

Abstract Submitted
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The Heaviest Black Holes of
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Recently, the LIGO and Virgo gravitational-wave observatories discovered a black hole merger, GW190521, with a total mass of about 150 solar masses. LIGO/Virgo are sensitive to mergers with total mass up to 1000 solar masses, providing a window onto intermediate-mass black hole mergers in this mass range, probing whether the black hole mass distribution continues to higher masses. The origin of the heaviest black holes with mass above 50 solar masses is debated. The heaviest ones like GW190521 likely are not the end products of stellar evolution but could have been forged by multiple previous mergers in galactic centers, globular clusters or AGN disks. Here, we discuss what we learned from LIGO/Virgo's published results about the heaviest events and what we expect in the future.

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