

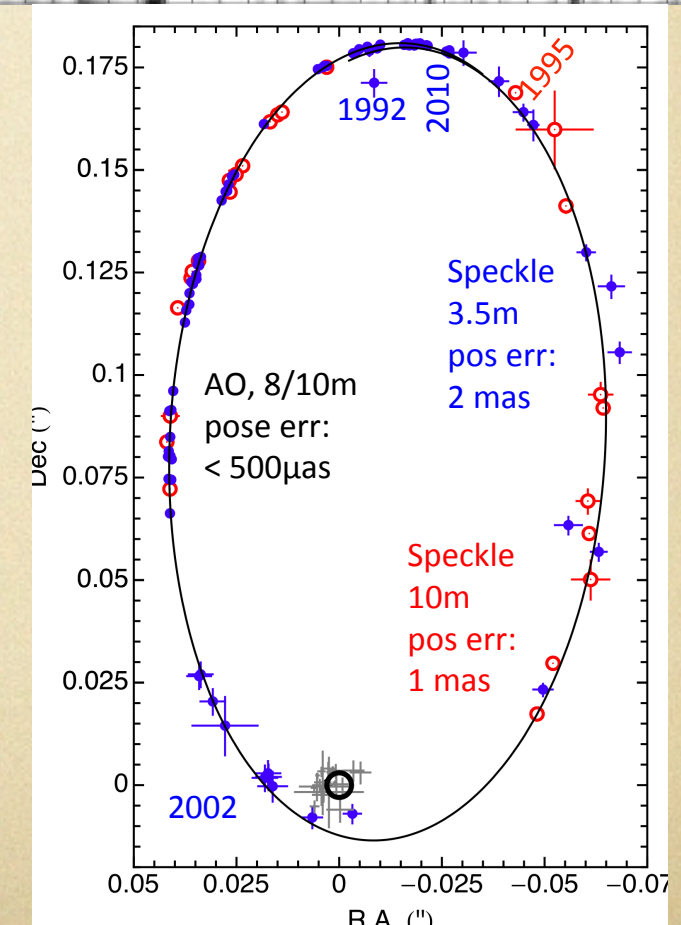
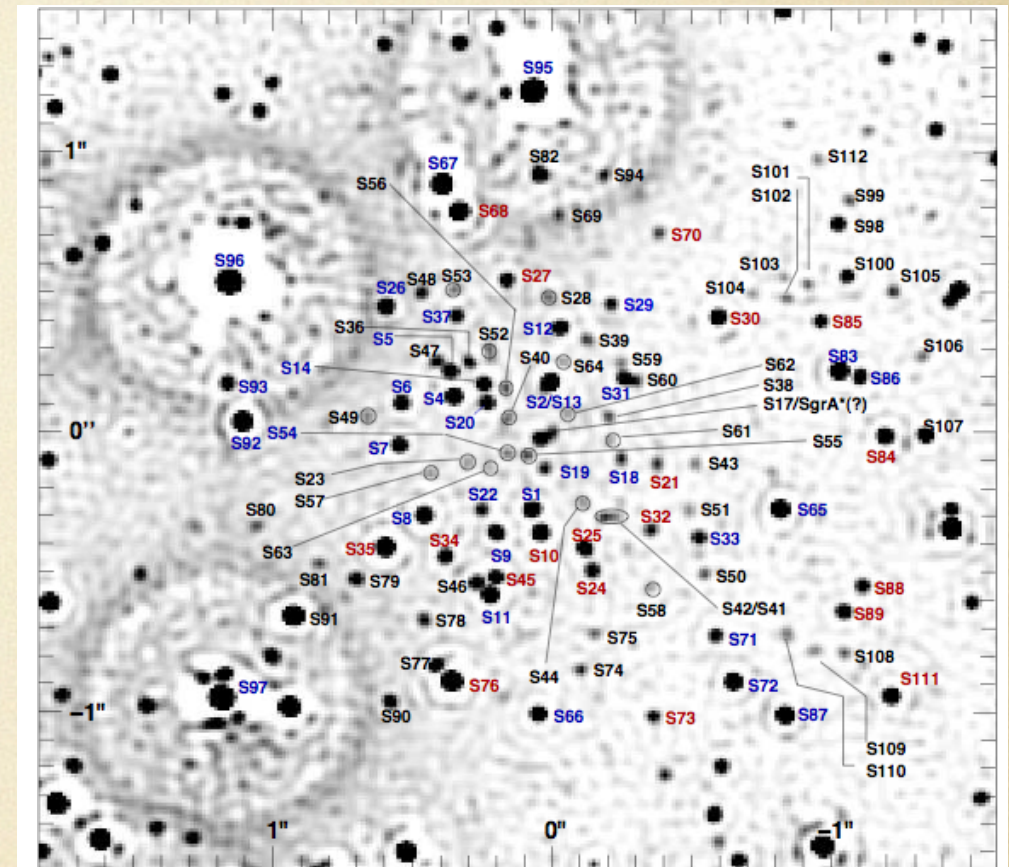
Working Group 3

Mohammad Zamaninasab

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Stefan Gillessen (MPE, Germany)

- Review of the GC region.
- Techniques: Speckle imaging, Adaptive Optics,...
- Nuclear star cluster, stellar dynamics, mass estimation
- Correction for the reference frame (VLT vs Keck data)
- 2018! Test of GR with star S2.
- Paradox of youth! S-stars are all young --> In-situ star formation.
- 2020, Distance to GC wit up to 30pc, GR test up to 3-sigma!



Lorenzo Iorio

Ministero dell'Istruzione, dell'Università e della Ricerca, Italy

- PERSPECTIVES IN TESTING POST-NEWTONIAN GRAVITY IN THE GRAVITATIONAL FIELD OF GC BLACK HOLE
- The cumulative, long term time variations of the radial velocity of S2 orbiting the SBH in the GC caused by several Newtonian and Einsteinian dynamical effects are $8 \times 10^{-5} \text{ m s}^{-2}$ (Schwarzschild), $4 \times 10^{-6} \text{ m s}^{-2}$ (dark matter), $1 \times 10^{-8} \text{ m s}^{-2}$ (Kerr), $1 \times 10^{-10} \text{ m s}^{-2}$ (quadrupole), respectively.

Fernando de Felice

University of Padova and INFN, Sezione di Padova, Italy

- Accelerated orbits in BH fields

Black hole accretion rings revealed by future X-ray spectroscopy

Vjačeslav Sochora

Astronomical Institute of the Academy of Sciences
of Czech Republic

Vladimír Karas, Jiří Svoboda, Michal Dovčiak

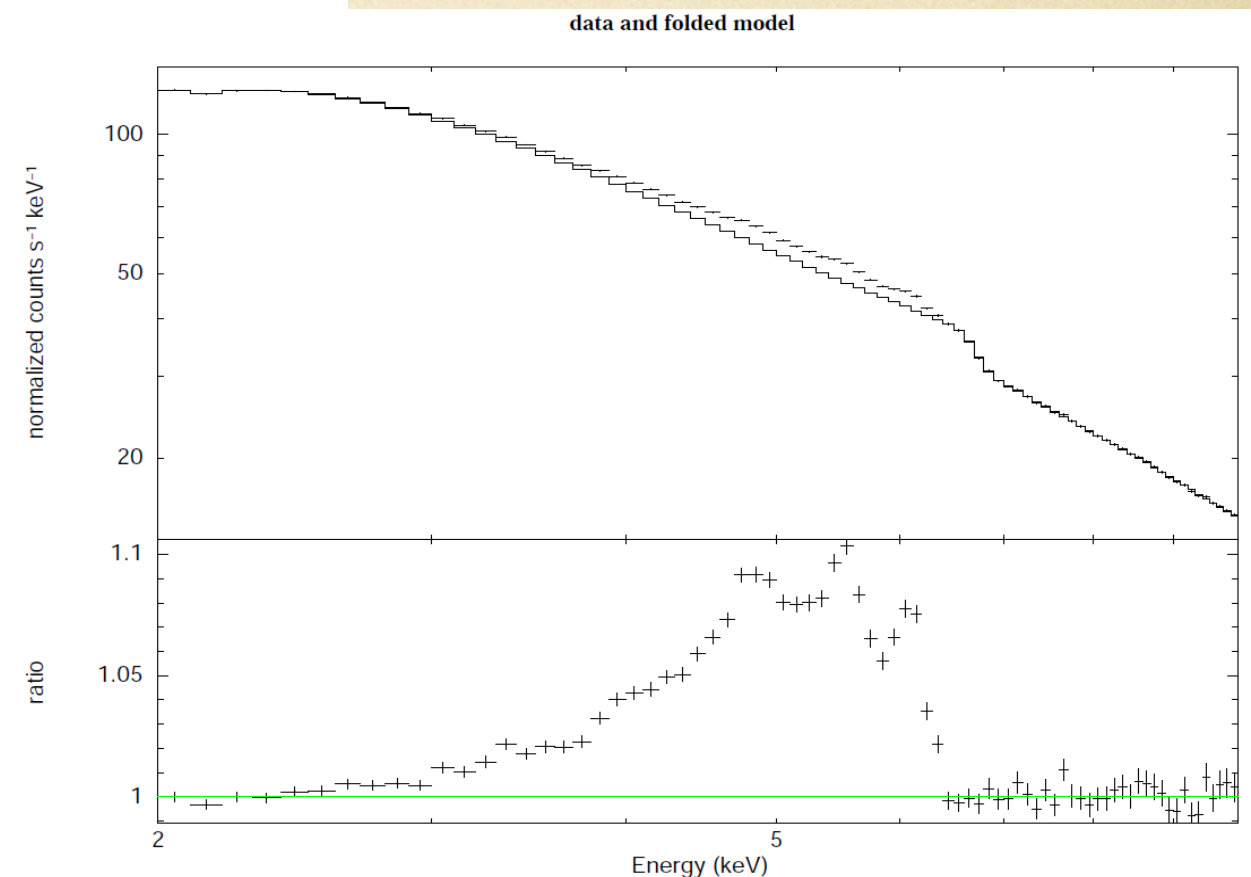


Fig. 6: Simulated data and the ratio to the test model for $N = 3$, exposure time 100 ksec.

The flip-flop instability of the shock cone around the rotating black hole

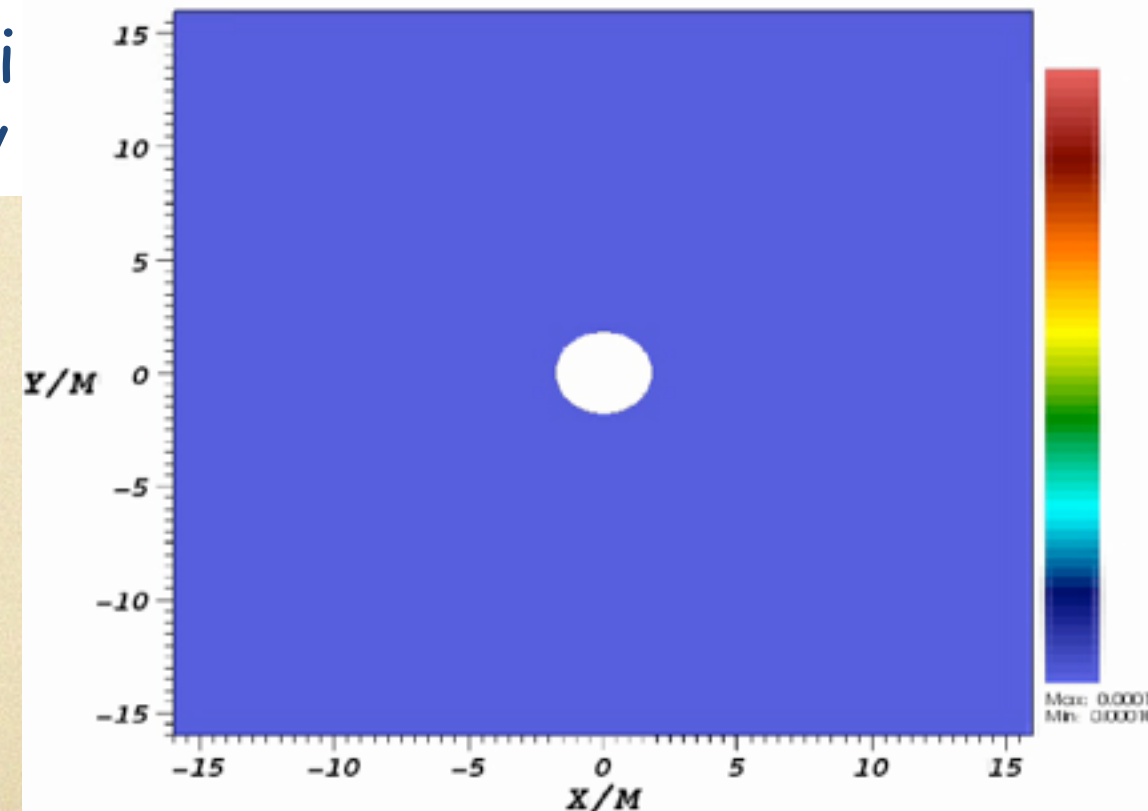
Orhan Dönmez

Olindo Zanotti and Luciano Rezzolla

Niğde University Department of Physics

Max-Planck-Institut für Gravitationsphysik
Einstein Institut, Golm, Germany

DB: movies1

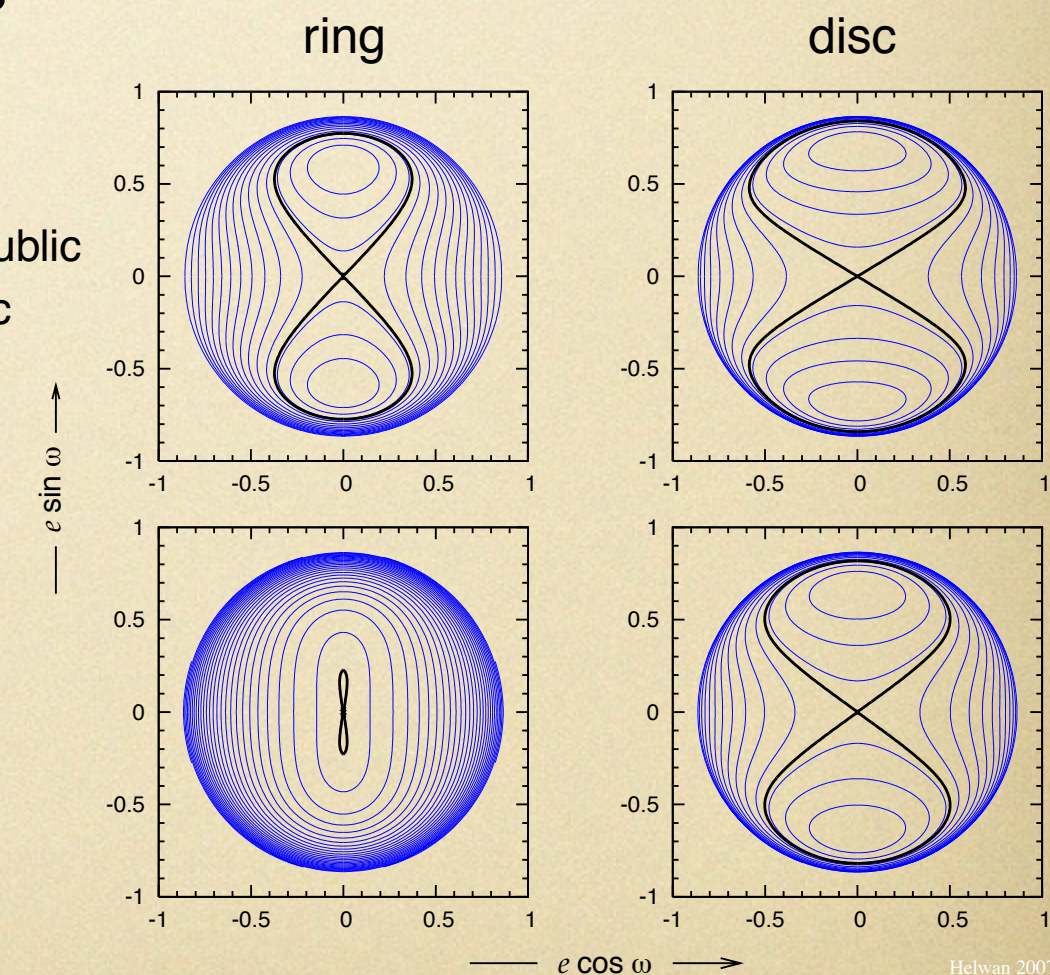


ORBITAL INTERACTION BETWEEN STARS AND SMBH SURROUNDED BY ACCRETION DISC

Vladimír Karas,¹ Ladislav Šubr,² & Jaroslav Haas²

¹ Astronomical Institute, Academy of Sciences, Prague, Czech Republic

³ Astronomical Institute, Charles University, Prague, Czech Republic

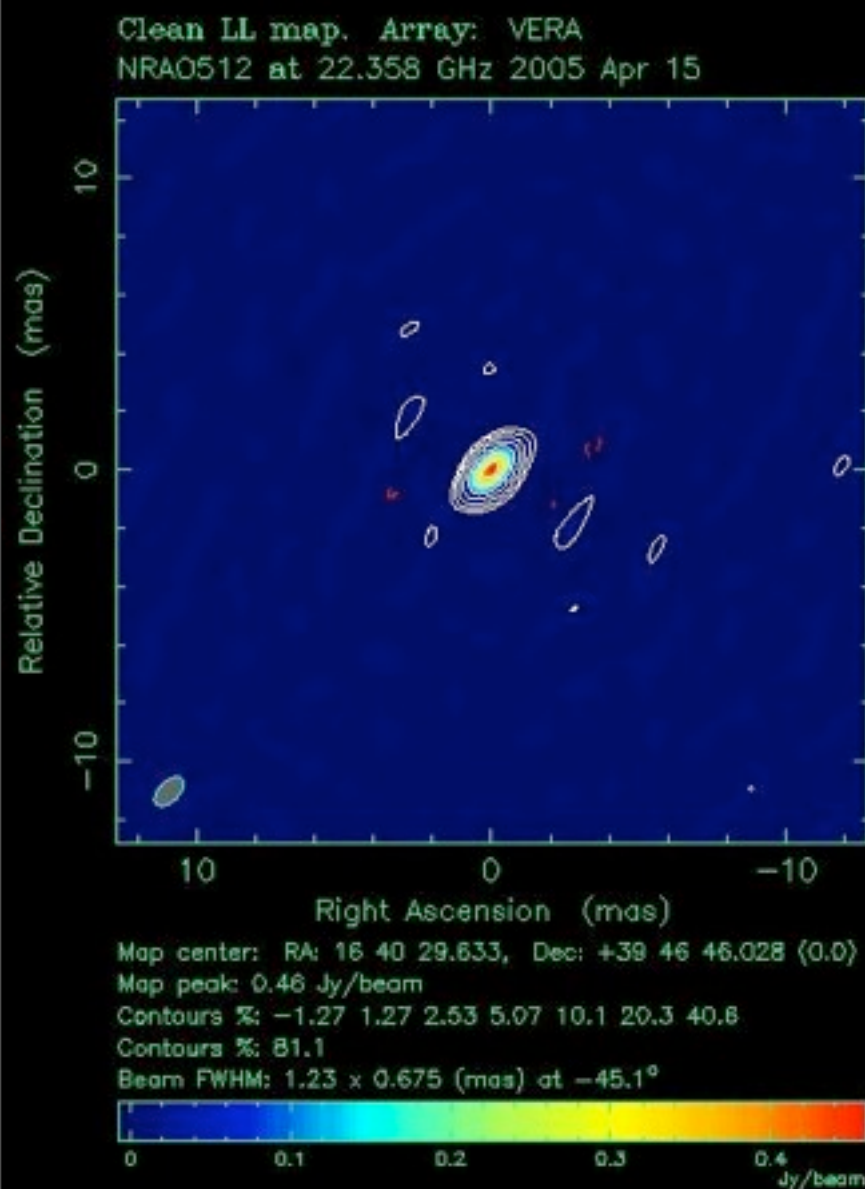


Current status of KVN-VERA observation of Sgr A*

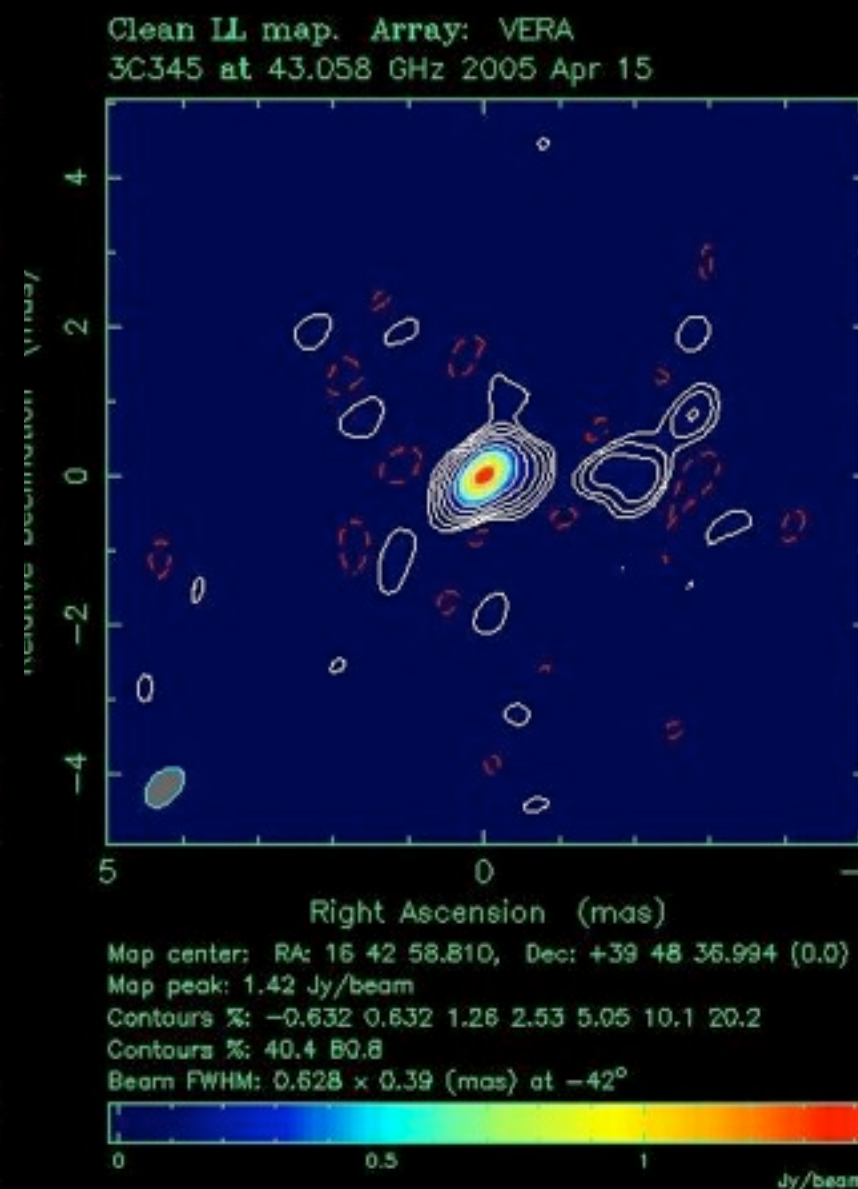
Sohn, Bong Won (KVN/KASI)

Images

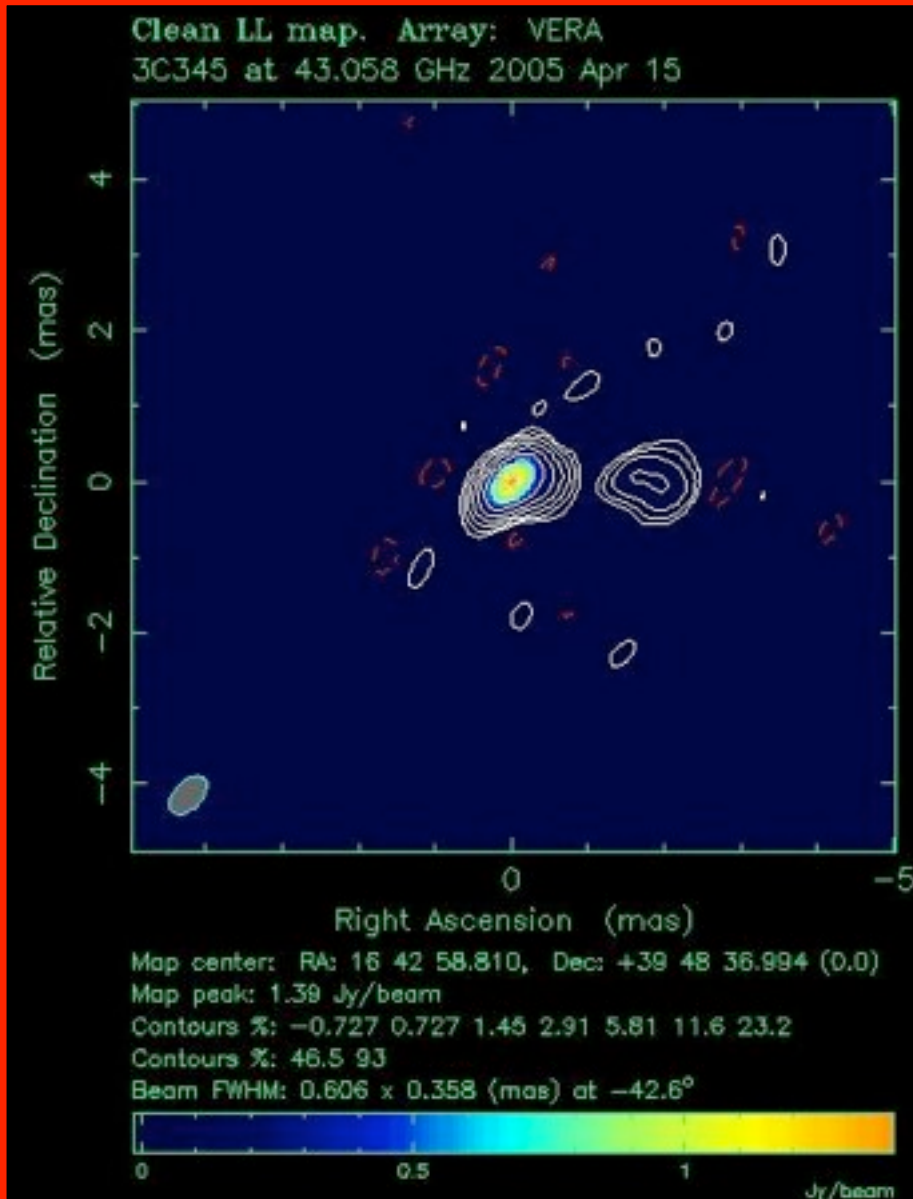
The FIRST phase referenced image
from the 22 & 43 GHz simultaneous
dual-frequency observation



NRAO512 (22GHz)
phase model



3C345 (43GHz)
original



3C345 (43GHz)
phase referenced

THE GALACTIC CENTRE IN MID-INFRARED

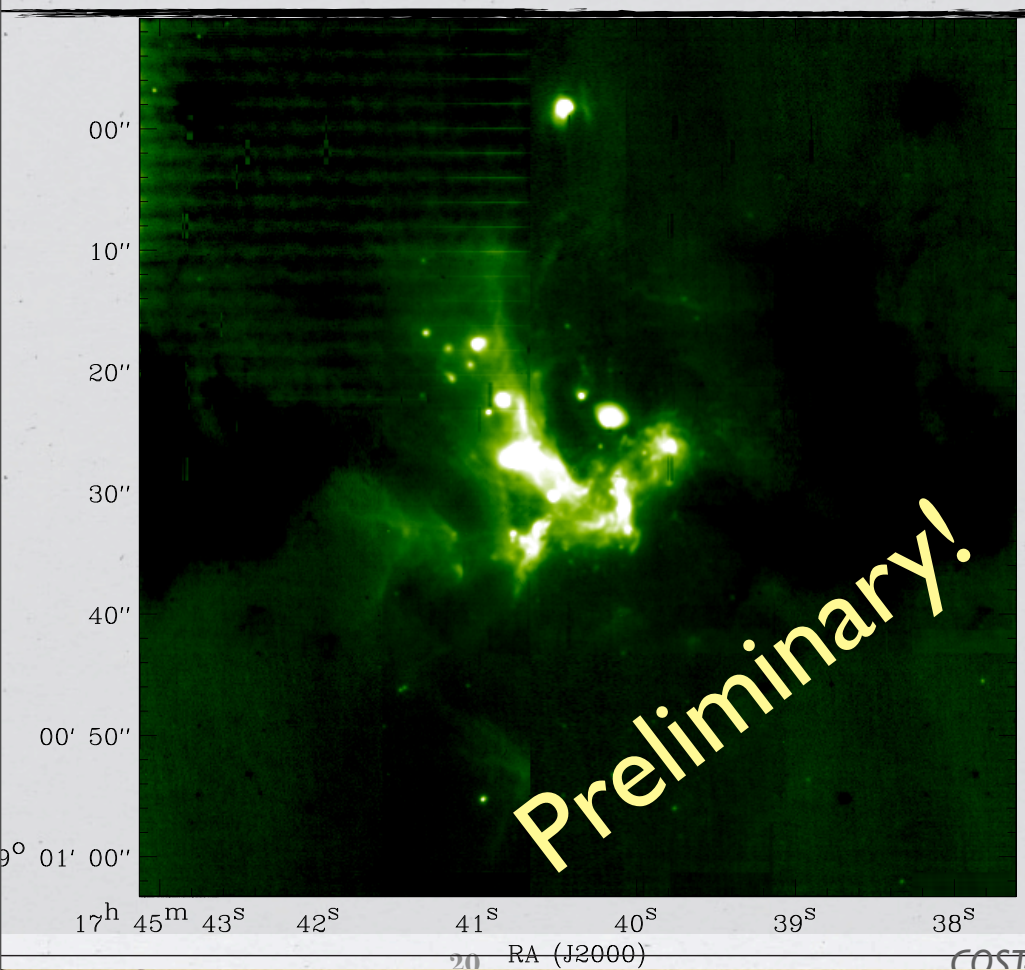
Nadeen Sabha

COST 3rd WGs Meeting, Bologna



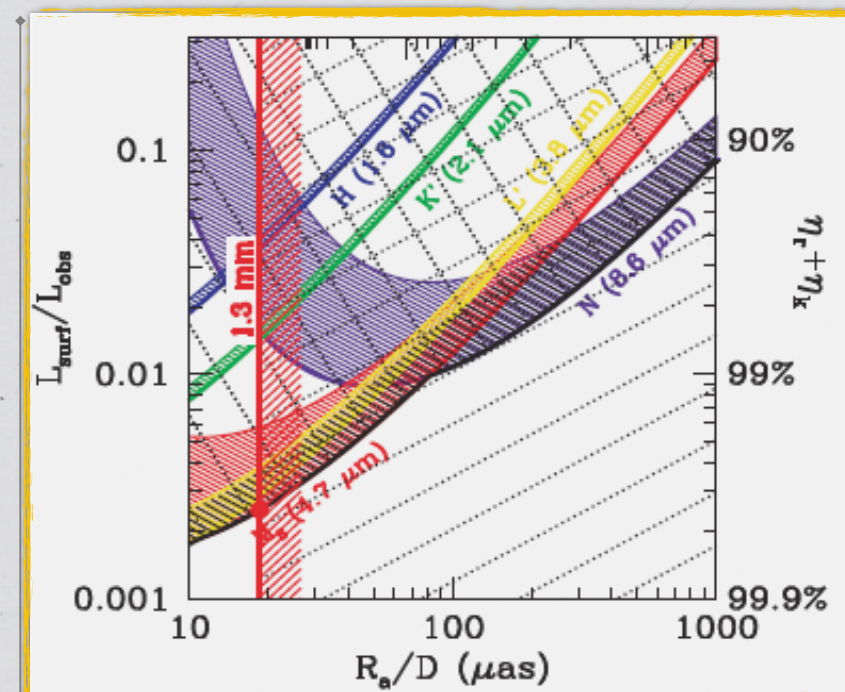
Bonn-Cologne Graduate School
of Physics and Astronomy

the GC in Mid-Infrared



The Nature of Sgr A *

- * Constraining the ratio of the surface to the observed luminosity ($L_{\text{surf}}/L_{\text{obs}}$)
- * Using VLBI size constraints and infrared-mm flux measurements
- * Implying a larger than 99.6% efficiency factor for the energy conversion



Broderick+09

Discussion

- ALMA!