



1
00:00:08,290 --> 00:00:06,490
when they say it takes a village and

2
00:00:10,360 --> 00:00:08,300
that's definitely the case with so many

3
00:00:11,860 --> 00:00:10,370
researchers with experiments on the

4
00:00:14,289 --> 00:00:11,870
space station a station research

5
00:00:15,960 --> 00:00:14,299
facility has begun conducting the fourth

6
00:00:18,940 --> 00:00:15,970
in a series of experiments to study

7
00:00:21,790 --> 00:00:18,950
plasma crystals now pk4 is an experiment

8
00:00:24,520 --> 00:00:21,800
that studies complex plasmas plasmas are

9
00:00:26,110 --> 00:00:24,530
ionized gases that are produced by high

10
00:00:28,090 --> 00:00:26,120
temperatures like from the Sun or

11
00:00:30,430 --> 00:00:28,100
electric fields well today we learn

12
00:00:32,440 --> 00:00:30,440
about PK fours objectives and how

13
00:00:35,650 --> 00:00:32,450

operators at the catalyst control center

14

00:00:38,440 --> 00:00:35,660

in France are helping be careful it's

15

00:00:41,380 --> 00:00:38,450

ten for plasma crystal foo and it's

16

00:00:44,200 --> 00:00:41,390

basically a chamber to create plasma and

17

00:00:46,510 --> 00:00:44,210

the microgravity and what is really

18

00:00:48,730 --> 00:00:46,520

interesting is that it's the cooperation

19

00:00:51,729 --> 00:00:48,740

between either and Rocco's mas in Russia

20

00:00:54,040 --> 00:00:51,739

and it will be done in the European

21

00:00:56,920 --> 00:00:54,050

module Columbus the other particularity

22

00:01:00,250 --> 00:00:56,930

it's at it's not an experiment with one

23

00:01:03,910 --> 00:01:00,260

scientist it's a laboratory and the

24

00:01:06,940 --> 00:01:03,920

experiment are led by a consortium of

25

00:01:08,770 --> 00:01:06,950

scientists for from entire Europe and

26

00:01:11,520 --> 00:01:08,780

also from Russia so it's a good

27

00:01:14,920 --> 00:01:11,530

cooperation and from from NASA of course

28

00:01:16,870 --> 00:01:14,930

from united states and these people are

29

00:01:19,450 --> 00:01:16,880

walking all together and they have some

30

00:01:22,600 --> 00:01:19,460

slots or some campaigns approximately

31

00:01:26,110 --> 00:01:22,610

four times a year where they can design

32

00:01:28,810 --> 00:01:26,120

a custom scientific protocol uploaded on

33

00:01:32,310 --> 00:01:28,820

board in this laboratory and steady hot

34

00:01:36,330 --> 00:01:32,320

plasma can react until microgravity and

35

00:01:40,660 --> 00:01:36,340

manipulate all these plasma and physical

36

00:01:42,609 --> 00:01:40,670

parameters to get very good science we

37

00:01:45,340 --> 00:01:42,619

are only uploading a script via our

38

00:01:47,230 --> 00:01:45,350

facility in Cadmus so how does that work

39

00:01:50,109 --> 00:01:47,240

the scientists their work on a

40

00:01:52,840 --> 00:01:50,119

scientific script so some programming

41

00:01:54,520 --> 00:01:52,850

and we upload it on board few days

42

00:01:56,950 --> 00:01:54,530

before the experiment and everything is

43

00:02:00,340 --> 00:01:56,960

done from ground scientific sit next to

44

00:02:02,950 --> 00:02:00,350

us and can say okay put more DC voltage

45

00:02:05,320 --> 00:02:02,960

and we do that and we can see the plasma

46

00:02:10,209 --> 00:02:05,330

moving in real time don't know if it's

47

00:02:12,399 --> 00:02:10,219

clear first of its kind study our for

48

00:02:14,170 --> 00:02:12,409

plasma not because it's bless my crystal

49

00:02:16,059 --> 00:02:14,180

for so I let you guys

50

00:02:18,880 --> 00:02:16,069

well bless my crystal ball on Tuesday

51
00:02:21,099 --> 00:02:18,890
but I think it's the first time that we

52
00:02:22,679 --> 00:02:21,109
have a cooperation with so many partners

53
00:02:25,059 --> 00:02:22,689
usually it was more on Russian side

54
00:02:26,500 --> 00:02:25,069
what's it like to know that you're

55
00:02:29,349 --> 00:02:26,510
working with the international space

56
00:02:31,030 --> 00:02:29,359
station it's great it's a big Hana I'm

57
00:02:32,830 --> 00:02:31,040
very happy and this kind of event

58
00:02:35,530 --> 00:02:32,840
reminds me that it's really an

59
00:02:39,629 --> 00:02:35,540
international cooperation so I'm feeling

60
00:02:42,039 --> 00:02:39,639
really proud of it and had lots of

61
00:02:46,210 --> 00:02:42,049
happiness to work with international

62
00:02:49,000 --> 00:02:46,220
space station what do you actually do my

63
00:02:51,039 --> 00:02:49,010

job is to help the European scientists

64

00:02:53,770 --> 00:02:51,049

or for international collaboration

65

00:02:56,259 --> 00:02:53,780

international scientists to have them

66

00:02:59,530 --> 00:02:56,269

experiment realized on board so

67

00:03:02,199 --> 00:02:59,540

basically I walk with them to elaborate

68

00:03:04,449 --> 00:03:02,209

to experiment concepts and sometimes we

69

00:03:06,879 --> 00:03:04,459

develop some hardware we qualified from

70

00:03:09,459 --> 00:03:06,889

our dwell for space we develop all the

71

00:03:11,379 --> 00:03:09,469

operational scenario and products to

72

00:03:13,869 --> 00:03:11,389

have this experiment done on board and

73

00:03:16,149 --> 00:03:13,879

then on the big day we are supporting

74

00:03:19,930 --> 00:03:16,159

the experiment and science session from

75

00:03:22,390 --> 00:03:19,940

ground from Cadmus in France and after

76

00:03:25,210 --> 00:03:22,400

that we are delivering to the p.i all

77

00:03:28,360 --> 00:03:25,220

the data so that then can have good

78

00:03:30,550 --> 00:03:28,370

science results so you're the p.o I see