

Blue Straggler Star

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Blue Straggler Star Latest News

Recently, Indian astronomers, along with their international collaborators, have reported the rare discovery of a Blue Straggler Star (BSS).

About Blue Straggler Star

- These are a peculiar class of stars found in star clusters that appear hotter, brighter, and more massive than their peers.
- They have a **different trajectory of evolution** from the norm.
- These are observed in **old, dense stellar systems** such as **globular clusters**.
- They lie on an **extension of the main sequence star** and are bluer and brighter than the main-sequence turn-off stars.
- These objects are found **in star clusters, dwarf galaxies, and in the field**

How are Blue Straggler Stars Different?

- There are a few stars, when they are expected to start expanding in size and cooling down, do just the opposite.
- They grow **brighter and hotter as indicated by their blue colour**, thus standing out from the cooler red stars in their vicinity in the colour-magnitude diagram.
- Since they **lag behind their peers in evolution**, they are called stragglers, more specifically, blue stragglers, because of their hot, blue colour.

Why do they Behave Differently?

- **Possibility 1:** They **do not belong to the family of stars** in the cluster, and hence not expected to have the group properties.
- **Possibility 2:** The straggler **draws matter from the giant companion star** and grows more massive, hot and blue, and the red giant to end up as a normal or smaller white dwarf.
- **Possibility 3:** The **straggler draws matter from a companion star**, but that there is a **third star that facilitates this process**.

Source: **PIB**

Source: <https://vajiramandravi.com/current-affairs/blue-straggler-star/>

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