

AGN Outflow Simulation

Presented by

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AGN in Keel et al. (2015) sample

Galaxy Seyfert II

- Active nuclei
- Smaller amounts of energy release
- Low accretion rate

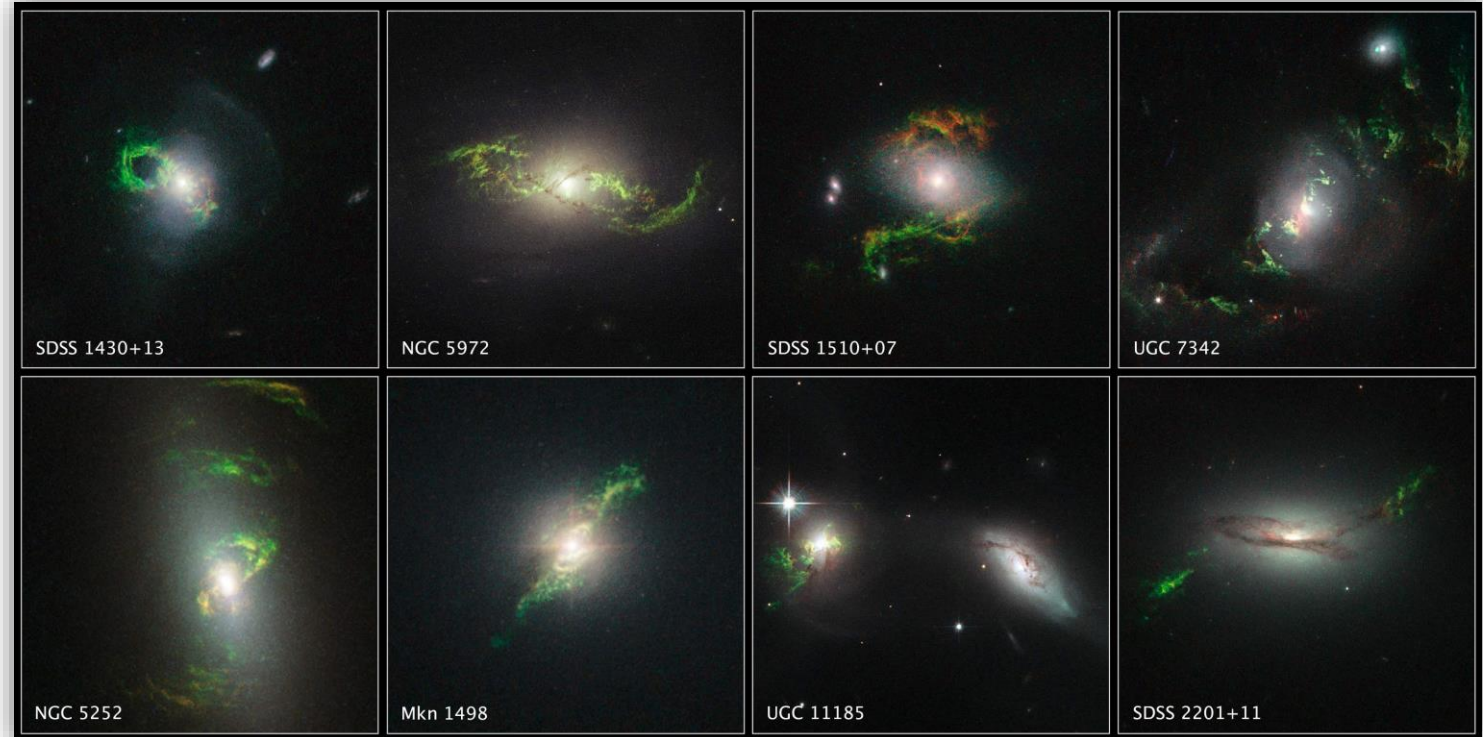


Figure 1. Fading AGN (NASA / ESA / W. Keel, University of Alabama)

Study previous literatures and select Active Galaxy samples presented in Keel et al. (2015)

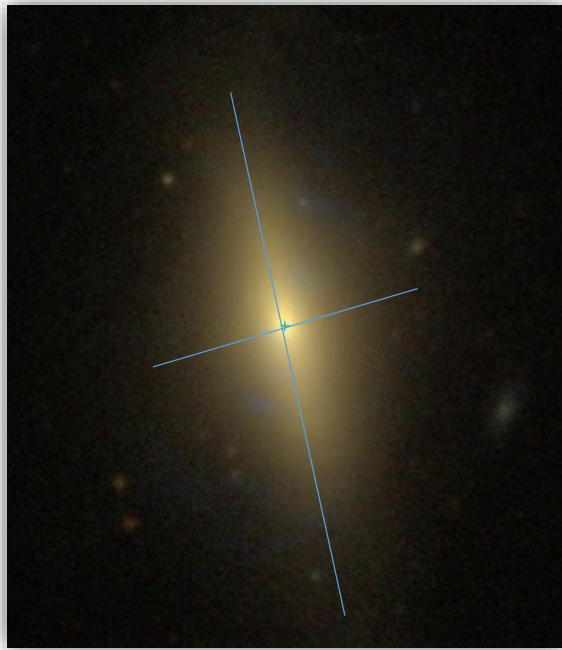


Figure 2. NGC 5252 (SDSS from SIMBAD)
Major axis size = 90 arcsec (43 kpc)
Minor axis size = 39.6 arcsec (19 kpc)

NGC 5252

- Symmetric, edge-on stellar disk in a luminous bulge
- The clouds extended more than 10-kpc
- Type Lenticular galaxy (S0)

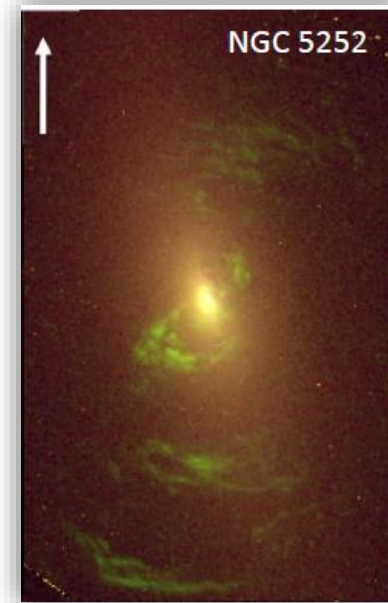
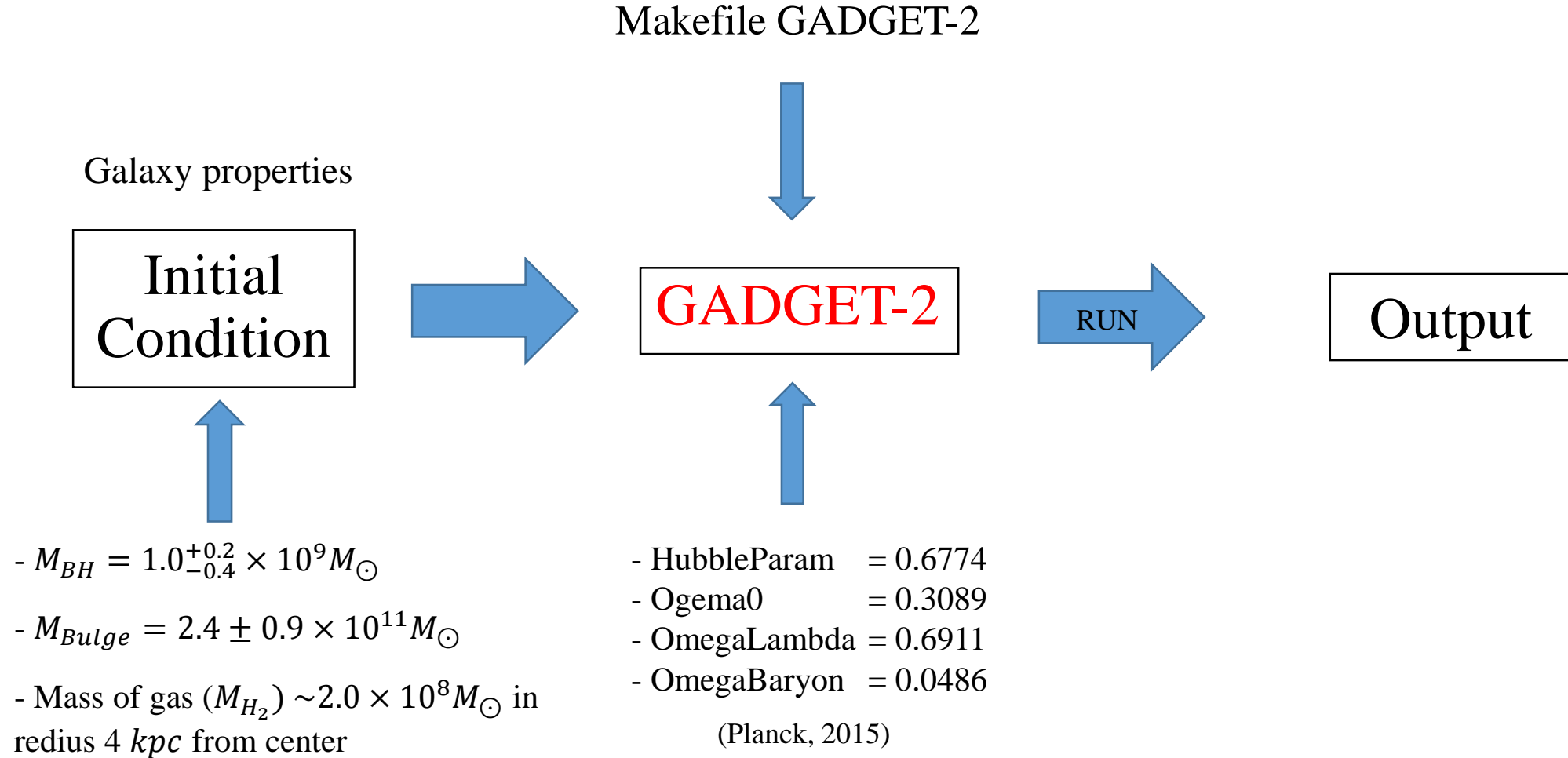


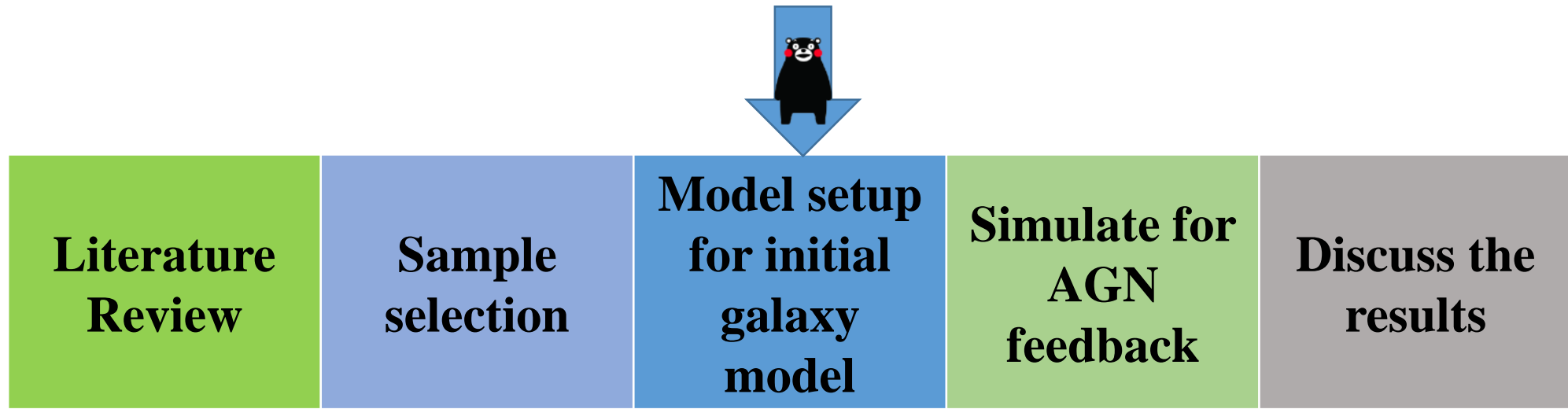
Figure 3. NGC 5252 scale bar is 2.5 kpc. North is to the top and east to the left (NASA, ESA, Galaxy zoo team & W. Keel., University of Alabama, USA).

GADGET-2

- The **GA**laxies with **D**ark matter and **G**as **interact-2** (GADGET-2) code (Springel., 2005).
 - published to be freely used for studying
- Isolated systems
- Self-gravitational adiabatic collapse
- **N-body system**
- **Gas dynamics**
- Isothermal collapse
- Dark matter halo mass function and clustering
- Merging of galaxies
- Formation of a rich galaxy cluster
- Spherical collapse of a self-gravitating sphere of gas
- Cosmological formation of a cluster of galaxies
- Cosmological structure formation in a periodic box with adiabatic gas physics



(Almudena and Wolfram, 1995; Marconi and Hunt, 2003)



- To simulate AGN feedback in form of kinetic feedback
- Study its interaction with the intergalactic medium by density of outflow gas
- Discuss the results

Thank you

