

Huntsville Retirees Gazette



Huntsville Chapter TRA • The Retirees Association • Second Tuesday • 11:30 • Red Lobster

February 2020

Attention Lunch bunchers, join us this Tuesday, Feb 11, 11:30, food and service is great at Red Lobster but with friends is even better. If you have not had lunch in a while this can be rewarding, eating any lunch. Lunch with this nice group, doubly so.

The TRA (LA based) NoName Gazette newsletter again requesting a small article-paragraph and Tom Turner will be featured as an inspiration to some on his recent recovery. The main Gazette has a circulation of about 2000.

NORTHROP-GRUMMAN MILESTONES

James Webb Space Telescope. Many will remember the TRW proposal to provide a much larger (than Hubble) space telescope that then won the competition in **2003**. Nearly completed at Space Park, it is now scheduled to launch on March 30 2021 (from French Guiana). Its post launch will be quite complex requiring a complex fold-out of apparatus and then its positioning to a specific spot a million miles out from Earth, four times further out than the moon. The Webb will orbit the sun not Earth well away from view blockages for much longer viewing schedules than Hubble which orbits closely to Earth.

Recent digital ground and space telescopes like the Webb now use multiple mirrors not just one for much better combined optical power. It is now possible to combine these separate images for much greater resolution using digital technology. This telescope has an array of 18 gold plated mirrors totaling about 21 feet in overall diameter. A very large sun shield (66x46 ft) is used on the sun side to greatly reduce the telescope's temperature so it can accurately observe redshift effects maintaining its instrument temperature at -370 F.

The new Webb will reside one million miles out from the earth in a solar orbit, but held somewhat in place to orbit aligned with earth instead of orbiting slower, positioned by occasional jet boosts within a gravitational "dimple" or interference spot between earth's and sun's gravity waves that occur around planets called Lagrangian Points in this case "L2." This locating permits a hugely larger viewing time, and far less view blockage from the Earth and Moon.

By comparison although Webb will orbit a million miles from Earth, the orbit paths of Mars and Mercury are 49 and 57 million miles from Earth however the closest planet to Earth most of the time is..... Mercury! While further out planets orbit much slower per Kepler's laws, the Webb will oddly orbit at L2 faster than Earth, keeping in line with Earth and Sun at all times for continued communications and access by astronomers at their computer screens.

As with Hubble, Webb captures human-visible light but Webb also sees down into the infra-red range. Because of its much, much greater size and better viewing conditions it will observe much further toward the edge of the universe seen nearer the beginning of time, as well as into our outer Solar System (Kuiper Belt) for many likely discoveries.

TRIP REPORT

Just returned from the new civil rights complex of museums also dealing with lynchings, at Montgomery. This is extremely well done, thoughtful and certainly worth a visit. You visit first

the main ticket area and memorial, and a buss takes you to another nearby museum not quite co-located but all are amazing. One might return to Birmingham via the Pettus freedom bridge in charming Selma worth a look. We also visited New Orleans saw one (crazy fun) Krewe parade, revisited the wonderful WW2 Museum, then to Mobile, itself a hoot and don't miss its Mardi Gras museum. Mobile was capital of Louisiana before New Orleans was founded 301 years ago, and was the originator of the Mardi Gras also still going strong (and right now). Lots to see in Mobile, where Airbus 340 airliners are built in the former unused Northrop Grumman tanker plane facility. Let us know about your trip(s) coming up, as the travel season begins soon.

FACTOIDS

The next new moon & Mars manned rocket – SLS, now *Artemis*, formerly called Apollo II, is being constructed under the leadership of NASA Marshall at Huntsville, manufactured mainly at Marshall-owned Michoud (*me shoe*) giant facility at New Orleans then tested at Marshall's Stennis NASA center in MS (very near NOLA) and at Marshall Space Center in Huntsville. These giant parts are delivered via waterways as Huntsville is a deep water shipping port, who knew? I believe 12 giant rockets are under construction with some completed very giant assemblies already at Huntsville being tested. The Artemis models are shown at the Space Center, free entry at the Thursday night Biergarten hall dinners that begin in March. New Orleans oddly has ports on both the Mississippi River and on the Gulf of Mexico below the river. Huntsville's river port is 600 feet above sea level. But it all works.

SPACE LAB EXHIBIT

Finally. The *Space Lab*, a Shuttle lab insert that many worked on for many years, is apparently slated to be added to the Space and Rocket Center soon not sure the date. Checking...

See you Tuesday!