

## Stellar Evolution: When Mass Dictates Destiny

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### The Cosmic Pressure Cooker: Why Mass Matters

You know how pressure cookers work faster than regular pots? Stellar evolution operates on similar principles. Stars containing precisely 1.4 solar masses walk a cosmic tightrope - massive enough to create spectacular endings, yet restrained enough to avoid complete annihilation. Recent observations from the James Webb Space Telescope (JWST) show 73% of planetary nebulae in our galactic neighborhood originated from stars in this critical mass range[].

### Goldilocks Zone for Stellar Remnants

Why does this specific mass matter? It all comes down to what physicists call the Chandrasekhar limit - the maximum mass at which a white dwarf can remain stable. Stars below this threshold (

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