BALATON

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Leonard Burtscher
Iván Martí-Vidal
محسن رمضانپور
(Mohsen Ramezanpour)
Елизавета Расторгуева
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Best AnguLAr resolution sTudy Of active galactic Nuclei

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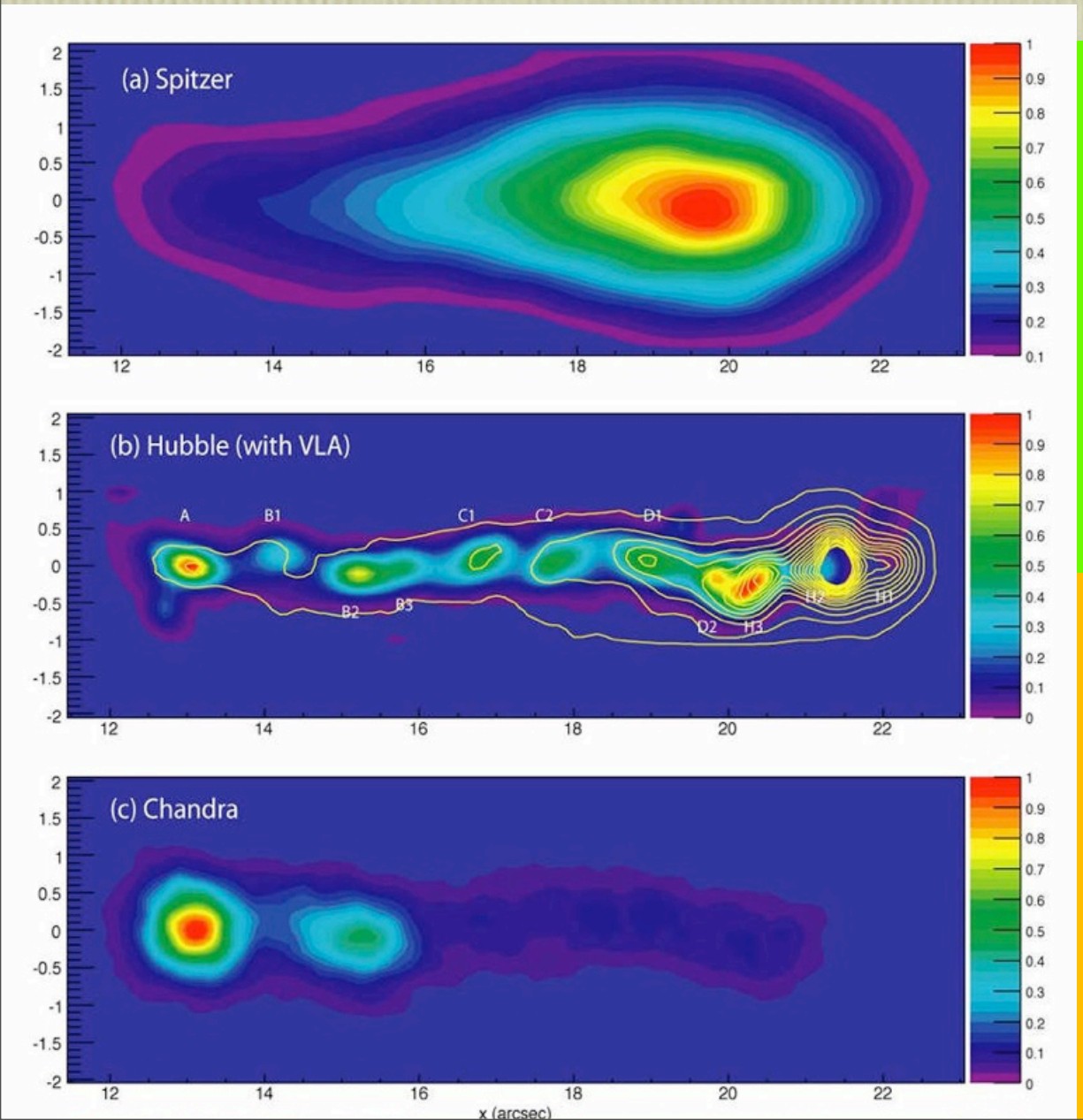
Why?

The Science Case

PRIMA+AMBER



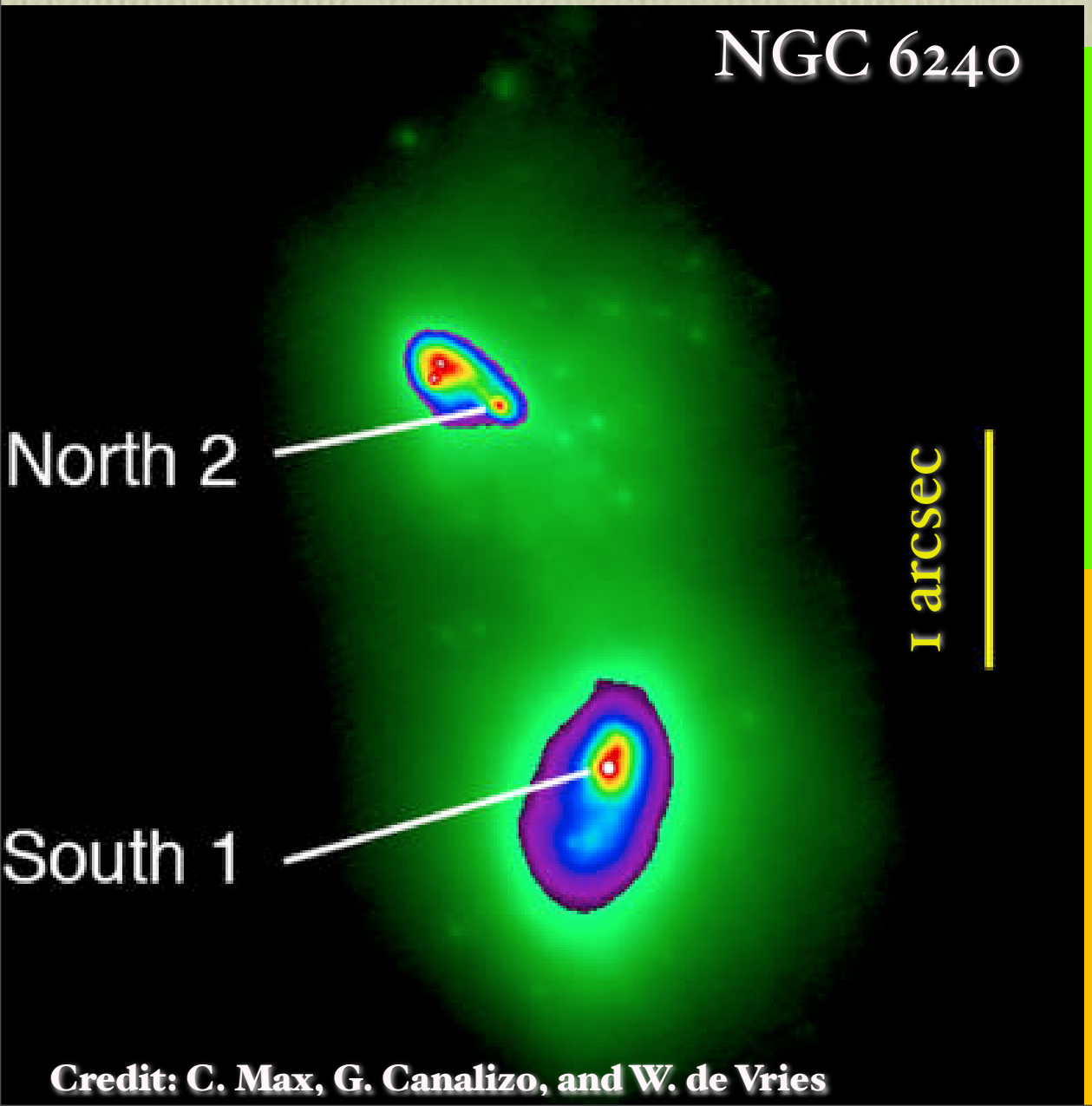
Detect non-point-symmetric behaviour to a very good accuracy (optical-radio structure correlations, maybe constrain ICRS)

For double quasars: detect with very high resolution proper motion between foreground and background QSO

Why?

The Science Case

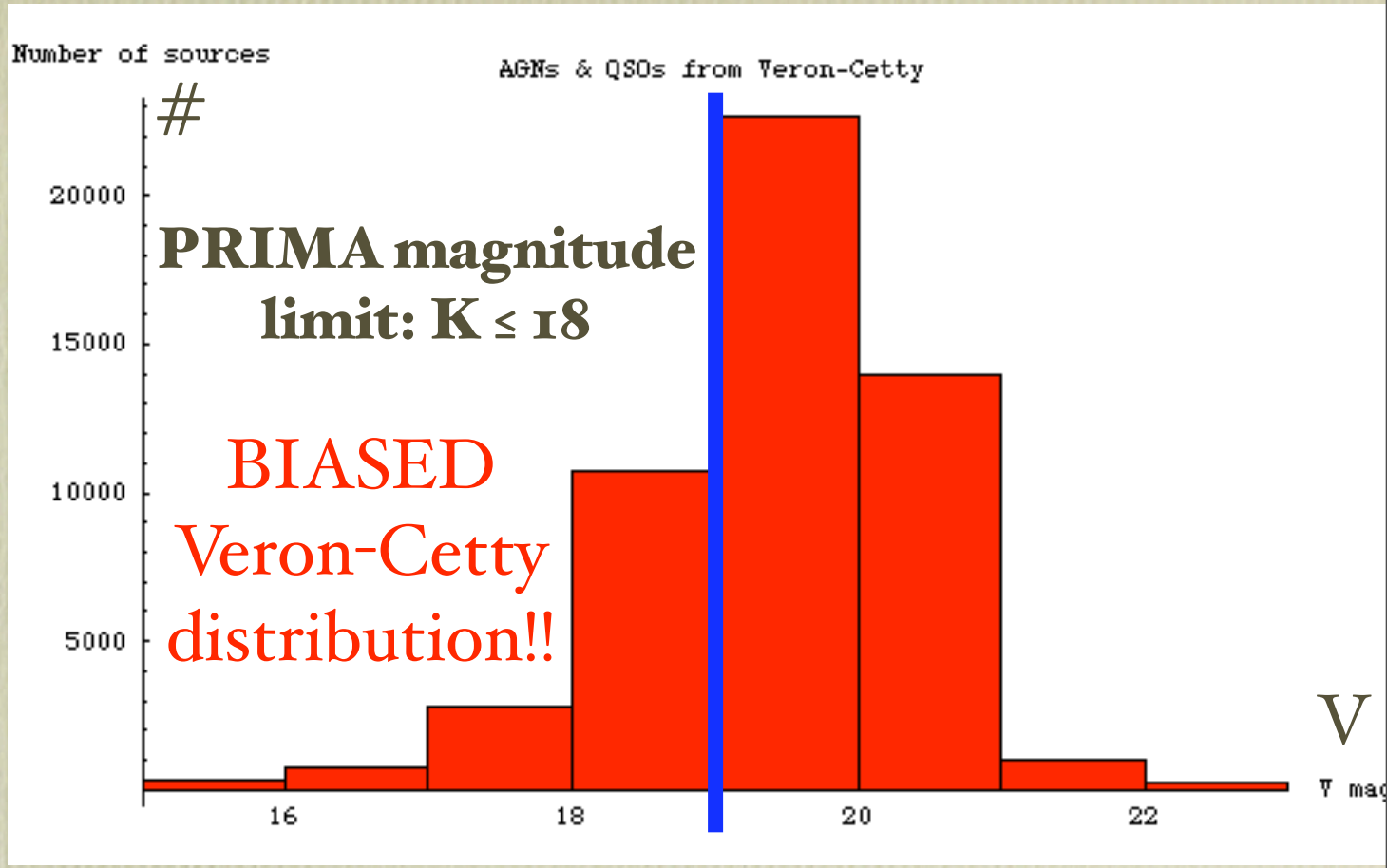
PRIMA+AMBER



Detect non-point-symmetric behaviour to a very good accuracy (optical-radio structure correlations, maybe constrain ICRS)

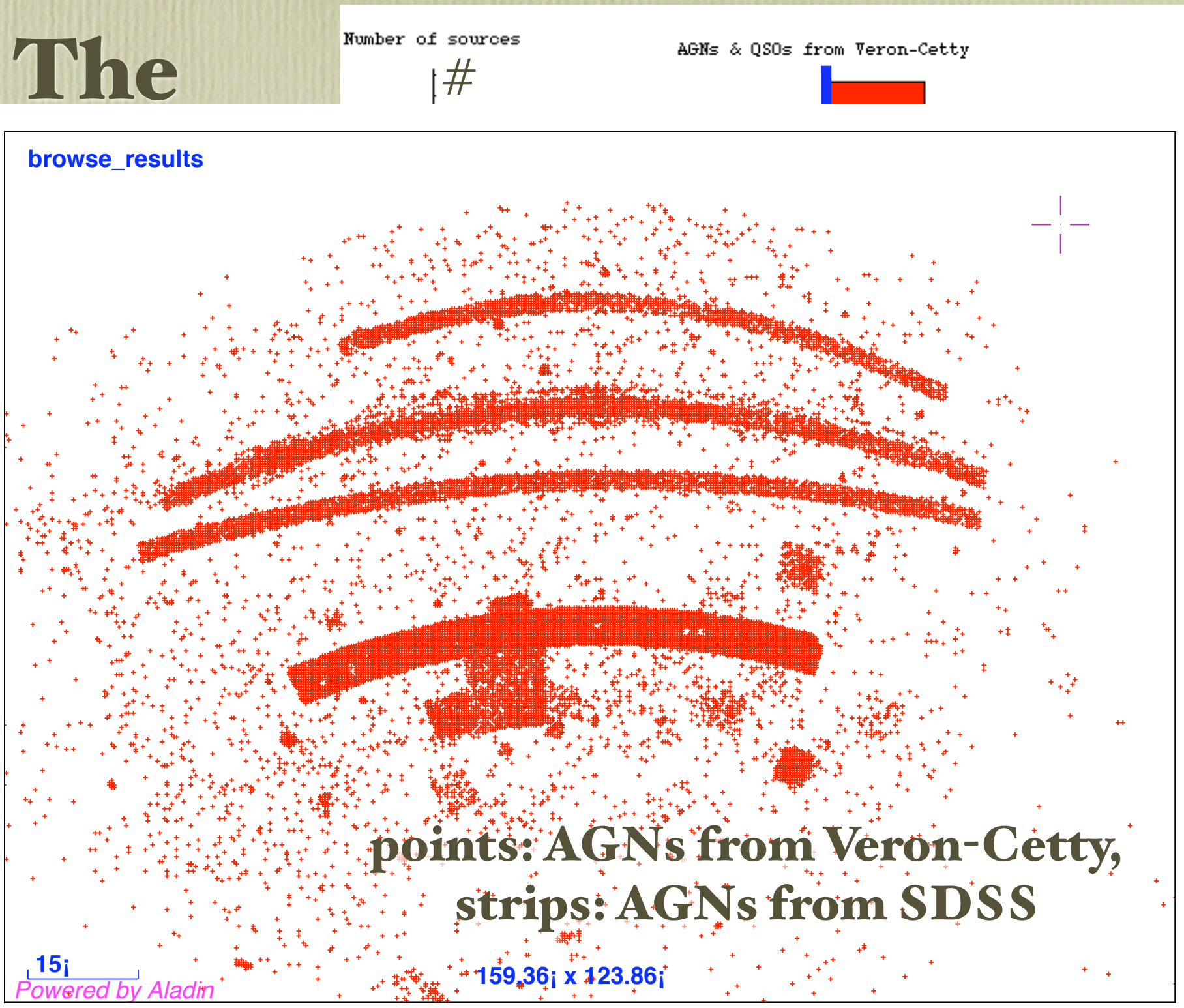
For double quasars: detect with very high resolution proper motion between foreground and background QSO

The sample



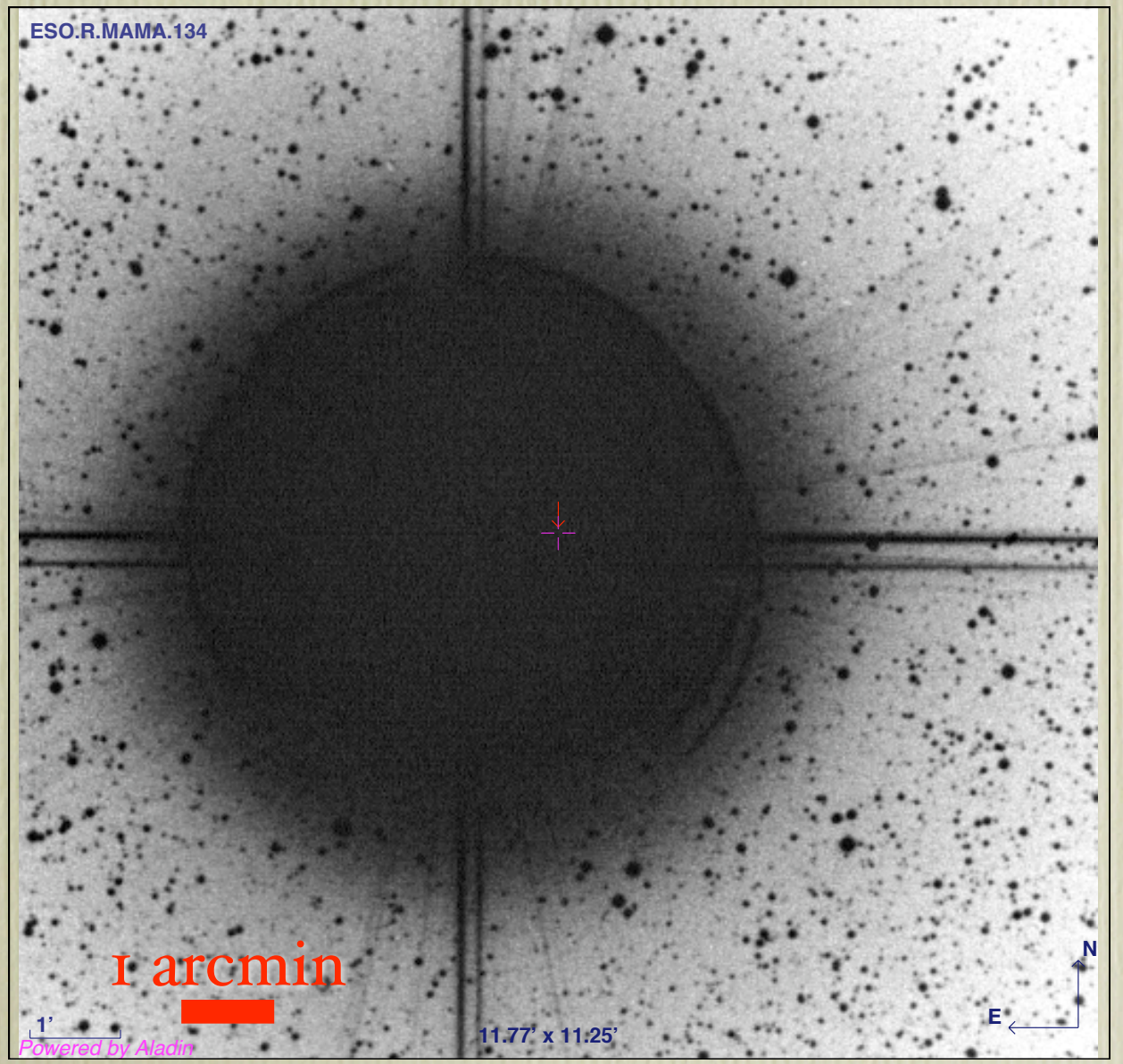
- By using AGN catalog by Veron-Cetty (2006, 12th ed.) and cross-correlating with 2MASS, i.e. computing the calibratable area
- Using correction factor from SDSS mean sky density of AGNs, we found **at least 42 expected candidate sources** (i.e. K < 18 mag source within 20" to a K < 10 mag point source)

The


Number of sources
#
AGNs & QSOs from Veron-Cetty
browse_results
points: AGNs from Veron-Cetty,
strips: AGNs from SDSS
15¡
159.36¡ x 123.86¡
Powered by Aladin

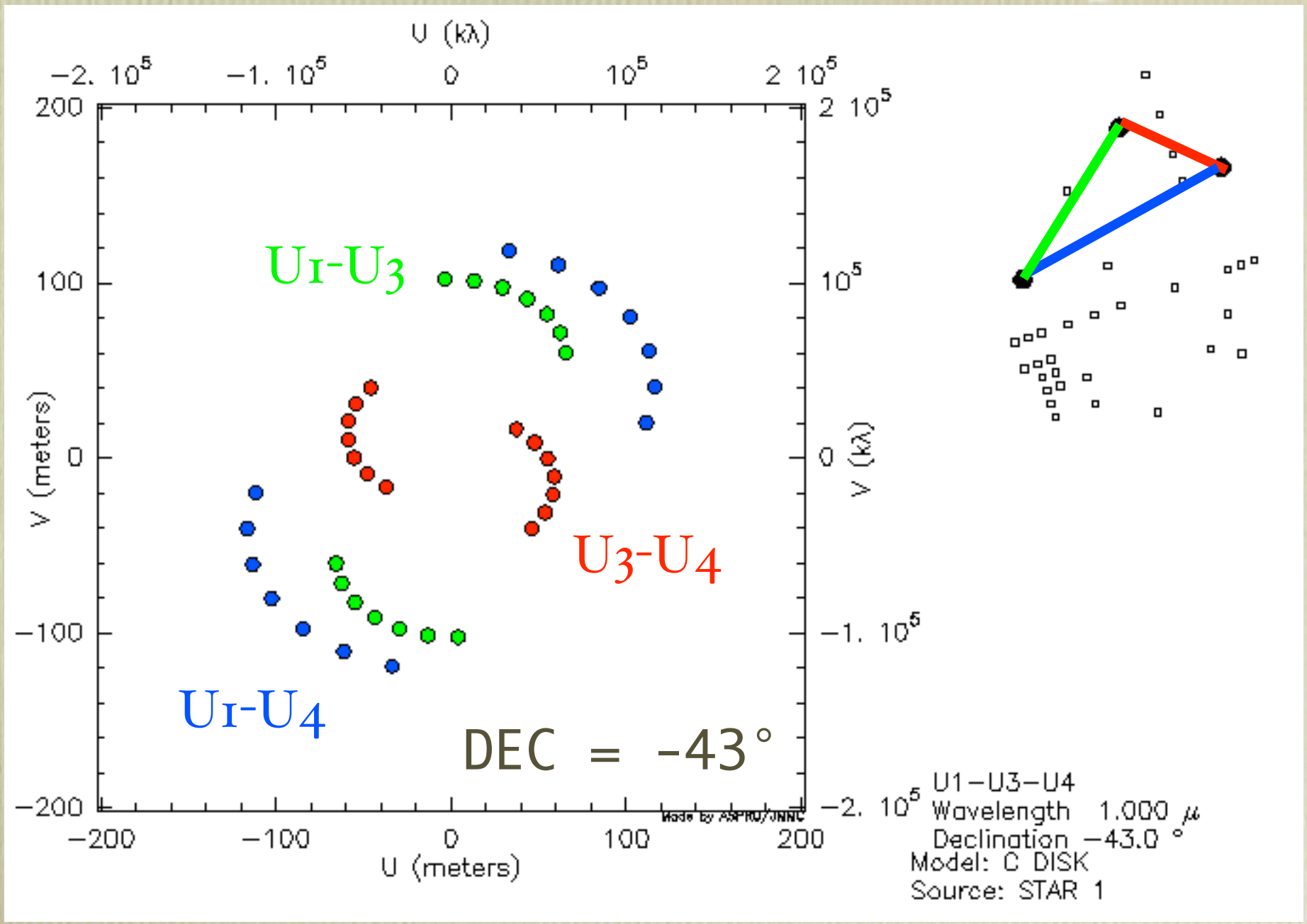
- By
- Us

Additional bias: catalogs don‘t contain AGNs near bright stars



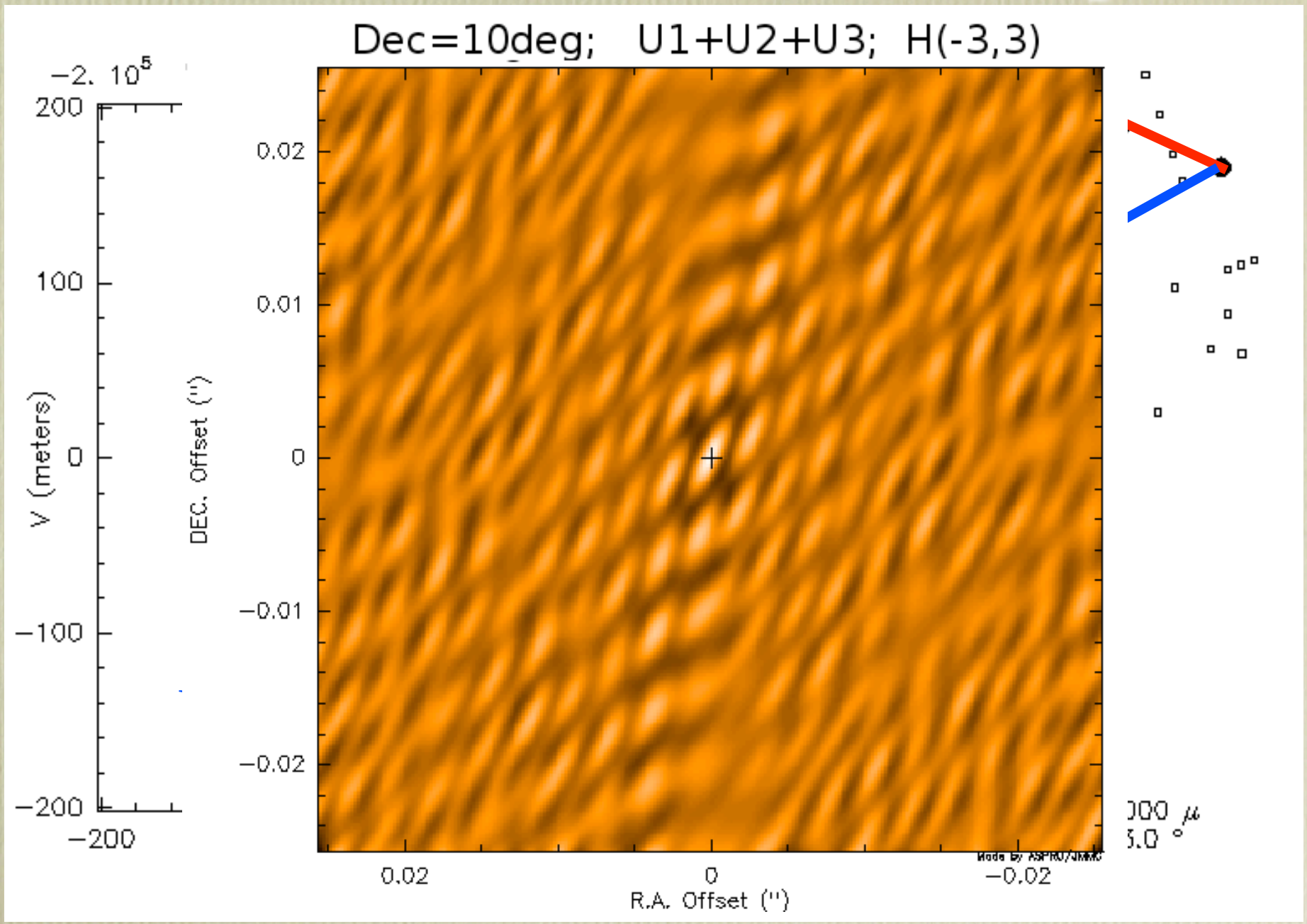
Alpha Centauri
V = -0.1

The observational setup



HA = -3...+3 observation, optimized uv-coverage

The observational setup



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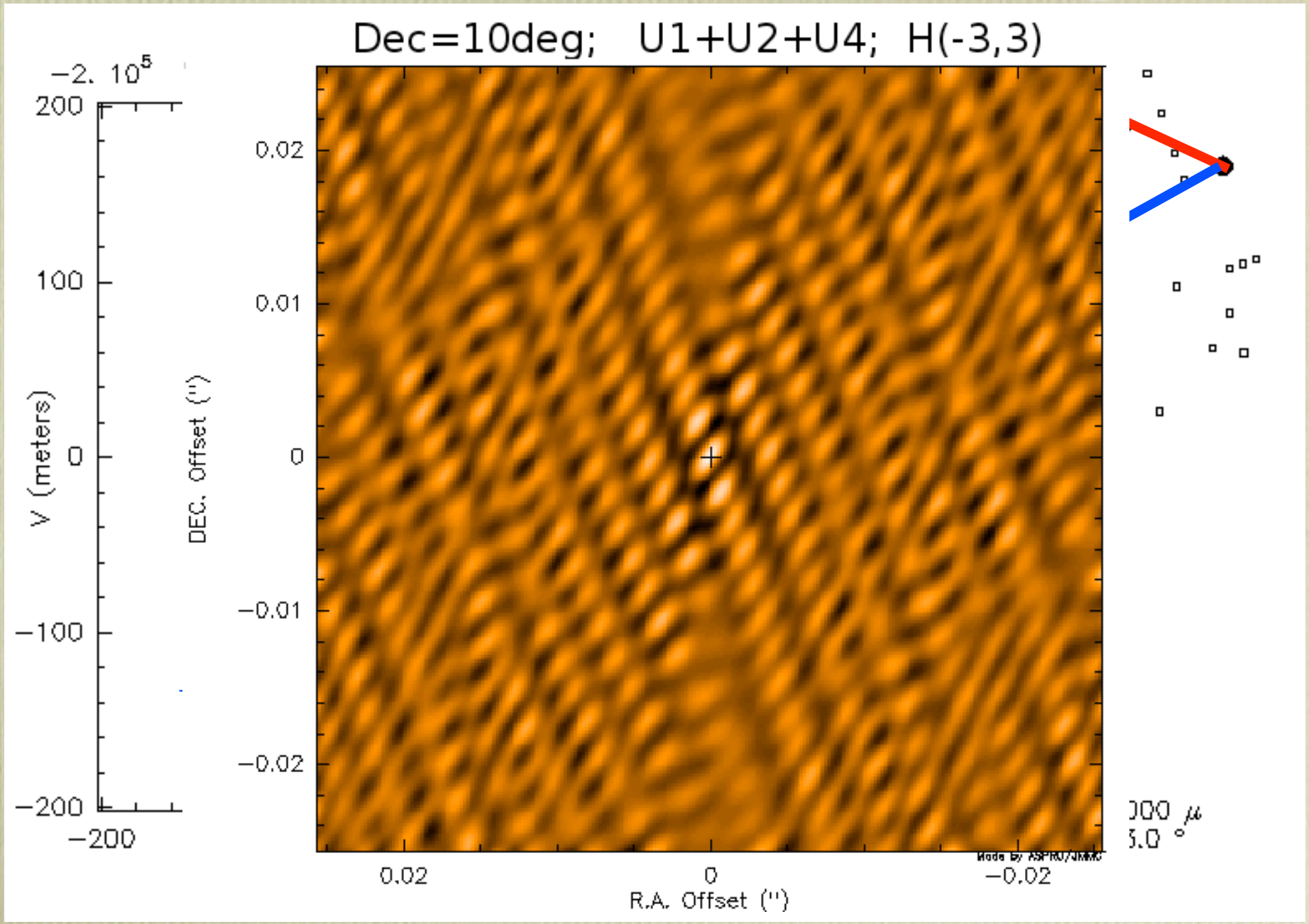
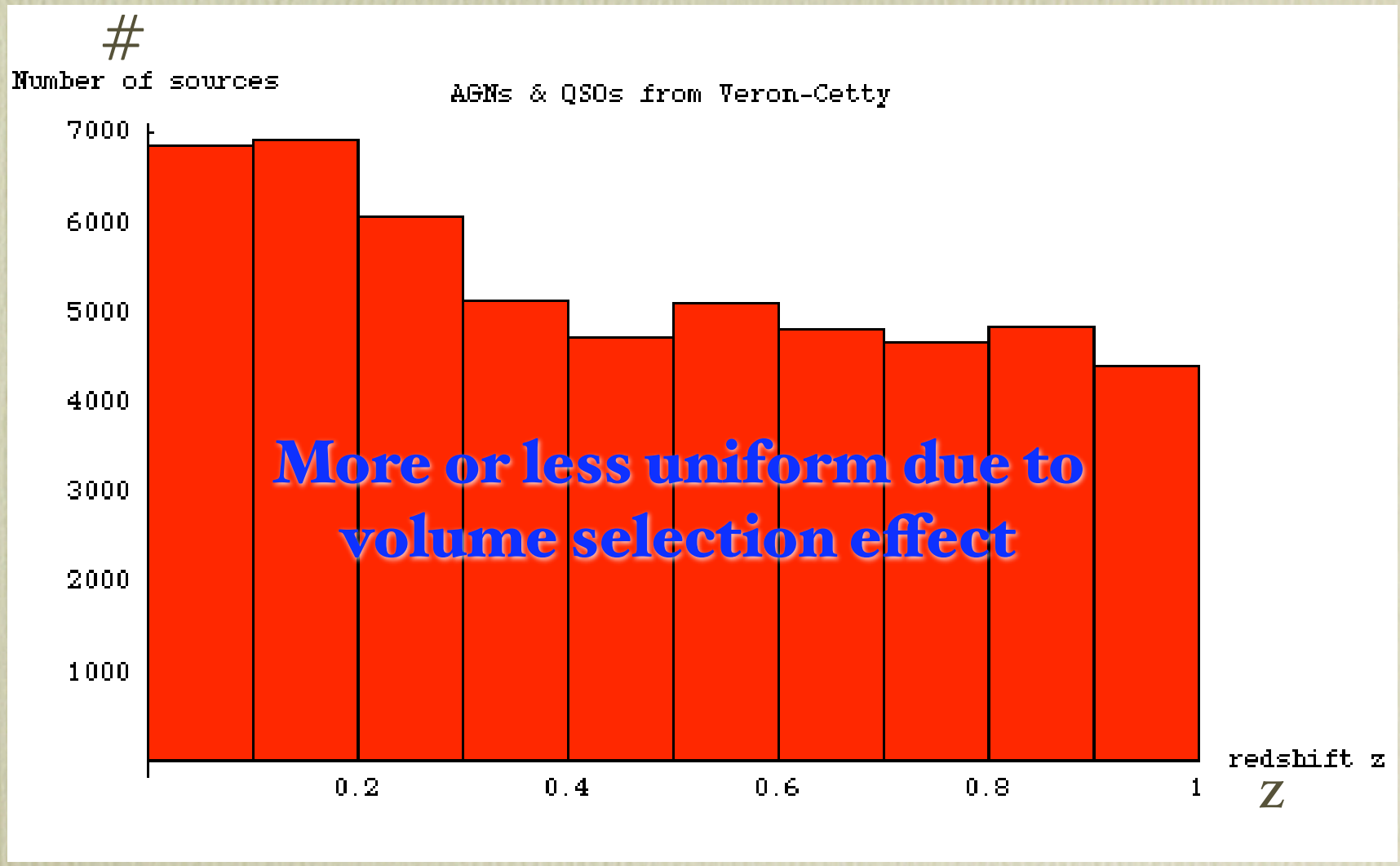
The observational setup



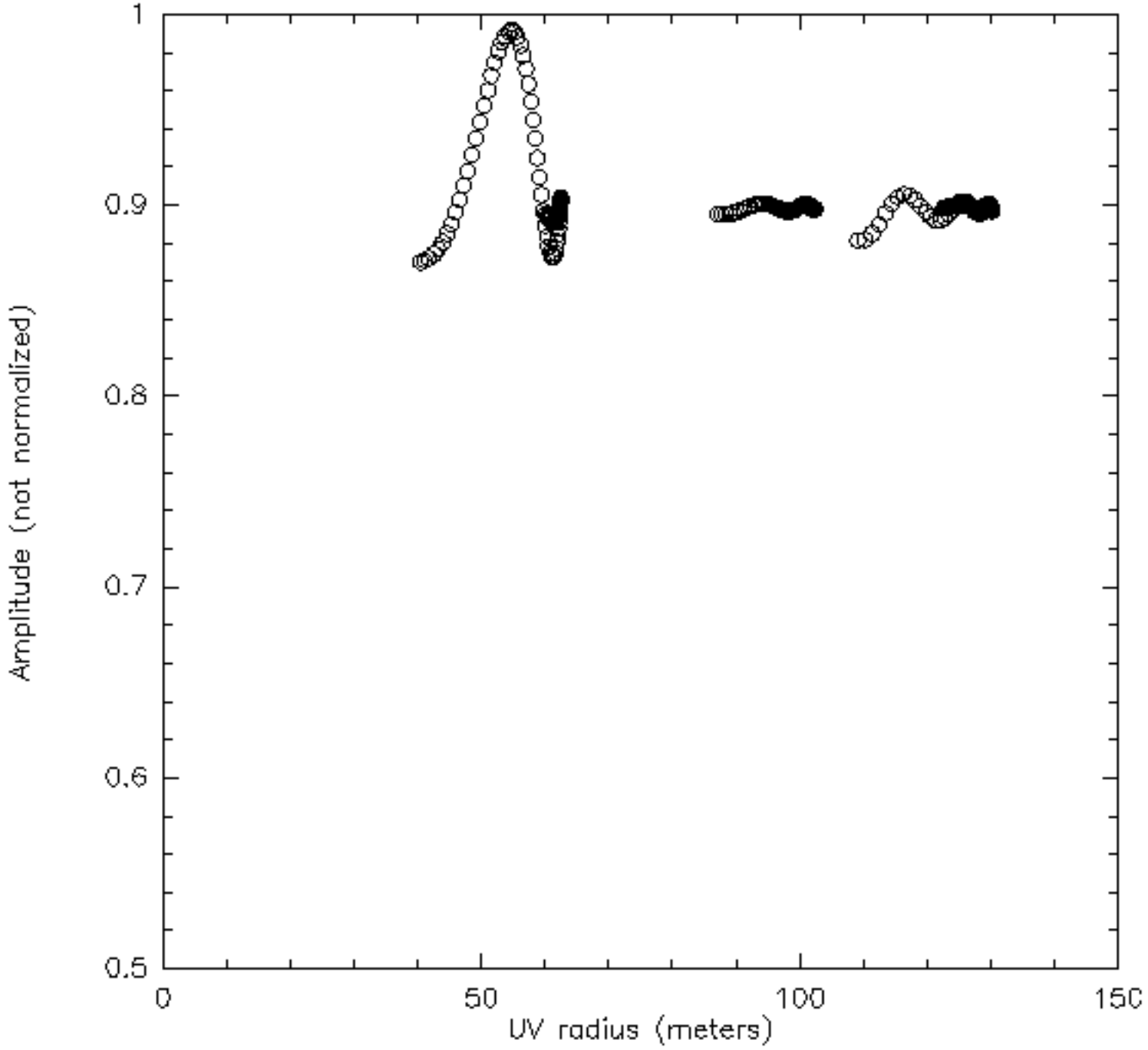
HA = -3…+3 observation, optimized uv-coverage

Thanks for your attention!

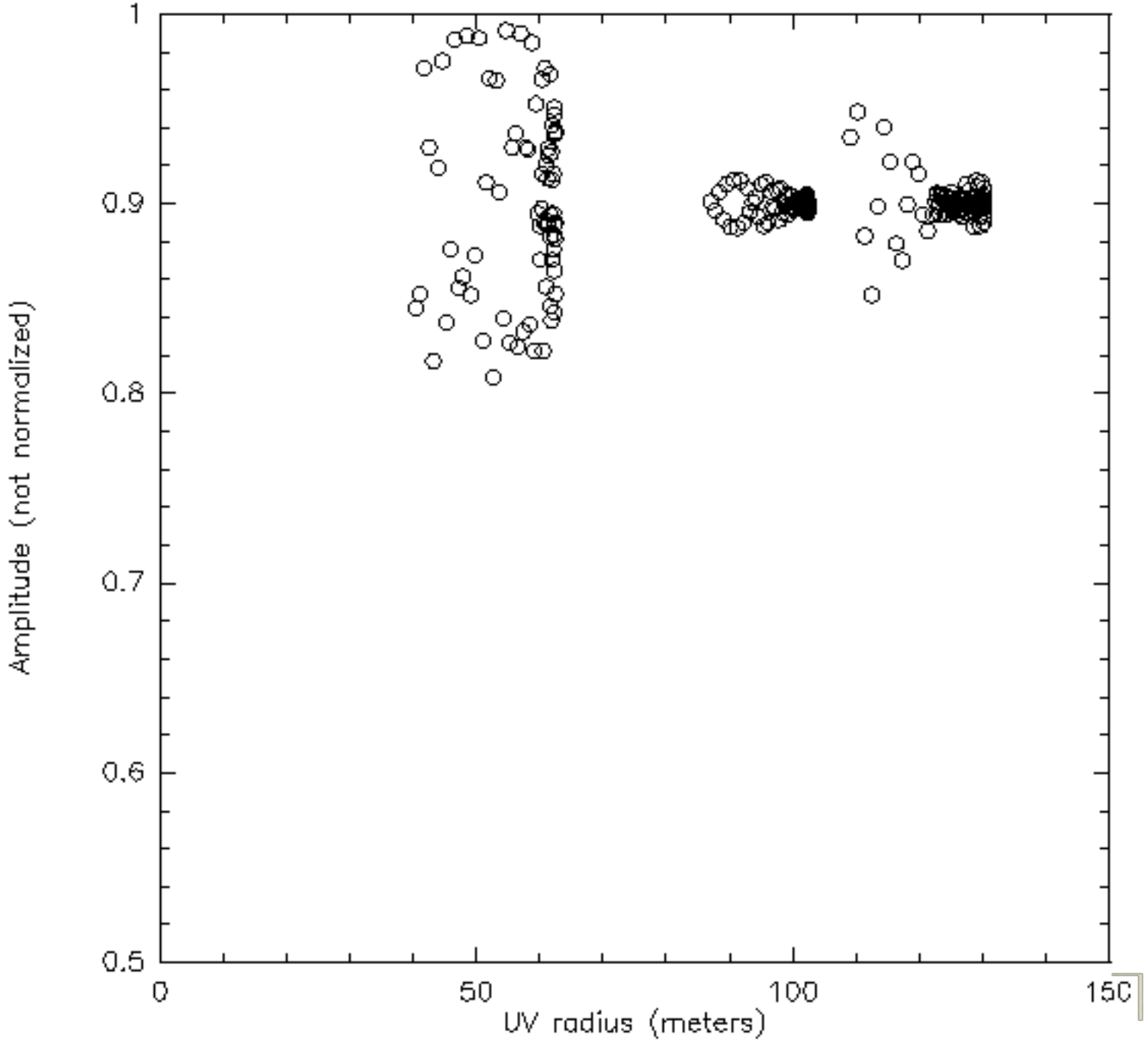
Backup slides

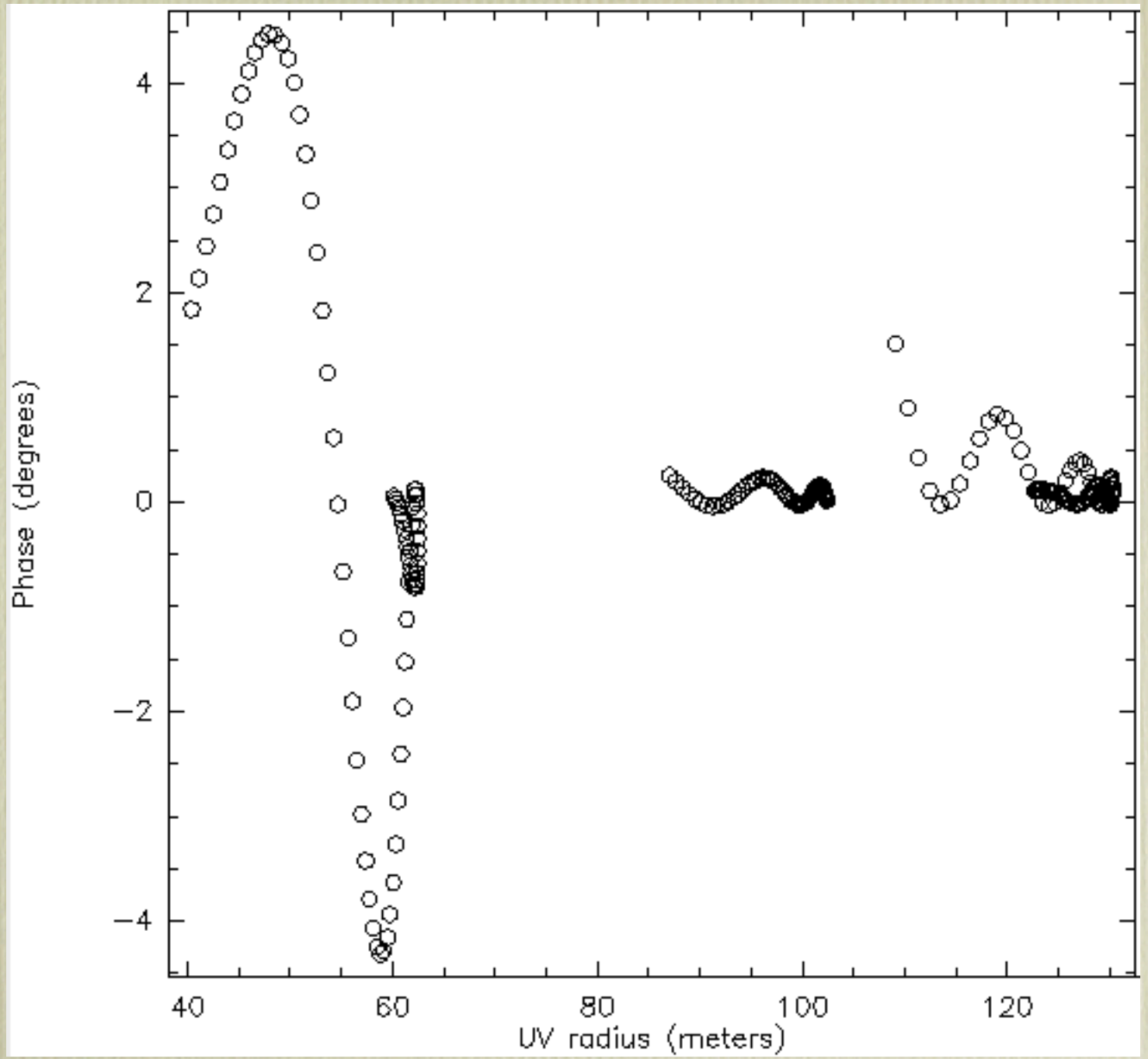

#
Number of sources
AGNs & QSOs from Veron-Cetty
7000
6000
5000
4000
3000
2000
1000
0.2
0.4
0.6
0.8
1
redshift z
z
More or less uniform due to volume selection effect

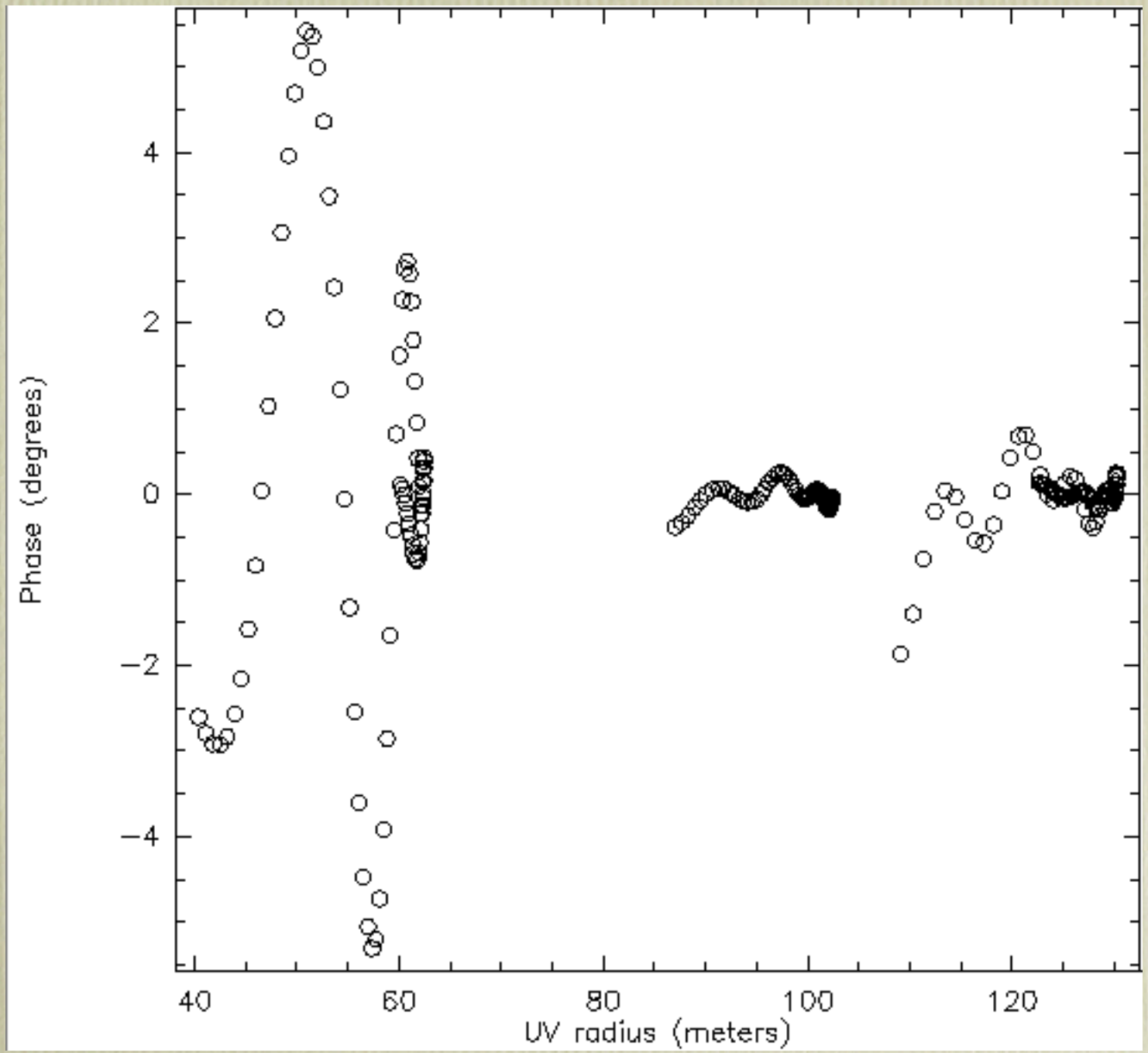
CORE + 5 mas JET (NORTH-SOUTH) $M_{core} = M_{jet} - 5$



CORE+100mas JET (NORTH-SOUTH) $M_{core} = M_{jet} - 5$




Phase (degrees)
4
2
0
−2
−4
40
60
80
100
120
UV radius (meters)


Phase (degrees)
4
2
0
−2
−4
40
60
80
100
120
UV radius (meters)