

# NUMERICAL RELATIVITY: EARLY YEARS

- 1964: First GR simulation
- 70's 80's: Early successes for gasses + spacetime, with symmetry imposed
- Sharing of codes is uncommon:
  - Extremely difficult to develop, makes codes extremely valuable
  - Researchers closely guard the unique codes they've invested years in

# BINARY BLACK HOLE GRAND CHALLENGE

- 3D codes simulating black holes are a huge challenge
  - Large computational grids & short time-steps
  - Advanced CFD techniques
  - Parallelism & adaptive meshes needed
- NSF “Grand Challenge” funding brings multidisciplinary teams together
- 3D Black Holes are simulated...

