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*Erratum*

# BeppoSAX LECS/MECS X-ray spectroscopy of the young supernova remnant N132D

**F. Favata**[1], **J. Vink**[2], **A.N. Parmar**[1], **J. Kaastra**[2], **and T. Mineo**[3]

[1] Astrophysics Division – Space Science Department of ESA, ESTEC, Postbus 299, 2200 AG Noordwijk, The Netherlands
[2] Space Research Organization Netherlands, Sorbonnelaan 2, 3584 CA-NL, Utrecht, The Netherlands
[3] Istituto di Fisica Cosmica ed Applicazioni Informatiche, CNR, Via U. La Malfa 153, I-90146 Palermo, Italy

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In Favata et al. (1997) we reported an analysis of the SAX X-ray observation of the supernova remnant N132D in the Large Magellanic Cloud (LMC), obtained with the LECS and MECS instruments. The observed spectrum was modeled with a two-component non-equilibrium ionization (NEI) model. Unfortunately a technical error in the analysis resulted in an artificially high oxygen abundance, which in turn influenced the other fit parameters. We report here the correct best-fit parameters (incidentally obtained on a better quality spectrum resulting from improved data processing).

Table 1 lists the revised best-fit parameter estimates. The oxygen abundance is much lower, and fully in line with the LMC ambient medium abundance. Also, the emission measure is higher (and thus the inferred mass) and the interstellar column density lower than in the erroneous fit. The fit has $\chi^2 = 173$ with 93 degrees of freedom. Most of the conclusions of Favata et al. (1997) are unchanged, except for the O richness. The consistency of the O abundance with the ambient (LMC) is in full agreement with the emission coming mostly from shocked ISM. The question of the origin of the hot component is however still standing.

A satisfactory fit to the Fe K line could only be obtained by allowing the iron abundance of the two components to vary independently, resulting in a low [Fe/H] for the cooler one (which, due to the high mass, is likely due to swept-up ISM), and a [Fe/H] compatible with LMC values for the hotter one. Possibly some of the iron of the cooler component is locked in dust grains – or the process of fitting a complex underlying DEM with two discrete components introduces a bias in the metallicity. This discrepancy in the iron abundance of the two spectral components deserves more attention in future studies of N132D.

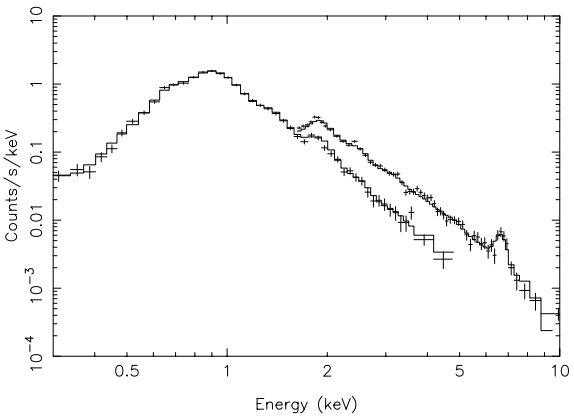


**Fig. 1.** The observed SAX LECS/MECS spectrum of N132D with the best-fit two-component NEI model.

**Table 1.** Best-fit parameters for the two-temperature non-equilibrium ionization model for the LECS/MECS spectra of N132D. A distance of 50 kpc is assumed. LMC abundances from Russell & Dopita (1992).

| Parameter | Best-fit | 90% range | LMC |
|---|---|---|---|
| $N_{\rm H}$ ($10^{21}$cm$^{-2}$) | 0.96 | 0.87-1.01 | |
| component 1: | | | |
| $kT$ (keV) | 0.79 | 0.72–1.05 | |
| $n_e\, n_H\, V$ ($10^{58}$cm$^{-3}$) | 383 | 253–463 | |
| $n_e\, t$ ($10^3$cm $^{-3}$ yr) | 2.3 | 1.1–3.1 | |
| component 2: | | | |
| $kT$ (keV) | 3.3 | 2.7–7 | |
| $n_e\, n_H\, V$ ($10^{58}$cm$^{-3}$) | 29 | 7–33 | |
| $n_e\, t$ ($10^3$cm$^{-3}$ yr) | 25 | $> 19$ | |
| [O/H] | 0.15 | 0.11–0.21 | 0.32 |
| [Ne/H] | 0.21 | 0.15–0.31 | 0.42 |
| [Mg/H] | 0.32 | 0.28–0.41 | 0.74 |
| [Si/H] | 0.32 | 0.26–0.39 | 1.7 |
| [S/H] | 0.45 | 0.33–0.57 | 0.27 |
| [Ar/H] | 0.64 | 0–1.1 | 0.49 |
| [Fe/H] (component 1) | 0.15 | 0.13–0.21 | 0.50 |
| [Fe/H] (component 2) | 0.47 | 0.33–1.06 | 0.50 |

## References

Favata, F., Vink, J., Parmar, A.N., et al., 1997, A&A 324, L45
Russell, S.C., Dopita, M.A., 1992, ApJ 384, 508

*Send offprint requests to*: F. Favata (fabio.favata@astro.estec.esa.nl)