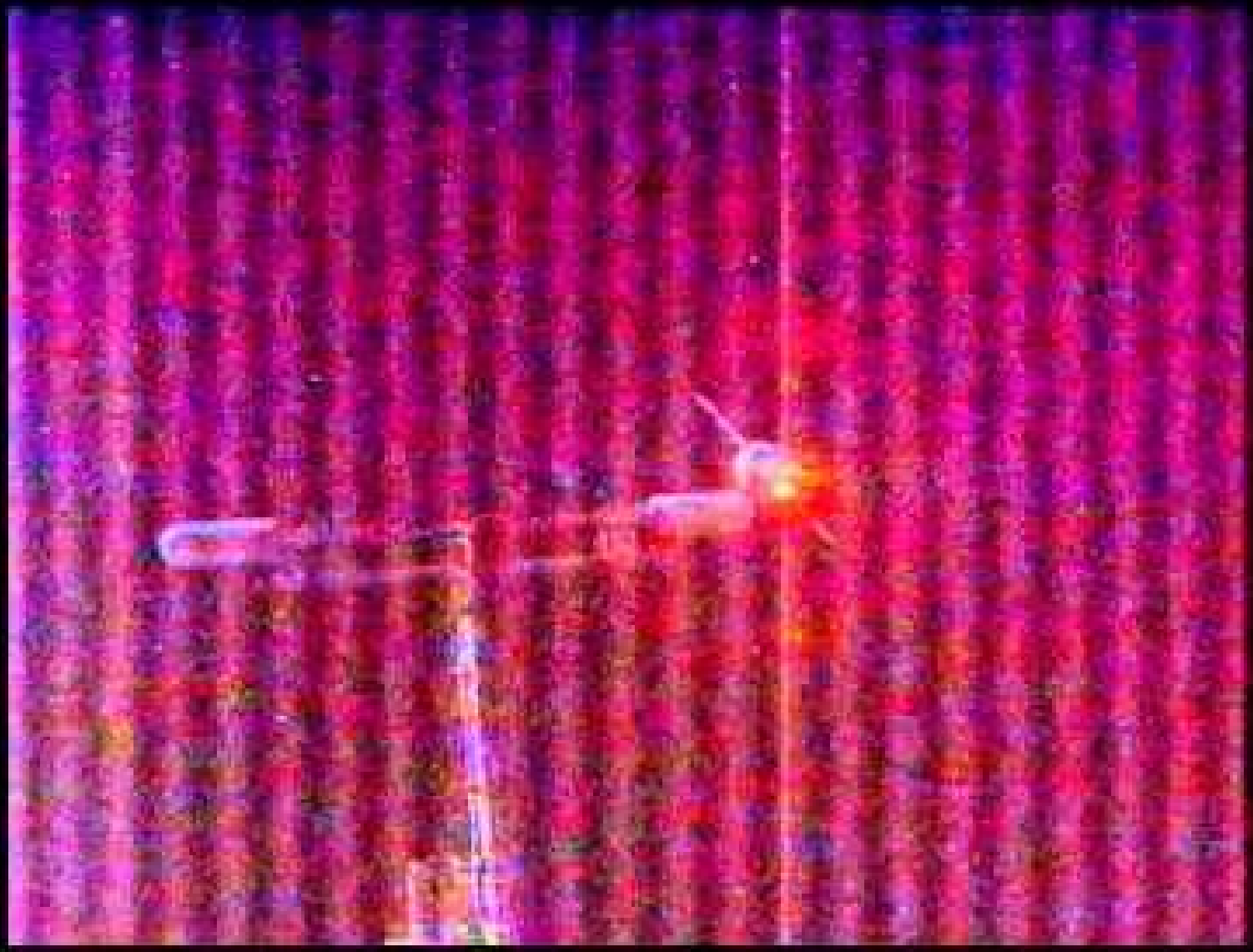

1
00:00:04,309 --> 00:00:02,869
and there's a view of the international

2
00:00:07,269 --> 00:00:04,319
space station from the forward

3
00:00:09,669 --> 00:00:07,279
engineering camera on the soyuz tma-20

4
00:00:12,070 --> 00:00:09,679
looking at the complex it will of course

5
00:00:14,470 --> 00:00:12,080
come closer and closer upon the final

6
00:00:16,470 --> 00:00:14,480
approach of the soyuz for docking

7
00:00:19,429 --> 00:00:16,480
now just two kilometers separating the

8
00:00:21,750 --> 00:00:19,439
soyuz from its home for the next five

9
00:00:23,189 --> 00:00:21,760
months plus

10
00:00:24,710 --> 00:00:23,199
an excellent view right now from

11
00:00:26,950 --> 00:00:24,720
external cameras on the international

12
00:00:30,950 --> 00:00:26,960
space station as you look at the soyuz

13
00:00:32,630 --> 00:00:30,960

tma-20 with its three crew members

14
00:00:34,950 --> 00:00:32,640
gandrafiev in the center seat of the

15
00:00:36,549 --> 00:00:34,960
descent module to his left palo nespoli

16
00:00:41,350 --> 00:00:36,559
of the european space agency on

17
00:00:46,470 --> 00:00:43,670
uh for initiation of final approach at

18
00:00:48,229 --> 00:00:46,480
twenty three zero three

19
00:00:50,389 --> 00:00:48,239
copy

20
00:00:52,869 --> 00:00:50,399
we have your goal to

21
00:00:55,590 --> 00:00:52,879
send command to initiate final approach

22
00:01:00,310 --> 00:00:55,600
at twenty three zero three

23
00:01:03,189 --> 00:01:01,670
and final approach now has been

24
00:01:05,429 --> 00:01:03,199
initiated

25
00:01:08,310 --> 00:01:05,439
this should take about nine minutes

26
00:01:10,630 --> 00:01:08,320
perhaps a minute or so less we'll see

27
00:01:12,710 --> 00:01:10,640
as you can clearly see against the

28
00:01:14,789 --> 00:01:12,720
approaching orbital sunset the thruster

29
00:01:16,950 --> 00:01:14,799
firings on the soyuz vehicle from

30
00:01:18,950 --> 00:01:16,960
multiple thrusters on the various axes

31
00:01:20,870 --> 00:01:18,960
of the spacecraft from the

32
00:01:23,350 --> 00:01:20,880
instrumentation and propulsion module at

33
00:01:26,789 --> 00:01:23,360
the base of the soyuz spacecraft

34
00:01:28,950 --> 00:01:26,799
as uh conjotif monitors fuel consumption

35
00:01:31,190 --> 00:01:28,960
and all of his systems

36
00:01:34,149 --> 00:01:31,200
the soyuz now 140 meters away from

37
00:01:37,030 --> 00:01:34,159
contact and capture range and

38
00:01:37,040 --> 00:01:45,910

from time to time

39
00:01:48,710 --> 00:01:46,789
the

40
00:01:51,590 --> 00:01:48,720
range is 80.

41
00:01:52,870 --> 00:01:51,600
and nominal range rate copy

42
00:02:03,830 --> 00:01:52,880
based on your visual assessment the

43
00:02:03,840 --> 00:02:10,150
sunset

44
00:02:13,589 --> 00:02:12,309
uh what's your visual on the station and

45
00:02:15,270 --> 00:02:13,599
the target

46
00:02:18,550 --> 00:02:15,280
we have a good visual

47
00:02:27,270 --> 00:02:18,560
uh on the target and the station

48
00:02:30,630 --> 00:02:28,630
the soyuz

49
00:02:32,630 --> 00:02:30,640
and the international space station just

50
00:02:51,589 --> 00:02:32,640
30 meters apart crossing the west coast

51
00:02:51,599 --> 00:03:17,030
so

52
00:03:23,670 --> 00:03:21,190
at 11 11 pm moscow time 2 11 pm central

53
00:03:26,149 --> 00:03:23,680
time over the southwest corner of the

54
00:03:28,869 --> 00:03:26,159
republic of mali in western africa

55
00:03:30,630 --> 00:03:28,879
docking occurring at an altitude of 224

56
00:03:32,470 --> 00:03:30,640
statute miles

57
00:03:34,710 --> 00:03:32,480
a multinational crew has arrived at the