

STAR GAZERS
SG 1706 - 5M
FEBRUARY 6-12, 2017

"VENUS MISSES MARS BY THAT MUCH" (NEW SHOW)

JAMES: HEY THERE 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. THE PLANETS OF LOVE AND WAR ARE UP IN THE EVENING SKY TONIGHT. IM TALKING VENUS AND MARS.

JAMES: THESE ARE THE TWO PLANETS THAT CAN COME CLOSEST TO THE EARTH, AND THEY HAVE A LOT IN COMMON.

DEAN: THEY'RE BOTH ROUND, ROCKY OBJECTS THAT CIRCLE RELATIVELY CLOSE TO THE SUN.

JAMES: RELATIVELY - AT LEAST COMPARED TO THE OUTER PLANETS, JUPITER, SATURN, URANUS, AND NEPTUNE. BUT WHEN YOU LOOK CLOSER AT THEM, THEY PRESENT SOME STARTLING DIFFERENCES.

DEAN: FOR INSTANCE, MARS MIGHT BE A GOOD PLACE TO PERSONALLY VISIT SOMEDAY, WHILE VENUS...WELL...YOU'D DIE PRETTY MUCH INSTANTLY ON THE SURFACE.

JAMES: AND WE HAVE SOMETHING REALLY COOL BECAUSE THIS WEEK, VENUS WILL APPEAR CLOSE TO MARS IN THE SKY, SO LET'S GO CHECK THEM OUT!

---(STOP & DROP)

DEAN: OKAY, WE HAVE OUR SKY SET TO FEBRUARY 6 AT 7:30PM FACING SOUTHWEST. YOU CAN SEE THE TWO PLANETS, VENUS AND MARS ABOUT A THIRD OF THE WAY UP IN THE SKY. BUT WHICH IS WHICH?

JAMES: ITS EASY! VENUS IS THE REALLY, REALLY, REALLY BRIGHT ONE. IT'S SUSPICIOUSLY BRIGHT. IT LOOKS LIKE A PLANE OR U.F.O. COMING IN FOR A LANDING. VENUS IS ABOUT 46 MILLION MILES FROM EARTH THIS WEEK AND GETTING CLOSER EACH NIGHT.

DEAN: MARS IS THE FAINTER, AND PERHAPS REDDER-LOOKING ONE UP AND TO THE LEFT OF VENUS. IT WAS A LOT BRIGHTER BACK IN 2016 WHEN IT WAS CLOSER TO THE EARTH. THIS WEEK IT WILL BE OVER 175 MILLION MILES AWAY AND GETTING FARTHER.

JAMES: RIGHT NOW VENUS AND MARS LOOK TO BE ABOUT 5 DEGREES APART IN THE SKY. BUT, LETS GO BACK IN TIME - BACK TO TWO MONTHS AGO - TO SEE HOW THESE TWO PLANETS LOOKED IN DECEMBER.

---(STOP)

JAMES: ITS NOW DECEMBER 6 AT 7:30PM FACING SOUTHWEST. VENUS AND MARS ARE STILL IN THE SKY BUT THEY'RE IN DIFFERENT POSITIONS. LOOK, THEY'RE MUCH MORE SEPARATED. IN FACT THEY'RE ALMOST 21 DEGREES APART.

DEAN: THIS IS WHAT MADE THE PLANETS SO FASCINATING TO THE ANCIENT STAR GAZERS. THEY SEEMED TO WANDER ACROSS THE BACKGROUND STARS. LET'S MOVE TIME FORWARD AND SEE HOW THIS PLAYS OUT.

JAMES: HERE IS DECEMBER 15TH...DECEMBER 24TH...JANUARY 2ND

DEAN: HEY LOOK! THERE'S THE WAXING CRESCENT MOON WANDERING THROUGH OUR PLANET PAIR.

JAMES: HERE'S JANUARY 11TH...JANUARY 20TH...JANUARY 29TH...AND BACK TO FEBRUARY 6TH AGAIN.

DEAN: WOW! THOSE PLANETS ARE MOVING! AND AS THE DAYS CONTINUE, VENUS WILL TURN TAIL AND HEAD AWAY FROM MARS. AND THEY WILL SPREAD OUT ONCE MORE.

----(STOP & FLY)

JAMES: WERE GOING TO VISIT VENUS FIRST. AS WE APPROACH, WE CAN SEE THAT THIS PLANET IS ABOUT 7,500 MILES IN DIAMETER - ALMOST THE SAME SIZE AS EARTH. IT'S OFTEN CALLED OUR SISTER PLANET FOR THIS VERY REASON.

DEAN: HOWEVER, THAT IS WHERE THE SIMILARITIES END BECAUSE UNDER A THICK BLANKET OF CARBON DIOXIDE CLOUDS LIES A BATTERED, SWELTERING SURFACE. ROBOTIC CRAFTS RECORDED SURFACE TEMPERATURES OF ABOUT 900 DEGREES FAHRENHEIT. ALSO THE AIR PRESSURE, UNDER ALL THESE CLOUDS, WOULD BE SO INTENSE THAT THEY'D SQUISH YOU FLAT.

JAMES: I DON'T FEEL SO GOOD...

DEAN: AND FINALLY WHEN IT RAINS ON VENUS...

JAMES: OH NO...

DEAN: IT RAINS SULFURIC ACID. SO THAT WOULD LEAVE ANY VISITOR TO VENUS, LIKE JAMES OVER THERE, A MELTED, SQUISHED, ACIDY PILE OF GOOP.

JAMES: OKAY, I THINK WE'VE SHOWED THEM ENOUGH FROM VENUS. WHAT DO YOU SAY WE GO TO MARS?

DEAN: GREAT IDEA!

---(STOP & FLY)

JAMES: MARS IS A MUCH SMALLER PLANET - ONLY ABOUT 4,200 MILES WIDE. IT'S MUCH FARTHER FROM THE SUN SO IT'S A LOT COLDER.

DEAN: ALTHOUGH OUR ROBOTIC VISITORS TO MARS HAVE OCCASIONALLY RECORDED SURFACE TEMPERATURES IN THE 70S, MOST OF THE TIME, IT'S WELL BELOW ZERO. AND AT NIGHT, OH MAN WATCH OUT, IT CAN DROP TO MINUS SEVENTY.

JAMES: STILL, OUT OF THE TWO PLANETS, MARS IS THE BETTER PLACE FOR HUMANS TO GO VISIT. AND SOMEDAY WE MAY EVEN ESTABLISH A COLONY ON MARS.

----(STOP) - CLOSE-UP ENDING

DEAN: SO THIS WEEK LOOK FOR BRILLIANT VENUS NEAR RUBY-RED MARS IN THE EVENING SKY. THEY WON'T APPEAR ANY CLOSER THAN THIS UNTIL SEPTEMBER AND OCTOBER.

JAMES: WHEN YOU LOOK UP AND SEE THEM, YOU CAN IMAGINE FLYING THERE AND
STANDING ON THE BROILING SURFACE OF VENUS...

DEAN: OR BEING THE FIRST PERSON ON MARS AND COLONIZING AN ENTIRE PLANET. IT'S ALL
THERE WHEN YOU...

BOTH: KEEP LOOKING UP!

---(STOP)