“HOUSTON, STATION ON SPACE TO GROUND.”

WELCOME TO SPACE TO GROUND, I’M CHELSLEY BALLARTE. ON THE SPACE STATION, ASTRONAUTS EXPECT A DELIVERY OF NOT ONE, BUT TWO CARGO SPACECRAFTS THIS WEEK.

“AND LIFTOFF, LIFTOFF OF PROGRESS 80.”

LOVE WAS NOT THE ONLY THING IN THE AIR ON FEBRUARY 14 WHEN A RUSSIAN CARGO SPACECRAFT LAUNCHED TO THE SPACE STATION FROM THE BAIKONUR COSMODROME IN KAZAKHSTAN AT 11:25 P.M. EASTERN. PROGRESS 80 DOCKED TO THE SPACE STATION THREE DAYS LATER DELIVERING FOOD, FUEL, AND SUPPLIES TO THE CREW.

SPEAKING OF VALENTINE’S DAY, THE ASTRONAUTS ABOARD THE SPACE STATION MAY HAVE SPENT THE HOLIDAY AWAY FROM THEIR LOVED ONES ON EARTH, BUT STILL MADE THE MOST OF THE DAY WITH THEIR CREWMMATES.

ASTRONAUT KAYLA POSTED THIS PHOTO SHE TOOK FROM THE SPACE STATION, WISHING EVERYONE ON THE PLANET A HAPPY VALENTINE’S DAY FROM OFF THE PLANET.

A SECOND CARGO SPACECRAFT IS MAKING ITS WAY TO THE INTERNATIONAL SPACE STATION LATER THIS WEEK TOO, CARRYING SCIENTIFIC EXPERIMENTS THAT WILL GIVE RESEARCHERS A BETTER LOOK AT PLANT ROOT GROWTH AND CANCER CELL GROWTH.

GROWING PLANTS IN SPACE INVOLVES USING SOIL, WHICH CAN BE HEAVY AND REQUIRE A LOT OF MAINTENANCE. ONE EXPERIMENT LAUNCHING ON NORTHROP GRUMMAN’S 17TH RESUPPLY MISSION HOPES TO CHANGE THAT. THE X-ROOTS EXPERIMENT IS LOOKING TO USE HYDROPONIC, OR WATER-BASED, OR AEROPONIC, AIR-BASED, TECHNIQUES TO REDUCE MASS. IT WILL ALLOW ASTRONAUTS AND RESEARCHERS THE ABILITY TO WATCH THE ROOTS AS THEY GROW.

ANOTHER EXPERIMENT LAUNCHING IS CALLED THE MICRO-QUIN 3-D EXPERIMENT. IT WILL LOOK AT THE EFFECTS OF A DRUG ON BREAST AND PROSTATE CANCER CELLS. THEY’LL BE USING THE MICROGRAVITY ENVIRONMENT TO GROW THE CELLS IN A 3-D MODEL, ALLOWING RESEARCHERS TO GET A BETTER LOOK.

THE MICRO-QUIN 3-D EXPERIMENT HOPES TO MAKE RESEARCHERS SMARTER ABOUT DISEASE PROGRESSION AND DRUG RESISTANCE, SO ONE DAY WE MIGHT SEE NEW TREATMENTS FOR CANCER PATIENTS ON EARTH THAT ARE MORE EFFECTIVE AND HAVE BETTER PATIENT OUTCOMES.

CYGNUS IS EXPECTED TO LAUNCH WITH THESE EXPERIMENTS AND MORE SHORTLY AFTER NOON ON SATURDAY, FEBRUARY 19. THE SPACECRAFT WILL LIFTOFF FROM NASA’S WALLOPS FLIGHT FACILITY IN VIRGINIA ATOP A NORTHROP GRUMMAN ANTARES ROCKET. IT’LL ARRIVE AT THE SPACE STATION TWO DAYS LATER ON MONDAY, FEBRUARY 21. COVERAGE OF THE RENDEZVOUS AND CAPTURE BEGINS AT 3 A.M. EASTERN, WITH INSTALLATION COVERAGE AT 6 A.M. YOU CAN CATCH ALL OF THESE EVENTS LIVE ON NASA TV, NASA.GOV, OR ON YOUR NASA APP.
THIS CYGNUS IS DUBBED THE S.S. PIERS SELLERS, A NOD TO THE LATE NASA
ASTRONAUT WHO PLAYED A VITAL ROLE IN THE ASSEMBLY OF THE SPACE STATION,
AND A CHAMPION OF EARTH SCIENCE AT NASA DURING HIS CAREER.

YOU CAN KEEP UP WITH ALL OF THESE EXPERIMENTS AND MORE BY FOLLOWING US
ON TWITTER @ISS_RESEARCH. THAT’S ALL FOR TODAY ON SPACE TO GROUND.
WE’LL SEE YOU NEXT WEEK.