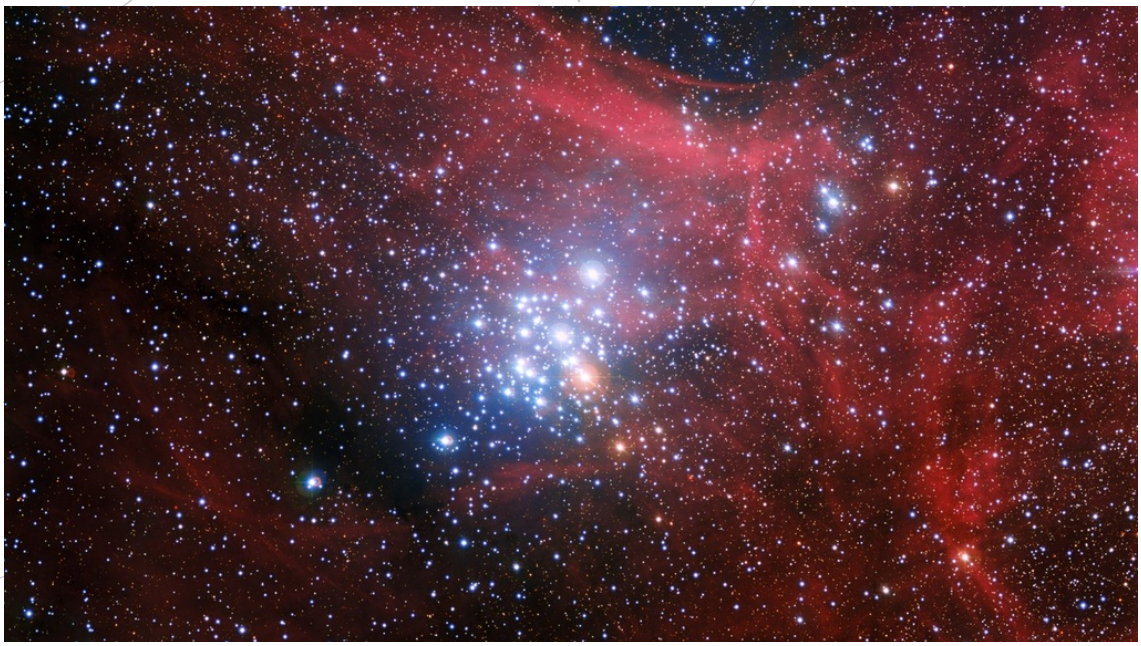
SPACE awareness

SPACE SCOOP

DES NOUVELLES DES QUATRE COINS DE L'UNIVERS



How Long Do Stars Last?

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Answer: Stars live different lengths of time, depending on how massive they are.

Imagine how strange it would be if members of your family aged at different rates. If your brother or sister looked like they were seventy years old, but your grandparents still looked as young as teenagers.

This would be very unusual for people but it is really common for stars. All stars age at different rates, depending on how massive they are at the start their lives.

The stars in this photograph are part of an open star cluster called NGC 3293, containing around 50 stars that were all born around the same time. The cluster itself is less than 10 million years old – just a baby on cosmic scales! (Especially if you consider that our own Sun is 4.6 billion years old and only in the middle of its life.)

Each star in this cluster is much more massive than our own. Take the largest orange star at the bottom right of the photograph. This is a gigantic Red Giant star, around six and a half times larger than the Sun!

Red Giants are stars that are nearing the end of their lives, even though this star's actual age is much less than our Sun's. Since all the stars in this cluster are thought to have formed at the same time, it is interesting that this star appears to have flown through the phases of its life much quicker than its youthful blue siblings.

The reason this star is ageing faster than the others is that it is more massive and hotter than the others. This means that the star burns brighter, using up its fuel faster than the rest its siblings of the cluster.

COOL FACT!

Star clusters like this one can contain up to a few thousand stars. Two astronomers recently created a picture to demonstrate what our night sky would look like if our Solar System were inside a star cluster! Take a look at their image: tinyurl.com/starcluster