
SOFIA
STRATOSPHERIC OBSERVATORY
FOR INFRARED ASTRONOMY

1
00:00:04,660 --> 00:00:07,840
[music]

2
00:00:18,119 --> 00:00:22,820
>>It's gonna be a straight FORCAST removal today,
usual procedure, I think the biggest difference

3
00:00:22,820 --> 00:00:26,369
is the fact that we're right out here on the
flight ramp, and we're using the cargo truck

4
00:00:26,369 --> 00:00:31,069
with the canopy on it. We'll do the un-cableing,
then after that we're ready for the instrument

5
00:00:31,069 --> 00:00:37,440
removal. Then after that, they'll rotate to
17, take off the counter-weight rack, and

6
00:00:37,440 --> 00:00:44,400
take out the PI rack. The HIPO PI rack pallet
is gonna go in the number three position.

7
00:00:47,299 --> 00:00:51,760
>>Today we are swapping a science instrument
on the telescope. We are actually exchanging

8
00:00:51,760 --> 00:00:56,219
the FORCAST instrument with the HIPO instrument
and FLITECAM instrument that mounts with it,

9
00:00:56,219 --> 00:01:02,109
in preparation for observing a Pluto occultation
event in a few more days. The entire instrument

10
00:01:02,109 --> 00:01:08,140
exchange begins with disconnecting the electrical
cables of the science instruments, and then

11

00:01:08,140 --> 00:01:13,280
unbolting it from the telescope flange, and
then reversing that whole process. We do this

12
00:01:13,280 --> 00:01:18,000
quite often, but this is the first time we've
done it in New Zealand.

13
00:01:18,000 --> 00:01:22,320
[music/background work]

14
00:02:02,400 --> 00:02:04,640
>>This is FLITECAM.

15
00:02:04,640 --> 00:02:09,590
FLITECAM is the First Light TEst Experiment
CAMera for SOFIA. It's a near infrared imager

16
00:02:09,590 --> 00:02:13,810
and spectrometer that looks at light from
one to five and a half microns.

17
00:02:16,080 --> 00:02:23,500
>>HIPO is an optical instrument. It's designed to observe occultations of stars by planets.

18
00:02:23,510 --> 00:02:27,900
>>FLITECAM could look at the occultation alone, but we've got a special advantage when we can co-mount

19
00:02:27,900 --> 00:02:31,660
with HIPO, because we see different wavelengths
of light.

20
00:02:31,660 --> 00:02:34,840
>>When we mount them together they're called the FLIPO configuration.

21
00:02:35,760 --> 00:02:38,520
>>Every science
instrument has a different weight, and the

22

00:02:38,530 --> 00:02:42,900
shape is also different, so they have a different
center of mass as well. So every time we put

23
00:02:42,900 --> 00:02:48,280
on a new science instrument, we have to balance
the telescope again. Every science instrument,

24
00:02:48,280 --> 00:02:52,409
again, needs a different button. Some science
instruments use that button to calibrate,

25
00:02:52,409 --> 00:02:55,209
some just need it to get rid of some stray
light.

26
00:02:55,209 --> 00:02:58,289
>>FLITECAM is plugged into the MCCS IRIG-B

27
00:02:58,289 --> 00:03:00,169
signal, and that's working.

28
00:03:00,169 --> 00:03:04,659
>>Thank you very
much, Ted. FLITECAM, confirm you are receiving

29
00:03:04,659 --> 00:03:06,059
GPS data?

30
00:03:06,059 --> 00:03:07,359
>> Yes.

31
00:03:07,360 --> 00:03:10,059
>>I see nothing wrong over here.

32
00:03:10,059 --> 00:03:12,419
>>It takes a lot of teamwork to get everything

33
00:03:12,430 --> 00:03:17,040

ready to go, to get these instruments ready
to fly, but everyone pulled together and did

34
00:03:17,040 --> 00:03:18,260
a really good job.

35
00:03:18,260 --> 00:03:23,320
>>The functional check is
complete, and I'm gonna say everything is go for flight.

36
00:03:23,320 --> 00:03:27,120
>>I think everyone's excited
at this point, at least I'm excited at this

37
00:03:27,129 --> 00:03:33,129
point. We've all worked really hard and prepped
really well, and I think it's gonna be a great