

Student questions: SESE Graduate Students Colloquium

3/3/21

Edward Buie II: “The Turbulent Halos of Galaxies”

In your presentation, you showed the Active Galactic Nuclei (AGN), the AGNs’ electromagnetic signals varies in days, do you have any idea on why these variations? What is the significance of the directions on the Hubble data plots in the ion ratios plot?

AGN's vary based on the rate of material falling into them (there may be other factors that I don't know about). The directions of the Hubble data points shows whether they are lower or upper limits.

You have gorgeous, striking plots and animations. What do you use to make these, and how long did it take you to learn?

Thank you. I use a combination of python code and a software called yt. I am still learning how to use them to their fullest potential, and its been 5 years now.

What causes halos to occur?

Gas that is flowing into the central galaxy but is too hot to fully cool is how this halo exists.

Does the circumgalactic medium affect the Earth in any noticeable way?

Not really, the circumgalactic medium is super far away from the Earth and the processes there take really long to happen, millions to billions of years.

Does the temperature of the halos have any correlation to the age of the galaxy?

Kind of, yes. The temperature of the halo is a consequence of the mass of the halo. And more massive halos tend to belong to older elliptical galaxies while less massive halos belong to younger galaxies.

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