

LETTER TO THE EDITOR

Cluster-formation in the Rosette molecular cloud at the junctions of filaments (Corrigendum)

N. Schneider^{1,5}, T. Csengeri², M. Hennemann¹, F. Motte¹, P. Didelon¹, C. Federrath^{3,4}, S. Bontemps⁵, J. Di Francesco⁶, D. Arzoumanian¹, V. Minier¹, Ph. André¹, T. Hill¹, A. Zavagno⁷, Q. Nguyen-Luong¹, M. Attard¹, J.-Ph. Bernard⁸, D. Elia⁹, C. Fallscheer⁶, M. Griffin¹⁰, J. Kirk¹⁰, R. Klessen⁴, V. Könyves¹, P. Martin¹¹, A. Men'shchikov¹, P. Palmeirim¹, N. Peretto¹, M. Pestalozzi⁹, D. Russeil⁷, S. Sadavoy¹², T. Sousbie¹³, L. Testi¹⁴, P. Tremblin¹, D. Ward-Thompson¹⁰, and G. White^{15,16}

¹ IRFU/SAP CEA/DSM, Laboratoire AIM CNRS – Université Paris Diderot, 91191 Gif-sur-Yvette, France
e-mail: nschneid@cea.fr

² Max-Planck Institut für Radioastronomie, Auf dem Hügel, Bonn, Germany

³ Monash Centre for Astrophysics (MoCA), School of Mathematical Sciences, Monash University, 3800 Victoria, Australia

⁴ Zentrum Astronomie, Universität Heidelberg, Inst. Theor. Astrophysik, Albert-Ueberle Str. 2, 69120 Heidelberg, Germany

⁵ OASU/LAB-UMR5804, CNRS, Université Bordeaux 1, 33270 Floirac, France

⁶ National Research Council of Canada, Herzberg Institute of Astrophysics, Victoria BC, Canada

⁷ Laboratoire d'Astrophysique de Marseille, CNRS/INSU – Université de Provence, 13388 Marseille Cedex 13, France

⁸ Université de Toulouse, UPS, CESR, 9 Av. du Colonel Roche, 31028 Toulouse, France

⁹ IAPS-INAF, Fosso del Cavaliere 100, 00133 Roma, Italy

¹⁰ Cardiff University School of Physics and Astronomy, Cardiff, UK

¹¹ CITA & Dep. of Astronomy and Astrophysics, University of Toronto, Toronto, CA, Canada

¹² Department of Physics and Astronomy, University of Victoria, PO Box 355, STN CSC, Victoria BC, Canada

¹³ Institut d'Astrophysique de Paris, UPMC, UMR 7095, CNRS, 98 Bd Arago, 75014 Paris, France

¹⁴ ESO, Karl Schwarzschild Str. 2, 85748 Garching, Germany

¹⁵ Department of Physics & Astronomy, The Open University, Milton Keynes MK7 6AA, UK

¹⁶ The Rutherford Appleton Laboratory, Chilton, Didcot, OX11 0NL, UK

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The paper by Schneider et al. (2012) contains an error in Sect. 2.2 and in Fig. 6. The bottom y -axis label of Fig. 6 must read “PDF(η)” instead of “ \log_{10} PDF(η)”. The corrected version of the figure is shown in Fig. 1 here. In Sect. 2.2 of Schneider et al. (2012), the slope fitted to the high-density tail of the composite PDF, Fig. 6 (here Fig. 1), in Rosette was wrongly quoted to correspond to a radial volumetric density profile $n \propto r^{-0.65}$. The value of the slope -0.65 actually corresponds to the radial column density profile, $N \propto r^{-0.65}$. Since $n \propto N/r$, this translates into the equivalent volumetric density profile, $n \propto r^{-1.65}$ (see the derivation of the relation between PDF slopes and (column) density profiles in Federrath & Klessen 2013). Hence the statement in Sect. 2.2 is incorrect, i.e., that the “exponent is smaller than what is typically found for dense cores (-1.5 to -2), suggesting that on large (cloud)-scales, turbulence is the dominating process compared to gravity”. The corrected value $n \propto r^{-1.65}$ is much closer to what is found in related studies (e.g., Arzoumanian et al. 2011) and suggests that gravitational collapse – at least locally – does play an important role in Rosette and likely is the reason for the high-density power-law tail in Fig. 1.

References

- Arzoumanian, D., André, P., Didelon, P., et al. 2011, A&A, 529, L6
Federrath, C., & Klessen, R. S. 2013, ApJ, 763, 51
Schneider, N., Csengeri, T., Hennemann, M., et al. 2012, A&A, 540, L11

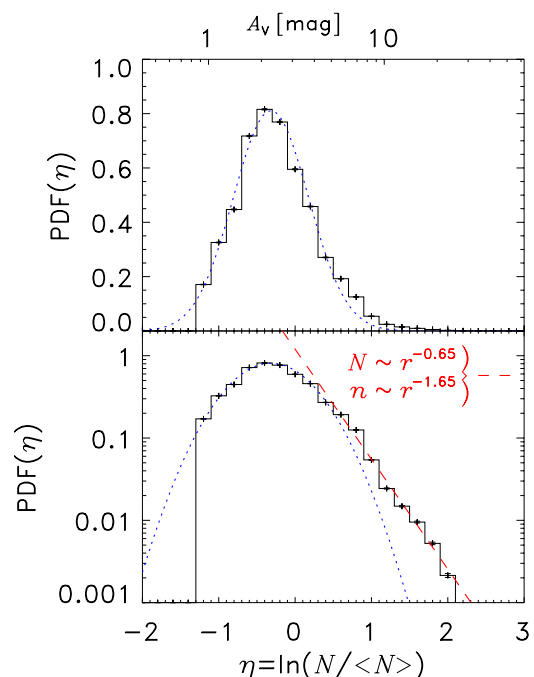


Fig. 1. Corrected version of Fig. 6 in Schneider et al. (2012).