A one column paper draft demo

Research proposal for Ph.D. in Astrophysics

Fmajor [1,2]

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Thesis Advisor: XXX [1,2]

[1] *XXXXXXX*

[2] *OOOOOO*

Contents

1. Introduction

1.1. Test for cite and enumerate and term

Test for cite and enumerate

Example:

```
[#Kormendy&Ho2013ARA&A, Koss2012ApJ]
[#Kormendy&Ho2013ARA&A, Koss2012ApJ][]
[foo][#Kormendy&Ho2013ARA&A, Koss2012ApJ]
[foo\]\[bar][#Kormendy&Ho2013ARA&A, Koss2012ApJ]

[#Kormendy&Ho2013ARA&A, Koss2012ApJ;]
[#Kormendy&Ho2013ARA&A, Koss2012ApJ;][]
[foo][#Kormendy&Ho2013ARA&A, Koss2012ApJ;]
[foo\]\[bar][#Kormendy&Ho2013ARA&A, Koss2012ApJ;]
```

Term:

- (Kormendy & Ho 2013; Koss et al. 2012)
  - (Kormendy & Ho 2013; Koss et al. 2012)
- (Kormendy & Ho 2013; Koss et al. 2012, foo)
  - (foo Kormendy & Ho 2013; Koss et al. 2012, bar)

Enumerate:

1. Kormendy & Ho (2013); Koss et al. (2012)
2. Kormendy & Ho (2013); Koss et al. (2012)
3. Kormendy & Ho (2013); Koss et al. (2012, foo)
4. Kormendy & Ho (foo 2013); Koss et al. (foo 2012, bar)

Here is not cited( ).

Here is a enumerate:

1. Type for “1984.”

Here is not:

1984. Type for “1984.”

List of Markers:

\ Backslash0 \ Backslash1

`Backtick0` Backtick1

- Asterisk0
- Asterisk1
- plus sign0
- plus sign1
- minus sign0 (hyphen)
- minus sign1 (hyphen)

This is a line. This is a new line.

Cite for intro note (§ 1)

Cite for cite note (§ 1.1)

Cite for quote § 1.2

1.2. Test for quote

Test for quote:

Level 1 Lazy type in for level 1

Level 1, must have a empty line for new line, Level 1 (failed new line)

> Level 2 Lazy type in for level 2, must have a empty type for lazy type
>
> Level 2
>
> Level 2 (successful new line)
>
> > Level 3 Lazy type in for level 3, Not lazy type in for level 3

2. Other test

2.1. test for rules

Test for rules:

Some

Thing

Between

---

different

---

rules

En. . .

2.2. test for Links

This is an example[1] inline link.

This link[2] has no title attribute.

Also we can add a foot note[3]

Or like this[4]

Or like id[5]

I get 10 times more traffic from Google[6] than from Yahoo[7] or MSN[8].

2.3. test for emphasis

single asterisks

single underscores

double asterisks

---

[1]http://example.com/

[2]http://example.net/

[3]http://example.net/

[4]http://example.com

[5]http://example.com

[6]http://google.com/

[7]http://search.yahoo.com/

[8]http://search.msn.com/

double underscores

this text is surrounded by literal asterisks

2.4. test for code

Use the `printf()` function.

```
There is a literal backtick (`) here.
```

A single backtick in a code span: `` ` ``

A backtick-delimited string in a code span: `` `foo` ``

Please don't use any <`blink`> tags.

`&#8212;` is the decimal-encoded equivalent of `&mdash;`.

2.5. test for equation

Some equations: eq:0 (§ 2.5)

$$x_{1,2} = \frac{-b \pm \sqrt{b^2} - 4ac}{2a}$$

$$x_{1,2} = \frac{-b \pm \sqrt{b^2} - 4ac}{2a} \tag{1}$$

Inline: $x_{1,2} = \frac{-b \pm \sqrt{b^2} - 4ac}{2a}$, blabla

Inline: $x_{1,2} = \frac{-b \pm \sqrt{b^2} - 4ac}{2a}$, blabla

eq:1 (Eq. 1) eq3 inline (Eq. 2.5)

$$1 = \Omega_0 + \Omega_\Lambda + \Omega_k, \tag{2}$$

And:

$$\Omega_0 = \frac{\rho_0}{\rho_{c0}} = \Omega_m + \Omega_r; \tag{3}$$

$$\Omega_\Lambda = \frac{\rho_\Lambda}{\rho_{c0}}; \tag{4}$$

$$\Omega_k = -\frac{kc^2}{a_0^2 H_0^2}; \tag{5}$$

2.6. test for table

MultiMarkdown table here (Table 1):

Table 1: Very very very very very very very very very long caption

	Grouping	
First Header	Second Header	Third Header
Content	Long Cell	
Content	**Cell**	Cell
New section	More	Data
And more	And more	

Large Table:large (Table 2)

3. Test for figs

Include some figure:

Image one (image with given size, 200x400): image fixed (Figure 4)

Image two (image direct): image direct, no way to ref it (**??**)

Image three (image: normal): Figure 3

Image Four (image:small):Figure 4

Good include: cmp (Figure 5)

Table 2: Photometric Parameters

Target name (1)	Aperture (2)	m_Y (3)	m_U (4)	M_z (5)	M_u (6)	$u-z$ (7)	M_* (8)	B/T (9)
SDSS J1108+0659	18″	16.24±0.05	18.48±0.26	-23.12	-21.37	1.76±0.26	11.14	0.55
SDSS J1131−0204	12″	15.81±0.01	18.94±0.09	-23.04	-20.39	2.65±0.10	11.24	0.12
SDSS J1146+5110	18″	15.89±0.03	18.40±0.14	-22.68	-20.65	2.02±0.14	11.00	0.41
SDSS J1332+0606	12″	16.82±0.04	19.29±0.16	-22.86	-20.88	1.98±0.17	11.07	0.69

Note. — Col. 2: the aperture sizes that are large enough to enclose more than 95% flux of the galaxies; Col. 3 & 4: the apparent magnitudes in Y and U bands measured with the apertures correspondingly. The uncertainties are estimated from 1 σ variation of the sky background; Col. 5 & 6: the SDSS z- and u-band absolute magnitudes of the targets, transformed from m_Y and m_U correspondingly, assuming a flat local spectra ($f_\lambda \sim const.$) around the relevant frequencies; Col. 7: color calculated from the u and z magnitudes; Col. 8: the stellar mass in solar unit of the targets estimated from the z- and u-band magnitudes (see the text for details, §**??**). Col. 9: the bulge-to-total mass ratios. The bulge mass is obtained by adding up the two bulge components in `GALFIT` decomposition results for each galaxy.

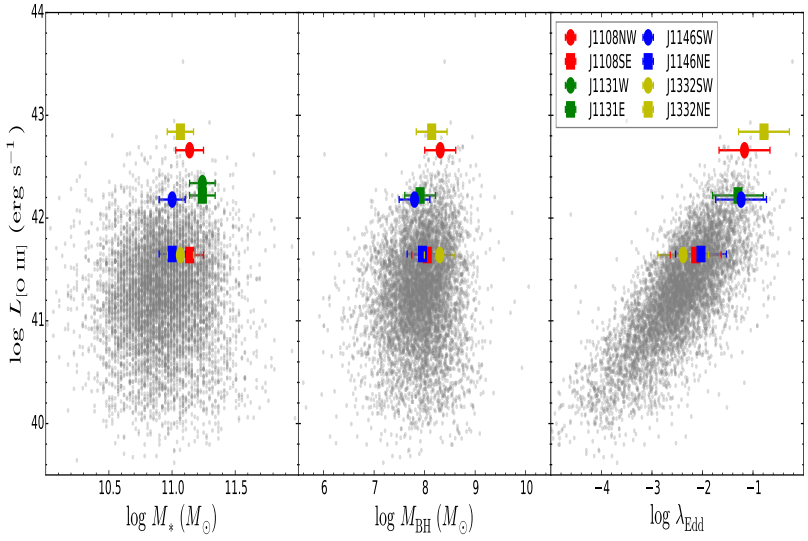

Fig. 1.— Fig with give size, 200x400

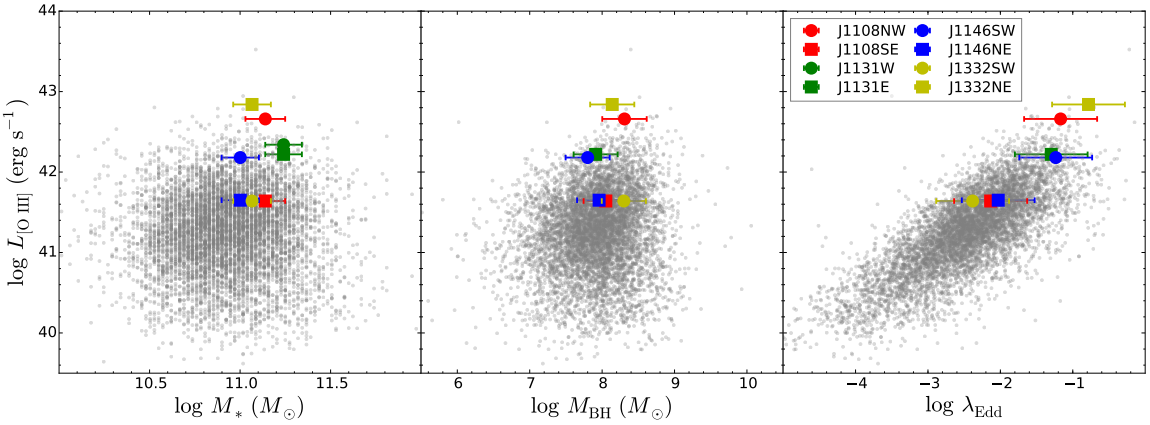

Fig. 2.— Direct figure title

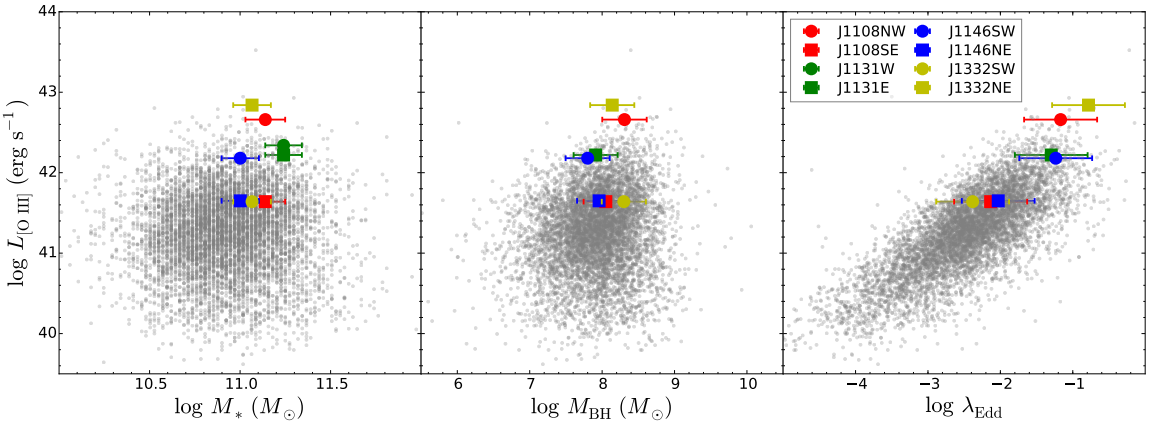

Fig. 3.— Here we have our long long blablaFigblablaFigblablaFigblabla Figtitle-blablaFigblablaF igblablaFigblablaFigti tleblablaFigblablaFig, A demonstration of our near- to far-IR SEDs of PG quasars, produced by Kormendy & Richstone (1995)., I try to ref intro (§ 1)

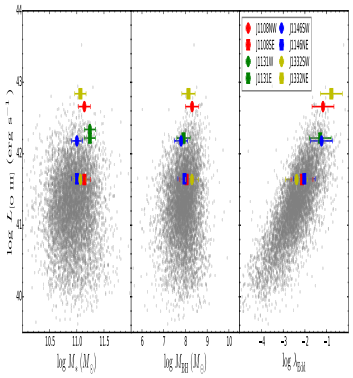

Fig. 4.— 0.3 \textwidth and 0.25 \textheight, compare the size with Figure 3

REFERENCES

Kormendy, J., & Ho, L. C. 2013, ARA&A, 51, 511

Kormendy, J., & Richstone, D. 1995, ARA&A, 33, 581

Koss, M., Mushotzky, R., Treister, E., et al. 2012, ApJ, 746, L22

Pović, M., Sánchez-Portal, M., Pérez García, A. M., et al. 2012, A&A, 541, A118

This preprint was prepared with the AAS LaTeX macros v5.2.

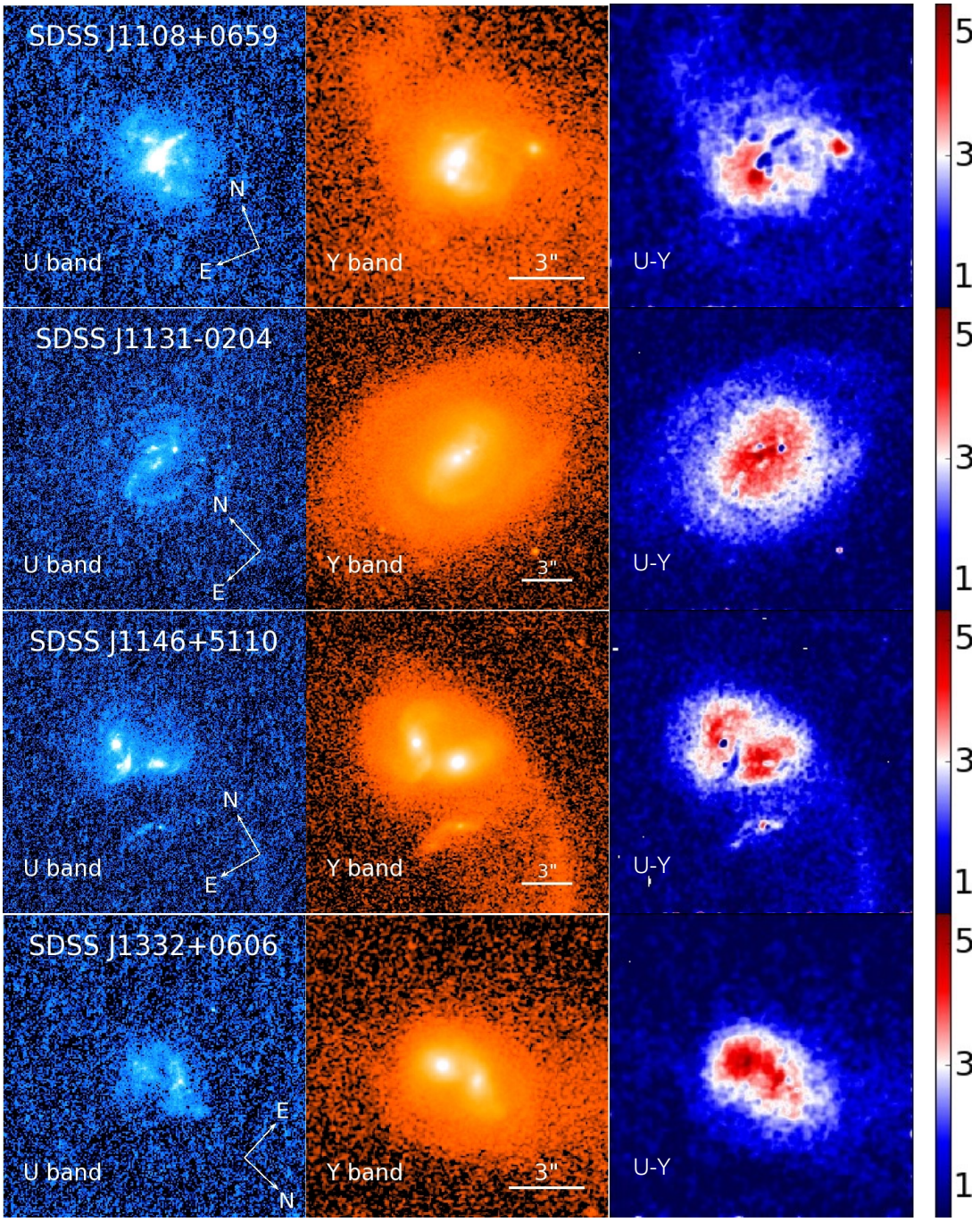

Fig. 5.— Images observed through U- and Y-band filters are shown in *left* and *middle* columns. The color maps are in the *right column*. The FOV and orientation of the images in each row are the same. The compass and 3″ scale bar are on the lower right corner of *left* and *middle* panels in each row.

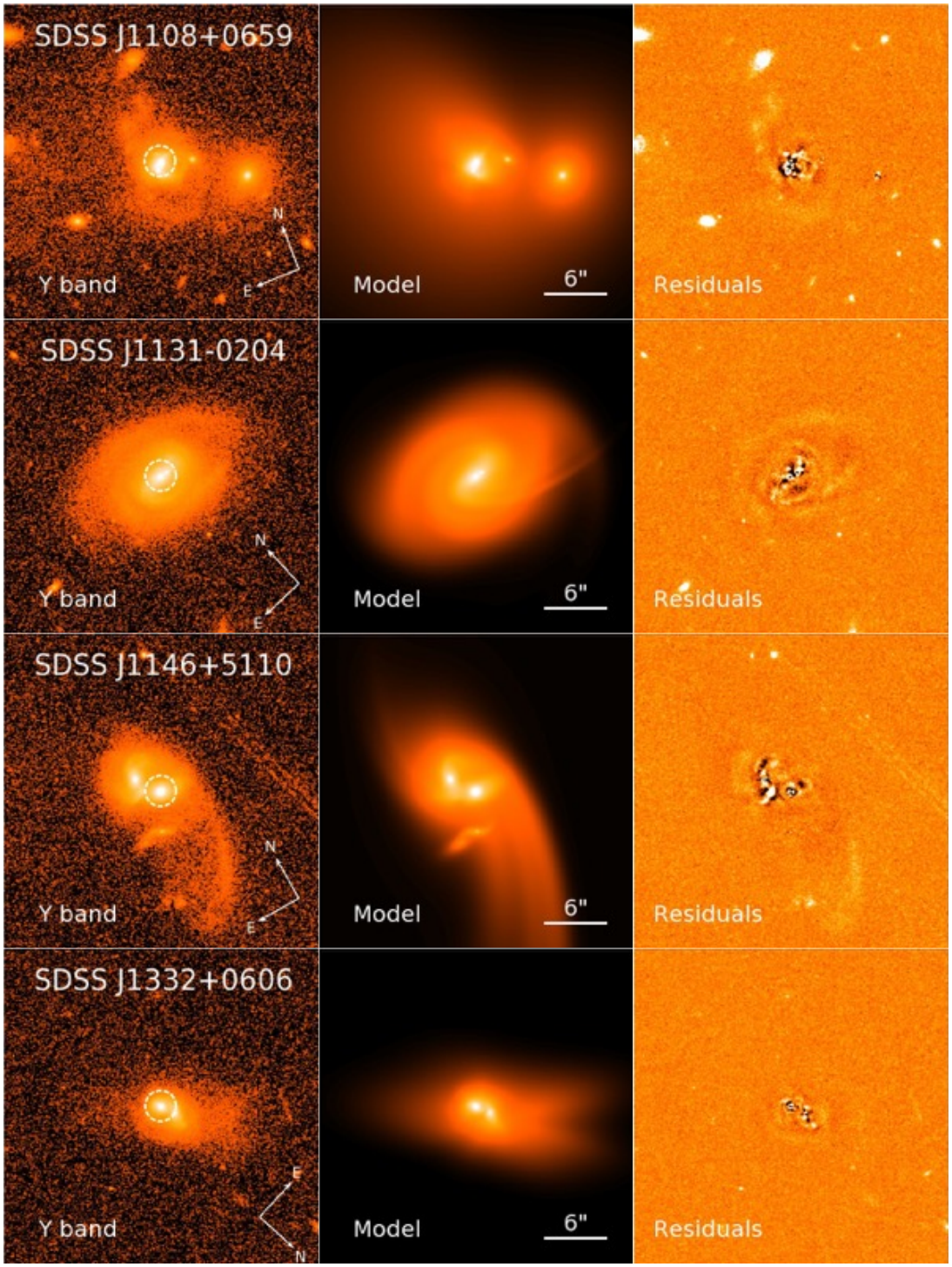

Fig. 6.— Model fits of the *HST* Y-band images of the four sources. *Left column* is the Y-band image of each target. The white dashed circles demonstrate the coverage of SDSS fibers ($3''$ in diameter). The compass of each image is shown in the lower right corner. *Middle column* is `GALFIT` best fit of each target. The scale bar is shown in the lower-right corner. The FOVs of three panels in each row are the same. The pixel brightness scale is logarithmic in the first two columns. The residuals are show in *Right column*, where the pixel brightness scale is linear. We simultaneously fit the close companions of J1108 and J1146.