

Hubble peers into globular cluster NGC 6325

May 22 2023



Credit: ESA/Hubble & NASA, E. Noyola, R. Cohen

The densely packed globular cluster NGC 6325 glistens in this image from the NASA/ESA Hubble Space Telescope. This concentrated group

of stars lies around 26,000 light-years from Earth in the constellation Ophiuchus.

Globular clusters like NGC 6325 are tightly bound collections of stars with anywhere from tens of thousands to millions of members. They can be found in all types of galaxies and act as natural laboratories for [astronomers](#) studying [star formation](#). This is because the constituent stars of globular clusters tend to form at roughly the same time and with similar initial composition, meaning astronomers can use them to fine-tune their theories of how stars evolve.

Astronomers inspected this particular cluster not to understand star formation, but to search for a hidden monster. Though it might look peaceful, astronomers suspect this cluster could contain an intermediate-mass black hole that is subtly affecting the motion of surrounding stars. Previous research found that the distribution of stars in some highly concentrated globular clusters—those with stars packed relatively tightly together—was slightly different from what astronomers expected.

This [discrepancy](#) suggests that at least some of these densely packed globular clusters—including perhaps NGC 6325—could have a black hole lurking at the center. To explore this hypothesis further, astronomers turned to Hubble's Wide Field Camera 3 to observe a larger sample of densely populated [globular clusters](#), which included this star-studded image of NGC 6325. Additional data from Hubble's Advanced Camera for Surveys was also incorporated into this image.

Provided by NASA

Citation: Hubble peers into globular cluster NGC 6325 (2023, May 22) retrieved 25 June 2024 from <https://phys.org/news/2023-05-hubble-peers-globular-cluster-ngc.html>

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