

**Erratum: Atacama Cosmology Telescope: Modeling the gas
thermodynamics in BOSS CMASS galaxies from kinematic and
thermal Sunyaev-Zel'dovich measurements**
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We have identified an error in the algorithm that calculates the kSZ temperature profile, T_{kSZ} , for a given generalized Navarro-Frenk-White (GNFW) density model or a simulated density profile. This error changes the value of $\log_{10} \rho_0$ by 0.75σ in Table II and Fig. 2, and it affects the results shown in the left panels of Fig. 6. The statistical comparison between the simulations and measured density profile as well as the conclusions of this work remain unchanged as a result of this correction.

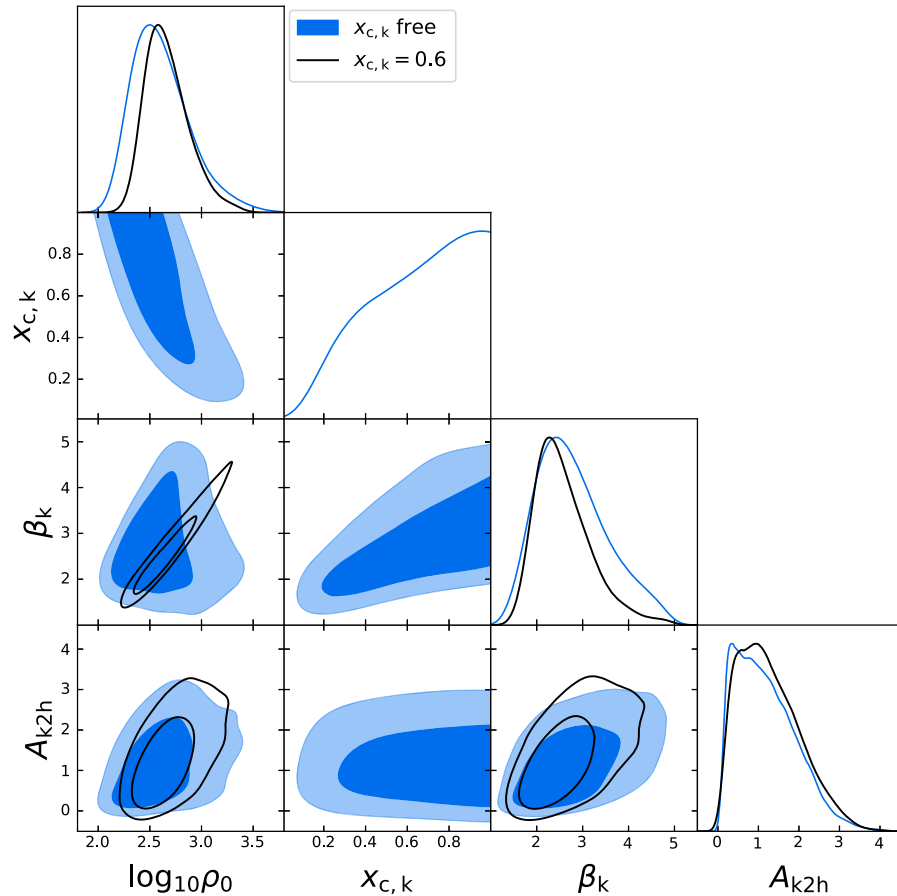


FIG. 2E. Corrected confidence levels of the log amplitude of the GNFW density profile.

In our computation of the GFW density model and simulation comparison, electron density and gas density were misrelated by a factor of 1.7. As a consequence:

- (i) In Table II, the marginalized constraints on the log amplitude should be replaced by $\log_{10} \rho_0 = 2.6^{+0.4}_{-0.3}$;
- (ii) Figure 2 should be replaced by Fig. 2E (only the contours relative to $\log_{10} \rho_0$ are affected);
- (iii) The three left panels of Fig. 6 should be replaced by Fig. 6E.

When comparing the measured density profile, including the correction factor, against cosmological simulations we find the total χ^2 and probability to exceed (PTE) values for Illustris TNG and the [1] simulations changed from 8.2–8.7 and 0.12–0.14 to 8.2–10.1 and 0.07–0.15.

Regardless of these corrections, our results provide a testbed for the subgrid stellar and AGN feedback models used in simulations and still pose a challenge for the numerical methods used to describe the heating of the circumgalactic medium of low-mass halos beyond the virial radius. The corrections presented in this erratum, although minor, should be considered when comparing or using our findings in other works [2–4].

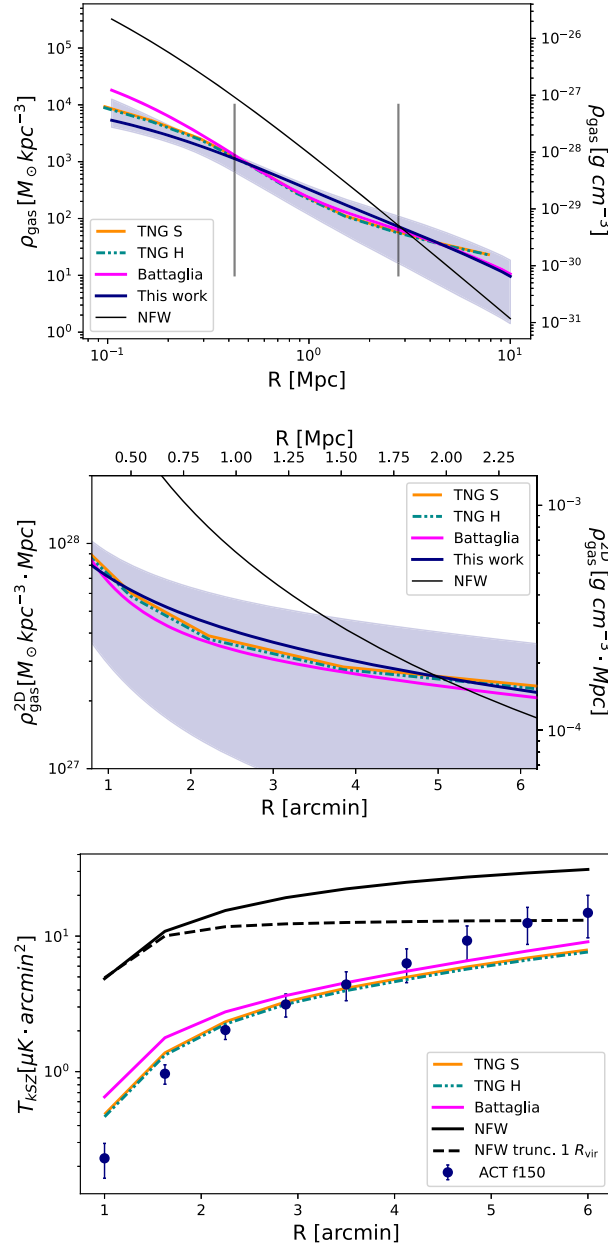


FIG. 6E. Corrected comparisons of our best-fit gas density profile (top), projected density profile (middle), and kSZ measurements (bottom) to profiles from simulations.

Lastly, we document a typo:

- (i) In Secs. IIC and IIIC describing our GNFW pressure model, the intermediate slope α_t is a free parameter, while the core radius parameter is fixed to $x_{c,t} = 0.497 \times (M_{200}/10^{14}M_{\odot})^{-0.00865} \times (1+z)^{0.731}$ [5].

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