

# **Simulation of Gravitational Lensing**

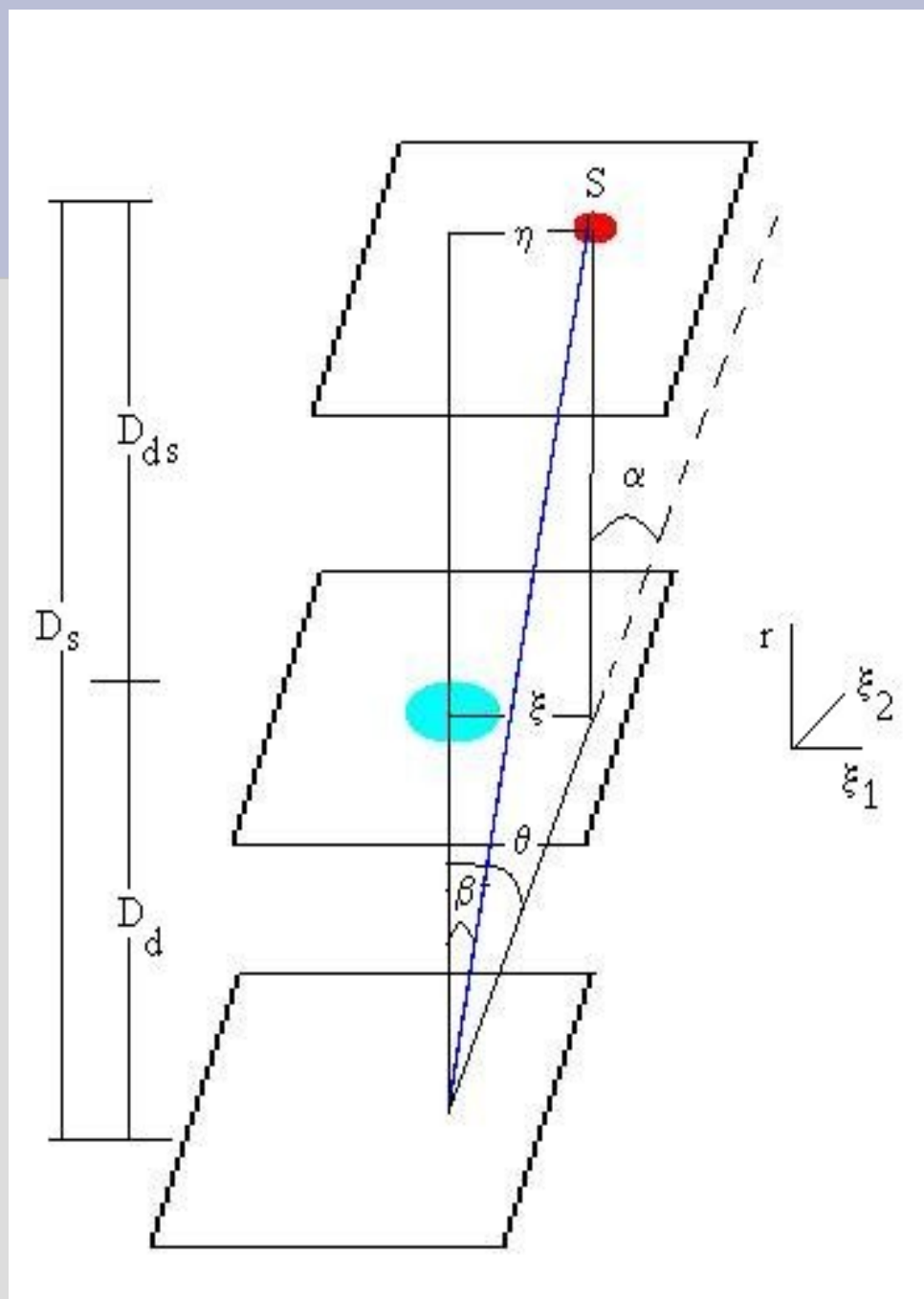
David Coss

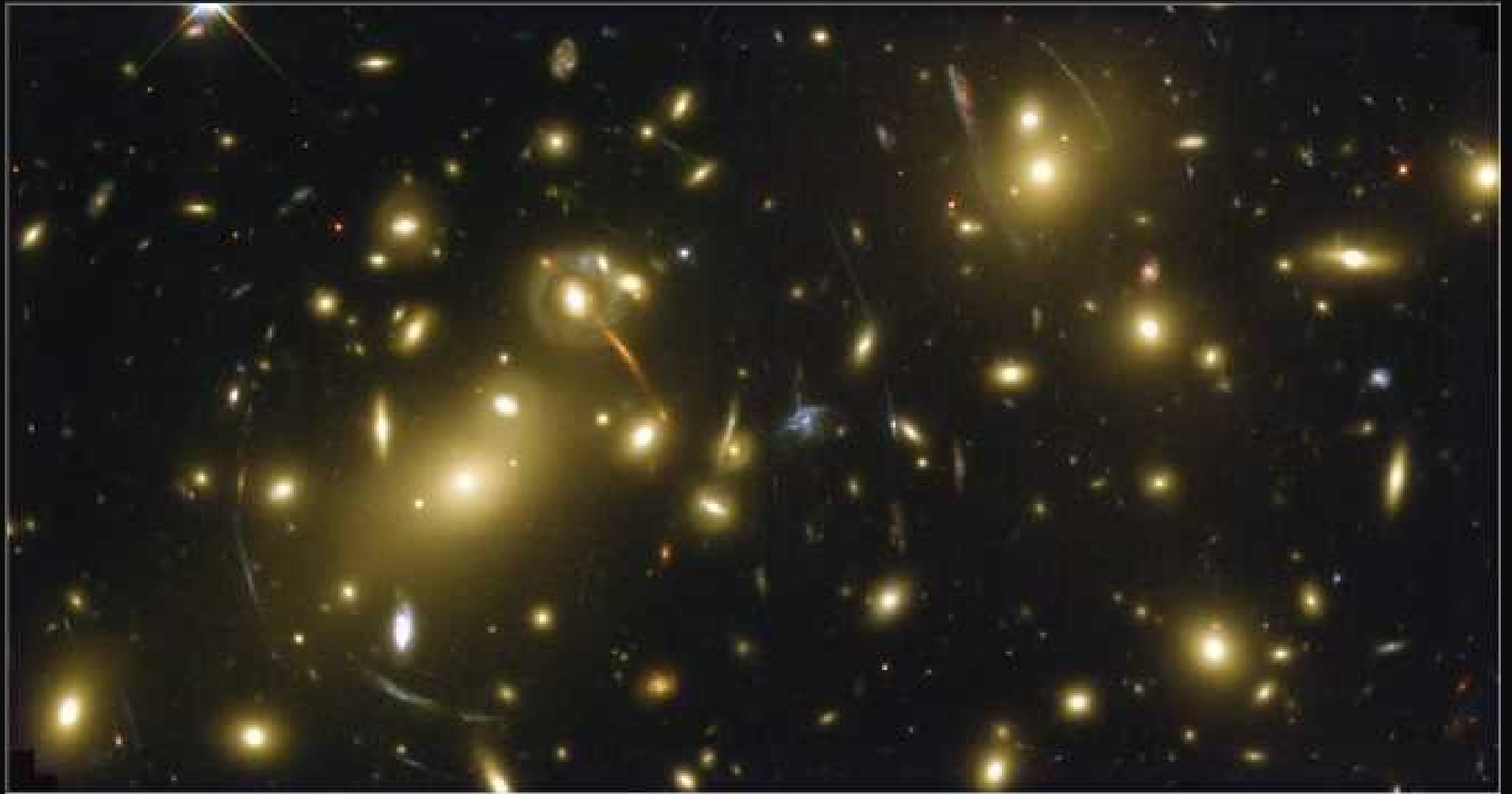
NASA Missouri Space Grant Consortium

April 11 – 12, 2008

# Outline

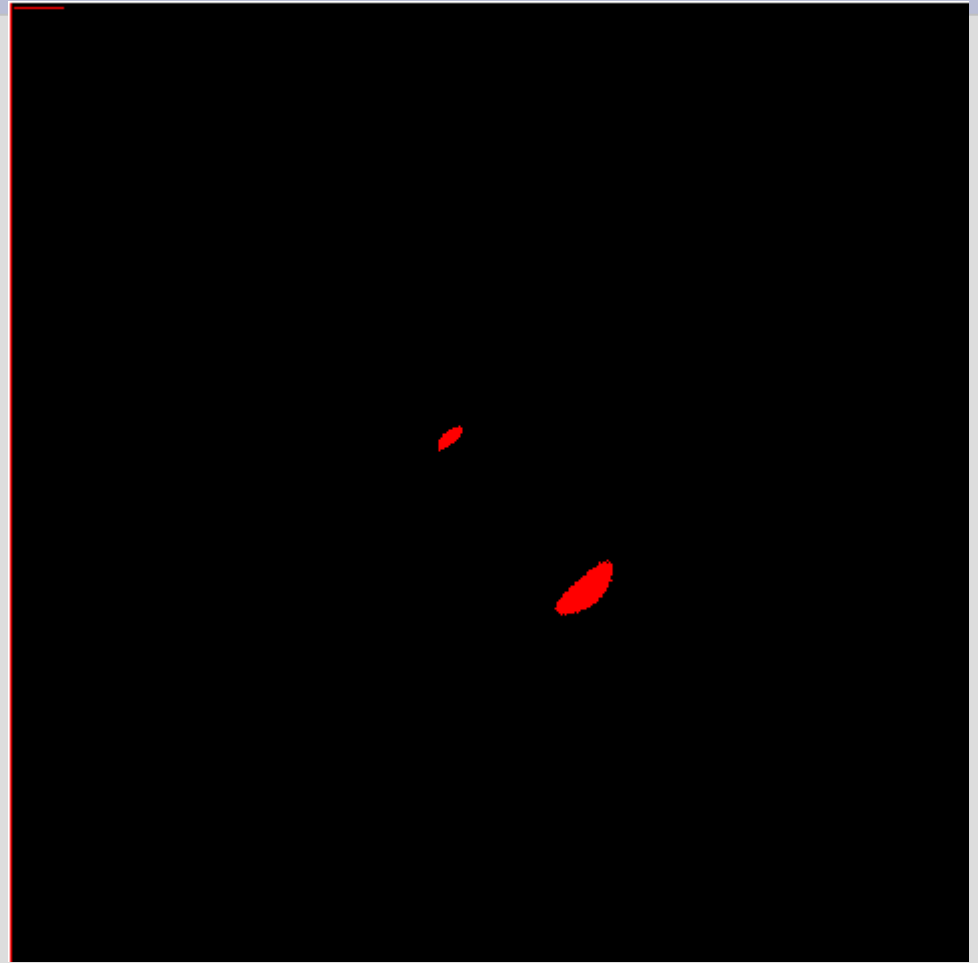
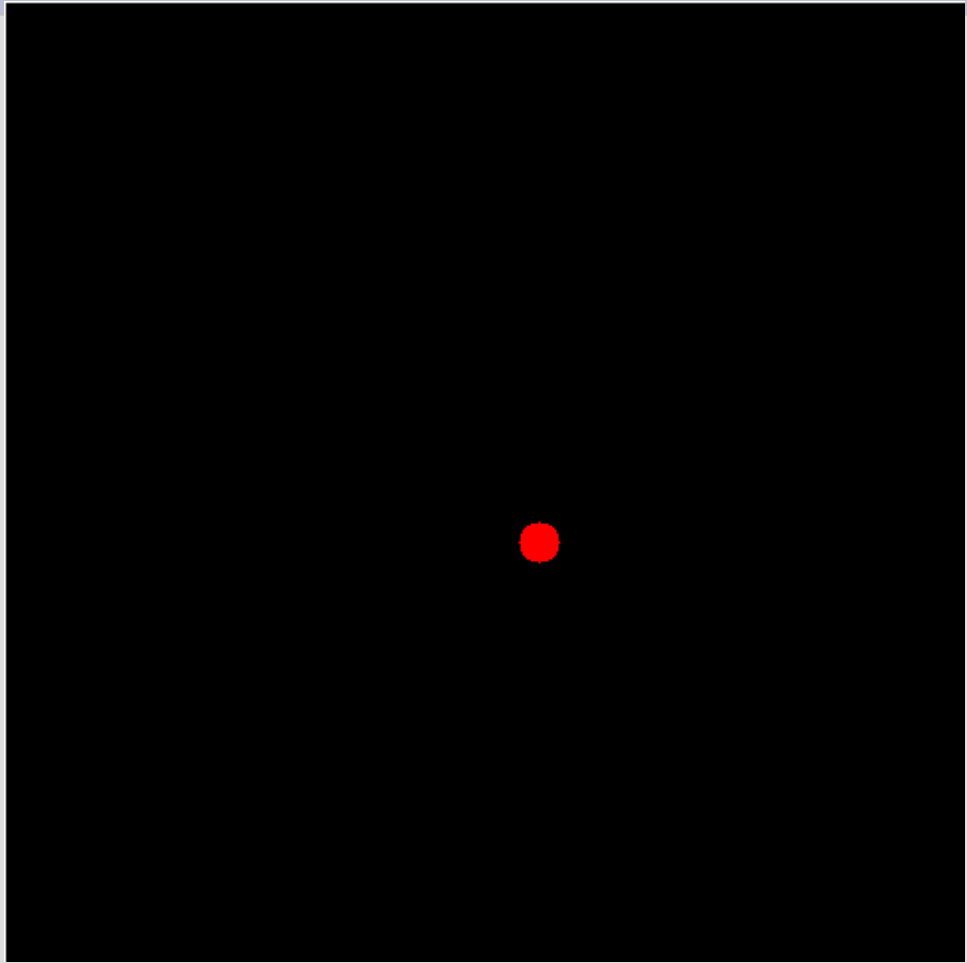
- Basics of Lensing
- Ray Tracing
- Shear Map
- Usefulness



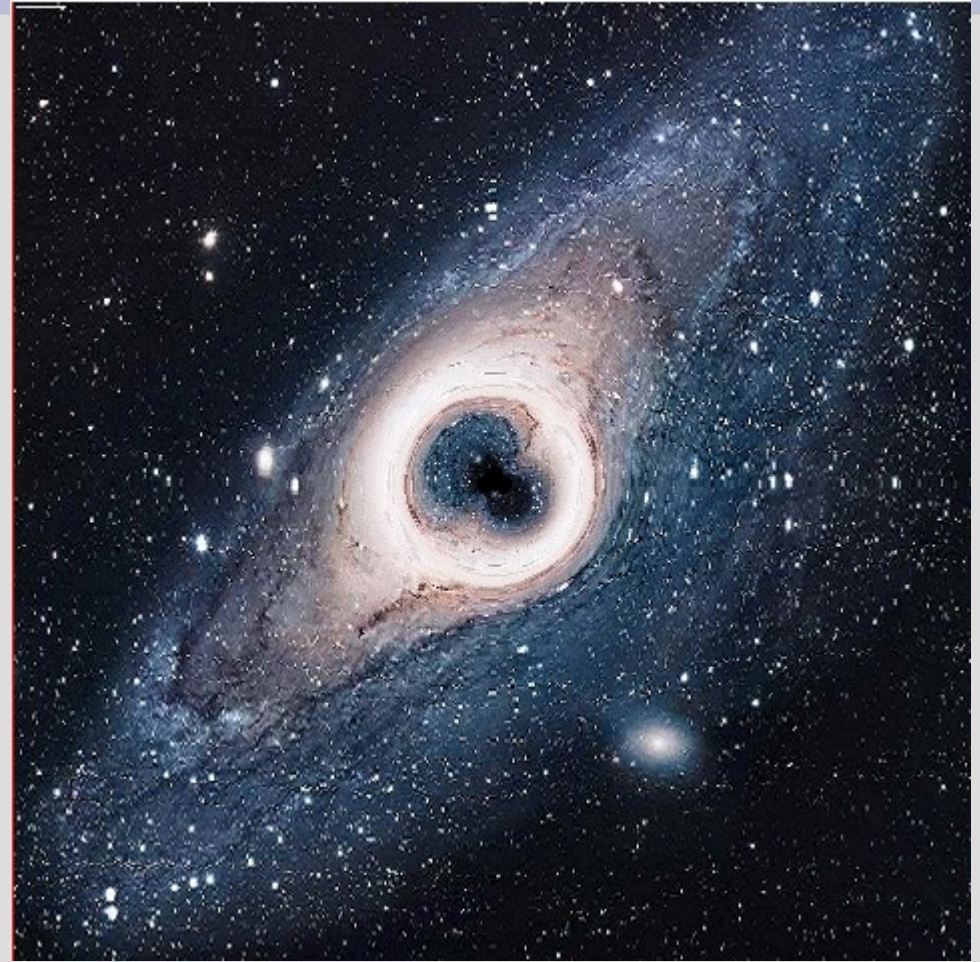


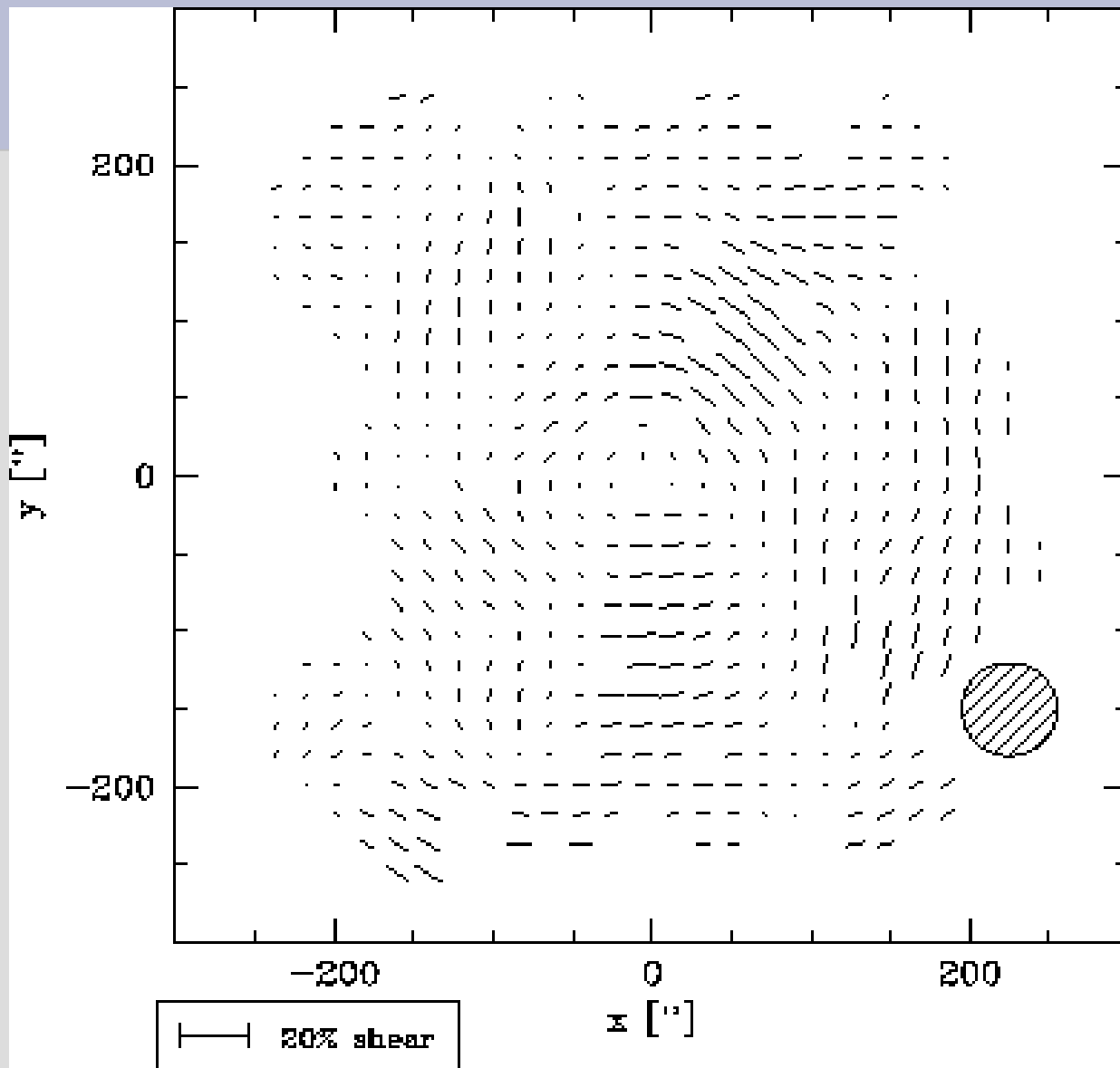
NASA/Hubble Image: Galaxy Cluster Abell 2218

# Ray Tracing



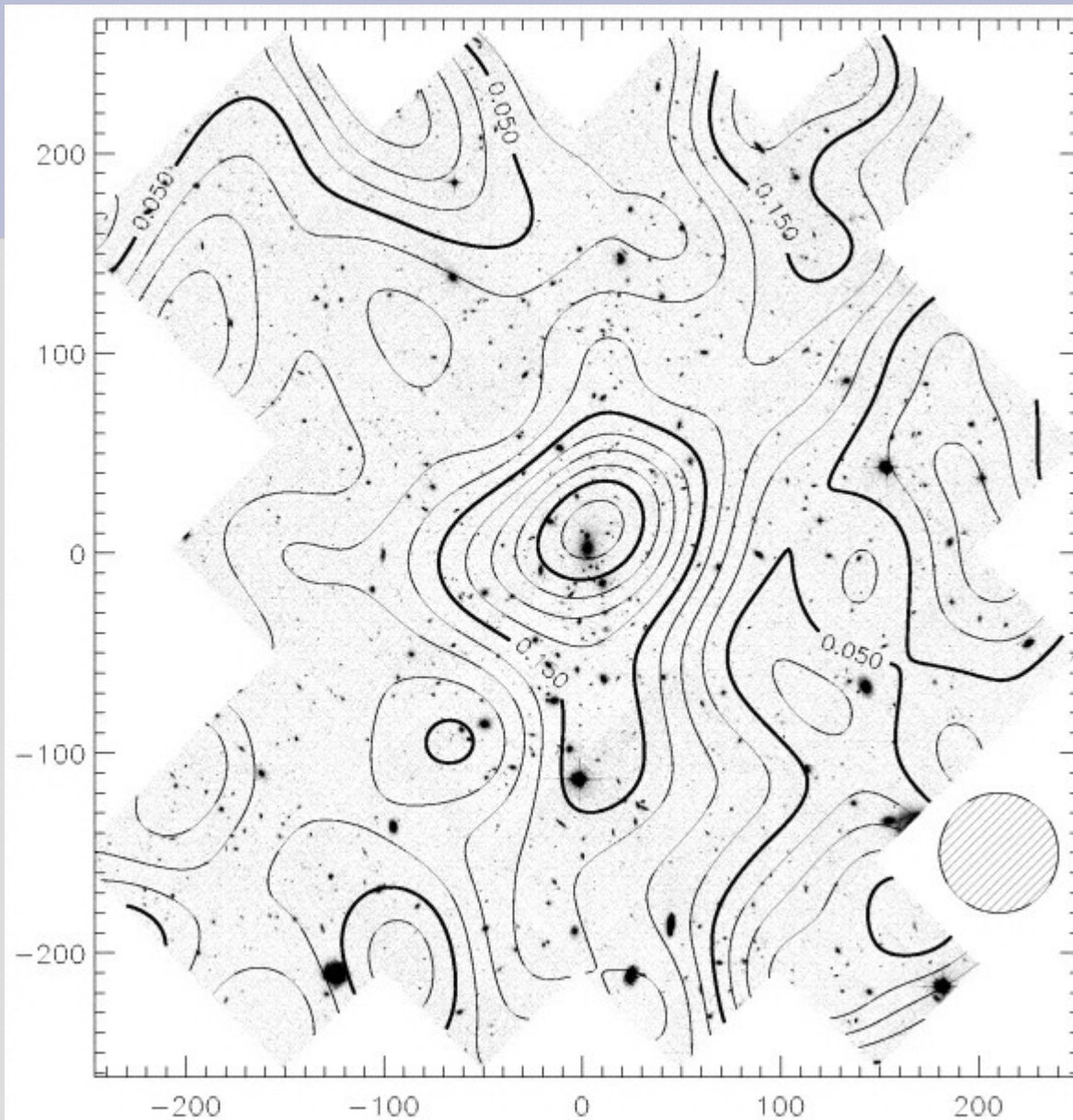
# Ray Tracing





## Shear Map from Hoekstra et al 1998





# Mass Density from Hoekstra et al 1998

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# References and Acknowledgements

## References

- Hoekstra, H., Franx, M., Kuijken, K. 1998. *ApJ*. 504: 636–660.

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  - <http://maxwell.dhcp.umsl.edu/brats/>

