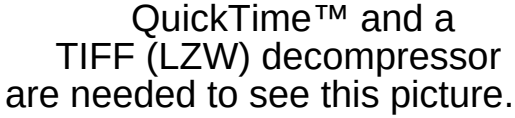
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are needed to see this picture.

RHUBC-II Trip Objectives

1) Evaluate potential sites for experiment

   - prepare preference list for Chilean authorities

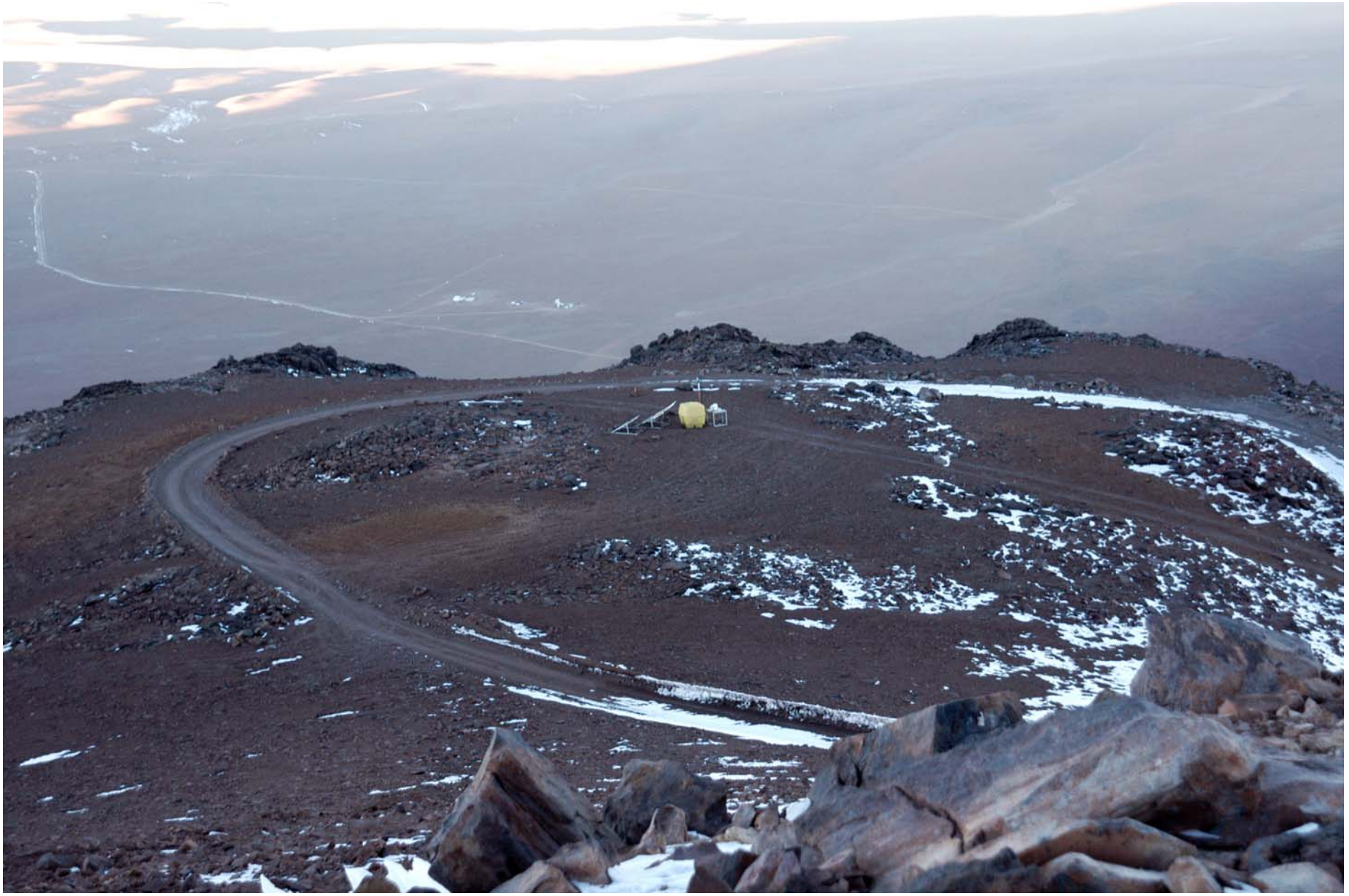
2) Develop contacts within Chilean government agency

3) Develop contacts with existing astronomical installations in area

4) Evaluate local technical infrastructure; develop contacts

5) Four guinea pigs for assessing altitude health issues

6) Evaluate local area accommodations, etc.




Lima
La Paz
Bolivia
Asuncion
Chile
Cordoba
Uruguay
Santiago
Buenos Aires
Montevideo
Argentina
N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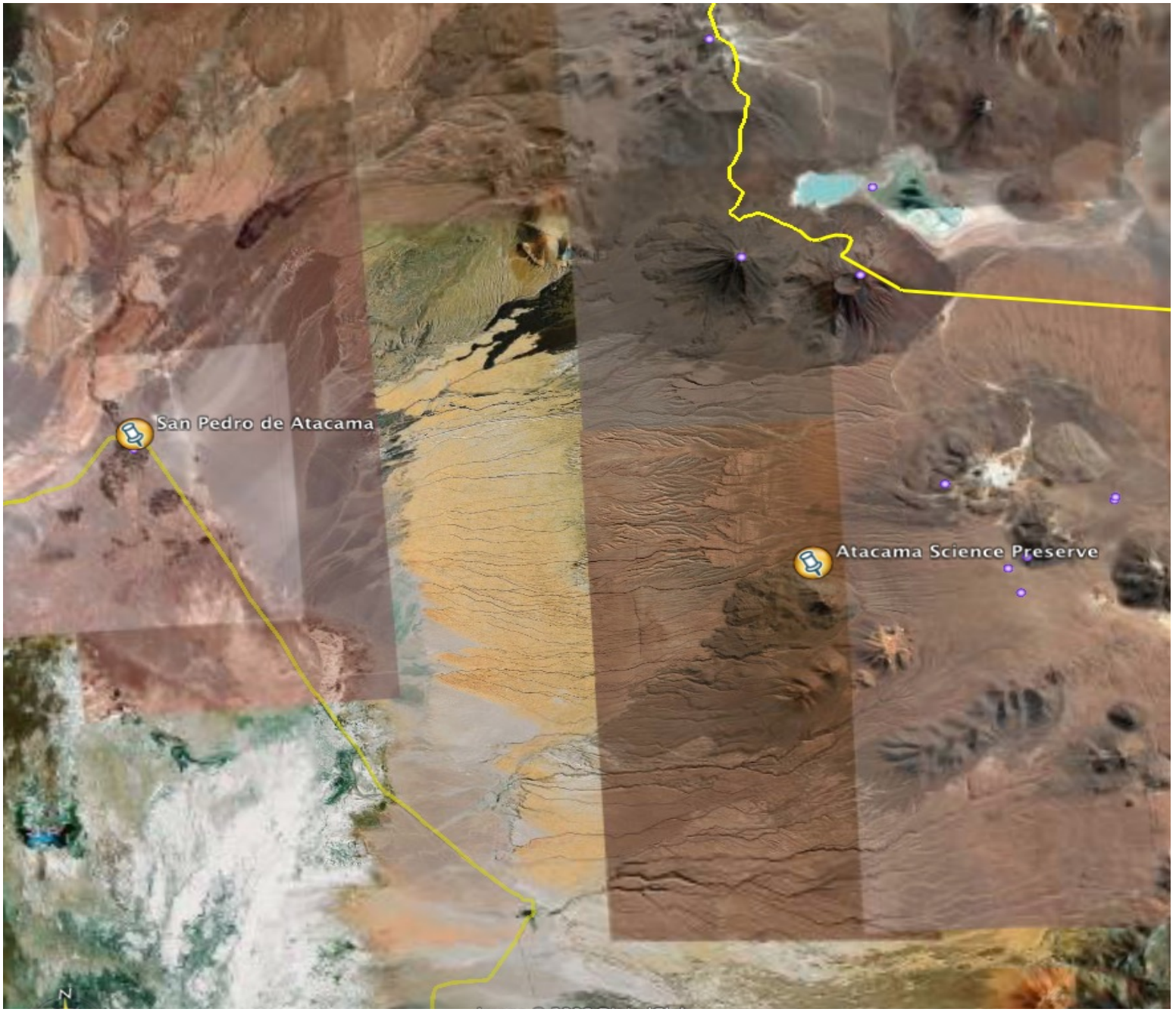
Calama
5
23
25
San Pedro de Atacama
Atacama Science Preserve
Isla Santa Maria
Segunda Region De Antofagasta
Antofagasta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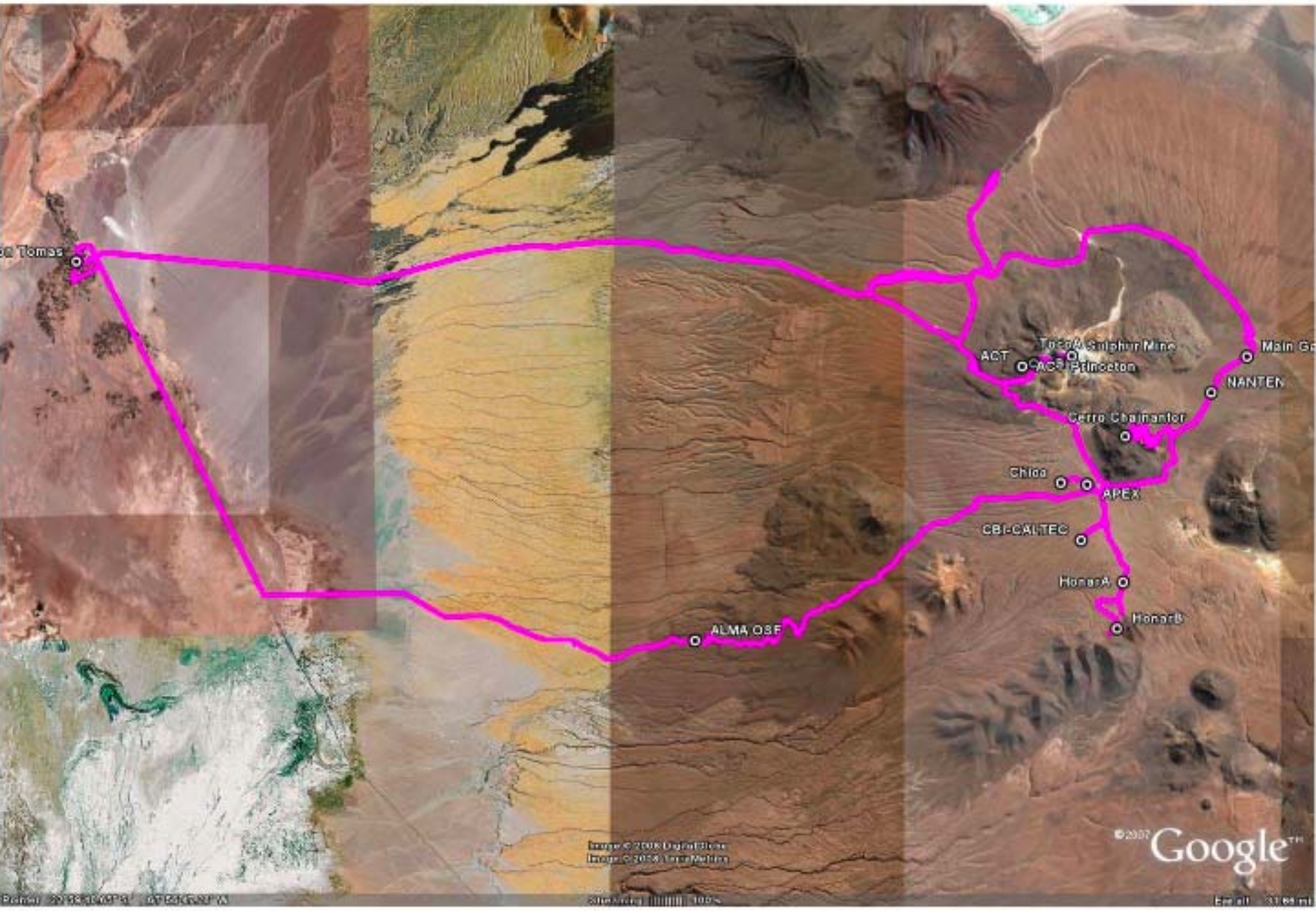
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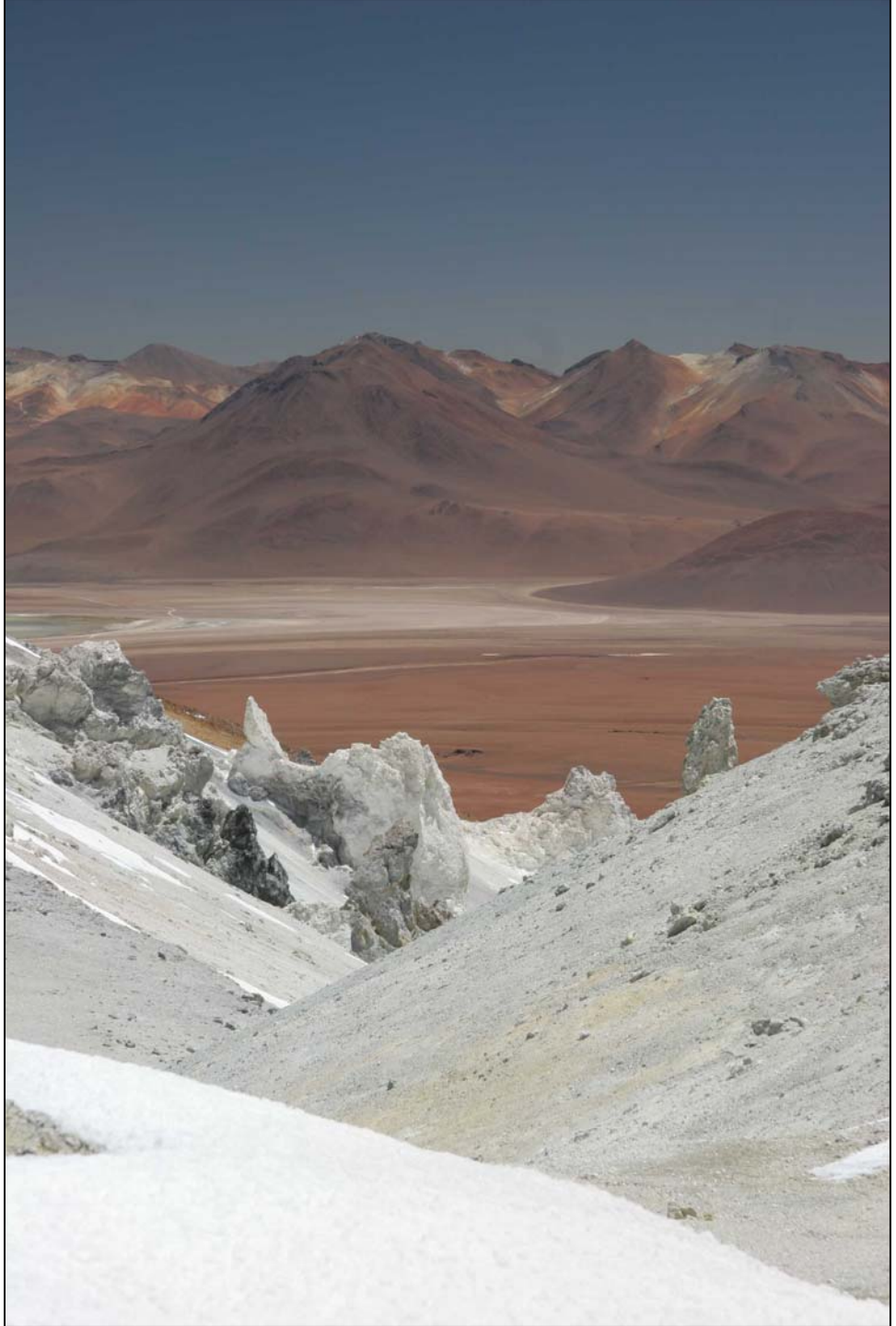
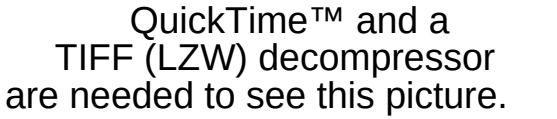
APEX
CBI-CALTEC
HonarA
HonarB
ALMA OSF
Google

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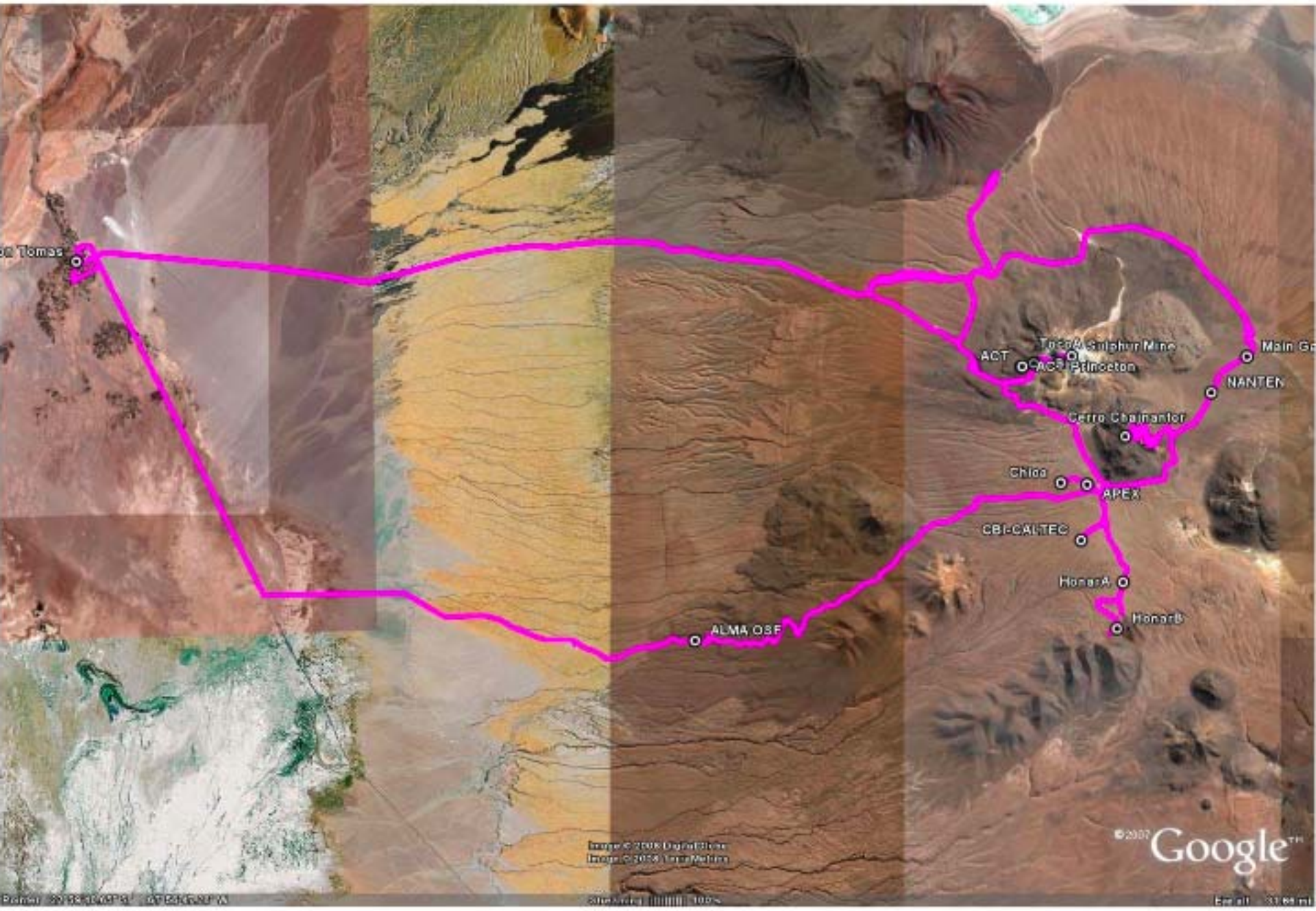
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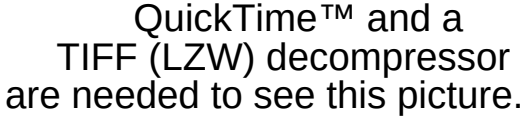
QuickTime™ and a
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are needed to see this picture.


SCIENCE PRESERVE
RESERVA CIENTIFICA
OSF: 27 Km.
OSF RD
TOCO RD
ACT
12.9 Km.
CBI
11.3 Km.
APEX
9.7 Km.
AOS
RD
11.9 Km.
ALMA Intersection
CCAT
TAO
TAO RD
5.0 Km.
O
S
N
E
PAMPA
LA BOLA
RD
2.3 Km.
ASTE
NANTEN 2
0 Km.
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1
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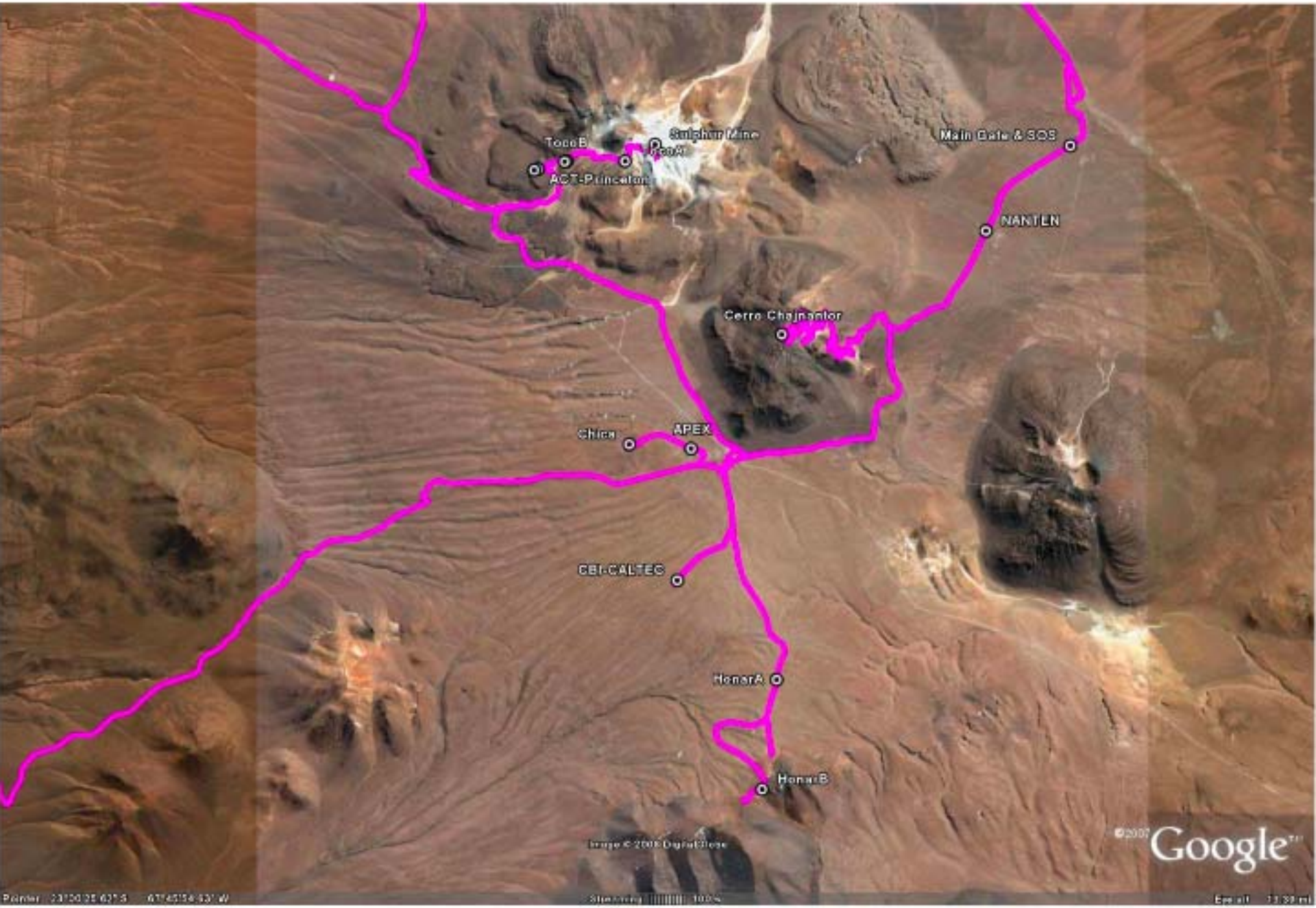

Sulphur Mine
Main Gate & SOS
ACT-Princeton
NANTEN
Cerro Chajnantor
APEX
CBI-CALTEC
HonorA
HonorB
Google

Nubra, India

Memo to Nubra Chamber of Commerce:

The Chajnantor summit road has 200 ft on Himank.

From Wikipedia:

The world's highest motorable pass?

Khardung La is widely, but incorrectly, believed to be the world's highest motorable pass. There are higher motorable passes at Suge La, west of Lhasa, **5,430 m** (17,815 feet), and Semo La **5,565 m** (18,258 feet), between Raka and Coqen in Central Tibet. Both these elevations are supported by GPS and SRTM evidence and the latter was also measured by the Catalans and supported by the CIC, see above. Vehicles have been driven over the **5,582** metres (18,314 ft) Marsimik La, in the Indian Karakoram to the north-east of Khardong La, but it is debatable whether this pass should be considered to be motorable. There may be higher motorable passes elsewhere in Tibet, but verification of these has not been possible because of lack of information and restricted access.

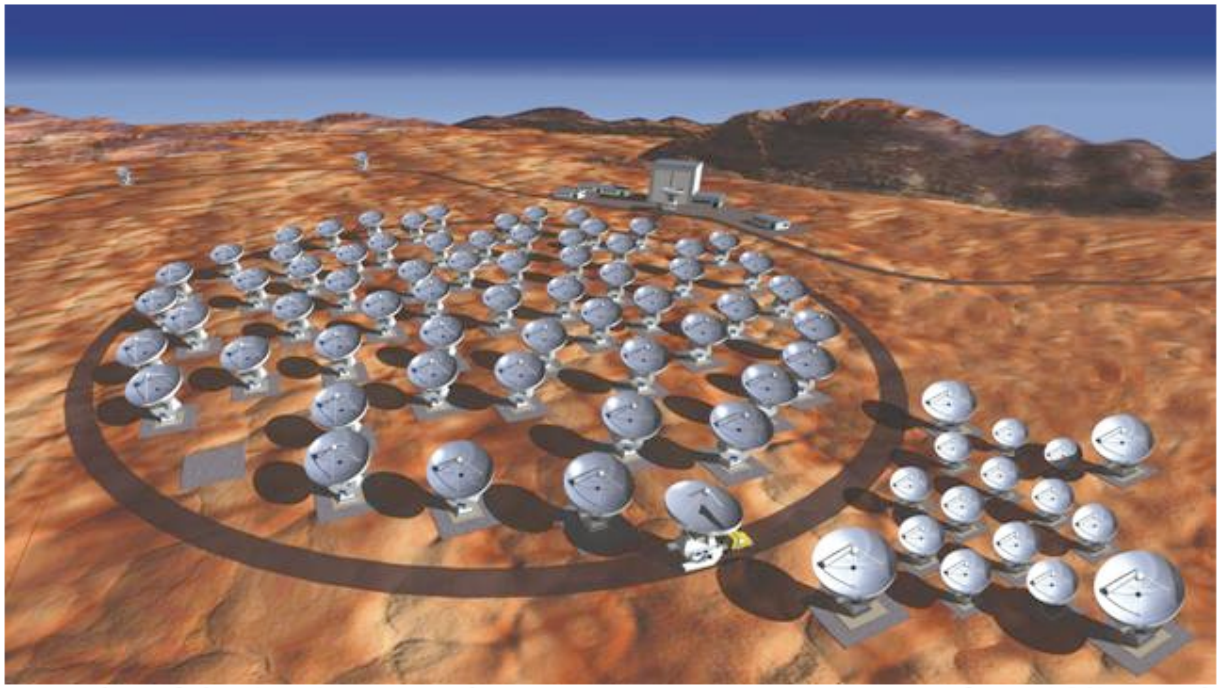

QuickTime™ and a
TIFF (LZW) decompressor
are needed to see this picture.


Sulphur Mine
ACT
ACT-Princeton
ToccB
ToccA
Cerro Chajnantor
Chile
APEX
Google

Atacama Large Millimeter / Submillimeter Array - Taiwan

ALMA IS THE WORLD'S LARGEST, MOST SENSITIVE RADIO TELESCOPE OPERATING AT MILLIMETER WAVELENGTHS:

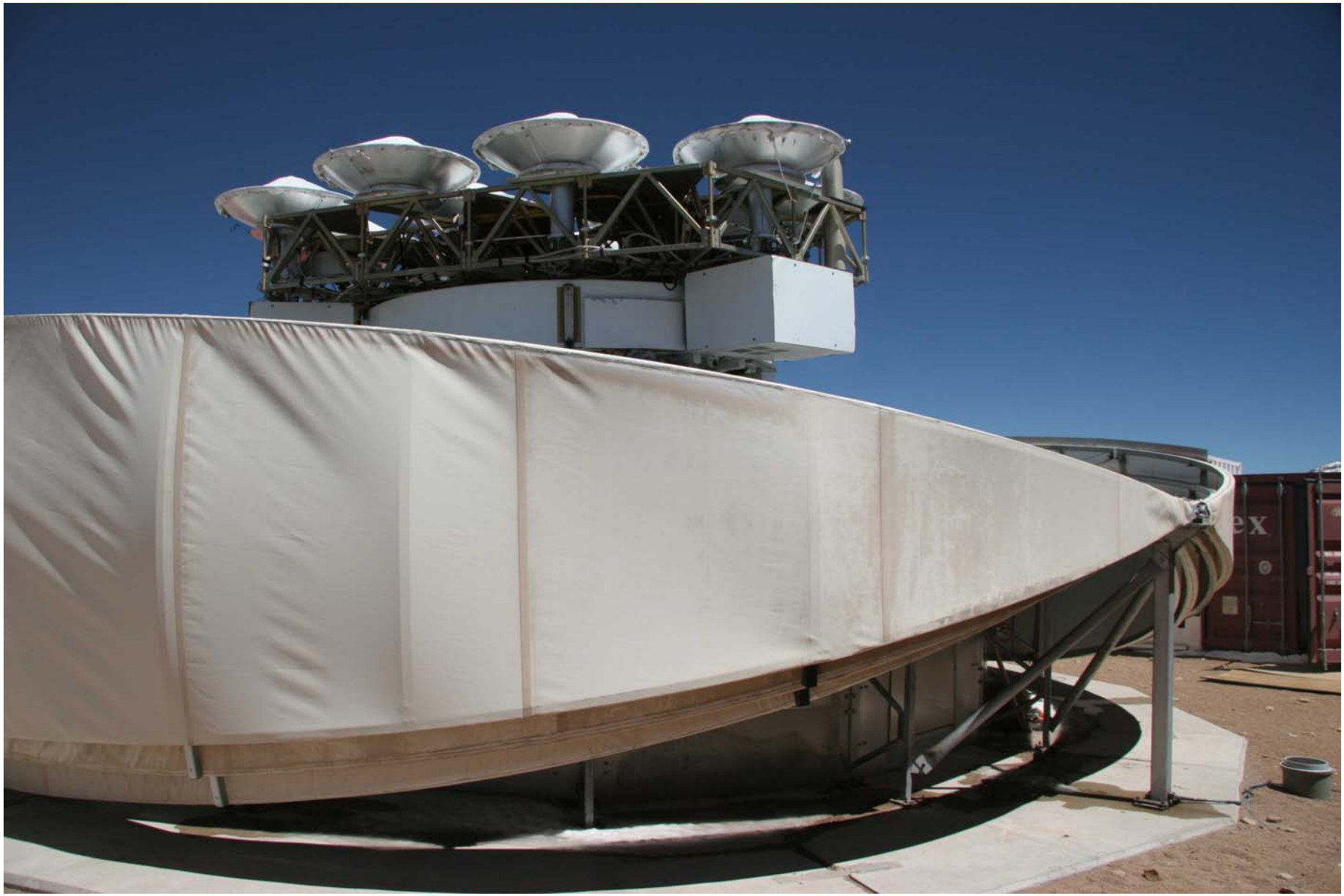
The Atacama Large Millimeter/Submillimeter Array (ALMA) is the largest ground based, international astronomical observational facility ever built. It is currently under construction in the Chajnantor area in the Atacama desert in northern Chile. ALMA is designed to cover the wavelength range from 0.3mm to 9mm with an angular resolution of up to 0.004 arcsec. The baseline project consists of the 12-m array of up to 64 12-m telescopes, and the Atacama Compact Array (ACA) of 4 12-m telescopes and 12 7-m telescopes. ALMA will be studying a broad range of exciting science, such as weather patterns on solar system planets, the formation of planets and stars in our galaxy, the motions within active galactic unclei , and the formation of the earliest galaxies at z~10.



Artist's conception of the ALMA antennas in a compact array. Image courtesy of NRAO/AUT and ESO. ALMA/Chajnantor Video Clip, Backgrounds & Photos (from ESO Press Release, 10 June 1999)

The **Cosmic Background Imager** (CBI) is a special-purpose radio telescope designed to study the cosmic microwave background radiation from the early universe. It is located at an altitude of 5080 m (16,700 feet) in the Chilean Andes at the Chajnantor Observatory.

The CBI Project is a collaboration between the California Institute of Technology, the Canadian Institute for Theoretical Astrophysics, the University of Chicago, the National Radio Astronomy Observatory, the Max-Planck-Institut für Radioastronomie (Bonn), Oxford University, the University of Manchester, the Universidad de Chile, and the Universidad de Concepción. The project has been supported by funds from the National Science Foundation, the California Institute of Technology, Maxine and Ronald Linde, Cecil and Sally Drinkward, Barbara and Stanley Rawn Jr., Rochus Vogt, the Kavli Institute, and the Canadian Institute for Advanced Research.




Sulphur Mine
ACT
ACT-Princeton
ToccB
ToccA
Cerro Chajnantor
Chile
APEX
Google

ACT Atacama Cosmology Telescope Project

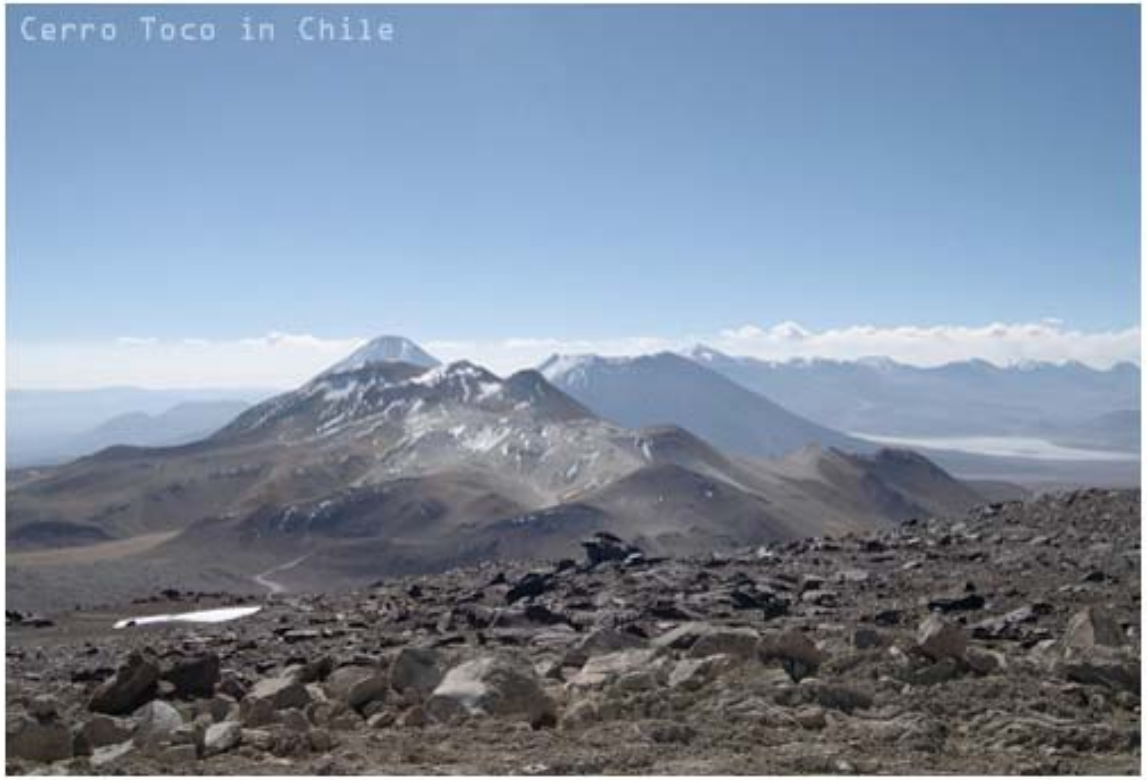
Observing the birth of the universe. . . .

Supported by the National Science Foundation

- About ACT
- Collaborators
- Papers
- Specifications
- Coordinated Observations
- Hardware
- Software
- Site

RESTRICTED ACCESS:
[at U. Penn]

- TEAM
- ACT TELESCOPE




ACT

RHUBC-II Site Survey

9-12 Feb 2008

Site Name	Altitude	East Horizon	Install	Access	Notes
Chajnantor	5655 m	0º	15	15	Road is essentially impassable
Toco A	5319 m	4º	7	7	Road may drift closed
Honar B	5190 m	5º	2	4	10 min from Honar A
Toco B	5158 m	7º	4	4	
Toco C	5154 m	5º	4	4	Better site than Toco B
Chico	5127 m	< 3º	5	5	May interfer with ALMA communication
ACT	5124 m	4º	4	3	
Honar A	5078 m	< 2º	1	2	5 min from CBI
APEX	5050 m	< 3º	2	1	
CBI	5041 m	< 3º	1	1	

East horizon is important for Langley's in the morning; airmass 5 is ~11º above the horizon and airmass 7 is ~8º above the horizon.

"Install" is a scale from 1-10, where 1 is "piece of cake" and 10 is "doable but extremely difficult (and thus expensive). A value of 15 implies impossible.

"Access" is a scale from 1-10 (same as "install"). This variable is for the daily commute to/from the site.


NONIN
Onyx
%SpO2

Nº
Accomo
Large
Millimeter
Array
ESO
OXYMAT
OM-400
SERIES
7
O_2
PSI
2000
1000
REFILL
GOOD
LOW BATTERY
REPLACE


RHUBC-II: August-October 2009
We're loco about Cerro Toco!