

S01a The jet and resolved features of the central supermassive black hole of M87 observed with EHT

Makoto Miyoshi(NAOJ), Yoshiaki Kato(RIKEN), & Junichiro Makino(Kobe Univ.)

We report the result of our image reconstruction of the center of the giant elliptical galaxy M87 from the public data released by the Event Horizon Telescope Collaborators (EHTC). Our result is quite different from the image published by EHTC. Differences include (a) we found the jet structure which is consistent with previous lower-frequency observations in the scale of a few mas, while EHTC reported none detection of any jet component, and (b) we did not find any ring-like structure at the core, but just two features with the separation of $89 \mu\text{as}$. The two features may be a binary of SMBHs. Further EHT observations are required for identification. We could obtain the ring-like structure similar to that reported by EHTC by limiting the field of view to a narrow box, but which is very fragile. The absence of the jet and the presence of the ring in EHTC result are both artifacts due to their insufficient calibrations and the EHT array's u-v sampling bias effect.