
Operations Controller
Jennifer Mcmillian

1
00:00:02,469 --> 00:00:04,037
- NASA Marshall
Space Flight Center

2
00:00:04,037 --> 00:00:05,105
is science central

3
00:00:05,105 --> 00:00:06,740
for the International
Space Station.

4
00:00:06,740 --> 00:00:09,242
Our teams have
astronauts conducting

5
00:00:09,242 --> 00:00:11,511
groundbreaking research
in microgravity.

6
00:00:11,511 --> 00:00:14,614
We have supported more than
3,400 investigations

7
00:00:14,614 --> 00:00:16,216
from around the globe.

8
00:00:16,216 --> 00:00:18,651
Our operators
work with researchers,

9
00:00:18,651 --> 00:00:20,754
commercials companies,
and even students

10
00:00:20,754 --> 00:00:22,789
to expand
scientific discoveries

11
00:00:22,789 --> 00:00:24,657

on the orbiting
laboratory.

12
00:00:24,657 --> 00:00:27,327
Now, let's hear how
each flight control position

13
00:00:27,327 --> 00:00:31,231
is critical towards making
science happen in space.

14
00:00:31,231 --> 00:00:33,800
- Welcome to the payload
operations integration center.

15
00:00:33,800 --> 00:00:35,502
As a payload
operators director,

16
00:00:35,502 --> 00:00:37,103
I manage the day to day operations

17
00:00:37,103 --> 00:00:38,271
of science experiments

18
00:00:38,271 --> 00:00:40,640
performed on board
the International Space Station.

19
00:00:40,640 --> 00:00:43,143
- The science experiments on
the International Space Station

20
00:00:43,143 --> 00:00:45,245
range from studying
human physiology

21
00:00:45,245 --> 00:00:46,513
to dark matter

22
00:00:46,513 --> 00:00:48,681
and even growing plants
in space.

23
00:00:48,681 --> 00:00:50,083
As a payload rack officer,

24
00:00:50,083 --> 00:00:51,718
our job is to
monitor and ensure

25
00:00:51,718 --> 00:00:54,254
the safe operational use
of these experiments.

26
00:00:54,254 --> 00:00:56,790
- It's very important
that tools and parts

27
00:00:56,790 --> 00:01:00,727
are safely organized on
the International Space Station.

28
00:01:00,727 --> 00:01:02,562
Every day,
those engineers

29
00:01:02,562 --> 00:01:04,697
track the location
of these items

30
00:01:04,697 --> 00:01:06,866
so astronauts can
easily find them

31
00:01:06,866 --> 00:01:09,002
to conduct
science experiments.

32

00:01:09,002 --> 00:01:10,603
- The PAYCOM team
talks directly

33
00:01:10,603 --> 00:01:12,205
with the ISS astronauts,

34
00:01:12,205 --> 00:01:13,773
guiding them through
science experiments

35
00:01:13,773 --> 00:01:15,742
and technology
demonstrations.

36
00:01:15,742 --> 00:01:17,377
The crew are
our system

37
00:01:17,377 --> 00:01:19,712
and we advocate for them
from the ground.

38
00:01:19,712 --> 00:01:21,948
- Analyzing, integrating,
and communicating.

39
00:01:21,948 --> 00:01:24,717
These are the responsibilities
of an operations controller.

40
00:01:24,717 --> 00:01:26,119
We ensure that
the astronauts

41
00:01:26,119 --> 00:01:27,487
have the resources
they need

42
00:01:27,487 --> 00:01:29,856

to complete their
science experiment safely.

43
00:01:29,856 --> 00:01:33,126
- Sometimes, even the best plans
need to change.

44
00:01:33,126 --> 00:01:35,995
Timeline change officers
work with NASA centers

45
00:01:35,995 --> 00:01:37,831
and scientists from
around the world,

46
00:01:37,831 --> 00:01:41,234
developing the best plans
for each science experiment.

47
00:01:41,234 --> 00:01:43,503
- It is important
that science data

48
00:01:43,503 --> 00:01:45,104
is transmitted
down to Earth.

49
00:01:45,104 --> 00:01:46,773
As a data management
controller,

50
00:01:46,773 --> 00:01:49,476
I help ensure that
data from space station

51
00:01:49,476 --> 00:01:52,078
is sent to scientists
around the world.

52
00:01:52,078 --> 00:01:53,313

- The Marshall
ground control team

53
00:01:53,313 --> 00:01:54,848
ensures that all
ground equipment

54
00:01:54,848 --> 00:01:56,282
is fully operational,

55
00:01:56,282 --> 00:01:58,017
such as computers,
servers,

56
00:01:58,017 --> 00:01:59,586
hardware,
and software.

57
00:01:59,586 --> 00:02:01,321
We also make sure
that all data

58
00:02:01,321 --> 00:02:02,655
is successfully
sent to

59
00:02:02,655 --> 00:02:04,624
and received from
the satellites.

60
00:02:04,624 --> 00:02:05,792
- Thank you
for visiting.

61
00:02:05,792 --> 00:02:08,061
We hope you've enjoyed
this behind the scenes look