

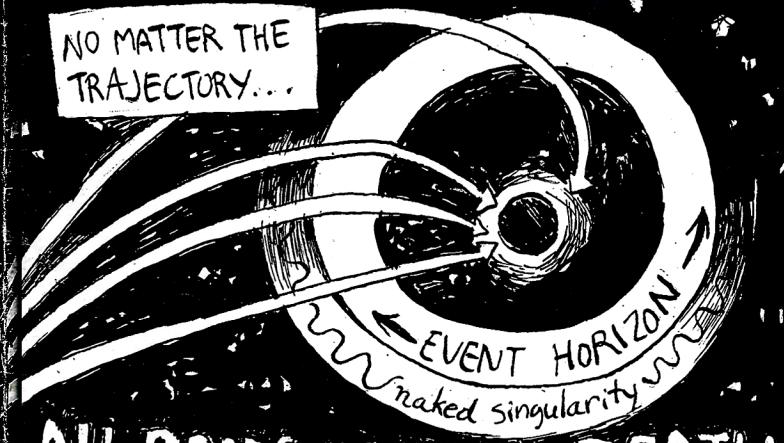
WHERE DO THEY COME FROM? Black holes form when sufficiently massive stars run out of fuel to counteract their gravity and collapse, becoming smaller and more dense. Subrahmanyan Chandrasekhar was among the first astrophysicists to theorize about what happens next.



If the star's mass is below a certain threshold (now known as the Chandrasekhar limit), it will stabilize itself and become a white dwarf or a neutron star. If the star's mass is ABOVE the limit it may continue to collapse to a point of infinite density, and possibly become a black hole!

IN THEORY, IT IS POSSIBLE FOR A BLACK HOLE TO FORM WITHOUT A GRAVITATIONAL COLLAPSE. BLACK HOLES WITH A RELATIVELY LOW MASS COULD NOT HAVE BEEN FORMED BY THE DEMISE OF A STAR. INSTEAD THEY MAY HAVE BEEN CREATED BY SOME EXTERNAL COMPRESSING FORCE.

THERE MAY ALSO BE PRIMORDIAL BLACK HOLES, FORMED BY RANDOM AREAS OF DENSE MATTER IN THE EARLY EXPANSION OF THE UNIVERSE

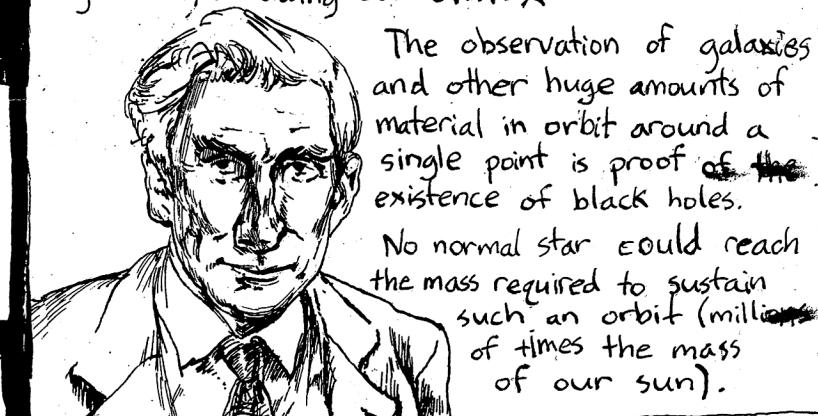


ALL ROADS LEAD TO DEATH

Around every black hole is a point at which the gravitational attraction becomes too great to withstand. Beyond this point—the event horizon—escape is impossible. Not even light can avoid being sucked in, which doesn't leave much hope for anything else.

The naked singularity is the last point at which objects entering a black hole can still be seen. Freaky things happen to spacetime around these parts, like Sam Neill's acting.

WHOA... SUPERMASSIVE, DUDE... IF A BLACK HOLE is sufficiently massive and located in a densely populated region of space, i.e. the center of a galaxy, it will attract nearby objects in its environment, consuming stars, planets, and other materials, and growing more and more massive. These supermassive black holes are now thought to be at the center of many galaxies, including our own.★



The observation of galaxies and other huge amounts of material in orbit around a single point is proof of the existence of black holes. No normal star could reach the mass required to sustain such an orbit (million of times the mass of our sun).

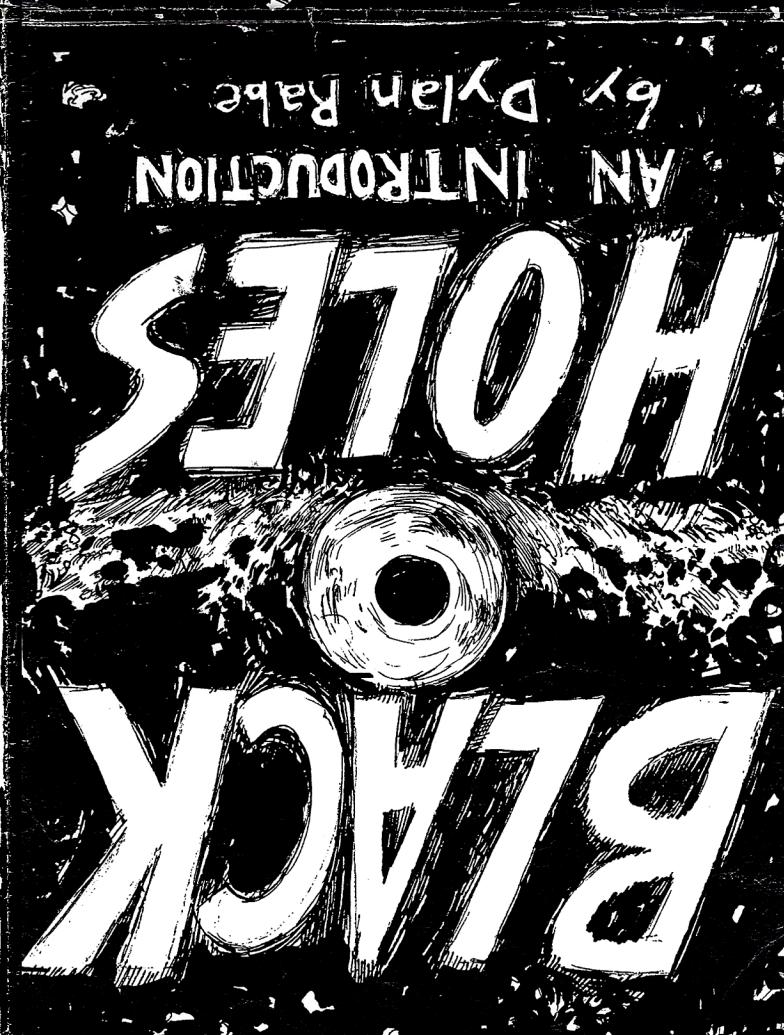
★ This was predicted by Cambridge astrophysicist Martin Rees in 1971, well before the black hole at the center of the Milky Way was actually discovered!



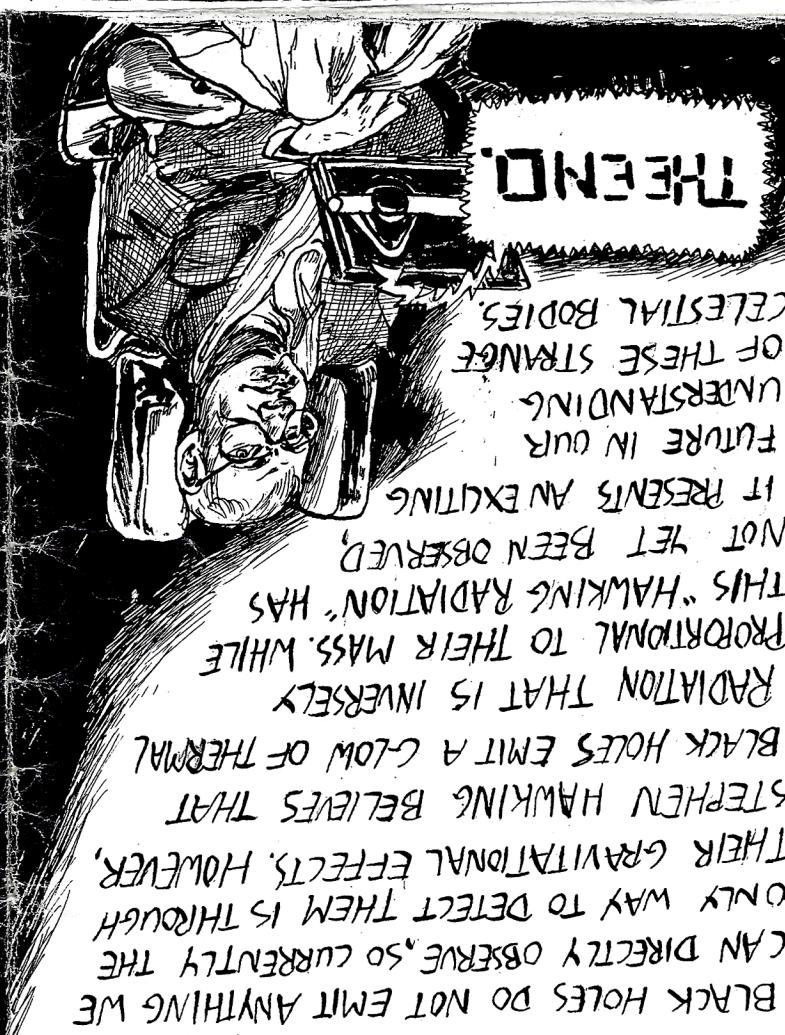
Although our concepts of gravity are very different today, we now know that objects of light and gravity do exist! Like this actually do exist! I think I'm on to something



BLACK HOLES ARE NOT REALLY HOLES: IN THE LITERAL SENSE, UNLESS YOU COUNT THE GRAVITATIONAL WELLS THEY PRODUCE IN SPACE TIME, RATHER, THEY ARE AREAS FROM WHICH NOTHING CAN ESCAPE DUE TO THE GRAVITY OF THEIR TERRIFYING MASS & DENSITY.



NOT YET BEEN OBSERVED, THIS "HAWKING RADITION" HAS PRODUCED TO THEIR MASS WHILE RADITION THAT IS INVERSELY PROPORTIONAL TO THEIR MASS. WHILE STEPHEN HAWKING BELIEVES THAT THEIR GRAVITATIONAL EFFECTS, HOWEVER, ONLY WAY TO DETECT THEM IS THROUGH THEIR GRAVITATIONAL EFFECTS. HOWEVER, CAN DIRECTLY OBSERVE, SO CURRENTLY THE ONLY OBJECTS IN THE COSMOS HAVE CAPTURED THE PUBLIC IMAGINATION. AS FULLY AS BLACK HOLES, FROM THEIR RECURRING APPEARANCES IN MUSIC, FILM, AND TELEVISION, IT IS CLEAR THAT WE HUMANS HAVE A DEEP FASCINATION WITH THESE MYSTERIOUS REGIONS OF SPACE WHICH ARE SUPPOSED TO SWALLOW UP EVERYTHING NEARBY—EVEN LIGHT!



IT PRESENTS AN EXCITING FUTURE IN OUR UNDERSTANDING OF THESE STRANGE CELESTIAL BODIES. NOT YET BEEN OBSERVED, THIS "HAWKING RADITION" HAS PRODUCED TO THEIR MASS WHILE RADITION THAT IS INVERSELY PROPORTIONAL TO THEIR MASS. WHILE STEPHEN HAWKING BELIEVES THAT THEIR GRAVITATIONAL EFFECTS, HOWEVER, ONLY WAY TO DETECT THEM IS THROUGH THEIR GRAVITATIONAL EFFECTS. HOWEVER, CAN DIRECTLY OBSERVE, SO CURRENTLY THE ONLY OBJECTS IN THE COSMOS HAVE CAPTURED THE PUBLIC IMAGINATION. AS FULLY AS BLACK HOLES, FROM THEIR RECURRING APPEARANCES IN MUSIC, FILM, AND TELEVISION, IT IS CLEAR THAT WE HUMANS HAVE A DEEP FASCINATION WITH THESE MYSTERIOUS REGIONS OF SPACE WHICH ARE SUPPOSED TO SWALLOW UP EVERYTHING NEARBY—EVEN LIGHT!