



## *WCD Americas Institute Visit to ALMA*

**\*THE MAX ALLOWED ON THIS TRIP IS 20 PEOPLE\***  
**Must sign up by February 24th**



## In search of our cosmic origins

The Atacama Large Millimeter/submillimeter Array (ALMA) is an international partnership of the European Southern Observatory (ESO), the U.S. National Science Foundation (NSF) and the National Institutes of Natural Sciences (NINS) of Japan, together with NRC (Canada), NSC and ASIAA (Taiwan), and KASI (Republic of Korea), in cooperation with the Republic of Chile. ALMA -the largest astronomical project in existence- is a single telescope of revolutionary design, composed of 66 high precision antennas located on the Chajnantor plateau, 5000 meters altitude in northern Chile

The **Atacama Large Millimeter Array (ALMA)** is an [astronomical interferometer](#) of [radio telescopes](#) in the [Atacama desert](#) of northern [Chile](#). Since a high and dry site is crucial to millimeter and submillimeter wavelength operations,<sup>[1]</sup> the array has been constructed on the Chajnantor plateau at 5,000 metres (16,000 ft) altitude, near [Llano de Chajnantor Observatory](#) and [Atacama Pathfinder Experiment](#). Consisting of 66 12-metre (39 ft) and 7-metre (23 ft) diameter radio telescopes observing at millimeter and submillimeter [wavelengths](#), ALMA is expected to provide insight on star birth during the early universe and detailed imaging of local star and planet formation.

ALMA is an international partnership among [Europe](#), the [United States](#), [Canada](#), [Japan](#), [South Korea](#), [Taiwan](#), and [Chile](#).<sup>[2]</sup> Costing about US\$1.4 billion, it is the most expensive ground-based telescope in operation.<sup>[3][4]</sup> ALMA began scientific observations in the second half of 2011 and the first images were released to the press on 3 October 2011. The array has been fully operational since March 2013.

## Overview



The first two ALMA antennas linked together as an [interferometer](#)



Three ALMA antennas linked together as an interferometer for the first time



ALMA prototype-antennas at the ALMA test facility



Cerro Chascon at sunset



The ALMA [correlator](#)

## Itinerary

### Date

### TOTAL Price

| Cumbres Hotel  |         | Tierra Atacama Hotel |           |
|----------------|---------|----------------------|-----------|
| <b>\$1,303</b> | 861,000 | <b>\$2,588</b>       | 1,710,800 |

### March 24, Friday

6:30 Transfer to Santiago airport

| USD | CLP    | USD | CLP    |
|-----|--------|-----|--------|
| 61  | 40,000 | 61  | 40,000 |

7:30 Check in at Santiago airport (Domestic flight).

8:30 LA 148 Departure to Calama.

|        |         |     |         |
|--------|---------|-----|---------|
| 170.95 | 113,000 | 171 | 113,000 |
|--------|---------|-----|---------|

10:45 Arrival at Calama airport and transfer to San Pedro de Atacama.

|    |        |    |        |
|----|--------|----|--------|
| 73 | 48,000 | 73 | 48,000 |
|----|--------|----|--------|

12:00 Arrival at San Pedro Atacama

|        |         |       |           |
|--------|---------|-------|-----------|
| 514.37 | 340,000 | 1,800 | 1,189,800 |
|--------|---------|-------|-----------|

13:00 Terrace Lunch at Cumbres Hotel

|                            |  |                            |  |
|----------------------------|--|----------------------------|--|
| Included in the room price |  | Included in the room price |  |
|----------------------------|--|----------------------------|--|

Free afternoon.

18:30 Transfer to Tulo Village, Coyo Community.

|    |        |    |        |
|----|--------|----|--------|
| 73 | 48,000 | 73 | 48,000 |
|----|--------|----|--------|

19:30 Welcome cocktail open air.

|    |        |    |        |
|----|--------|----|--------|
| 45 | 30,000 | 45 | 30,000 |
|----|--------|----|--------|

21:30 Sky Observation "Naked eyes".

22:30 Transfer back to Cumbres Hotel.

|    |        |    |        |
|----|--------|----|--------|
| 73 | 48,000 | 73 | 48,000 |
|----|--------|----|--------|

23:30 Arrival at Cumbres Hotel.

## March 25<sup>th</sup>, Saturday

|   |                            |        |                            |        |
|---|----------------------------|--------|----------------------------|--------|
| From 07:30 to 8:00 Breakfast at Cumbres Hotel .                             | Include in the room price  |        | Include in the room price  |        |
| 08:30 Transfer to the Operations Support Facility (OSF) ALMA at 3.000 masl. | 73                         | 48,000 | 73                         | 48,000 |
| 09:30 Arrival at OSF ALMA.  |                            |        |                            |        |
| 10:00 Lecturer: Dr. Pierre Cox, ALMA Director.                              |                            |        |                            |        |
| 11:00 Lecturer: Astronomer Researcher of ALMA Observatory. TBD              |                            |        |                            |        |
| 11:45 Health check and visit to the laboratories and research departments.  |                            |        |                            |        |
| 12:00 Transfer to the Array Operations Site (AOS) ALMA at 5.000 masl.       |                            |        |                            |        |
| 13:00 Arrival at AOS. Visit and explanation to the antennas array.          |                            |        |                            |        |
| 14:00 Transfer to Hotel Cumbres.  | 73                         | 48,000 | 73                         | 48,000 |
| 15:30 Late lunch at Hotel Cumbres.  | Included in the room price |        | Included in the room price |        |
| Free afternoon.   |                            |        |                            |        |
| 21:00 Transfer to the town at Adobe Café or Blanco Restaurant.              | 45                         | 30,000 | 45                         | 30,000 |
| 21:30 Dinner at Adobe Café or Blanco Restaurant.                            | 30                         | 20,000 | 30                         | 20,000 |

## March 26<sup>th</sup>, Sunday

From 07:30 to 10:00 Breakfast at Hotel Cumbres.

12:00 Check out

Free day suggested visit to Valle de la Luna.

Transfer to Calama airport.

### TOTAL

Included in room price

73

**\$1,303**

48,000

861,000

Included in room price

73

**\$2,588**

48,000

1,710,800

## Travel Info

\* The current available flights are:

LA 347 17:30 – 19:35

LA 149 20:20 – 22:25

LA 151 20:55 – 23:00

## Contacts:

### 1. Travel Agency: Travel Security

**Contact: Marcela Serdio**

**Email: marcela.serdio@security.cl**

### 2. Hotel Cumbres:

- Reservations with:

Bernardita Palacios: bpalacios@hotelescumbres.cl.

- Person in charge at Hotel Cumbres in San Pedro:

Carlos González: cgonzalez@hotelescumbres.cl

### 3. Café Adobe – Restaurant Blanco:

Natalia Mena: reservas.adobe@gmail.com

56 9-63339792 56 55-2851164

\* They are responsible of the catering at Villa Tulo. They carry all you need:

### 4. Comunidad de Coyo - Villa Tulo:

\* It is necessary to ask for a permission and to pay an admission entry.

Vladimir Reyes Varas Manager of the community 09-51582408