Joint ALMA Observatory

13 April 2021

Topics

- Chajnantor connectivity
- Control Room Extension to Santiago Office

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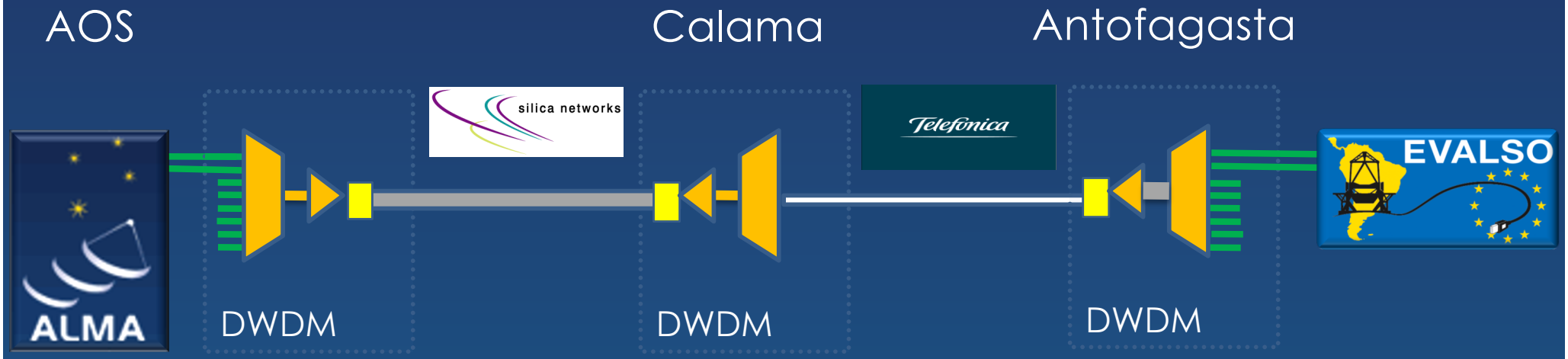
ALMA Optical Path

= Dark fiber
= LAMBDA (OTU2)
= 1 G-Ethernet



The Chajnantor plateau hosts/will host a number of astronomical facilities. Conversations carried out in the past years aimed to optimize the available communication infrastructure to minimize the use of MW based solutions. Two issues were addressed:

- Last mile
- Communication operations

Transponder (one per Lambda OTU2)

Optical amplifier (one per fiber)

DWDM internal backplane

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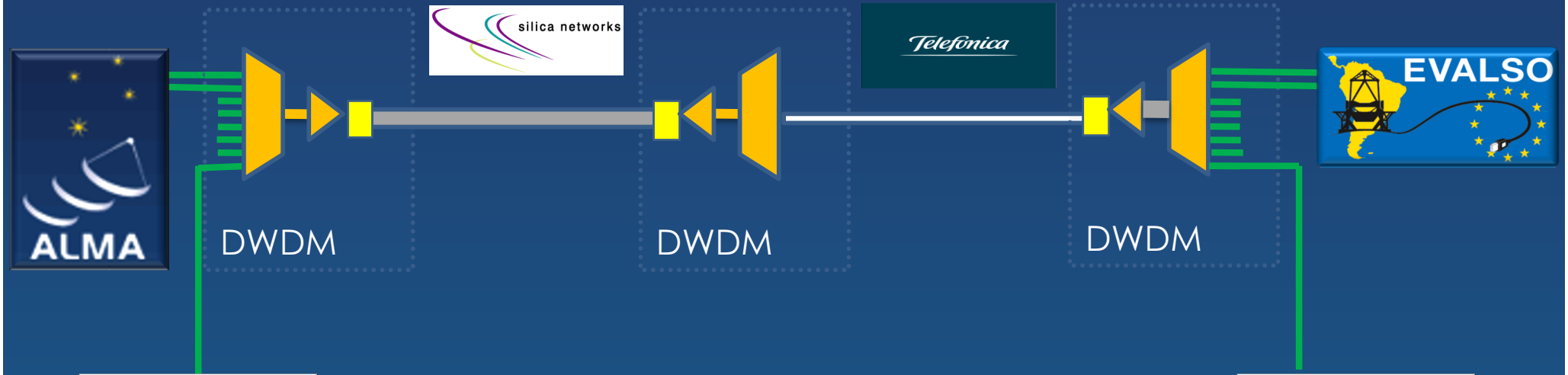
AOS

Calama

Antofagasta



REUNA PoP@AOS-TB

REUNA PoP@ANF

First part: PoP

Second part: Last mile

3 zones hosting other projects

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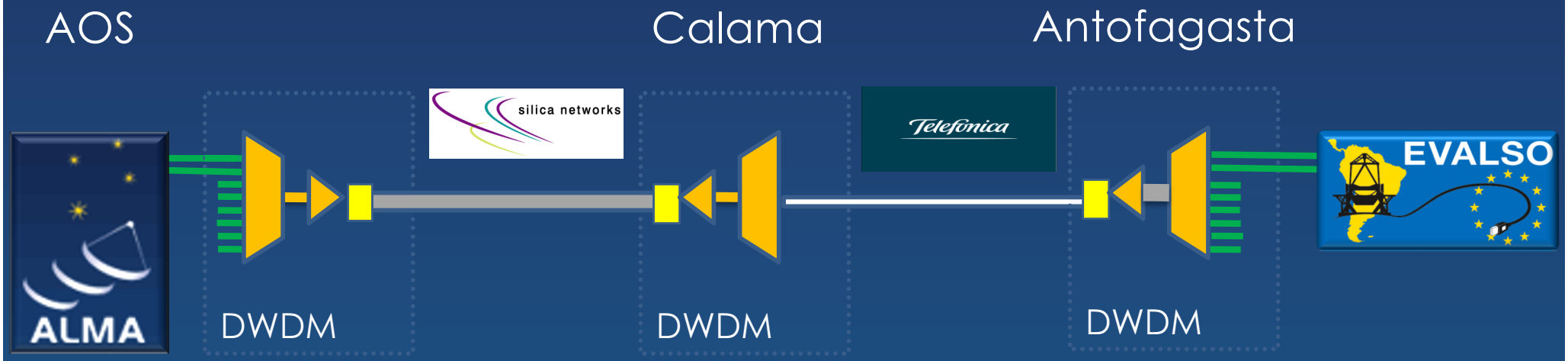

Future work: ANF/SCL infrastructure (in progress)

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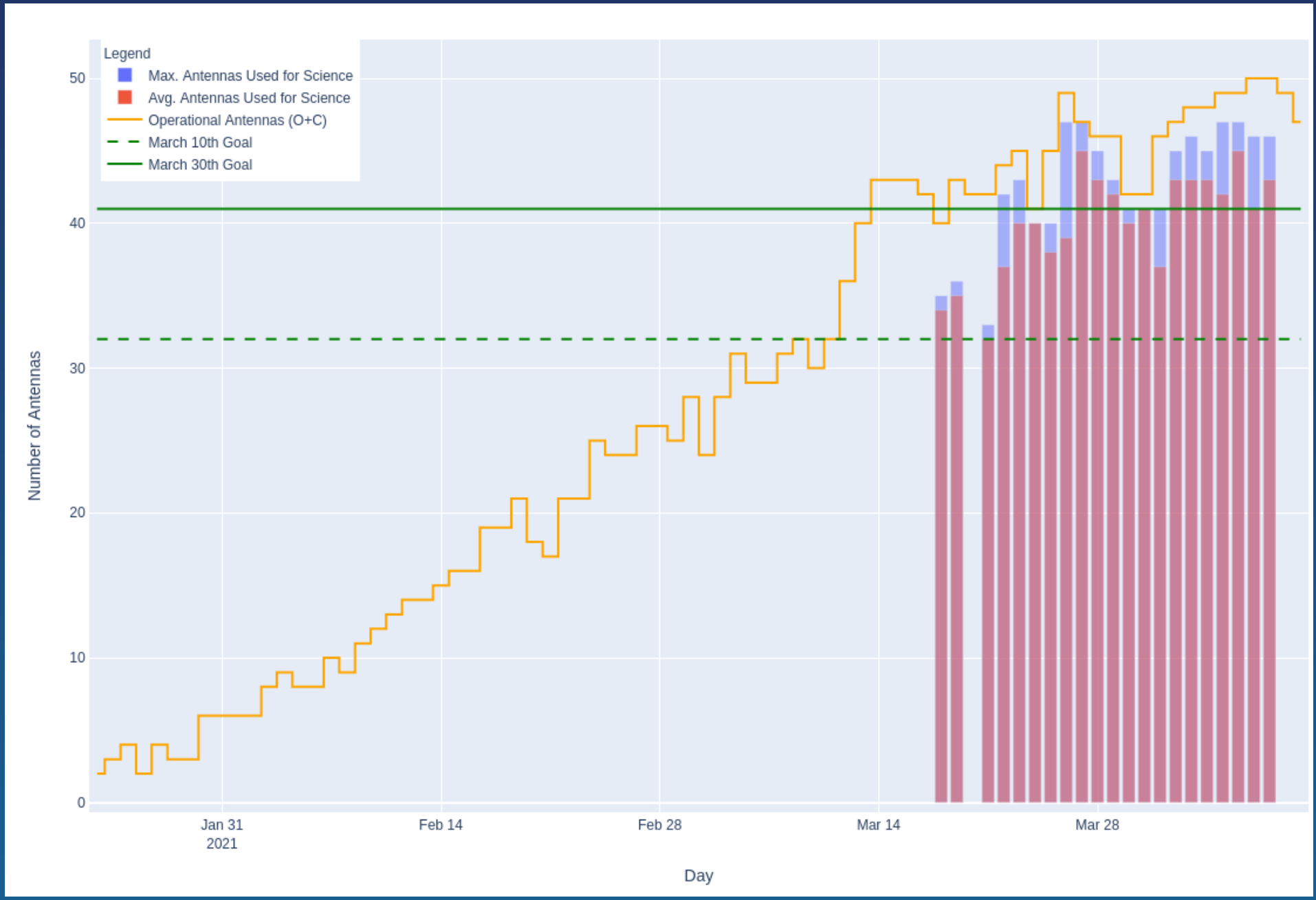
Control Room Extension to Santiago

- Motivation: Use the communication infrastructure to increase operational flexibility by allowing opportunistic testing activities from SCO
- Inspiration: Several mining companies in recent years started exploring remote operations with similar requirements and constrains
- "Santiago Remote Control Room Laboratory Project" was initiated in July 2019 to develop and implement a virtual extension of the OSF control room to Santiago Central Office for operational testing from Vitacura Campus.
- Project took around 8 months to complete, just before the pandemics reached Chile …

Today: Basic Science Operations



Thank you
For
Listening