

# Alignment of Light and Mass in Lensing Galaxies

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21 July 2014

## ABSTRACT

**Key words:** Gravitational lensing: strong — galaxies: structure

## 1 INTRODUCTION

### Content:

- Understand galaxy structure
- Relevant to e.g. weak lensing (Intrinsic alignments) and alternative gravity theories
- Strong lensing reacts purely due to total mass distribution → Can disentangle light and mass
- Free-form modelling technique, less model bias

## 2 DATA

### Content:

- Describe data set (why this data set, special features of galaxies (environment: y/n/unknown, elliptical/disk))

## 3 METHOD

### Content:

- Describe GLASS
- Describe shape measure and link it with Coles, Read and Saha 2014

## 4 RESULTS

### Content:

- Describe special features in reconstructed lenses
- Show the wedges money plot
- Discuss the results, especially:
  1. Dark matter halos seem quite round, stars not necessarily
  2. Dark matter halos are consistently more elliptical than stars

- 3. Rather elliptical dark matter halos are more aligned, otherwise not really a clear trend
- 4. There does not seem to be a trend of lenses being misaligned because of shear

## 5 CONCLUSION

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## 6 ACKNOWLEDGEMENTS

Acknowledge Dominik Leier, ...

JIR would like to acknowledge support from SNF grant PP00P2.128540/1.

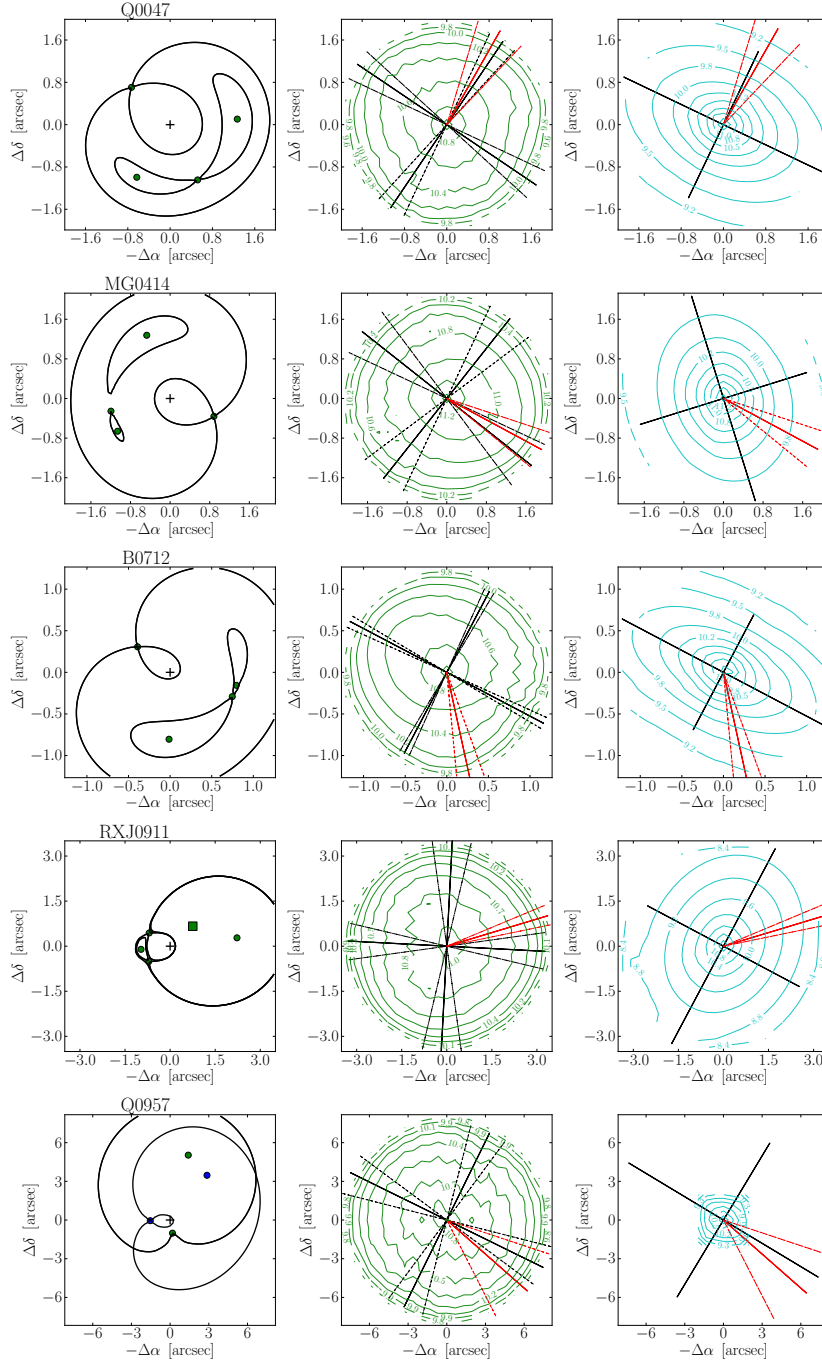
## REFERENCES

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**Table 1.** Table with lens properties

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**Table 2.** Table with lens properties relevant for modelling (point masses, positions, time delays)**Figure 1.**

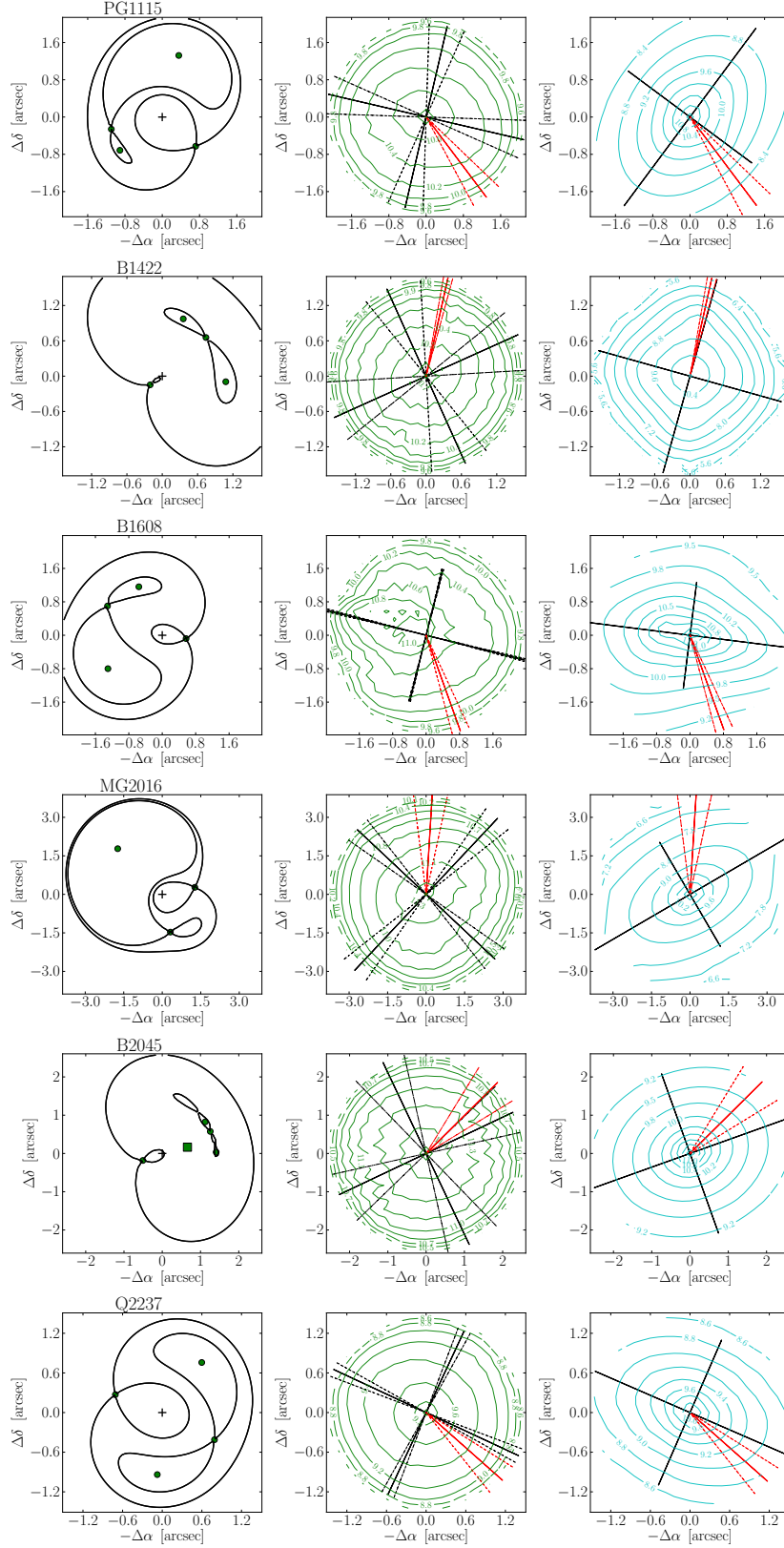
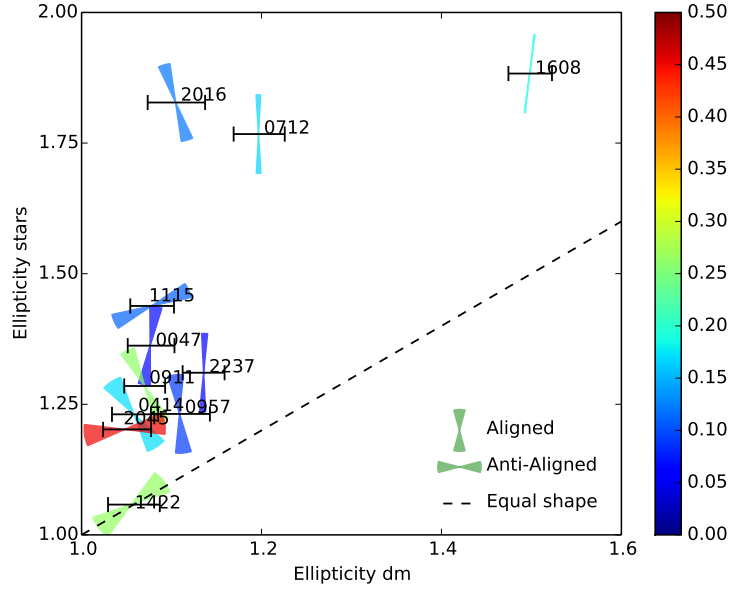


Figure 2.

**Figure 3.**