

The Synapse: Intercollegiate science magazine

Volume 7 | Issue 1

Article 10

2015

Size Matters

Eydon Thomashow

Follow this and additional works at: <https://digitalcommons.denison.edu/synapse>



Part of the [Life Sciences Commons](#), and the [Physical Sciences and Mathematics Commons](#)

Recommended Citation

Thomashow, Eydon (2015) "Size Matters," *The Synapse: Intercollegiate science magazine*: Vol. 7: Iss. 1, Article 10.

Available at: <https://digitalcommons.denison.edu/synapse/vol7/iss1/10>

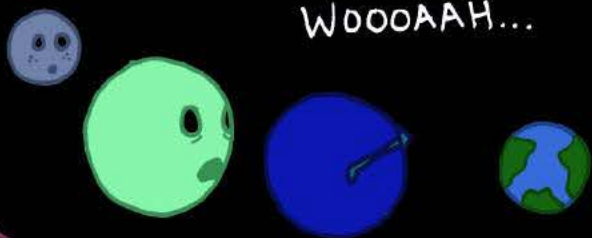
This Article is brought to you for free and open access by Denison Digital Commons. It has been accepted for inclusion in The Synapse: Intercollegiate science magazine by an authorized editor of Denison Digital Commons. For more information, please contact eresources@denison.edu.

Size Matters

WRITTEN BY EYDON THOMASHOW

ILLUSTRATED BY BEATRIX PAROLA

WOOOAAH...



WHAT'S THAT?

THAT, PLUTO, IS WHAT WE CALL A NEBULA. IT'S WHAT HAPPENS WHEN A RED GIANT STAR DIES.



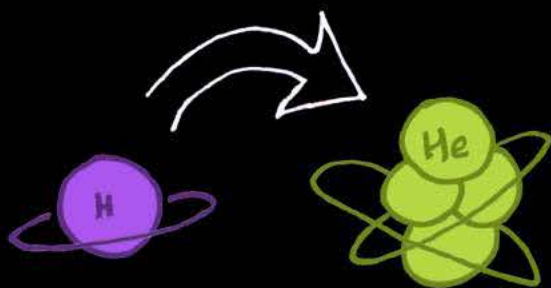
THEY JUST SHOOT OUT BUBBLES OF GAS?



NO, URANUS...



WHAT HAPPENS TO A DYING STAR IS DEPENDENT ON ITS MASS, BUT THE PROCESS IS GENERALLY THE SAME FOR EVERYONE.



STARS CREATE THEIR POWER BY FUSING HYDROGEN INTO HELIUM IN THEIR CORE.

AS THE STARS START TO AGE, THEY FUSE TOGETHER HEAVIER AND HEAVIER ELEMENTS.

EVENTUALLY, THEY WILL START FUSING IRON

UNFORTUNATELY, IRON IS THE END OF THE LINE. IRON IS EXTREMELY STABLE, SO IT CAN'T BE FUSED FOR MORE ENERGY.

THEN, THE STAR CONDENSES DRAMATICALLY.

FROM HERE ON OUT, EVERYTHING DEPENDS ON THE MASS.



PRESSURE GIVES OUT ONE FINAL PUSH, WHICH SENDS A SHOCK WAVE CARRYING MATERIAL INTO SPACE.

FOR SMALLER STARS, LIKE THE ONE WE JUST OBSERVED,
THIS MATERIAL TURNS INTO A PLANETARY NEBULA.

THE STAR ITSELF WILL
CONDENSE TO ABOUT
THE SIZE OF YOU, EARTH.

THESE ARE CALLED WHITE DWARFS,
WHICH IN MOST CASES IS THE LAST STEP.

LARGER STARS WILL GO THROUGH
SUPER NOVA EXPLOSIONS, WHICH CAN BE
LIGHT YEARS ACROSS. OUT OF THESE,
SMALLER STARS WILL CONDENSE DOWN
TO 10KM IN DIAMETER.

THESE ARE CALLED NEUTRON STARS

THE BIGGEST STARS WILL TURN INTO
BLACK HOLES. ALL THE MATTER IN A BLACK
HOLE CONDENSES INTO AN INFINITELY DENSE
POINT WHERE GRAVITY IS SO STRONG...



EVEN LIGHT CAN'T
ESCAPE



WOW.



SO...WHAT WILL HAPPEN TO OUR SUN?

OUR SUN IS CONSIDERED A LIGHTWEIGHT STAR.
WHEN THE TIME COMES, IT WILL EXPAND INTO A RED GIANT
AND COLLAPSE INTO A WHITE DWARF



WHAT WILL HAPPEN
TO US?!

DON'T WORRY EARTH, THE HUMAN RACE
WILL BE LONG GONE BY THEN.

AS FOR US THOUGH...

LET'S JUST BE GRATEFUL
WE DON'T HAVE TO WORRY
ABOUT IT FOR ANOTHER
5 BILLION YEARS!

