

Black holes: a tale of cannibalism

A group of scientists just uncovered a curious case of cannibalism among black holes. It's well known that black hole encounters give birth to gravitational waves. For encounters at close to the speed of light, surprising results emerge: the black holes, regardless of their structure, eat half of their gravitational-wave progeny. These results may change the way we think about ultra-relativistic collisions and black hole production and are the outcome of a recent study to be published in the prestigious *Physical Review Letters*.

The universe is populated by millions of black holes -- such as the one at the center of our own galaxy -- and collisions between black holes are thought to be a relatively common event. When they collide, colossal amounts of gravitational waves are created. These waves are travelling ripples in spacetime fabric, the same fabric black holes are made of. According to the team's results, when black holes collide at very large speeds they swallow the waves they generated...thus, two small black holes colliding at large energies may result in two slowly moving, fat black holes.

This study, by Sperhake, Berti, Cardoso and Pretorius in Cambridge, Olemiss, IST and Princeton respectively, provide more insight on the way black holes are born, how they interact and how they emit gravitational waves. These waves have also been called Einstein messengers, and are currently being studied and scrutinized by hundreds of scientists worldwide.