

STAR GAZERS

SG 1537 – 5 MINUTE

1

SEPT. 14-20, 2015

“THE FALSE DAWN OF  
OMAR KHAYYAM”

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.  
IT'S NEARING THAT TIME  
OF YEAR AGAIN WHERE  
WE TALK ABOUT THE  
FALSE DAWN OF OMAR  
KHAYYAM.

DEAN: THAT'S RIGHT,  
JAMES. ALMOST A  
THOUSAND YEARS AGO,  
THE PERSIAN POET OMAR  
KHAYYAM IN HIS BOOK OF  
POETRY "THE RUBAIYAT",  
WROTE HIS MOST FAMOUS  
LINE "A JUG OF WINE, A

LOAF OF BREAD AND  
THOU BESIDE ME SINGING  
IN THE WILDERNESS." BUT  
ELSEWHERE IN "THE  
RUBAIYAT" OMAR MADE A  
POETIC ALLUSION TO A  
MYSTERIOUS "FALSE  
DAWN", WHICH CAN ONLY  
BE SEEN AT A CERTAIN  
TIME OF YEAR.

JAMES: AND THIS YEAR, AS  
WE APPROACH THE  
BEGINNING OF AUTUMN,  
THE WEEK LEADING UP TO  
SEPTEMBER 22 IS YOUR  
BEST CHANCE TO SEE IT  
FOR 2015, BECAUSE  
THERE WILL BE NO BRIGHT  
MOONLIGHT TO  
OVERPOWER THIS  
DELICATE ASTRONOMICAL  
PHENOMENON. SO, LET'S  
TAKE A TRIP OUT INTO  
SPACE AND SEE WHAT  
WE'RE TALKING ABOUT.

(STOP)

JAMES: O.K. IF WE COULD  
GO WAY OUT INTO SPACE  
AND LOOK DOWN ON OUR

SOLAR SYSTEM WITH  
SUPER HUMAN VISION WE  
WOULD NOTICE A FAINT,  
ALMOST IMPERCEPTIBLE  
VAST CLOUD EXTENDING  
OUTWARD FROM THE SUN  
IN THE PLANE OF THE  
ORBITS OF MERCURY,  
VENUS, EARTH AND  
SLIGHTLY BEYOND, AN  
ENORMOUS CLOUD OF  
COSMIC DUST.

DEAN: AND WHILE ONE  
WOULD EXPECT IT WOULD  
BE IMPOSSIBLE TO SEE  
THIS SUPER FAINT CLOUD  
FROM EARTH,  
NEVERTHELESS IN  
SEPTEMBER, WHEN THE  
PLANE OF OUR EARTH'S  
ORBIT IS ALMOST  
VERTICAL TO THE  
HORIZON, WE CAN UNDER  
THE RIGHT CONDITIONS.

JAMES: AND THOSE  
CONDITIONS REQUIRE  
THAT THERE IS NO  
MOONLIGHT OUT AND  
THAT YOU MUST BE FAR

AWAY FROM CITY LIGHTS  
BECAUSE EVEN THE  
FAINTEST MOONLIGHT OR  
URBAN LIGHTING WILL  
WIPE OUT THE  
EXTREMELY DELICATE,  
ETHEREAL GLOW OF THE  
FALSE DAWN. AS A  
GENERAL RULE IF YOU  
CAN SEE THE MILKY WAY  
FROM WHERE YOU'RE  
OBSERVING YOU'LL HAVE  
A GOOD CHANCE TO SEE  
THIS IT.

(STOP)

JAMES: TO FIND IT LOOK  
TOWARD THE EAST ABOUT  
2 HOURS BEFORE  
SUNRISE, BEFORE THE  
REAL DAWN. IT WILL LOOK  
LIKE A DIM, CONE-SHAPED  
PATCH OF LIGHT, ABOUT  
THE SAME BRIGHTNESS  
AS THE MILKY WAY. AND IT  
WILL EXTEND FROM THE  
HORIZON, ABOUT ONE-  
THIRD TO HALF WAY UP TO  
THE ZENITH. A GHOSTLY,  
FAINTLY GLOWING,

ROUNDED PYRAMID OF  
LIGHT.

5

DEAN: IF YOU NOTICE,  
THE MILKY WAY IS AT AN  
ANGLE TO THIS FAINT  
BAND OF LIGHT.

HOWEVER, THE MILKY  
WAY WILL BE THERE ALL  
NIGHT LONG WHILE 'THE  
FALSE DAWN' WILL ONLY  
APPEAR AS DAWN  
APPROACHES. AGAIN,  
THAT'S ABOUT TWO  
HOURS BEFORE SUNRISE.

JAMES: NOW, THE  
SCIENTIFIC NAME OF THIS  
PHENOMENON IS THE  
ZODIACAL LIGHT, AND IT'S  
CAUSED BY SUNLIGHT  
SCATTERING FROM ALL  
THOSE TRILLIONS AND  
TRILLIONS OF DUST  
PARTICLES WHICH MAKE  
UP THE GREAT COSMIC  
CLOUD LYING IN THE  
PLANE OF THE PLANETS,  
CLOSE TO THE SUN.

DEAN: AND WHILE YOU'RE  
OUT THERE LOOKING FOR

THE FALSE DAWN LOOK  
OVER TO THE RIGHT AND  
NOTICE THE EARLY  
MORNING RETURN OF THE  
STARS OF WINTER: ORION  
THE HUNTER, THE  
BRILLIANT STAR SIRIUS IN  
CANIS MAJOR AND THE  
TWINNS OF GEMINI, CASTOR  
AND POLLUX WHICH WILL  
GIVE YOU A GOOD IDEA OF  
WHERE THE TOP OF THIS  
CONE OF LIGHT SHOULD  
BE.

JAMES: AND IF YOU LOOK  
A BIT FARTHER TO THE  
LEFT YOU'LL BE ABLE TO  
SEE THE BIG DIPPER  
RISING IN THE  
NORTHEASTERN SKY.

(STOP)

DEAN: AND ALTHOUGH  
OMAR DIDN'T MENTION IT,  
THIS 'FALSE DAWN' ALSO  
HAS AN EVENING  
COUNTERPART THE  
'FALSE DUSK', THE  
EVENING ZODIACAL LIGHT,  
WHICH LOOKS PRETTY

MUCH THE SAME EXCEPT  
THAT IT IS VISIBLE 2  
HOURS AFTER SUNSET IN  
THE WEST IN MARCH  
WHEN THE PLANE OF OUR  
EARTH'S ORBIT IS ALSO  
ALMOST VERTICAL TO THE  
HORIZON.

JAMES: ADDITIONALLY, IF  
YOU EVER SEE A SIMILAR  
OVAL SHAPED GLOW  
DIRECTLY OVERHEAD AT  
MIDNIGHT YOU WOULD BE  
SEEING THE ZODIACAL  
LIGHT'S SISTER  
PHENOMENON CALLED  
THE GEGENSCHNORR OR  
COUNTERGLOW. I  
SOMETIMES WONDER  
WHETHER ANY POET EVER  
WROTE ABOUT THAT.

DEAN: AT ANY RATE,  
REMEMBER THAT  
SEPTEMBER IS THE  
MONTH TO SEE THE  
'FALSE DAWN' OF OMAR  
KHAYYAM, THE MORNING  
ZODIACAL LIGHT, WHICH I  
ADMIT IS VERY ELUSIVE.

JAMES: BUT ONCE YOU'VE  
FOUND IT I THINK YOU'LL  
KNOW WHY IT APPEARED  
IN POETRY CENTURIES  
BEFORE IT APPEARED IN  
SCIENTIFIC WRITINGS

DEAN: SO GET OUTSIDE  
BEFORE DAWN THE NEXT  
THIS WEEK, AND BE SURE  
YOU'RE FAR FROM CITY  
LIGHTS AND SEE IF YOU  
ARE AS INSPIRED AS AN  
ANCIENT PERSIAN POET.

BOTH: KEEP LOOKING UP!