

STAR GAZERS
SG 1727 - 5M
JULY 3-9, 2017

"LYRA THE HARP!"

DEAN: WELCOME TO STAR GAZERS. I'M DEAN REGAS, ASTRONOMER FROM THE CINCINNATI OBSERVATORY.

JAMES: AND I'M JAMES ALBURY, DIRECTOR OF THE KIKA SILVA PLA PLANETARIUM IN GAINESVILLE FLORIDA. THE SUMMER TRIANGLE IS RIDING HIGH THROUGHOUT THE SKY FOR THE NEXT FEW MONTHS AND THIS WEEK, WE'RE GOING TO TALK ABOUT ONE OF THE CONSTELLATIONS THAT MAKES UP THIS VERY POPULAR GROUPING OF STARS.

DEAN: THAT'S RIGHT, JAMES. WE'RE GOING TO GIVE YOU A GUIDED TOUR OF THE CONSTELLATION LYRA THE HARP. LET'S SHOW YOU!

----STOP & DROP

DEAN: OK, WE'VE GOT OUR SKIES SET UP FOR ANY NIGHT THIS WEEK, AT ABOUT 10 PM YOUR LOCAL TIME. IF YOU LOOK TOWARD THE EAST, YOU WILL SEE A GROUPING OF STARS WE CALL THE SUMMER TRIANGLE. THE BRIGHTEST STAR IN THE TRIANGLE IS ACTUALLY THE FIFTH BRIGHTEST STAR WE CAN SEE FROM EARTH AND ITS NAME IS VEGA.

JAMES: VEGA IS THE STAR AT THE TOP OF THE TRIANGLE, AND THAT'S WHERE YOU CAN FIND LYRA. THE NEXT BRIGHTEST STAR IN THE SUMMER TRIANGLE IS ALTAIR IN AQUILA THE EAGLE AND THE THIRD BRIGHTEST IS DENEK IN CYGNUS THE SWAN.

DEAN: LYRA IS OFTEN SAID TO BE THE SMALL HARP THAT BELONGED TO APOLLO AND WAS LATER GIVEN TO ORPHEUS. ORPHEUS WAS SO SKILLED AT PLAYING THE HARP, THAT THE MUSIC WAS SAID TO CHARM ANYONE WHO HEARD IT; EVEN ANIMALS.

JAMES: INDEED, WHEN ORPHEUS PLAYED THE HARP, HE COULD EVEN CHARM INANIMATE OBJECTS LIKE TREES AND ROCKS. FURTHERMORE, WHEN ORPHEUS JOINED JASON AND THE ARGONAUTS, HIS MUSIC WAS ABLE TO MUFFLE THE SONGS OF THE DREADED SIRENS WHOSE VOICES TEMPTED THE ARGONAUTS.

DEAN: QUITE A FEW CULTURES SAW THIS GROUPING OF STARS AS A HARP. IN WALES, THEY REFER TO IT AS KING ARTHUR'S HARP AND IN PERSIA THEY CALLED IT THE LYRE OF ZURAH.

JAMES: LYRA IS ALSO KNOWN AS PRAESEPE SALVATORIS (THE MANGER OF THE INFANT SAVIOR) AND TO THE INCAS, THEY SAW IT AS URUCUILLAY, A GOD IN THE FORM OF A LLAMA WHO WATCHED OVER ANIMALS.

----STOP

JAMES: OF THE 25 STARS THAT ARE WITHIN THE BOUNDARY FOR THE CONSTELLATION LYRA, FIVE OF THOSE STARS ARE BRIGHT ENOUGH TO BE VISIBLE WITH THE NAKED EYE FROM MOST CITIES.

DEAN: THE BRIGHTEST ONE IS OF COURSE VEGA. VEGA'S BLUE-WHITE COLOR TELLS US THAT IT IS MUCH HOTTER THAN OUR OWN YELLOW-ORANGE SUN. IN FACT, COMPARED TO OUR SUN'S TEMPERATURE OF 10 THOUSAND DEGREES FAHRENHEIT, VEGA BLAZES AWAY AT A FIERCE 17 THOUSAND DEGREES FAHRENHEIT!

JAMES: VEGA IS ALSO CONSIDERABLY LARGER, FOR WHILE OUR SUN IS A LITTLE UNDER A MILLION MILES WIDE, VEGA IS ALMOST THREE MILLION MILES IN DIAMETER, WHICH MAKES IT EASY TO UNDERSTAND THAT IF WE COULD PLACE OUR SUN AND VEGA SIDE BY SIDE, VEGA WOULD SHINE 58 TIMES BRIGHTER THAN THE SUN.

---STOP & DROP

JAMES: NEAR VEGA, THERE ARE FOUR STARS THAT MAKE A PARALLELOGRAM. TRAVELING-COUNTER CLOCKWISE FROM VEGA, WE HAVE ZETA LYRAE, DELTA LYRAE AND THE TWO ON THE FAR END ARE, SULAFAT AND SHELIK.

DEAN: AS FAR AS STATISTICS GO, THE STARS IN LYRA ARE QUITE IMPRESSIVE. ZETA LYRAE AND DELTA LYRAE ARE BOTH BINARY STAR SYSTEMS. ZETA IS 156 LIGHT YEARS AWAY AND DELTA IS APPROXIMATELY 1,100 LIGHT YEARS FROM US. BY COMPARISON, VEGA IS VERY CLOSE TO US AT ONLY 25 LIGHT YEARS AWAY.

JAMES: MY TWO FAVORITE STARS IN THE PARALLELOGRAM ARE SULAFAT AND SHELIK. SULAFAT IS 2400 TIMES AS BRIGHT AS OUR SUN AND IS ABOUT 620 LIGHT YEARS AWAY. MEANWHILE, SHELIK IS OVER 26,000 TIMES AS BRIGHT AS OUR SUN, HAS A SURFACE TEMPERATURE OF OVER 54,000 DEGREES FAHRENHEIT AND IS 960 LIGHT YEARS AWAY. SHELIK WAS ALSO MENTIONED IN AN EPISODE OF STAR TREK THE NEXT GENERATION, SO I'M REALLY HAPPY ABOUT THAT.

----STOP - CLOSE UP ENDING

JAMES: ONE LAST THING ABOUT LYRA. DID YOU KNOW THAT THE SUN AND ALL THE PLANETS IN OUR SOLAR SYSTEM ARE HEADING TOWARDS VEGA?

DEAN: THAT'S RIGHT, JAMES! OUR SOLAR SYSTEM IS RACING TOWARDS VEGA AT THE INCREDIBLE SPEED OF 12 MILES PER SECOND, AND EVEN THOUGH VEGA IS ONLY 25 LIGHT YEARS AWAY, AT THIS SPEED IT WOULD STILL TAKE OUR SUN ALMOST 500 MILLION YEARS TO REACH VEGA.

JAMES: WELL THATS GOOD. I'D HATE FOR US TO GET AN INTERGALACTIC SPEEDING TICKET. BESIDES, WHEN WE GET THERE, WHAT IS THERE FOR US TO DO?

DEAN: YOU COULD PLAY THE HARP?

JAMES: OH YEAH!

DEAN: THERE'S ALWAYS SOMETHING TO DO WHEN YOU...

BOTH: KEEP LOOKING UP!

---STOP