

H1821+643

H1821+643 is a quasar in the constellation of Draco. It is situated in a massive, strong cooling flow cluster.^[1] Astronomers in 2014 identified H1821+643 as the most massive black hole with a precisely measured mass, at 30 billion solar masses.^[1] Several other black holes are possibly more massive, but they have less accurate mass estimates. The Schwarzschild diameter of this black hole is about 172 terametres (1,150 AU), which is about 14.5 times the diameter of Pluto's orbit. The average density of the hole is 22 g/m³, less than air on Earth.^[2]

References

1. Walker, S. A.; Fabian, A. C.; Russell, H. R.; Sanders, J. S. (2014). "The effect of the quasar H1821+643 on the surrounding intracluster medium: Revealing the underlying cooling flow". *Monthly Notices of the Royal Astronomical Society*. **442** (3): 2809. arXiv:1405.7522 (https://arxiv.org/abs/1405.7522). Bibcode:2014MNRAS.442.2809W (https://ui.adsabs.harvard.edu/abs/2014MNRAS.442.2809W). doi:10.1093/mnras/stu1067 (https://doi.org/10.1093%2Fmnras%2Fstu1067).

2. Mass $3.0\times10^{10} * 2.0\times10^{30}=6.0\times10^{40}$ kg. Volume at radius 8.6×10^{13} m is 2.66×10^{42} m³.

SDSS J182157.2+642036	
Observation data (Epoch J2000.0)	
Constellation	Draco
Right ascension	18 ^h 21 ^m 57.2365 ^s
Declination	+64° 20′ 36.226″
Redshift	0.2970
Distance	3.4 gigalight-years (1.0 Gpc)
Type	Quasar
Apparent magnitude (V)	14.24
See also: Quasar, List of quasars	

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