

STAR GAZERS
SG 1636 - 5M
SEPTEMBER 5-11, 2016

"UP ALL NIGHT WITH THE HARVEST MOON"

(LIKE SG 1336 OF THE SAME NAME)

JAMES: WELCOME TO STAR GAZERS. I'M JAMES ALBURY, DIRECTOR OF THE KIKA SILVA PLA PLANETARIUM IN GAINESVILLE, FLORIDA.

DEAN: AND I'M DEAN REGAS, ASTRONOMER FOR THE CINCINNATI OBSERVATORY. WE'RE HERE TO HELP YOU FIND YOUR WAY AROUND THE SKY. FRIDAY SEPTEMBER 16TH IS THE OFFICIAL NIGHT OF THE HARVEST MOON

JAMES: THAT'S RIGHT DEAN, FALL IS COMING AND I GUESS IT'S TIME TO HARVEST THE CROPS. TRADITIONALLY, THE HARVEST MOON REALLY HELPED FARMERS A LOT SINCE IT LIT UP THE SKY THE ENTIRE NIGHT. IT RISES AS THE SUN SETS, RIDES HIGH ACROSS THE SKY MOST OF THE NIGHT, AND SETS AS DAWN BREAKS.

DEAN: SO, WE'RE GOING TO FOLLOW ITS PATH ALL NIGHT AND CHECK OUT THE SKY IN EARLY EVENING, AFTER MIDNIGHT, AND JUST BEFORE DAWN. LETS GO TO THE EVENING SKY!

----STOP & DROP

JAMES: OKAY, WE HAVE OUR SKY SET FOR JUST AFTER SUNSET ON THE NIGHT OF SEPTEMBER 16 FACING EAST THE HARVEST MOON IS JUST RISING ABOVE THE HORIZON. PEOPLE OFTEN ASK ME IF THE HARVEST MOON IS BIGGER THAN OTHER MOONS...

DEAN: SOMETIMES, BUT NOT ALWAYS. THE MOON CHANGES ITS DISTANCE FROM US AND WHEN IT IS CLOSER TO US, LIKE LAST SEPTEMBER'S HARVEST MOON, WE GET TO SEE A SUPERMOON! THIS SEPTEMBER, IT WILL LOOK SLIGHTLY LARGER THAN AVERAGE BUT WILL NOT BE THE LARGEST FULL MOON OF THE YEAR. THAT WILL OCCUR ON NOVEMBER 14 AND WILL BE...READY JAMES? A...

BOTH: SUPERMOON!

JAMES: ANOTHER QUESTION WE GET A LOT IS, WHY DOES THE MOON LOOK ORANGE WHEN ITS LOW IN THE SKY LIKE THIS? IN ORDER TO REACH YOUR EYES, THE LIGHT OF THE MOON HAS TO PASS THROUGH MORE OF THE EARTH'S ATMOSPHERE. THAT EXTRA AIRS SHIFTS THE COLOR TO THE REDDISH SIDE, JUST AS IT DOES TO THE SUN AT SUNSET.

---STOP

DEAN: NOW WE HAVE OUR SKY SET TO AROUND 1AM, AND I'M GLAD I STAYED UP LATE! WHEN YOU FACE EAST, YOU GET A PREVIEW OF THE STARS OF FALL. LIKE THE V-SHAPED FACE OF TAURUS THE BULL AND JUST ABOVE IT, THE PLEIADES STAR CLUSTER, ALSO KNOWN AS THE SEVEN SISTERS.

JAMES: BUT AT THIS LATE HOUR, THE HARVEST MOON IS SO HIGH IN THE SKY, WE BETTER FLY UP THERE!

----STOP & FLY

JAMES: AT THIS POINT, IT'S ACTUALLY THE MORNING OF SEPTEMBER 17 AND THE MOON IS JUST PAST ITS FULL PHASE. BUT IT'S HARD TO TELL. IN FACT, ON THE PREVIOUS NIGHTS,

SEPTEMBER 16 AND 15, IT WAS ALMOST FULL AS WELL. SO FOR SEVERAL NIGHTS IN A ROW, THIS LUNAR BEACON WOULD SHINE DOWN ON YOUR FIELDS AND GIVE YOU ENOUGH LIGHT TO WORK BY.

DEAN: NOW THAT THE MOON IS HIGH IN THE SKY, THE REDDISH TINT IS GONE. THROUGH A TELESCOPE LIKE THIS VIEW, THE MOON IS SO BRIGHT THAT IT'S HARD TO SEE FINE DETAILS. YOU CAN SEE THE DARK AREAS, CALLED MARIA, AND RAYS EXTENDING FROM THE LARGER CRATERS, BUT IF YOU'RE GOING TO LOOK AT THE FULL MOON THROUGH A TELESCOPE, I'D RECOMMEND WEARING SUNGLASSES. IT IS BRIGHT!

----STOP

JAMES: GOOD MORNING EVERYONE. IT'S NOW 6 AM AND WE'RE FACING SOUTHEAST. ABOUT HALFWAY UP IN THE SKY YOU'LL FIND THE THREE DISTINCT STARS MARKING ORION'S BELT. DOWN TO THE LEFT IS THE REALLY BRIGHT DOG STAR, NAMED SIRIUS. AND UP AND TO THE LEFT OF THAT IS THE LITTLE DOG STAR, CALLED PROCYON.

DEAN: GETTING UP BEFORE SUNRISE LIKE THIS LETS YOU PREVIEW THE STARS OF THE COMING SEASONS. ORION, SIRIUS, AND PROCYON WILL BE THE HIGHLIGHTS OF THE WINTER EVENING, BUT FOR NOW, YOU CAN CATCH THEM IN THE EARLY MORNINGS.

JAMES: NOW LETS FACE WEST AND THE HARVEST MOON IS SINKING LOWER IN THE SKY. AS WE MOVE FORWARD TO 6:30AM, AND 7AM, THE MOON BEGINS TO TURN ORANGE AGAIN - JUST AS IT DID WHEN IT ROSE A HALF DAY AGO.

DEAN: AND BY 7:30, THE SUN WILL HAVE RISEN IN THE EAST AS THE MOON SETS IN THE WEST. SO DURING A HARVEST MOON, YOU EXPERIENCE 12 HOURS OF DAYLIGHT FROM THE SUN AND 12 HOURS OF MOONLIGHT FROM THE MOON. MY QUESTION IS, WITH ALL THIS LIGHT TO HELP THEM HARVEST, WHEN DID FARMERS SLEEP?

-----STOP & CLOSE-UP ENDING

JAMES: SO LOOK FOR THE HARVEST MOON RISING ON THE NIGHT ON SEPTEMBER 16.

DEAN: THEN STAY UP LATE TO WATCH IT LIGHT UP THE SEPTEMBER NIGHT.

JAMES: OR GET UP REALLY EARLY TO SEE IT SET AS THE SUN RISES.

BOTH: KEEP LOOKING UP!

----STOP