you

the moon it's our closest celestial neighbor and yet more than 40 years after astronauts first set foot on the lunar surface there are still many mysteries to solve NASA's twin Gravity Recovery and interior laboratory spacecraft known collectively as Grail are ready for their lunar assignment the spacecraft will look at the moon's gravitational field to determine the structure of the lunar interior from crust to core scientists hope what they learn from Grails mission will advance
understanding of the thermal evolution

Delta two rocket that will launch the
Grail spacecraft began to take shape at

Cape Canaveral Air Force stations launch

complex 17b in April the Rocket's first

stage arrived at the pad on April 7th

and was lifted into place later in the

month the nine solid fuel boosters were

delivered to the launch complex and

attached to the Rocket's first stage

workers transported the Rocket's second

stage to the pad in May and hoisted it

atop the first-stage booster may also
mark the arrival of the Air Force c-17 cargo plane carrying the Grail spacecraft the plane ferried the spacecraft from Lockheed Martin's Denver plant where it was built to Florida where it would undergo its pre-launch processing after it was unloaded at the shuttle landing facility at NASA's Kennedy Space Center Grail was transported to the Astro tech payload processing facility in nearby Titusville once inside the processing facility the spacecraft was uncrated before technicians attached and tested the
solar panels the electrical power

44
00:01:54,280 --> 00:01:59,079
subsystem on each of Grail's twin spacecraft includes two solar arrays and

45
00:01:56,290 --> 00:02:03,910
a lithium-ion battery each solar array is capable of producing no less than 700 watts shortly after Grail separates from the rocket the arrays will be deployed

46
00:01:59,079 --> 00:02:06,879
00:02:03,909 --> 00:02:10,569
00:02:06,879 --> 00:02:12,490
00:02:10,569 --> 00:02:14,139
00:02:12,490 --> 00:02:17,740
00:02:14,139 --> 00:02:19,959
00:02:17,740 --> 00:02:23,080
00:02:19,960 --> 00:02:26,590
00:02:23,080 --> 00:02:28,780
00:02:26,590 --> 00:02:30,670
00:02:28,780 --> 00:02:33,000
00:02:30,669 --> 00:02:35,979

the next step for the processing team was to move the spacecraft in late july to astro tax hazardous processing facility for fueling with the scheduled launch just a month away the twin spacecraft were weighed before they were stacked in their launch configuration
once attached to the spacecraft adapter

ring in there side by side launch

position Grail was placed in a protective canister for transport to the launch pad on August eighteenth the spacecraft arrived at the launch pad and was lifted atop the Delta two rocket technicians secured the clam shell shaped payload fairing around the spacecraft on August the 24th the fairing which will be jettisoned once the spacecraft is outside the Earth's atmosphere will protect the spacecraft during its ascent into space the rocket
and spacecraft stand ready at the launch pad set to begin the journey to further unlock the secrets of our mysterious moon.