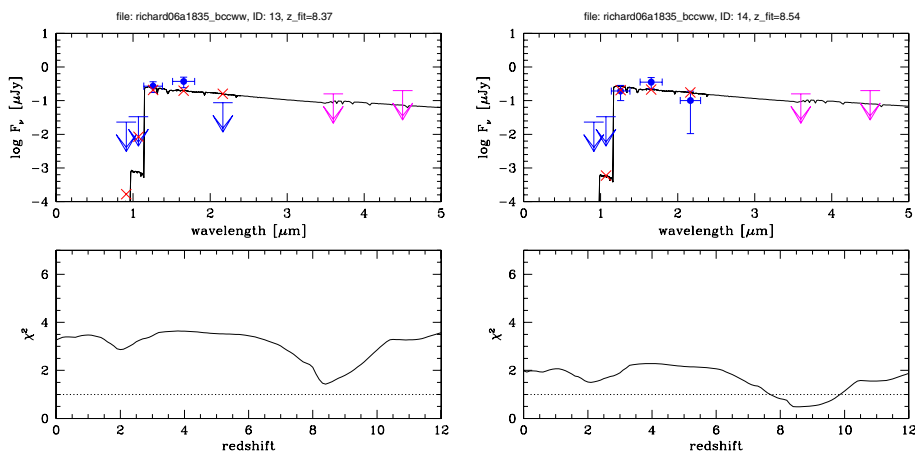
<sup>4</sup>Caltech Astronomy, MC105-24, Pasadena, CA 91125, USA

<sup>5</sup>OAMP, UMR 6110 Traverse du Siphon, 13012 Marseille, France

<sup>6</sup>Astronomical Institute Anton Pannekoek, NL-1098 SJ Amsterdam, The Netherlands,

**Abstract.** Following up on the detailed results from our searches for  $z \sim 6-10$  galaxies using gravitational lensing clusters described in Richard *et al.* (2006), we have obtained new observations, which are presented here. For a general overview of the project see Schaerer *et al.* (2006). First, deep HST/ACS observations in the z-band confirm 17 out of 18 high redshift candidates as optical drop-out objects; the remaining object appears faint and star-like. Second, Spitzer/IRAC images at 3.6, 4.5, 5.8 and 8.0  $\mu\text{m}$  have been obtained. 11 out of 18 candidates are in “free”, uncominated regions. These 11 high- $z$  candidates are undetected, with upper limits which are compatible with their SED if these objects are blue star-forming galaxies at high redshift (see Fig. 1). In conclusion, our new observations corroborate so far the high- $z$  nature of the majority of the candidates.

**Keywords.** galaxies:high-redshift, infrared: galaxies, early universe



**Figure 1.** SED of two high- $z$  candidates from Richard *et al.* including HST, ground-based, and Spitzer photometry corroborating their high redshift nature (here  $z \sim 8.-8.5$ ).

## References

Richard, J., *et al.* 2006, A&A, 456, 861

Schaerer, D., *et al.* 2006, The Messenger, 125, 20 [astro-ph/0610138]