

SDSS: THE ADVERTISEMENT

“The imaging data from the Sloan Digital Sky Survey (SDSS) provides the basis for a powerful gravitational lens survey as it allows the photometric selection of a large number of quasars. It is expected that the photometric sample will contain of order 1000 gravitationally lensed QSOs.”

– (1999) B.A.A.S 31, 1249

SDSS: THE REALITY

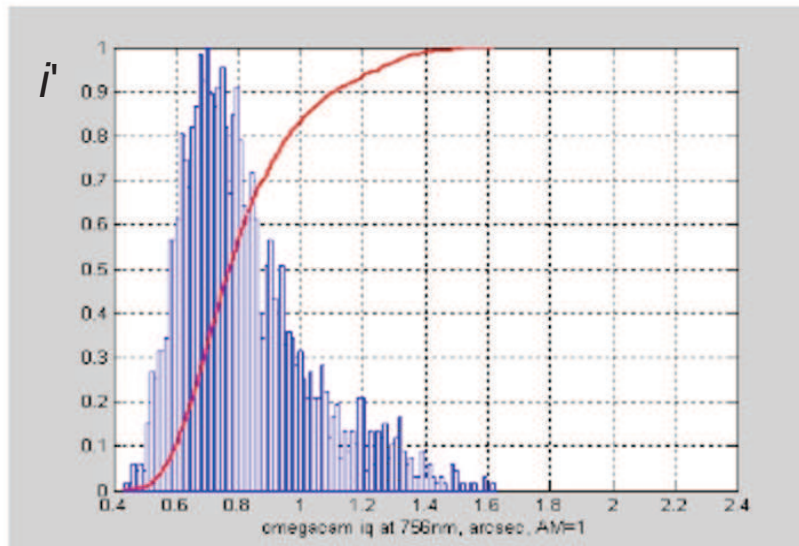
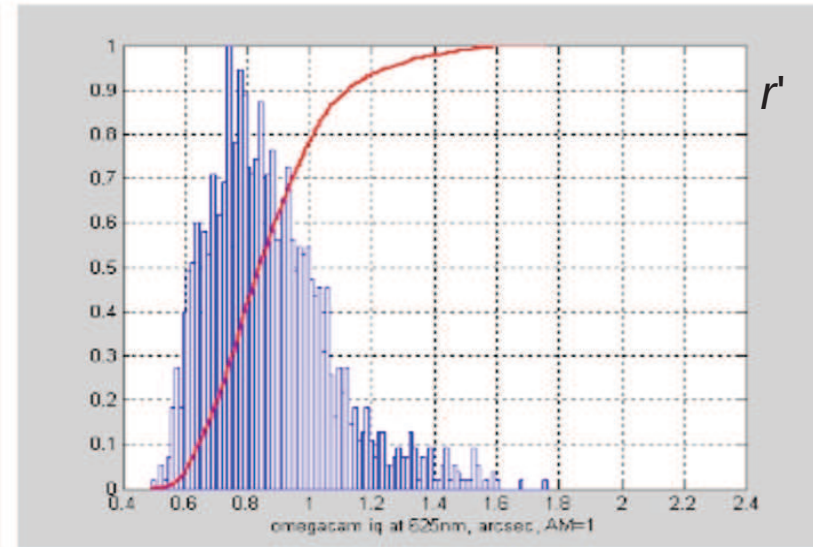
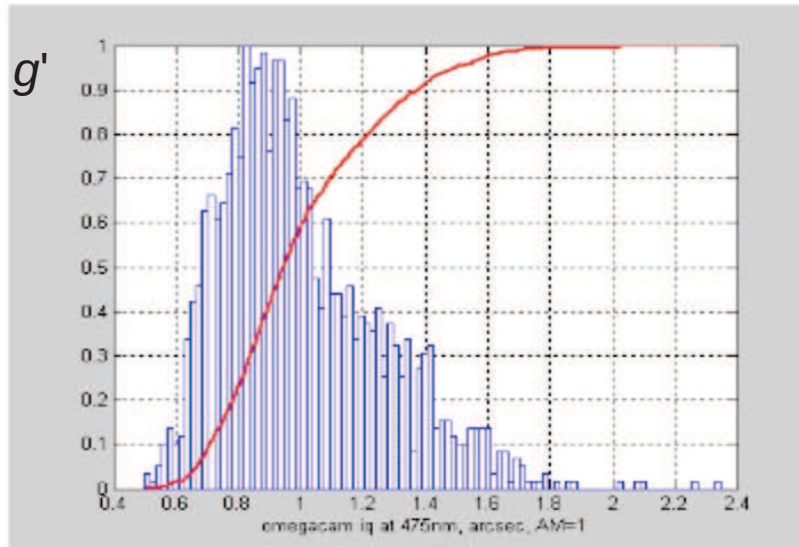
“The well-defined statistical sample consists of 26 lensed quasars brighter than $i = 19.1 \dots$ ”

“The SDSS DR7 quasar catalog also contains 36 additional lenses identified with various techniques.”

– (2012) A.J. 143, 119

OmegaCAM IQ distribution August – December 2011

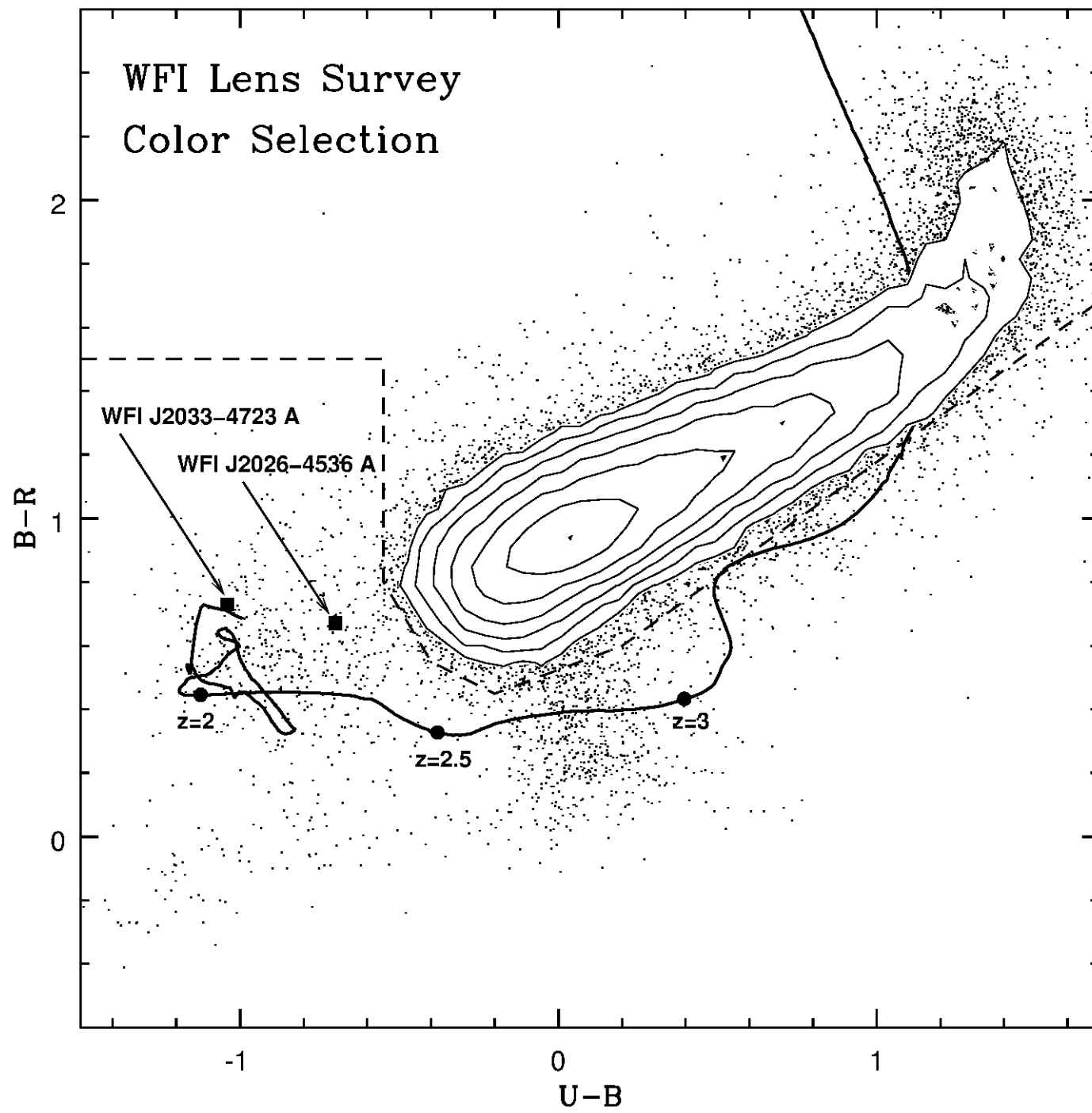
-- each data point is average IQ in one image over full chip array --



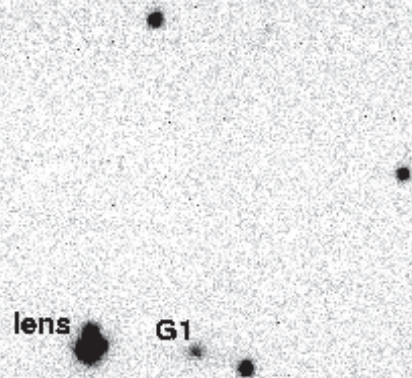
Median IQ in g' $\sim 0.95''$
Median IQ in r' $\sim 0.85''$
Median IQ in i' $\sim 0.80''$

Internal IQ $\sim 0.4-0.5''$

-> Outside median IQ $\sim 0.80''$ @ 600nm



a) WFI J2026-4536 / Magellan 6.5m



MPG/ESO 2.2m discovery

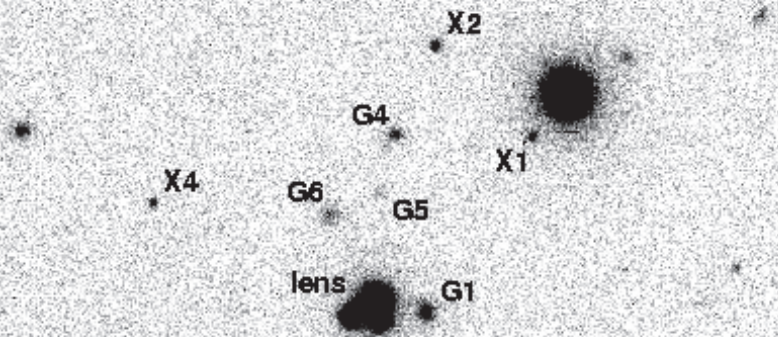
B
A C

This inset shows the discovery field from the MPG/ESO 2.2m telescope. It features three distinct sources labeled A, B, and C. Source A is the central, brightest object, with B and C positioned above and to the right of it, respectively. A scale bar at the bottom left indicates 2 arcseconds.

2"

N
E

b) WFI J2033-4723 / Magellan 6.5m



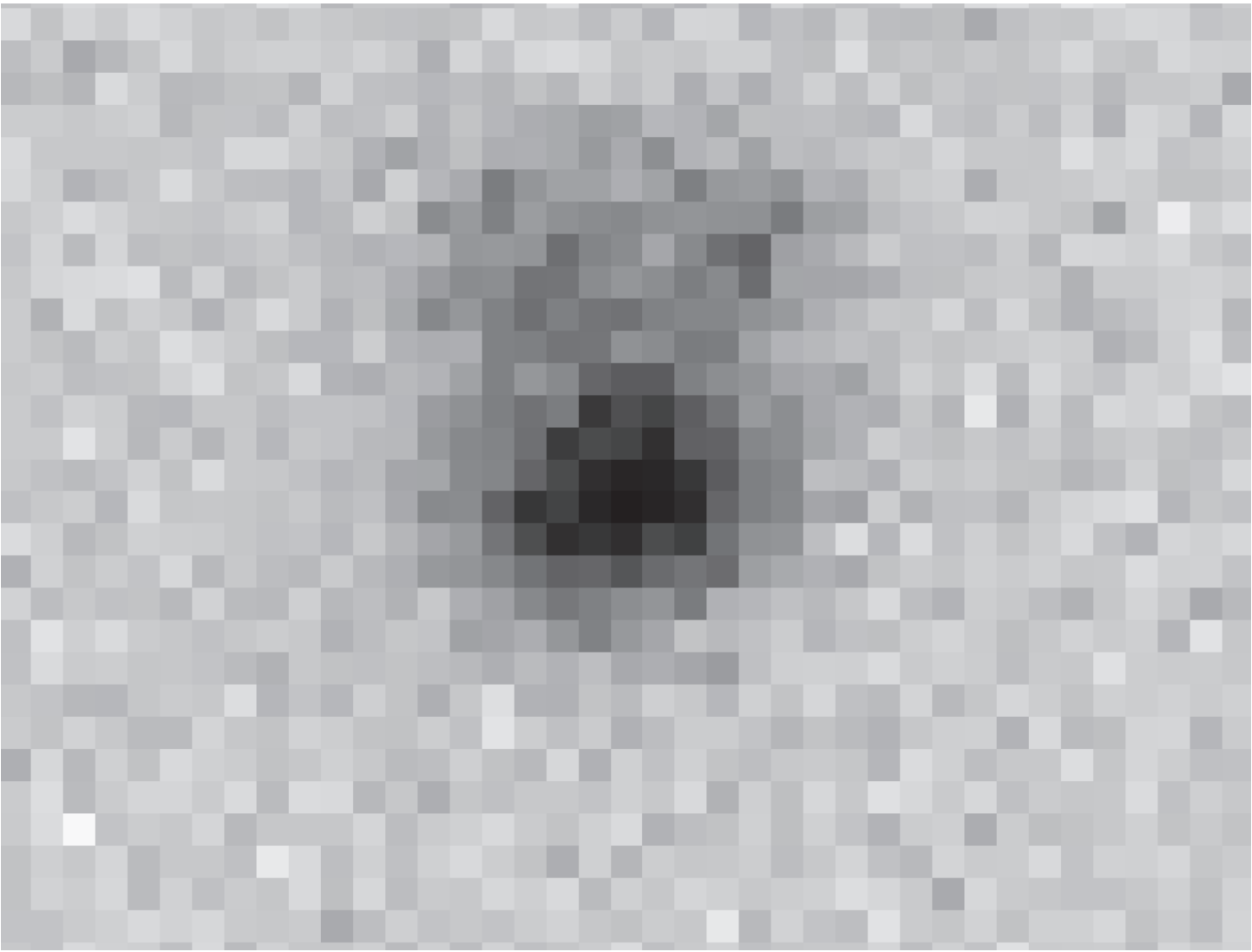
MPG/ESO 2.2m discovery

A
B C

This inset shows the discovery field from the MPG/ESO 2.2m telescope. It features three distinct sources labeled A, B, and C. Source A is the central, brightest object, with B and C positioned below and to the left of it, respectively. A scale bar at the bottom left indicates 2 arcseconds.

2"

N
E



200

250

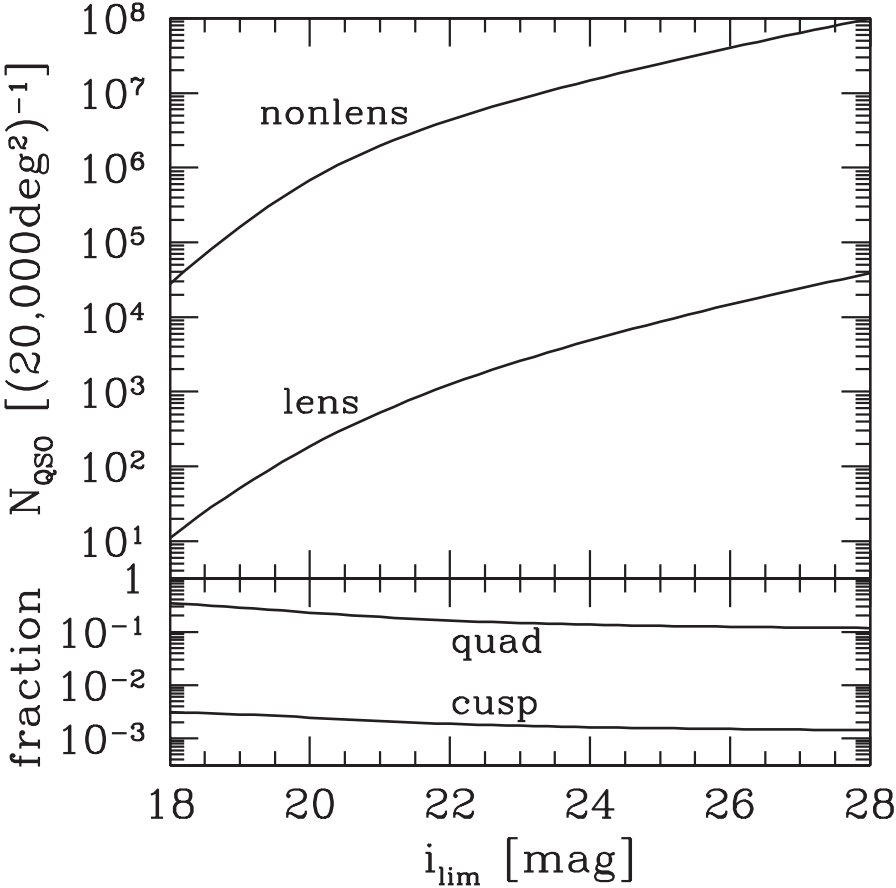
300

350

400

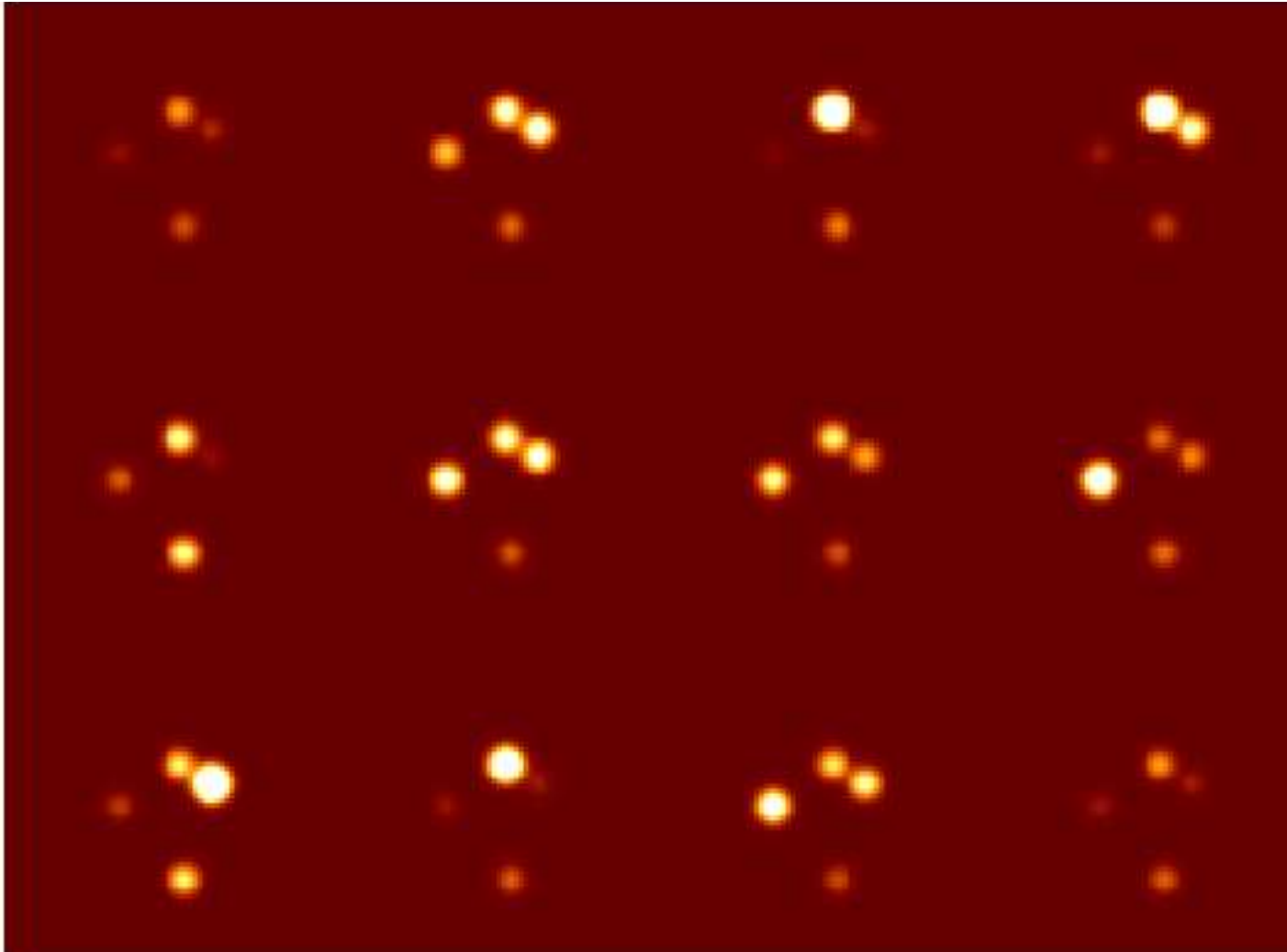
0.73 arcsec

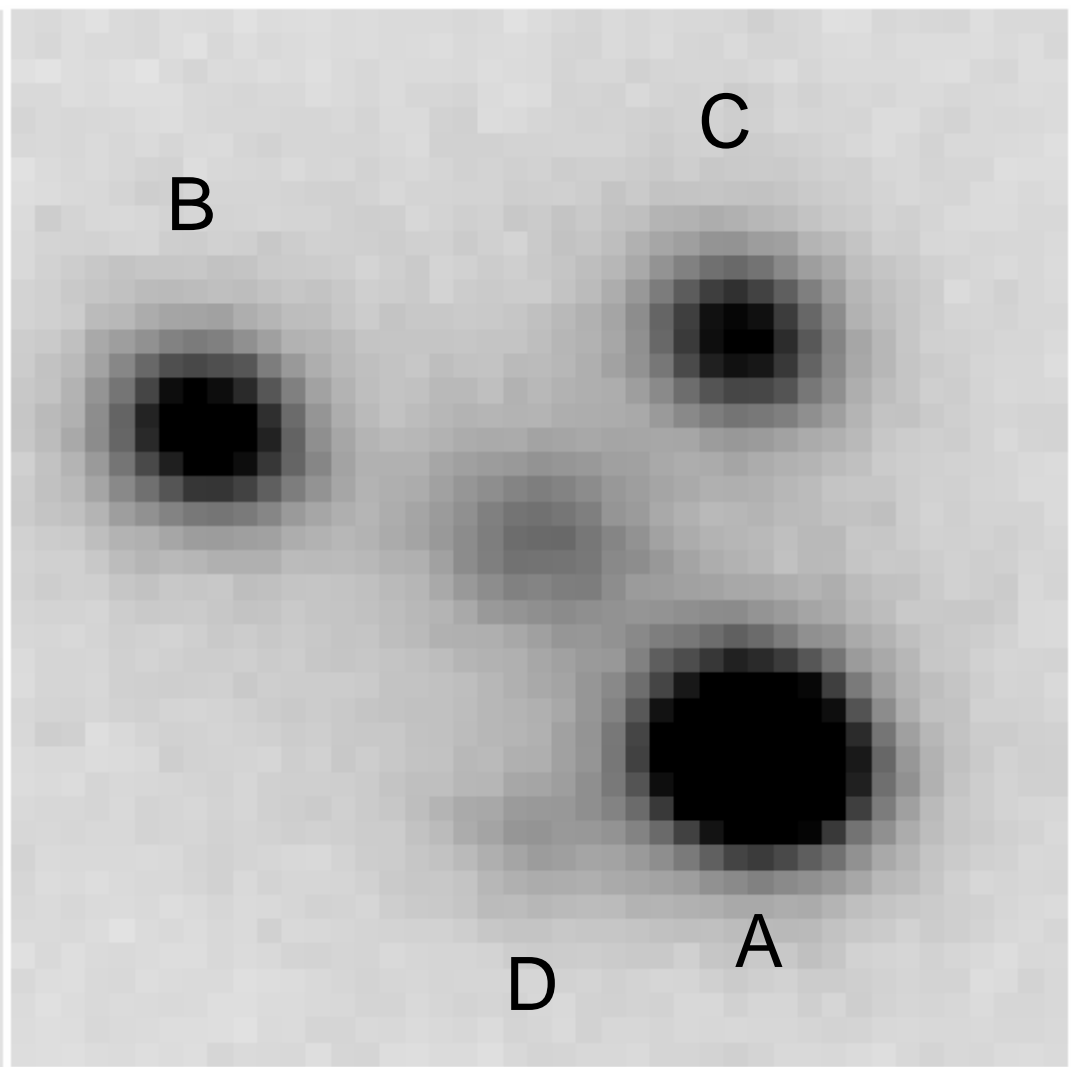
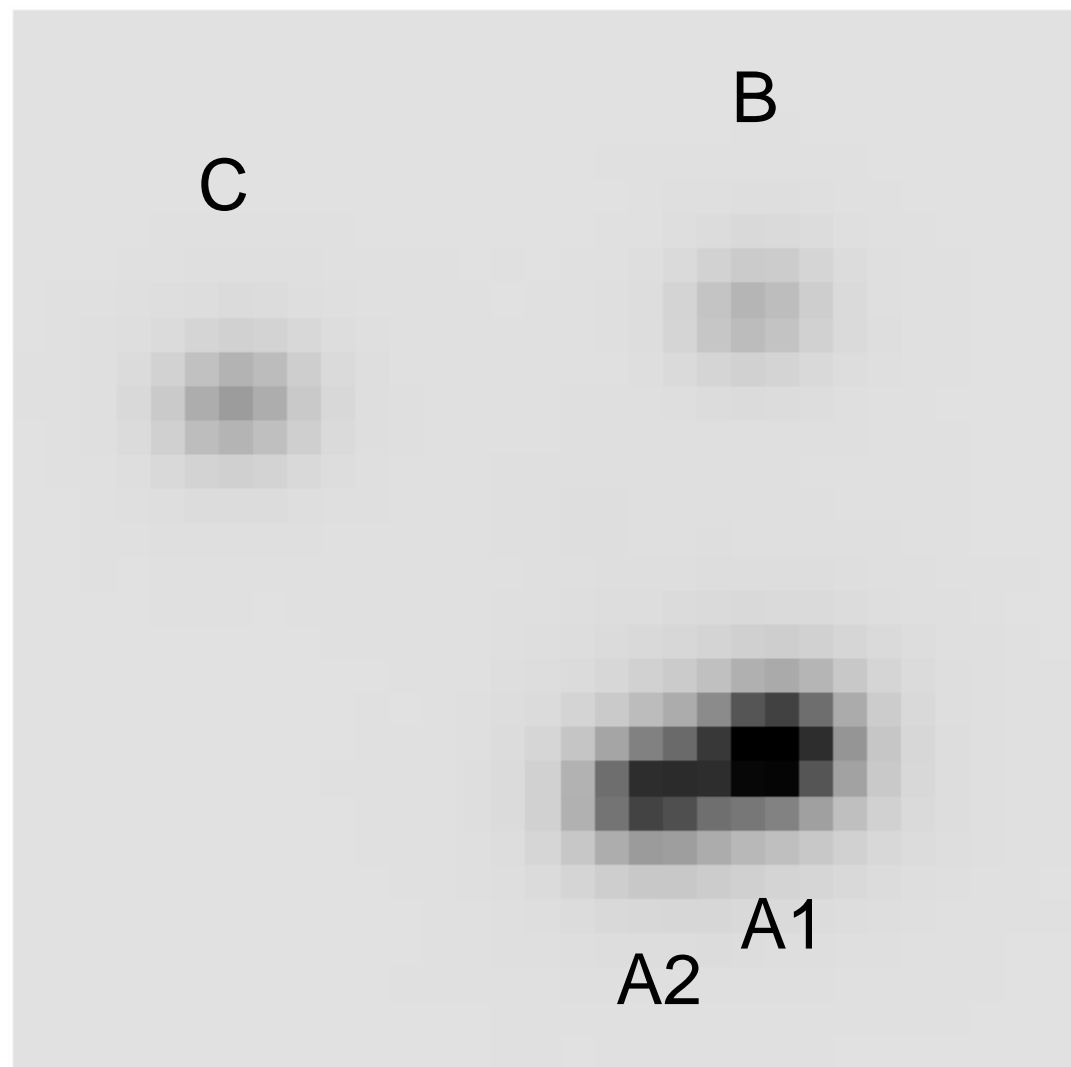




On the universality of microlensing in quadruple gravitational lenses (1995) ApJ 445, 18

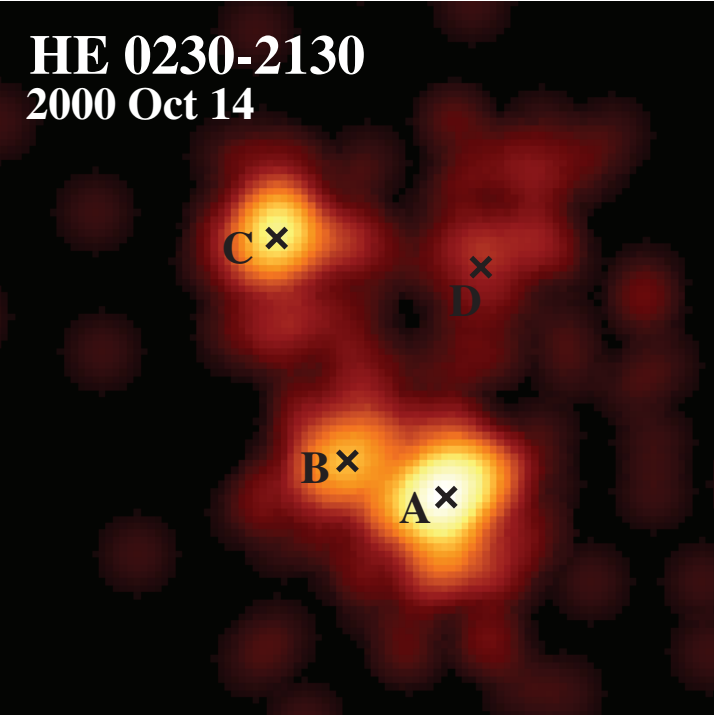
Hans J. Witt, Shude Mao and Paul L. Schechter





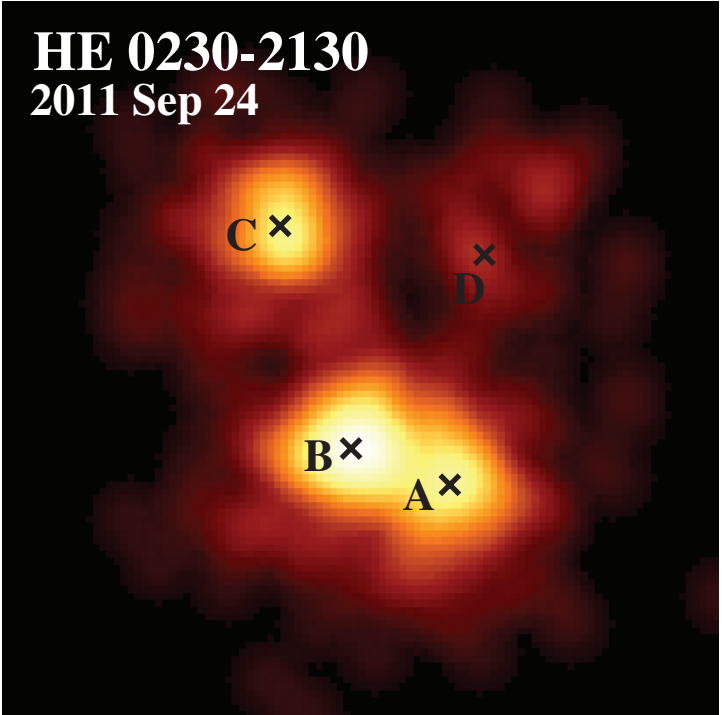
HE 0230-2130
2000 Oct 14

C^x
D^x
B^x
A^x

This is a false-color astronomical image of the star HE 0230-2130, showing four stars labeled A, B, C, and D. The stars are arranged in a roughly rectangular pattern. Star A is the brightest and is located at the bottom center. Star B is to the left of A. Star C is at the top left, and Star D is at the top right. The background is dark with some faint, diffuse light.

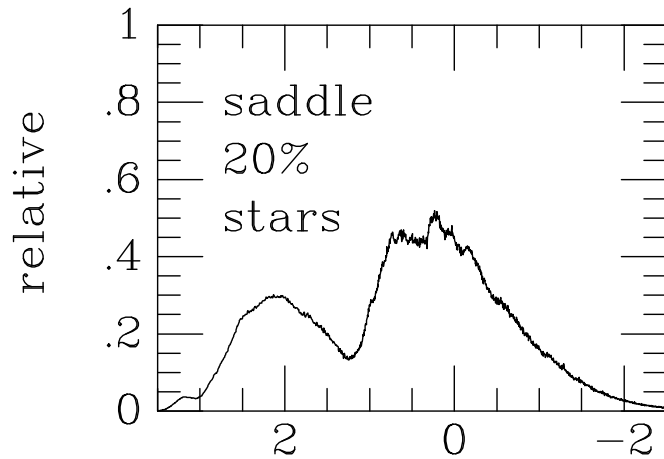
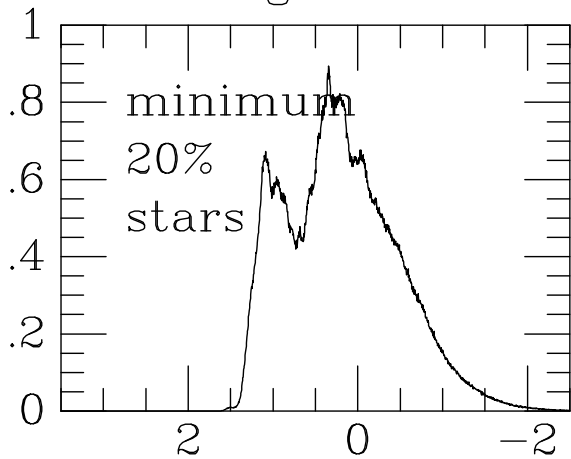
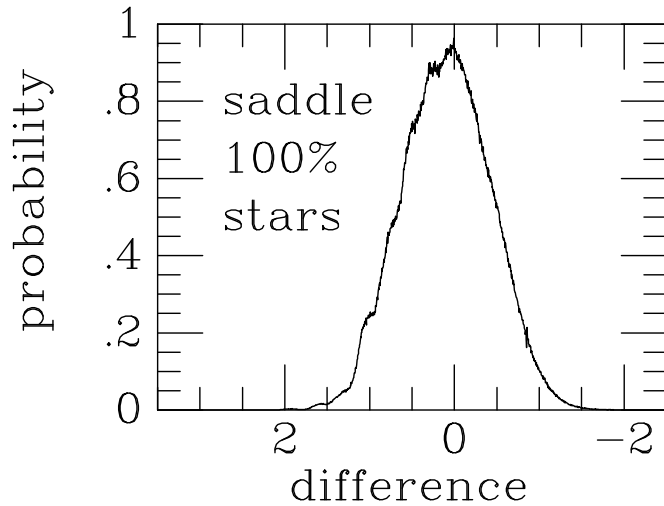
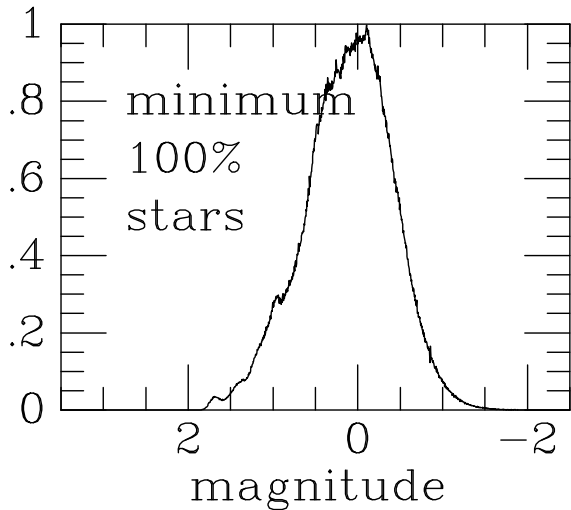
HE 0230-2130
2011 Sep 24

C^x
D^x
B^x
A^x

This is a false-color astronomical image of the star HE 0230-2130, showing four stars labeled A, B, C, and D. The stars are arranged in a roughly rectangular pattern, similar to the 2000 image. Star A is the brightest and is located at the bottom center. Star B is to the left of A. Star C is at the top left, and Star D is at the top right. The background is dark with some faint, diffuse light.

Sizes and Temperature Profiles of Quasar Accretion Disks from Chromatic Microlensing
(2011) ApJ 729, 34

**Jeffrey A. Blackburne, David Pooley,
Saul Rappaport and Paul L. Schechter**



X-Ray and Optical Flux Ratio Anomalies in Quadruply Lensed Quasars. II. Mapping the Dark Matter Content in Elliptical Galaxies (2012) ApJ 744, 111

David Pooley, Saul Rappaport, Jeffrey A. Blackburne, Paul L. Schechter and Joachim Wambsganss

A calibration of the stellar mass fundamental plane at $z \sim 0.5$ using the micro-lensing induced flux ratio anomalies of macro-lensed quasars (2014) to be submitted

Paul L. Schechter, David Pooley, Jeffrey A. Blackburne, Saul Rappaport, and Joachim Wambsganss

