Oh

hi and welcome to another exciting year

of space shuttle launches as we continue

construction of the International Space Station I'm your host Damon Talley with

NASA's Digital Learning Network have you

ever wondered how the massive space station segments are prepared and packed

for their trip in the space well we're going to show you the huge facility at

Kennedy Space Center where all the final checkouts and preparations take place

we'll also learn about the segment set

the flyboard discovery on the STS 119
mission then one reduce you to the crew

set to carry out the mission before I

join the payload manager inside Kennedy

Space Station processing facility let's learn a little more about this unique

building the space station processing

facility is in the Kennedy Space Center

industrial area built to handle the

final processing of space station

components it was completed in 1994 the

three-story facility has 450 7,000 square feet of space the building

includes to processing base and airlock

operational control rooms laboratories

logistics areas office space and a cafeteria as the last stop on earth for each space station segment of module this is where teams of technicians carry out the final preparation inspection and testing international partners like European Space Agency and Japan aerospace exploration agency send teams of technicians to prepare their modules in the facility the processing facility also is where astronauts get final hands-on experience with Hardware they will later install on the station during their missions and here we are in the
high bay the space station processing

44
00:01:45,310 --> 00:01:49,930
facility this place is huge it has eight

45
00:01:47,769 --> 00:01:52,000
footprints or separate locations for the

46
00:01:49,930 --> 00:01:53,350
various segments to be processed right

47
00:01:52,000 --> 00:01:55,239
now technicians are working on the

48
00:01:53,349 --> 00:01:58,059
external component of the Japanese Kibo

49
00:01:55,239 --> 00:02:00,459
module the cupola module and node three

50
00:01:58,060 --> 00:02:02,019
set to arrive soon here we also have all

51
00:02:00,459 --> 00:02:03,909
three the multi-purpose Logistics

52
00:02:02,019 --> 00:02:05,799
modules used to carry supplies to the

53
00:02:03,909 --> 00:02:07,509
station and down at that end is where

54
00:02:05,799 --> 00:02:10,468
they bring in the large canister to

55
00:02:07,510 --> 00:02:13,390
transfer the segments to the launchpad

56
00:02:10,468 --> 00:02:15,669
joining me is Robbie Ashley manager for

57
00:02:13,389 --> 00:02:17,059
this missions payload Robbie tell us how
the STS 119

s6 or starboard 6 payload was processed

here okay it's my pleasure to be here at
damen s6 arrived in with two pieces

actually back in december 2002 there was

the integrated equipment assembly and a

long spacer after completing

installation of all of the electronics

boxes we did a quick functional check

out just to make a make sure everything

was functioning properly and then we

integrated the two elements the long

spacer to the iea or integrated

equipment assembly back in September of
2003 when the processing is finished how

is the segment loaded and transported to

the launch pad well we have a payload

canister which is basically it's built
to the dimensions of the orbiters

payload bay and it rides on a

crawler-transporter we lift it out of

its work stand translated down the

length of the high bay and install it in

the payload canister we install the

payload vertically at the launch pad and

once we get out to the launch pad the

payload canister is hoisted up to the

195 foot level where we have a payload
clean room or it's referred to as a
payload change-out room we install the
payload into the payload change-out room
where it awaits the arrival of the
shuttle and that's where the s6 is now
tucked inside the payload bay of the
space shuttle Discovery as it stands
ready just a few miles from here on
launch pad 39a now we'd like to meet
discoveries crew members who will
install the s6 trust
when discoveries astronauts are finished
with the STS 119 mission they will leave
the space station with the ability to
generate enough power to support a crew

and install the s6 the final truss segment with its set of solar arrays

attached performing for spacewalks during the mission led by commander Li

are Shambo the crew members are pilot

tony antonelli mission specialists

joseph aqaba John Phillips Steve Swanson

Richard ro and co e chief wakara from

the Japanese aerospace exploration

agency while kata will stay aboard the station at the end of the mission and

current station resident sandy Magnus

will return to Earth aboard discovery
the spacewalkers will have their work cut out for them since the S6 must be installed at the farthest end to the right or starboard side of the station. That means the station's robotic arm must extend its reach about as far as it will go leaving little room to maneuver once the segment is attached the 2

foot solar wings will be carefully unfolded mission specialist John Phillips is charged with that critical task Phillips previously lived and worked aboard the space station as science officer and flight engineer for
the expedition 11 crew he describes a teamwork involved in the deployment of the solar wings and we've got the entire shuttle crew work on this we got 12 TV monitors up looking at different views we all one guy on the show all six guys on the station and and it's a big team effort when we unfold these arrays they're coming out of the boxes in there and they're pleated together and the pleats are flattening as they come out of the boxes with plenty of troubleshooting time built into the mission the teams on earth and in space
will breathe a collective sigh of relief

when the arrays are fully extended at

discovery and crew to part the station

at the end of their 14-day mission they

will be able to give us all the first

look at the station with the full

expanse of its superstructure in solar

wings in place

well the payload is ready the crew is

ready and the space shuttle Discovery is

poised for liftoff live coverage begins

about 5 hours before liftoff on NASA TV

and on NASA's launch blog that's at www

a gov / shuttle you can also join me for
a live interactive web cast beginning

00:06:03,569 --> 00:06:08,249
one hour before the launch and even

00:06:05,309 --> 00:06:11,159
submit questions via email at d ln nasa

00:06:08,249 --> 00:06:14,270
gov I'm Damon Talley thanks for joining

00:06:11,158 --> 00:06:14,269
us and go discovery

00:06:15,389 --> 00:06:17,449
you