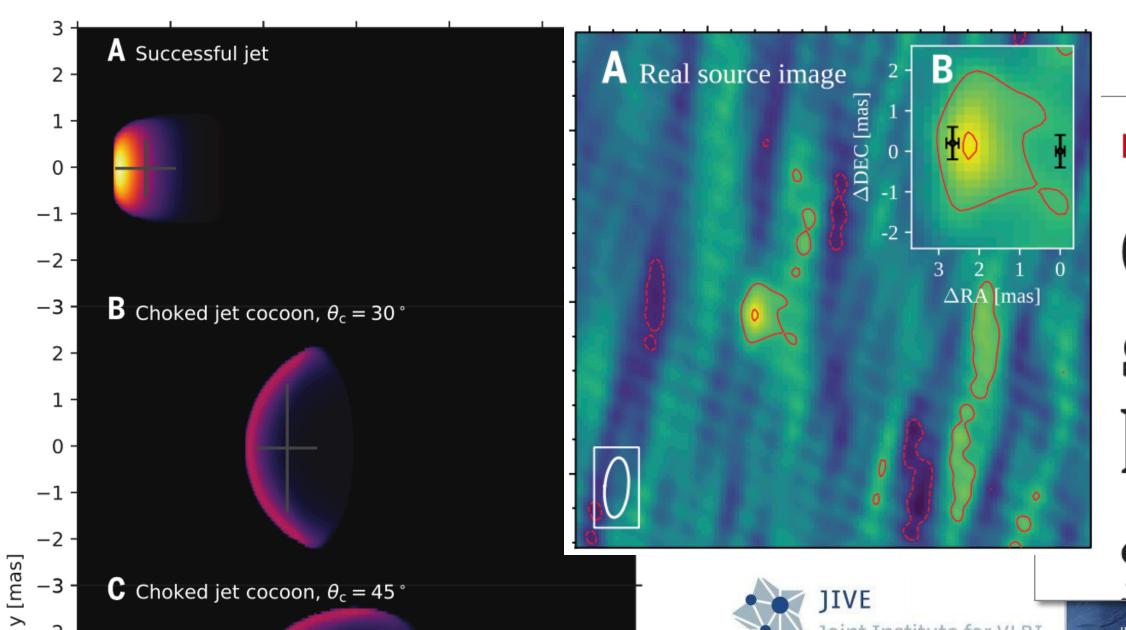
### GRBs and Kilonovae from GW Events





**D** Choked jet cocoon,  $\theta_c = 60^\circ$ 

x [mas]

-2 -

-3 -

-6

**NEUTRON STAR MERGER** 

Ghirlanda et al. (2019, Science)

# Compact radio emission indicates a structured jet was produced by a binary neutron star merger

G. Ghirlanda<sup>1,2,3</sup>\*, O. S. Salafia<sup>1,2,3</sup>\*, Z. Paragi<sup>4</sup>, M. Giroletti<sup>5</sup>, J. Yang<sup>6,7</sup>, B. Marcote<sup>4</sup>, J. Reswick<sup>11</sup> M. Rranchesi<sup>12,13</sup>

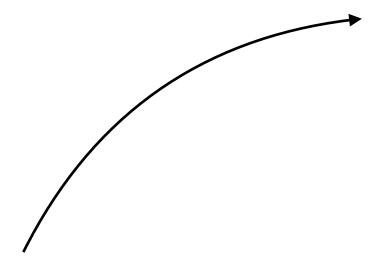


#### **Marcello Giroletti**

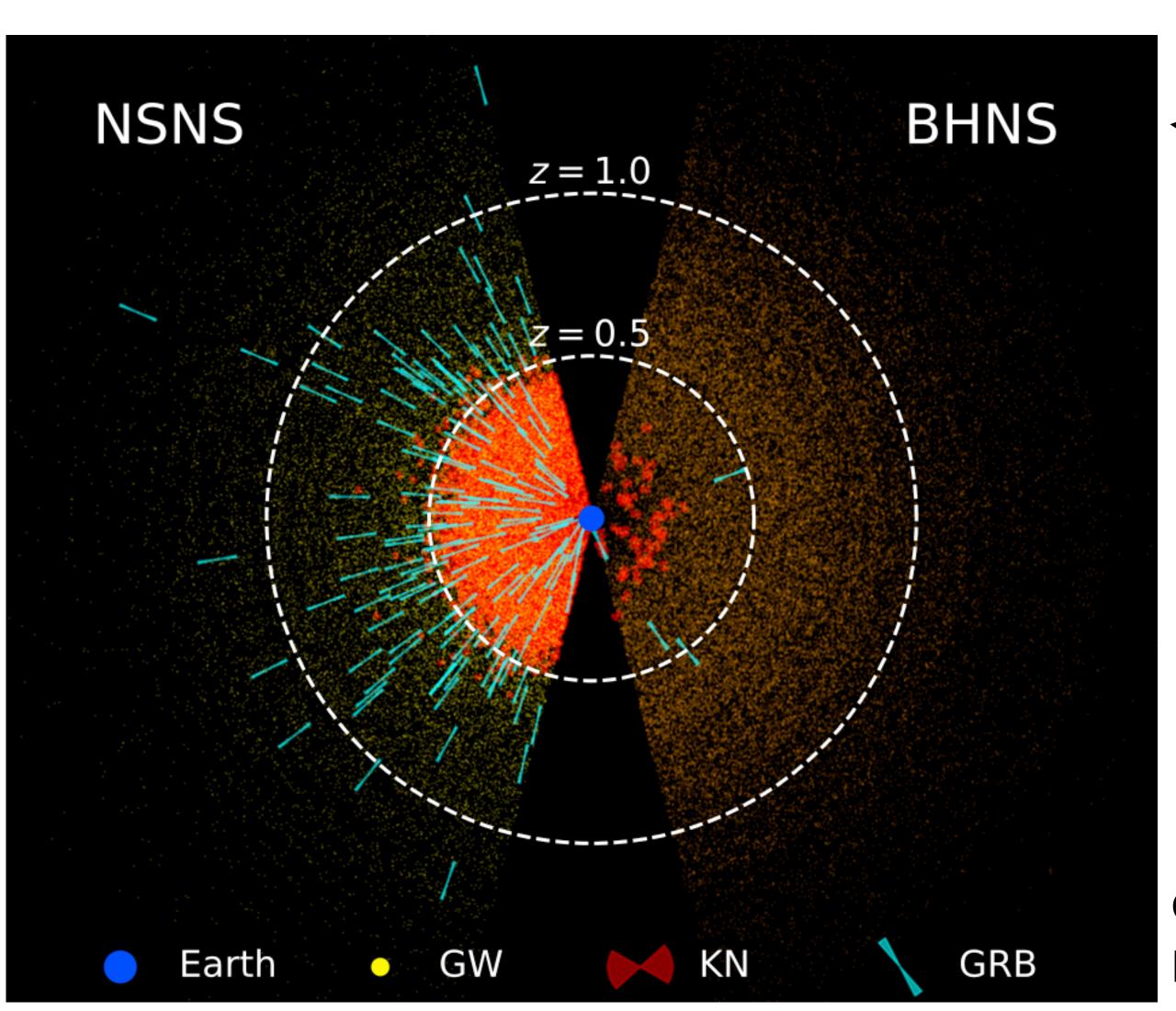
INAF Istituto di Radioastronomia

# Towards the Einstein Telescope





More likely to have EM counterpart (material not "swallowed" by BH)



More likely to be detected as GW sources (more massive)



EINSTEIN TELESCOPE Colombo et al. 2025 -Einstein Telescope 5 yr





## Gamma-ray Bursts and Kilonovae from Gravitational Wave Events

Alberto Colombo<sup>†</sup>, <sup>1,2</sup> Marcello Giroletti<sup>†</sup>, <sup>3</sup> Susanna Vergani<sup>†</sup>, <sup>4</sup> Lauren Rhodes <sup>5,6</sup> and the SKA Transients SWG

