

STAR GAZERS

SG 15-38 –5 MINUTE

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SEPTEMBER 21-27, 2015

“THE SUPERMOON, HAR-
VEST MOON, TETRAD-
COMPLETING TOTAL LU-
NAR ECLIPSE”

JAMES: HEY THERE STAR
GAZERS. I'M JAMES ALBU-
RY, DIRECTOR OF THE KI-
KA SILVA PLA PLANETARI-
UM IN GAINESVILLE, FLOR-
IDA.

DEAN: AND, I'M DEAN RE-
GAS, ASTRONOMER FOR
THE CINCINNATI OBSER-
VATORY. WE'RE HERE TO
HELP YOU FIND YOUR WAY
AROUND THE SKY. JAMES,
I HAVE SOME UNBELIEVA-
BLY EXCITING NEWS. YOU
SHOULD PROBABLY SIT
DOWN FOR THIS.

JAMES: OKAY.

DEAN: DO YOU REMEMBER HOW WE'VE HAD A SERIES OF LUNAR ECLIPSES OVER THE PAST 18 MONTHS?

JAMES: YES, THE SO-CALLED TETRAD. FOUR TOTAL LUNAR ECLIPSES IN A ROW. AND WE'VE HAD THREE SO FAR WITH ONE MORE TO GO.

DEAN: EXACTLY, NOW THE NEXT LUNAR ECLIPSE WILL BE THIS SUNDAY NIGHT SEPTEMBER 27 AND THIS WILL BE THE FOURTH IN THE TETRAD. BUT WAIT, THERE'S MORE. IT WILL ALSO BE THE NIGHT OF THE CLOSEST AND LARGEST FULL MOON OF THE YEAR, THE... SUPERMOON!

JAMES: HOLY MOLY! AND I HAVE SOMETHING FOR YOU. YOU BETTER SIT DOWN FOR THIS.

DEAN: OKAY.

JAMES: NOT ONLY WILL
THIS ECLIPSE FALL ON
THE SUPERMOON FOR
2015 BUT IT WILL ALSO BE
THE HARVEST MOON.

DEAN: NO WAY!

JAMES: WAY.

DEAN: LET'S SHOW YOU!

(STOP DROP)

JAMES: OKAY, LET'S SET
THE SCENE FOR THE SU-
PERMOON, HARVEST
MOON, TETRAD-
COMPLETING TOTAL LU-
NAR ECLIPSE. SINCE THIS
ECLIPSE WILL BE HAPPEN-
ING ON A SUNDAY NIGHT,
WE'D LIKE YOU TO MAKE
THE MOST OF IT. FIRST
WE'RE FACING WEST TO
WATCH THE SUNSET.

DEAN: AAH, I LOVE A GOOD
SUNSET. OKAY ENOUGH

OF THAT... LET'S TURN 180 DEGREES AND FACE EAST. AHA! THERE'S THE FULL MOON RISING ON THE OTHER SIDE OF THE SKY. THAT MAKES SENSE SINCE FOR AN ECLIPSE TO OCCUR, WE NEED A FULL MOON, AND A FULL MOON OCCURS WHEN IT IS OPPOSITE OF THE SUN. SO FOR ANY FULL MOON, AS THE SUN SETS IN THE WEST, THE MOON WILL RISE IN THE EAST.

(STOP) (DEAN ALONE IN SPACE)

DEAN: I REALLY LIKE TO WATCH A MOONRISE. IF YOU TIME IT JUST RIGHT YOU CAN CATCH A HINT OF IT IN THE TREETOPS. THEN IT EMERGES VERY RED AND ORANGE IN COLOR AND LOOKS REALLY HUGE. THE FULL MOON ON SEPTEMBER 27 SHOULD LOOK A LITTLE

LARGER SINCE IT IS ALSO
A SUPERMOON! IT'LL BE
SLIGHTLY CLOSER TO US
AND THEREFORE LOOK
BIGGER. SEE IF YOU CAN
TELL.

(STOP) (BOTH BACK ON
HORIZON)

JAMES: YOU'LL START TO
SEE THE ECLIPSE AT
9:07PM EDT. SO FOR
FOLKS OUT WEST, THE
MOON WON'T BE UP IN
THE SKY AT THE BEGIN-
NING. BUT BE PATIENT
BECAUSE YOU'LL STILL
SEE THE BEST PART.

DEAN: THE SHADOW OF
THE EARTH WILL SLOWLY
CREEP ACROSS THE LU-
NAR SURFACE UNTIL TO-
TALITY. THAT'S WHEN THE
MOON IS COMPLETELY IN
THE SHADOW OF THE
EARTH AND WILL TURN AN
EERIE SHADE OF RED.

THIS WILL OCCUR FROM
10:11 UNTIL 11:23PM EDT.

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JAMES: THEN THE SHAD-
OW WILL BEGIN TO WIPE
FROM THE MOON AND IT
WILL RETURN TO A NOR-
MAL FULL MOON BY
12:27AM ON THE 28TH.

DEAN: AND THAT COULD
CAUSE SOME CONFUSION
SINCE MANY WEBSITES
CLAIM THAT THE ECLIPSE
WILL BE ON THE 28TH.
THAT IS TRUE – IF YOU
LIVE IN ENGLAND AND EU-
ROPE. BUT FOR US AMER-
ICANS, IT WILL START ON
THE NIGHT OF THE 27TH
AND SPILL OVER TO THE
NEXT MORNING.

(STOP)

DEAN: LUNAR ECLIPSES
CAN HAPPEN ABOUT EVE-
RY 177 DAYS BUT IT'S
PRETTY RARE TO HAVE
FOUR LUNAR ECLIPSES

BACK-TO-BACK-TO-BACK-
TO-BACK LIKE THIS. AND
ALL OF THEM VISIBLE IN
THE UNITED STATES. THE
FIRST LUNAR ECLIPSE IN
THE TETRAD OCCURRED
ON APRIL 15, 2014.

JAMES: THE SECOND WAS
ON OCTOBER 8, 2014

DEAN: THE THIRD WAS ON
APRIL 4, 2015.

JAMES: AND THE LAST
ONE WILL BE THIS SUNDAY
NIGHT, SEPTEMBER 27.
BUT THE NEXT TOTAL LU-
NAR ECLIPSE VISIBLE IN
THE U.S. WON'T BE UNTIL
JANUARY 31, 2018

(STOP) (JAMES ALONE IN
SPACE)

JAMES: THIS FULL MOON
WILL ALSO BE A HARVEST
MOON. THERE ARE LOTS
OF DEFINITIONS FOR THIS,
BUT THE ONE MOST WIDE-

LY USED IS THE HARVEST
MOON IS THE FULL MOON
CLOSEST TO THE FALL
EQUINOX. AND SINCE
FALL BEGINS FOR US IN
THE NORTHERN HEMI-
SPHERE ON SEPTEMBER
23RD, THIS FULL MOON FITS
THE BILL.

(STOP) (CLOSE-UP END-
ING)

JAMES: SO GET OUTSIDE
WITH YOUR FRIENDS, FAM-
ILY, NEIGHBORS AND PETS
THE NIGHT OF SUNDAY
SEPTEMBER 27.

DEAN: FINALLY A NIGHT
ECLIPSE!

JAMES: JUST FOR YOU
DEAN! HE'S NOT A MORN-
ING PERSON.

DEAN: AND START BY
WATCHING A GORGEOUS
SUNSET IN THE WEST.

JAMES: THEN TURN AND
FACE EAST TO WATCH THE
SUPERMOON, HARVEST
MOON RISE.

DEAN: AND THE LUNAR
ECLIPSE BEGINS AT
9:07PM EDT, WITH TOTALI-
TY BETWEEN 10:11 AND
11:23PM.

JAMES: AND THE FULL
MOON RETURNS TO NOR-
MAL AFTER MIDNIGHT. IT
SHOULD BE AN AMAZING
SIGHT.

BOTH: KEEP LOOKING UP!