The shape and orientation of the radio jets were used to determine the velocity of the motion of the black holes through the hot gas.

The deduced velocity implies that the two black holes, which are about 25,000 light years apart, are gravitationally bound.

Computer simulations indicate that binary supermassive black holes gradually spiral toward each other until they coalesce to form a single, more massive black hole, accompanied by an enormous burst of gravitational waves.