1
00:00:04,960 --> 00:00:09,520
My name is Jens Redemann I'm the principal investigator for the ORACLES project and I

2
00:00:09,520 --> 00:00:14,510
work for the NASA Ames Research Center in Moffett Field California the ORACLES missions

3
00:00:14,510 --> 00:00:22,980
is a five-year project in which we're going to fly two research aircraft in 2016 and one

4
00:00:22,980 --> 00:00:29,610
research aircraft in 2017 and 18 each from Namibia to study the interaction of biomass

5
00:00:29,610 --> 00:00:33,600
burning emissions and low-level clouds over the southeast Atlantic.

6
00:00:33,600 --> 00:00:38,540
There's a long list of reasons why we're working here in the medium the ER2 aircraft that you

7
00:00:38,540 --> 00:00:44,780
see behind me actually requires a very long runway and a large hangar so that the instruments

8
00:00:44,780 --> 00:00:49,539
can be opened up and properly maintained after each one of their flights.

9
00:00:49,539 --> 00:00:54,100
It's also the only access point to the southeast Atlantic really from which we can fly and

10
00:00:54,100 --> 00:00:57,460
reach far into the southeast Atlantic basin.

11
00:00:57,460 --> 00:01:02,949
So we're studying a very unique system the
low-level cumulus clouds are not unique to

12
00:01:02,949 --> 00:01:09,200
the southeast Atlantic but the fact that they're
coexisting with biomass burning emissions

13
00:01:09,200 --> 00:01:14,210
at altitude is very unique to the southeast
Atlantic and gives us the opportunity to study

14
00:01:14,210 --> 00:01:21,590
the interactions of aerosol particles with
these clouds and these interactions actually

15
00:01:21,590 --> 00:01:27,299
are some of the largest remaining uncertainties
in humans effect climate.

16
00:01:27,299 --> 00:01:31,710
We think that the data is useful in two ways
first off there really no observations of

17
00:01:31,710 --> 00:01:36,280
these aerosol particles in the southeast Atlantic
because they usually overlay these very bright

18
00:01:36,280 --> 00:01:41,619
clouds and the satellite information that
we gather don't quite give us all the details

19
00:01:41,619 --> 00:01:45,759
that we need in order to study their effects.

20
00:01:45,759 --> 00:01:49,789
The other thing is that these effects and
interactions between aerosol particles and

21

00:01:49,789 --> 00:01:55,530
cloud particles really go on globally and
climate modelers struggle mightily with parameterizing

22
00:01:55,530 --> 00:01:58,369
them and putting them into their global climate
models.

23
00:01:58,369 --> 00:02:05,380
So implicitly we hope to have an impact on
the predictions of future anthropogenic impact

24
00:02:05,380 --> 00:02:06,740
on climate.

25
00:02:06,740 --> 00:02:12,960
Namibia have has been most welcoming we have
been welcomed with open arms the infrastructure

26
00:02:12,960 --> 00:02:18,360
is terrific the airport has been recently
renovated and gives us a perfect infrastructure

27
00:02:18,360 --> 00:02:24,530
really but it's really the welcoming by the
University and research types in the country

28
00:02:24,530 --> 00:02:28,190
that has made this little bit special.

29
00:02:28,190 --> 00:02:32,140
We're very excited to be here pulling off
a research effort halfway around the world

30
00:02:32,140 --> 00:02:38,940
is always difficult and we finally been able
to do it with a lot of support from the Namibian