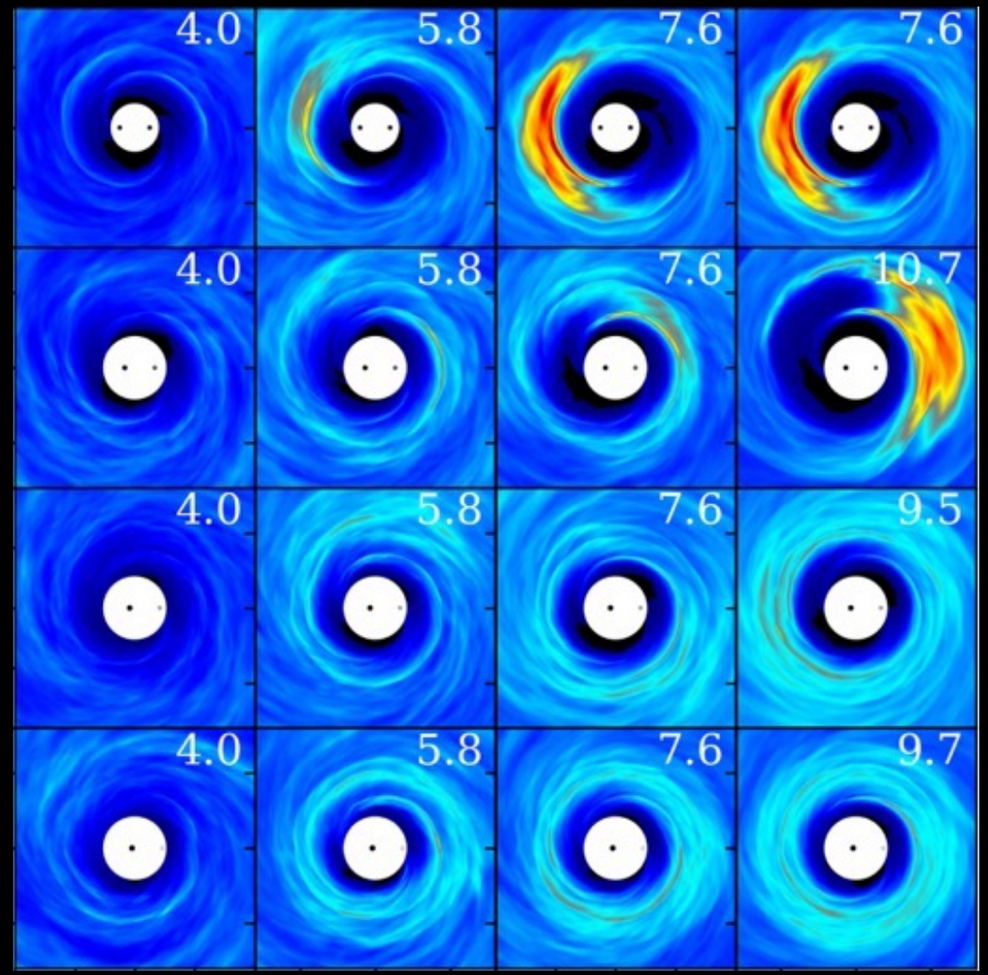
Modeling Lumpy Disks around Monster Black Hole Pairs

- Using supercomputer simulations, scientists explored how magnetic fields and mass difference between black holes affect lumpy disks of gas around pairs of supermassive black holes.
- Models like these will help astronomers search for real examples, especially because the light curves from the lumpy disks offers a unique way to identify these pairs.
- Goddard's Scott Noble (663) led this work. He and his co-authors have produced many beautiful simulations, which, in addition to being scientifically valuable, are popular with general audiences.

- Examples of Dr. Noble and his colleagues' work:

  https://www.nasa.gov/feature/goddard/2018/new-simulation-sheds-light-on-spiraling-supermassive-black-holes/

  https://www.nasa.gov/feature/goddard/2021/scientists-fling-model-stars-at-a-virtual-black-hole-to-see-who-survives



These models show the surface density of gas in lumpy disks around supermassive black hole pairs (black dots in center) from a top-down perspective.