Compiled: 01:10 Tuesday 27<sup>th</sup> August, 2024 (UTC) DRAFT VERSION TUESDAY 27<sup>TH</sup> AUGUST, 2024 Typeset using IATEX modern style in AASTeX631

# SAUNAS: III. X-ray Scaling Relations of Diffuse Hot Gas Galactic Halos\*

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#### ABSTRACT

Put the abstract here.

### 1. BACKGROUND

Here is the intro section (Aguerri et al. 1998; Bell et al. 2006b,a).

The first sentence in the intro!

The second sentence in the intro (Erwin & Debattista 2017; Falchi et al. 2016).

A 3rd sentence in the background.

Here is a comment, see if it changes color like it is supposed to.

## 1.1. Motivation

The first sentence under motivation. (Bernardi et al. 2006)

1.2. more motivation

second sentence under motivation.

Third sentence right here right NOW!!

4th sentence

5th sentence here

1.2.1. Goals

First sentence in this section underneath Goals.

2. METHODS

First sentence in methods section.

Facilities: Chandra

Software: CIAO, LIRA, VorBin

<sup>\*</sup> Released on May, 11th, 2023



**Figure 1.** Optical spectral energy distribution (SED) of NGC 5084 as detected by the 6dF survey and the APO/DIS observations. *Top panel:* 4300-7000 Å spectrum of the central 1.5 arcsec slit (APO/DIS, blue and red channels, in color) and the 6.7 arcsec radius fiber (6dF, black). *Bottom left:* Detail of the H $\gamma$  spectral range (4200 – 4550 Å), showing the core as detected by 6dF and APO/DIS, as well as the North, South, East, and West subregions avoiding the core. See the labels on each spectra. *Bottom right:* Same as previous for the 6400-6800 Å(H $\alpha$ ) range. Vertical shadowed red lines represent the redshifted wavelengths of the typical absorption and emission lines in galaxies (H $\beta$ , OIII, Mg, Na I, H $\alpha$ ), for reference.

### REFERENCES

Aguerri, J. A. L., Beckman, J. E., & Prieto, M. 1998, AJ, 116, 2136, doi: 10.1086/300615

Bell, E. F., Phleps, S., Somerville, R. S., et al. 2006a, ApJ, 652, 270, doi: 10.1086/508408

Bell, E. F., Naab, T., McIntosh, D. H., et al. 2006b, ApJ, 640, 241, doi: 10.1086/499931

Bernardi, M., Nichol, R. C., Sheth, R. K., Miller, C. J., & Brinkmann, J. 2006, AJ, 131, 1288, doi: 10.1086/499522

Erwin, P., & Debattista, V. P. 2017, MNRAS, 468, 2058, doi: 10.1093/mnras/stx620

Falchi, F., Cinzano, P., Duriscoe, D.,et al. 2016, , 2, e1600377,doi: 10.1126/sciadv.1600377