launch command issued for ignition

second umbilical tower separate the

second umbilical Tower has retracted you

can see the engines firing now going up

to flight speed and liftoff Shan

Kimbrough sergey bezrukov and andrey

borisenko blasting off from kazakhstan

making their way towards the International Space Station

and eken getting good calls from the team down in Baikonur everything looking

team down in Baikonur everything looking

nominal or normal throughout the flight

so far the first stage of the Soyuz

delivering delivering nine hundred
thirty thousand pounds of thrust in those four strap-on boosters and single core engine banking right things looking fairly calm inside for the crew members which are now rocketing over the Kazakh steppe the first stage measuring sixty-eight feet in length and 24 feet in diameter it's going to be burning that liquid fuel for the first two minutes and six seconds of the flight 70 seconds already 70 seconds into the flight velocity the craft now over 1,100 miles per hour the next major milestone will be the jettison of the escape tower
that coming at about 114 seconds

again you're continuing to get live views inside of the cabin of the Soyuz

spacecraft already well in excess of 1,000 miles an hour rocketing towards

space operating one minute 45 seconds

since liftoff continuing to get good performance calls from the ground

engines in the launch bunker all of the different parameters on this Soyuz

rocket continuing to look nominal or normal first page separation and so the first stage those four strap-on boosters

at this point have been jettisoned

at 00:02:27,210
completing their job and dropping away

00:02:29,469 --> 00:02:34,960
the Soyuz already at an altitude of

00:02:32,319 --> 00:02:39,539
about 28 statute miles traveling in

00:02:34,960 --> 00:02:43,330
excess of 3,000 350 miles per hour

00:02:39,539 --> 00:02:48,310
again the core stage or the second stage

00:02:43,330 --> 00:02:50,440
is going to continue to burn getting

00:02:48,310 --> 00:02:52,360
confirmation the launch shroud has been

00:02:50,439 --> 00:02:54,609
jettison that protective shroud around

00:02:52,360 --> 00:02:56,410
the Soyuz spacecraft so the spacecraft

00:02:54,610 --> 00:02:59,190
itself you can see some light coming in

00:02:56,409 --> 00:03:03,430
the window just over borisenko 's head

00:02:59,189 --> 00:03:10,359
shroud so the Soyuz now exposed the

00:03:03,430 --> 00:03:13,780
second phase continuing to fire 170

00:03:10,360 --> 00:03:15,100
second and second stage thruster is

00:03:13,780 --> 00:03:18,400
operating nominally
and the crew is feeling good everything

looking good with the second stage as we

cross the 3-minute mark Soyuz now

traveling at a speed of about 4,700 miles per hour in the core stage

performing as expected it's 56 feet in length 13 and a half feet in diameter

that single engine with four fuel chambers providing between 178 thousand and two hundred twenty two thousand pounds of thrust depending on where

they're at in the Earth's atmosphere

getting away from Shane Canberra there

on the right seat making his first light
into space on this Soyuz spacecraft

second stage one who continue to burn

until the four minute

forty-three second mark at that point

they're going to do what's known as a

hot stage where the third stage will

ignite while the second still burning

this is why the Soyuz has that small

open grading area in between the second

and the third stage just past four

minutes into the flight now continuing

to get good calls everything looking

normal with this asset again the whole

process today going to take about eight
minutes 45 seconds from that liftoff

until so uses in its initial orbit two

hundred and fifty seconds and why they

are nominal and everything nominal on

board and the crew is feeling good

standing by shortly for the ignition of

the third stage and the jettison of the

second

and with that the third stage ignition

confirmed the core booster now separated

in an altitude of over 105 statute miles

so that third stage single engine now

providing 67,000 pounds of thrust

burning for four minutes and two seconds
is going to deliver the Soyuz into its

initial orbit the crew is feeling good

three hundred thirty seconds and third

stage thruster is operating nominally

everything nominal onboard the crew is

feeling good copy three hundred fifty

seconds nominal flight everything

nominal onboard the crew is feeling good

and it's already been over six and a

half minutes since liftoff which

happened right on time at 3:05 a.m.

Central time 2:05 p.m. over in Baikonur

everything with the rocket has gone

flawlessly so far the first stage

separating on time the second stage
separating as well now powered by that
single third stage engine this is going to continue to burn until about the eighth minute 45 second marks about a minute and forty seconds from now then once the third stage delivers to Soyuz into its initial orbit the module separates it will execute all those pre-programmed commands to prepare for all of its on-orbit operations extending the solar arrays and all the necessary navigation and communication antennas the crew is feeling good we copy 400 60 seconds all parameters are normal and
the crew is feeling good and everything

nominal onboard copy 490 seconds press

the operation stable the crew is feeling

good everything nominal 510 seconds

five hundred and twenty seconds seeing

the tell-tale jolt and getting

confirmation the third stage has

separated Soyuz now flying free already

getting confirmation the solar arrays

have deployed sounding like the

navigation antennas as well getting

confirmation from the visiting vehicle

officer here in Houston the solar arrays

and all antennas now deployed Soyuz
ready for on-orbit operations 11:50

11:40 well different right now the

spacecraft orbiting at an altitude of

about 143 miles by 118 this orbit going

to be raised systematically over the

course of the next two days as they

begin to chase down the International

Space Station but for now three crew

members safely in orbit a flawless ride

uphill and a Soyuz spacecraft ready for

operations