

The large size telescope (LST)

Project Review

2018

Thomas Schweizer
17. December 2018



Day of inauguration
10. Oktober 2018

The LST inauguration event 15 years after MAGIC I inauguration

10. Oktober 2018

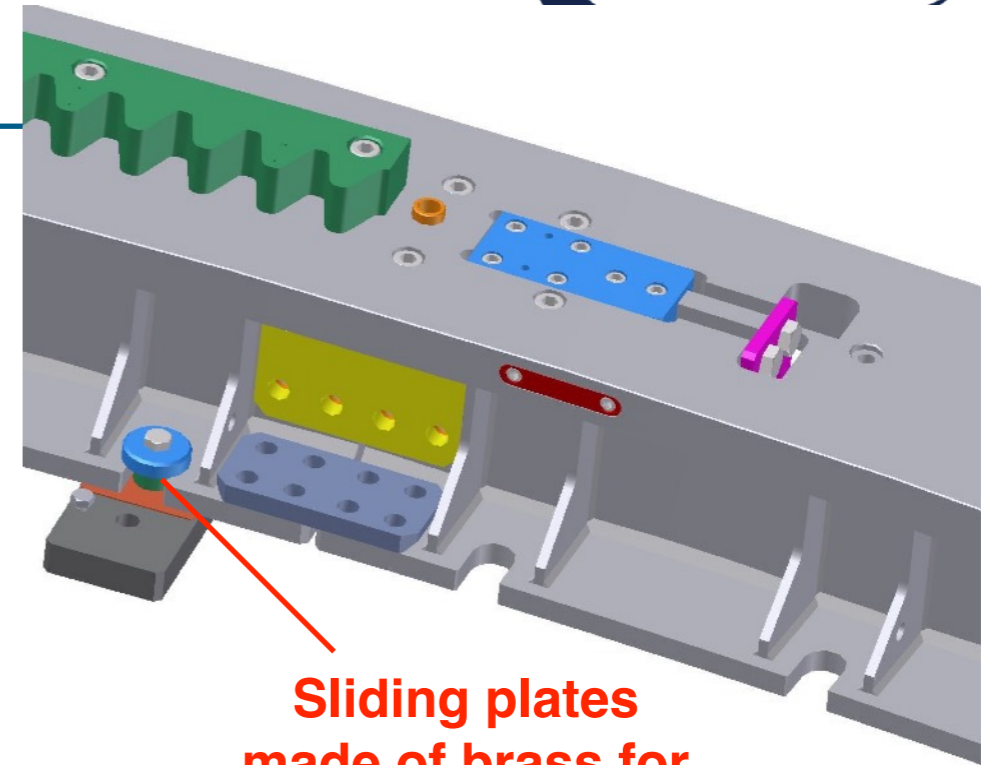
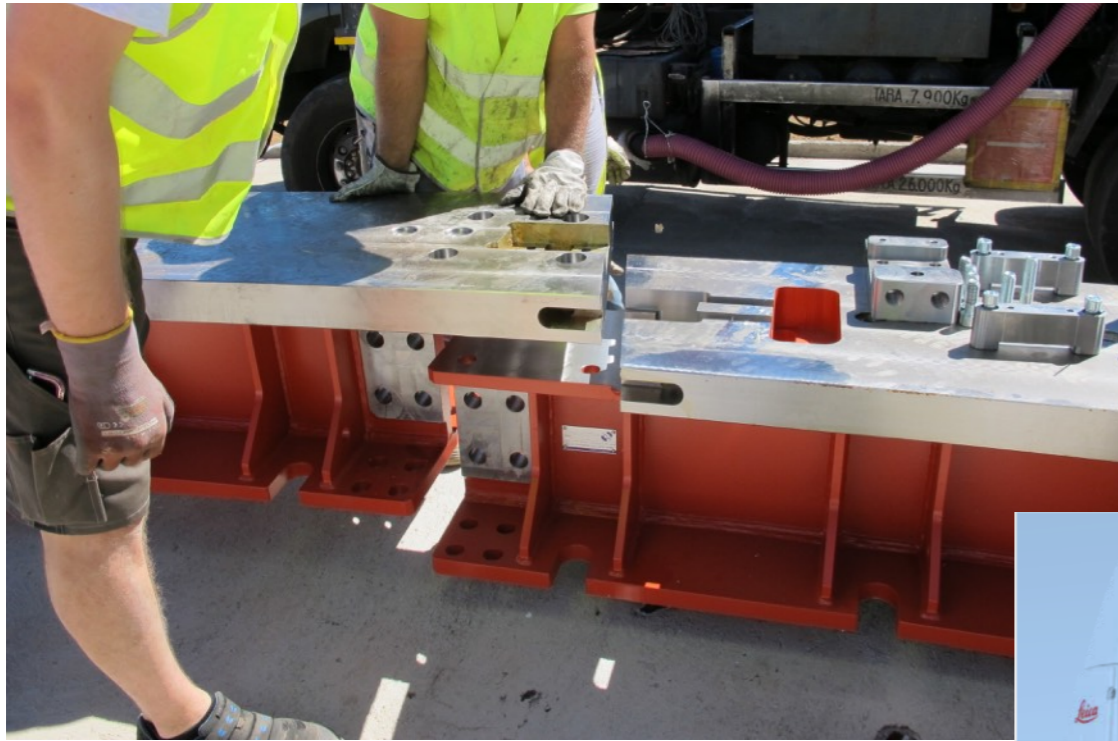


**Lets start from the
beginning**

Central Pin & Foundation October 2016



Installation Rail July 2017



**Sliding plates
made of brass for
temperature expansion**



Bogie installation & drive test: End of August 2017



Understructure finished: End of September 2017

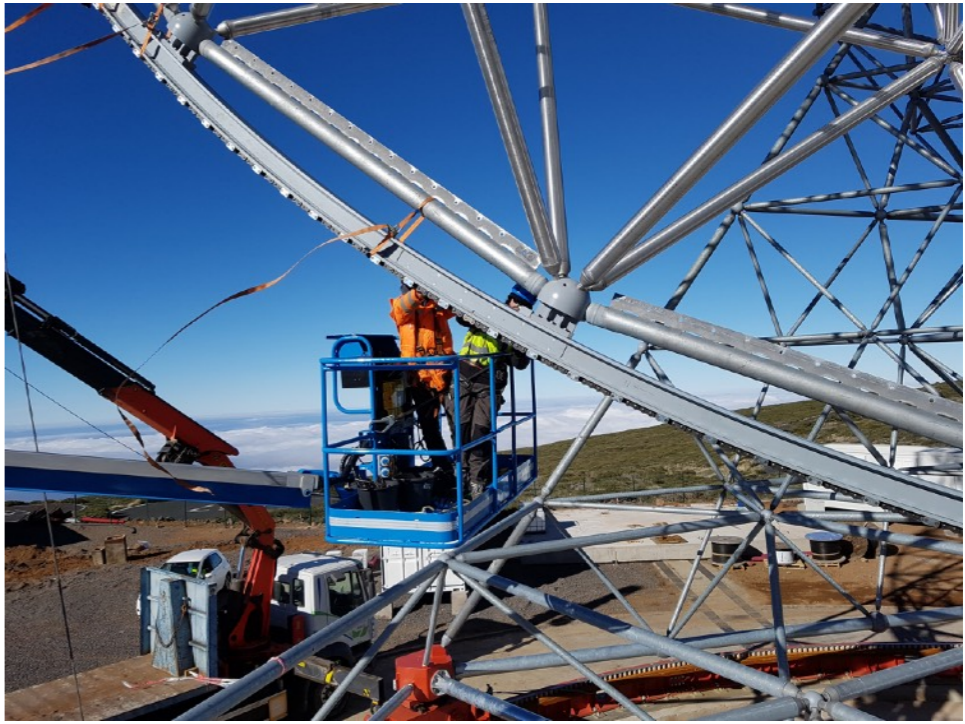


Dish installation finished November 2017



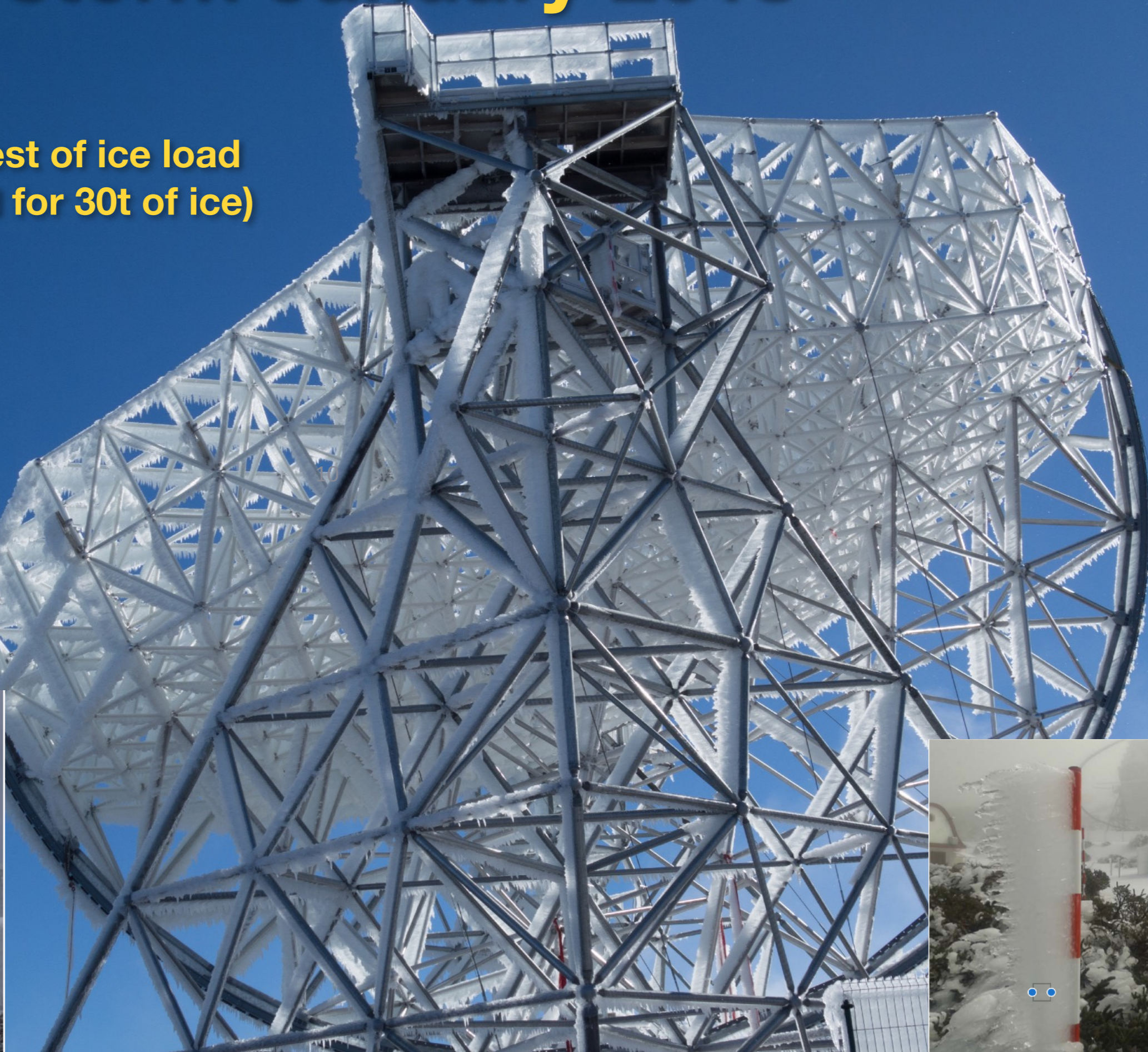
Installation elevation arch and elevation drive

January 2018

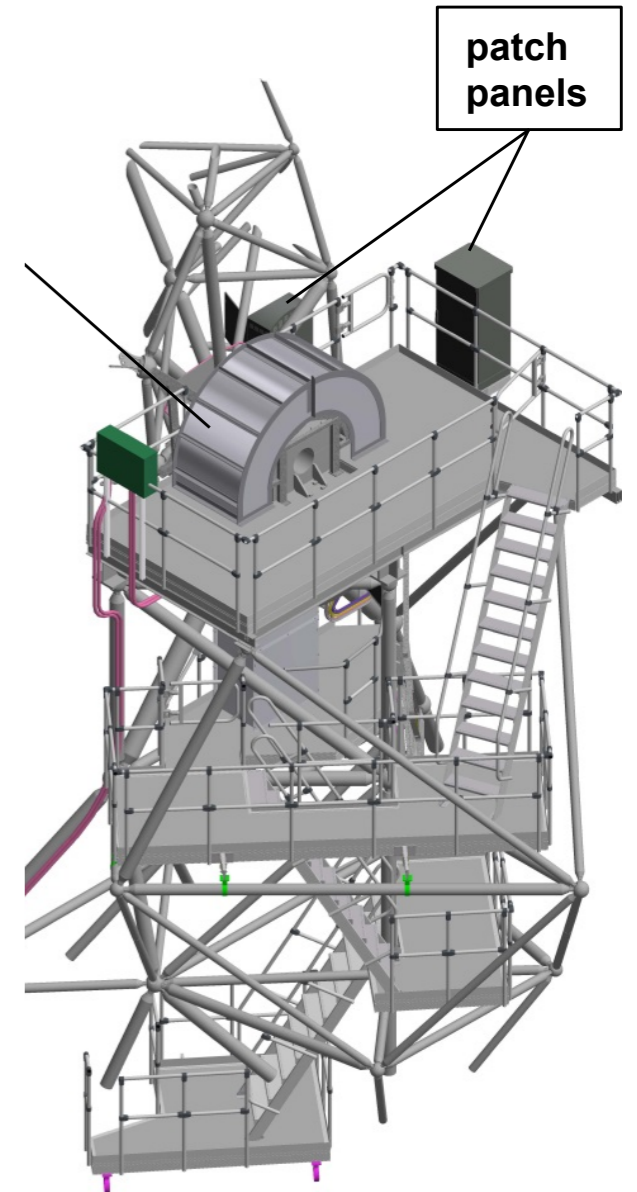
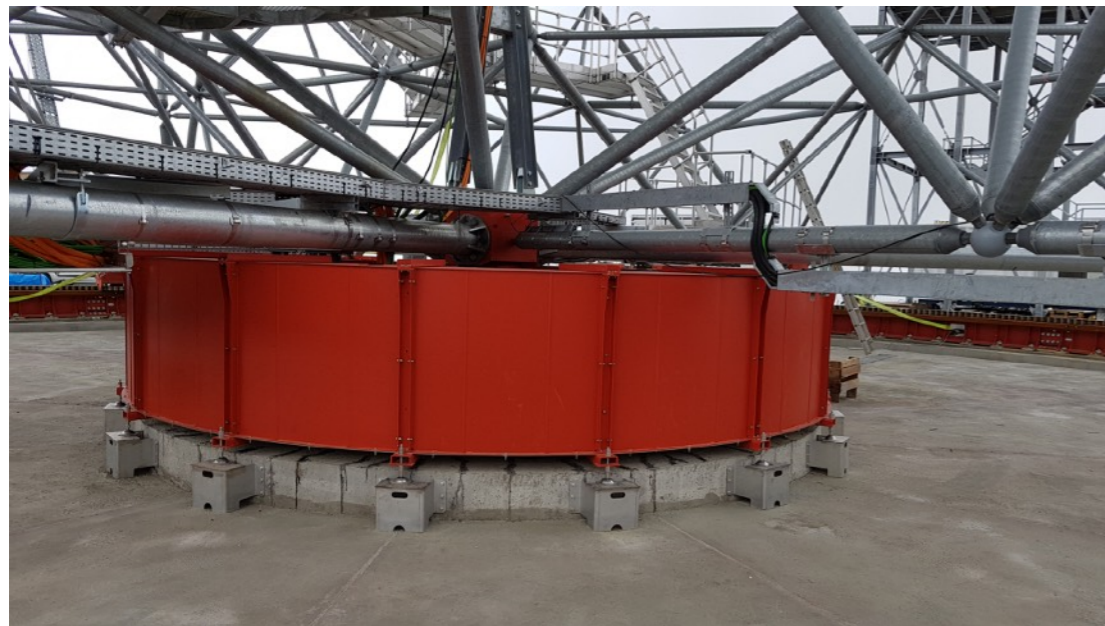


Ice storm January 2018

Successful Test of ice load
(LST designed for 30t of ice)



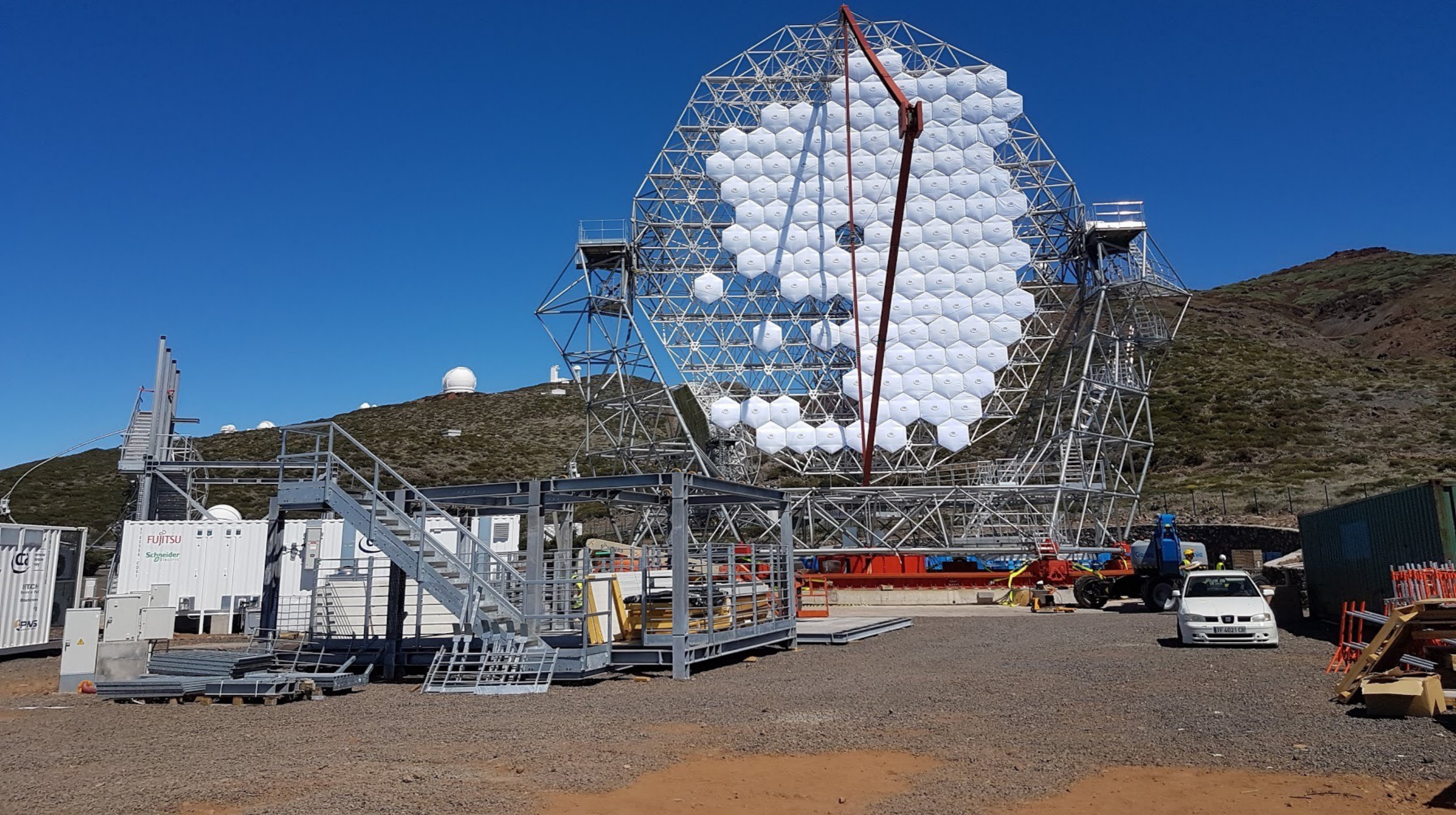
Installation of azimuth and elevation cable chains



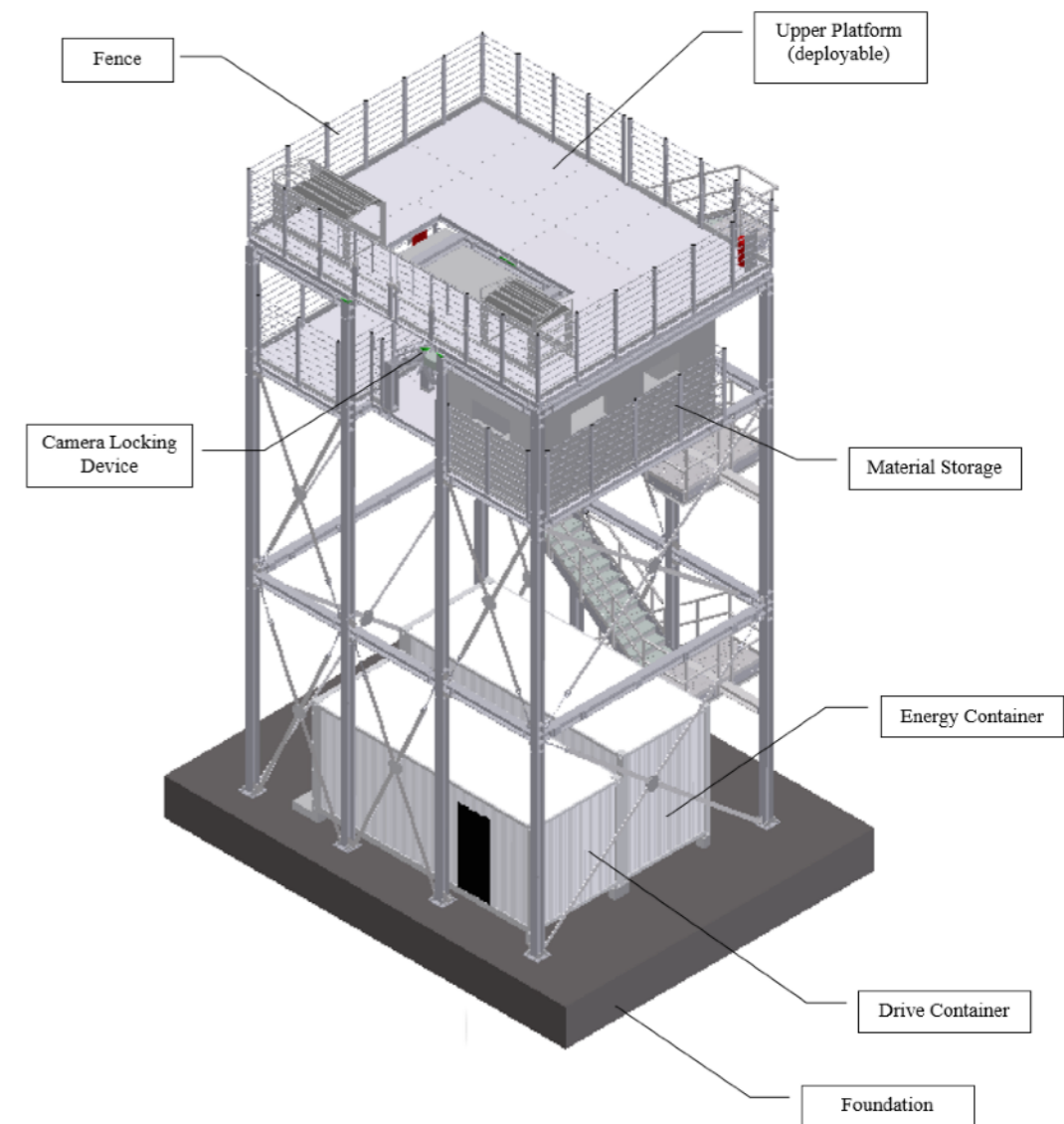
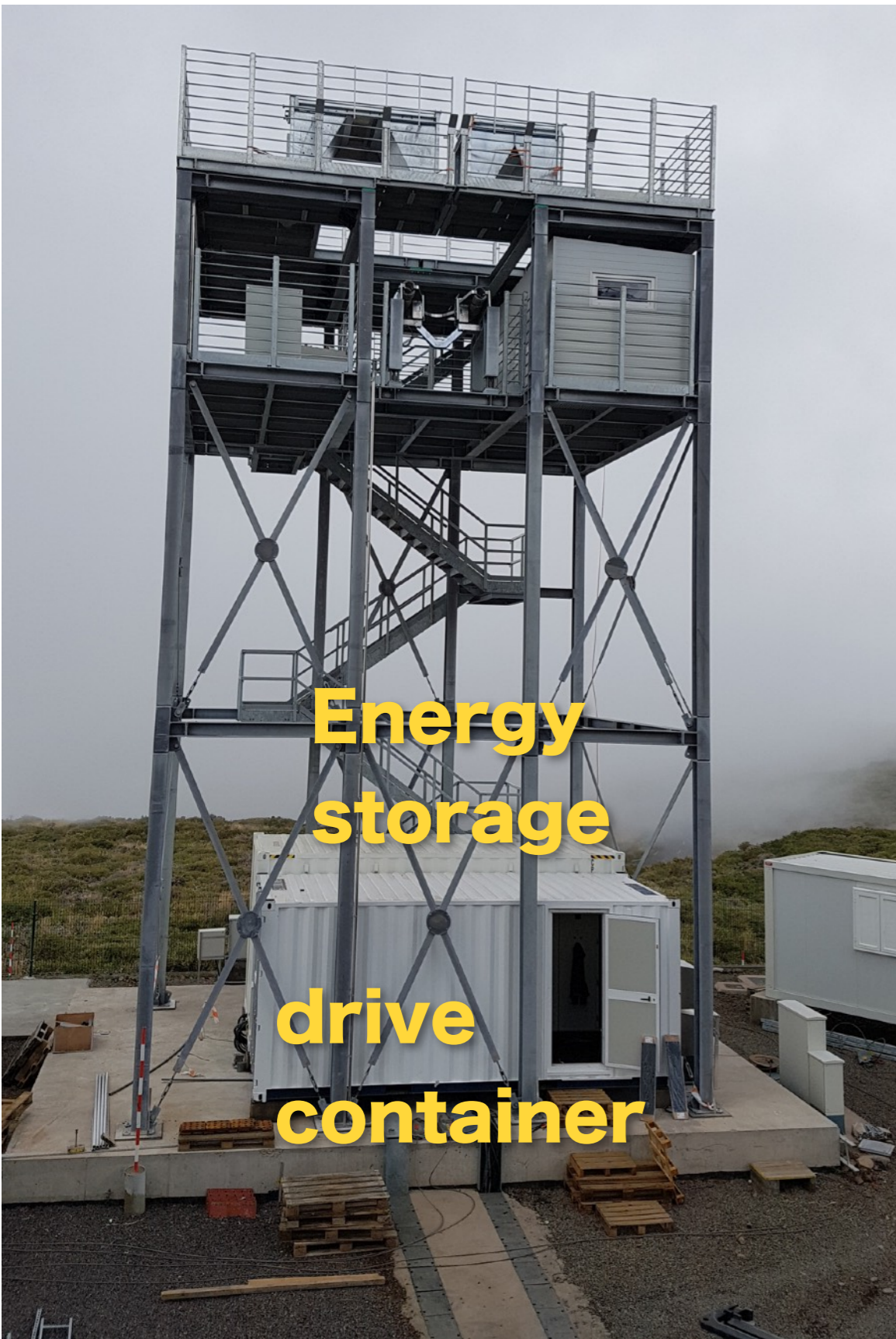
Installation of CSS dummy



Mirror installation with counterweight (15. May 2018)

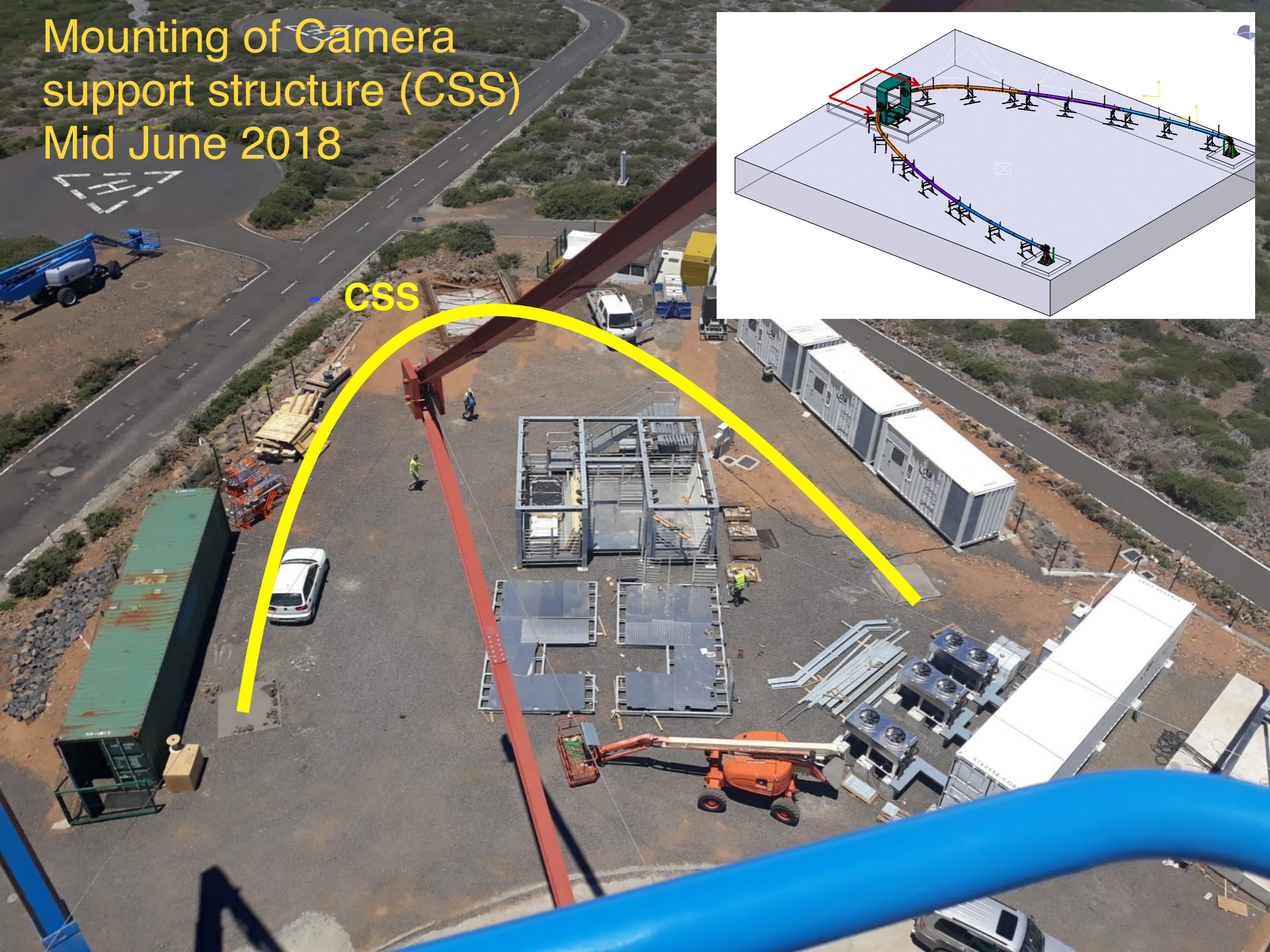


Installation of access tower



Mounting of Camera support structure (CSS)

Mid June 2018



CSS

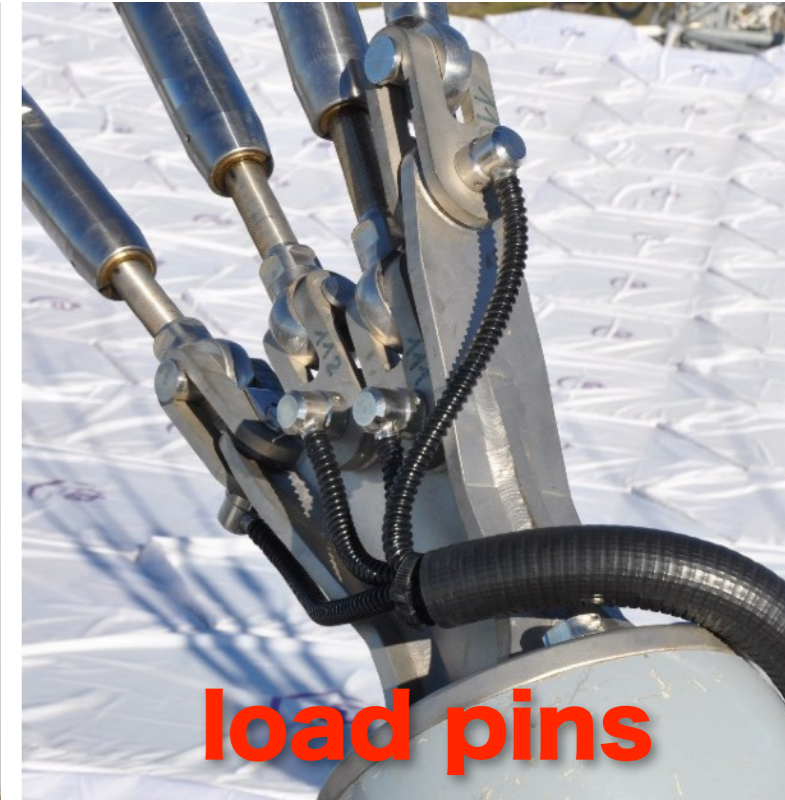
Camera support structure installation and CF cables with professional load pins



CSS installation



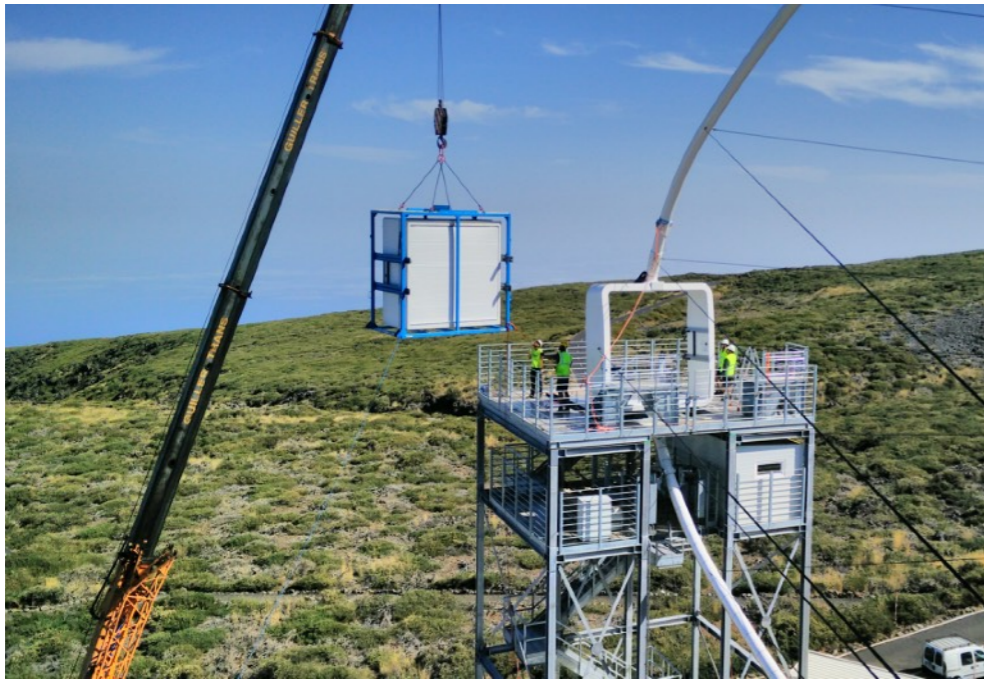
CF cable tensioning



Camera installation



Camera installation **without any problem**



CSS locking system & Azimuth locking system installed



Time lapse movie construction LST



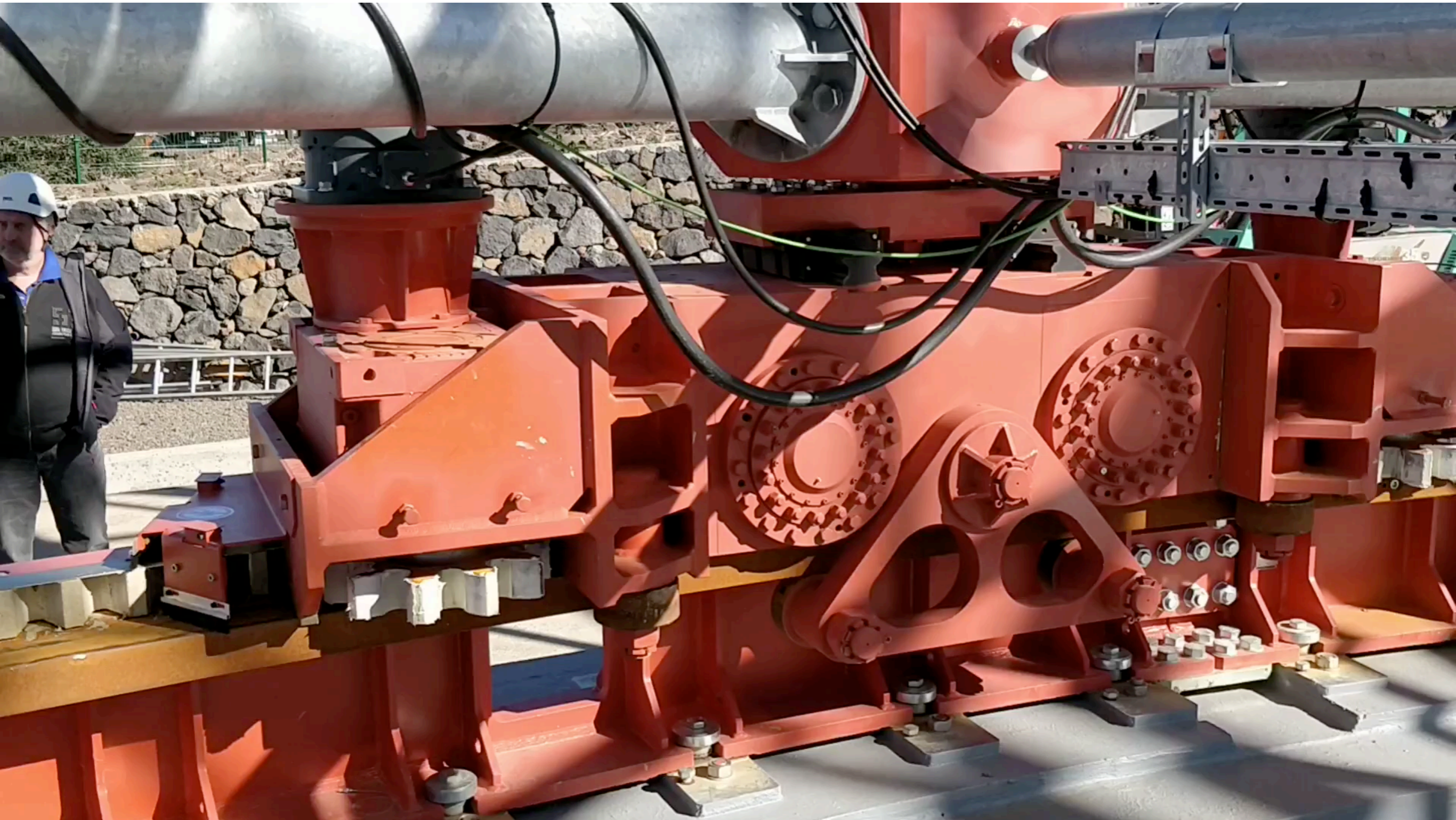
The LST inauguration event



Telescope ready for commissioning



Successful drive test with high speed: GRB acceleration + 40% max speed

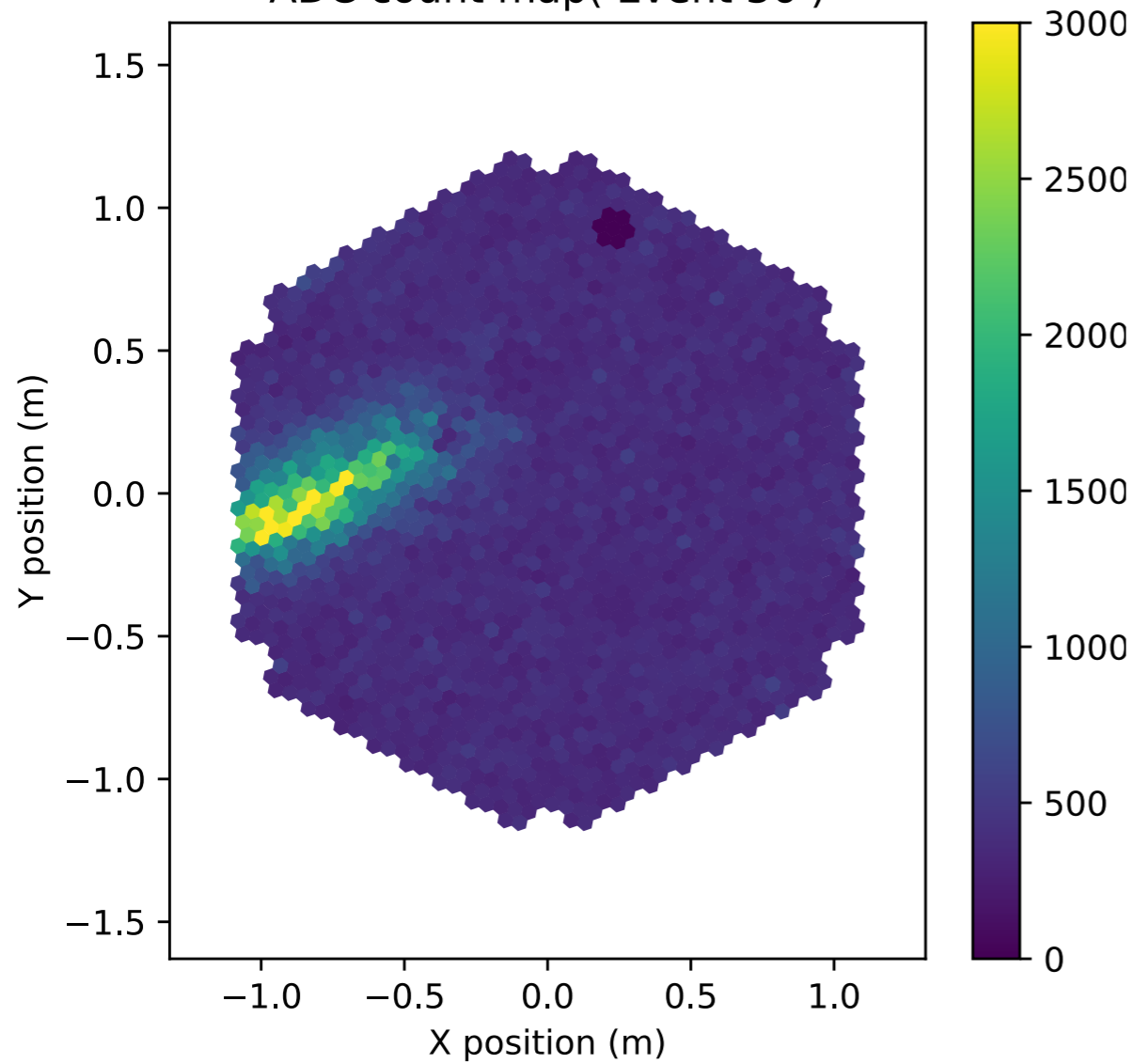


First events: still uncalibrated



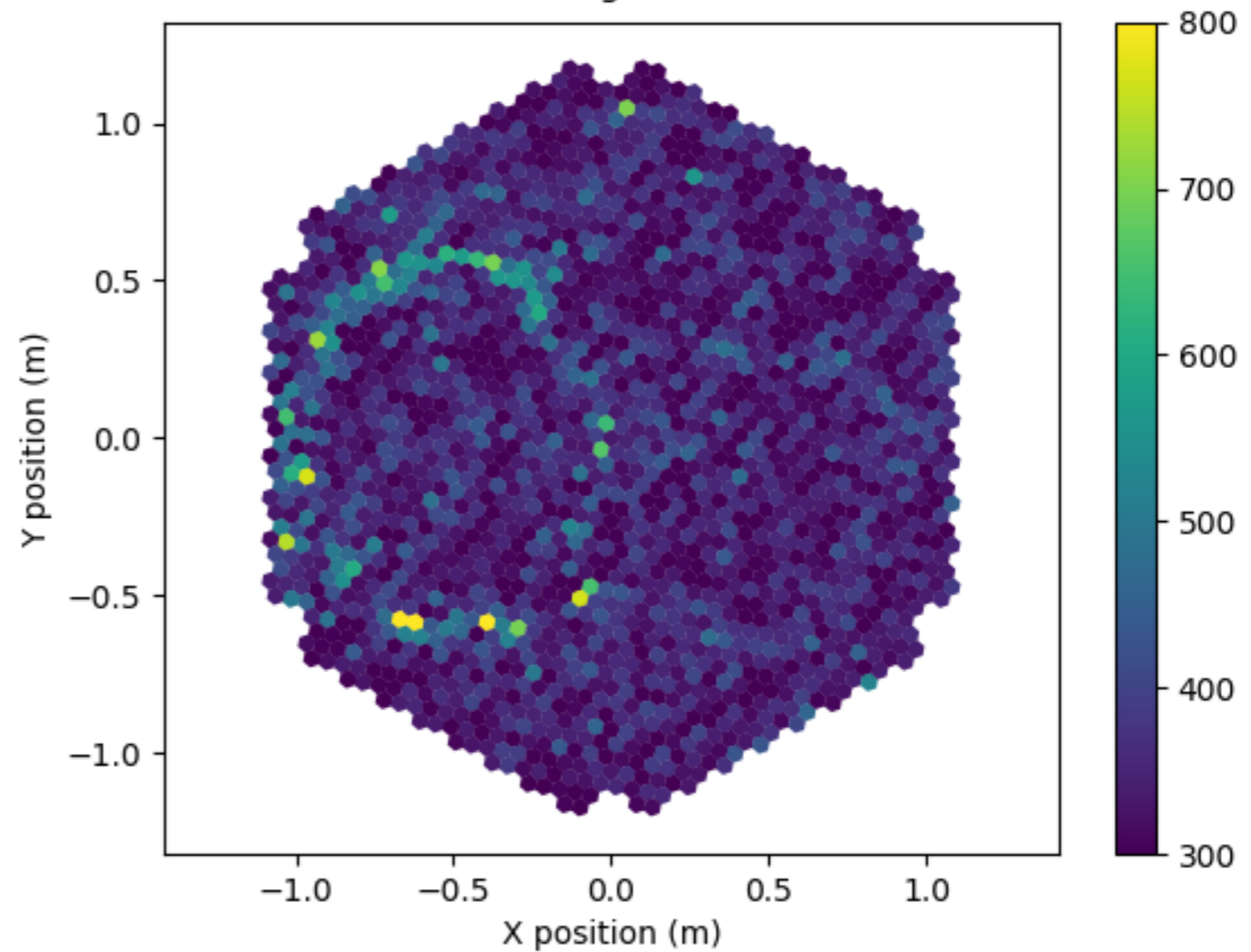
Shower

ADC count map(Event 36)

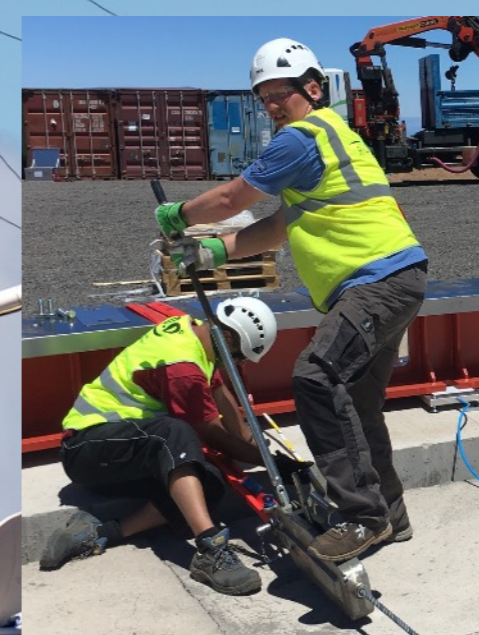


Muon ring

9

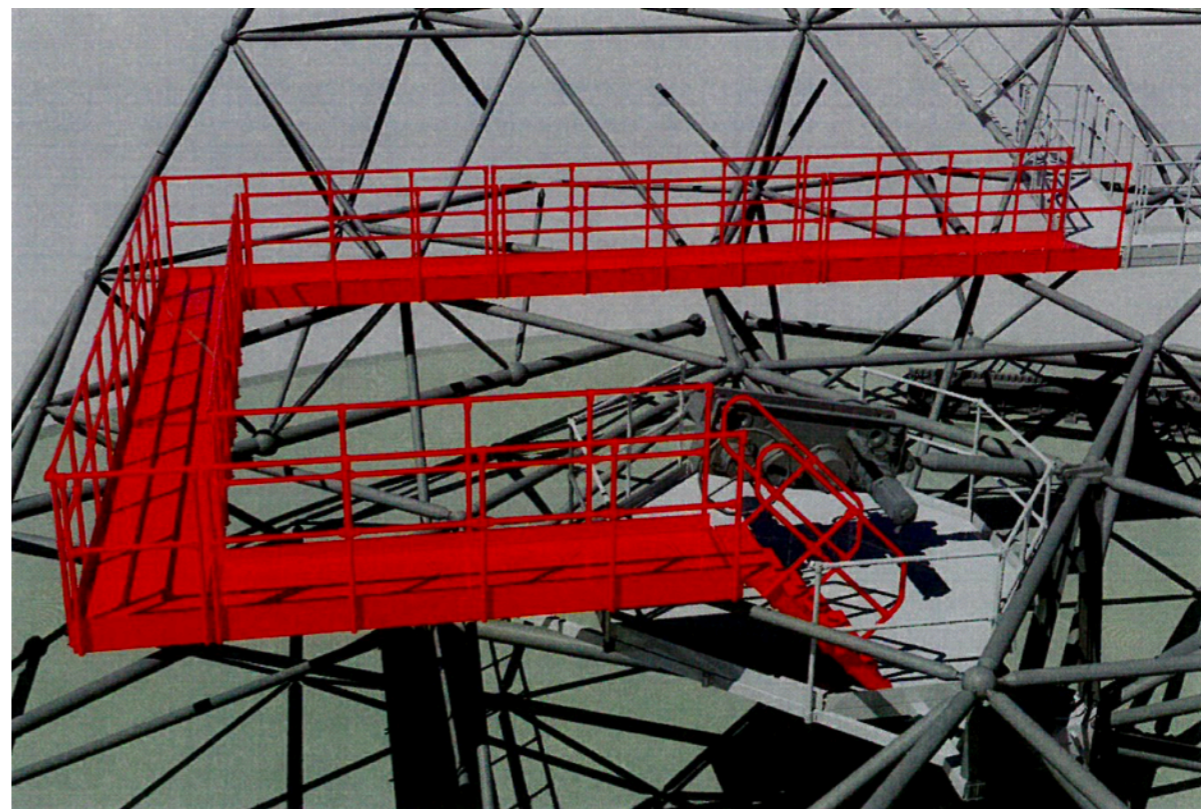
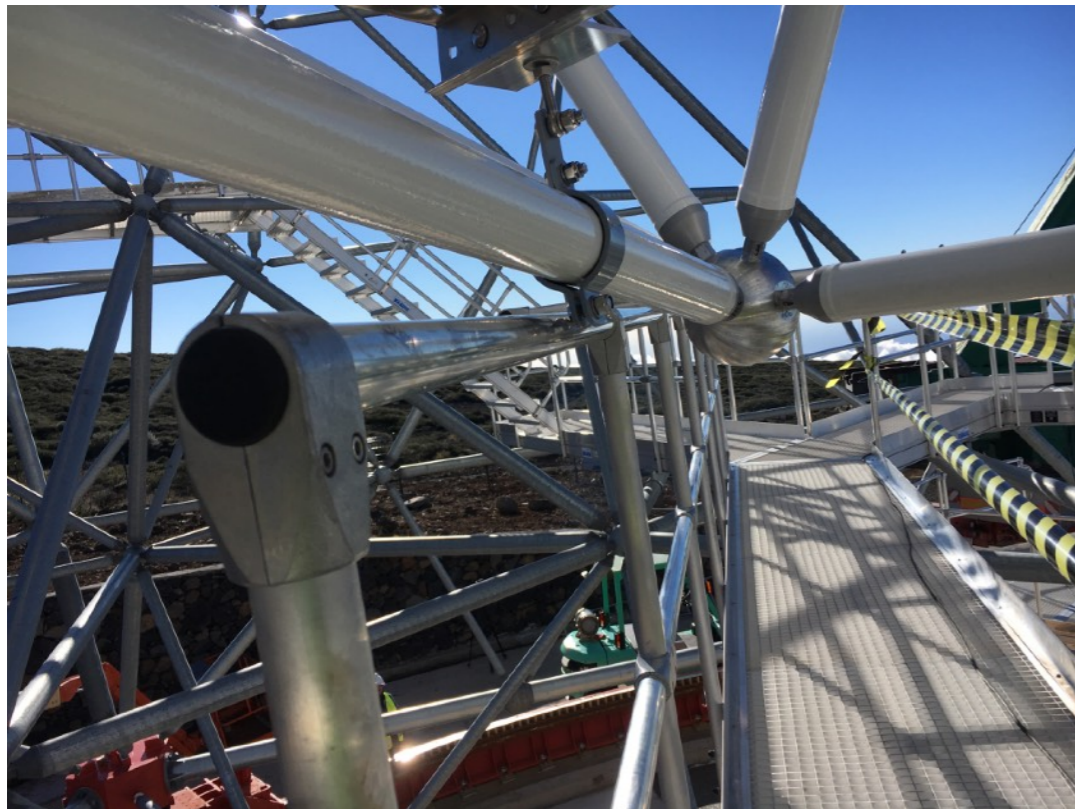


The team



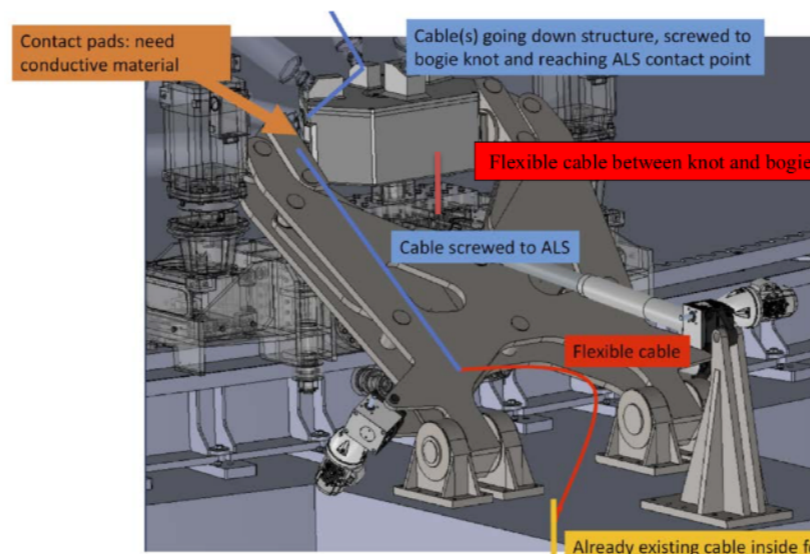
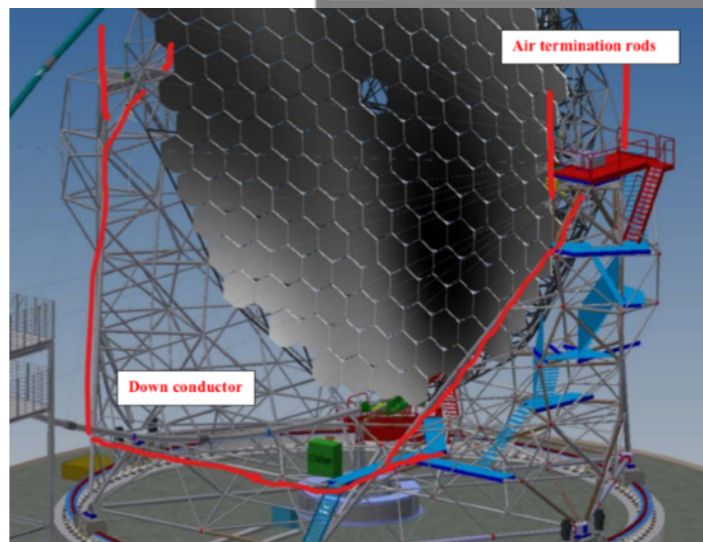
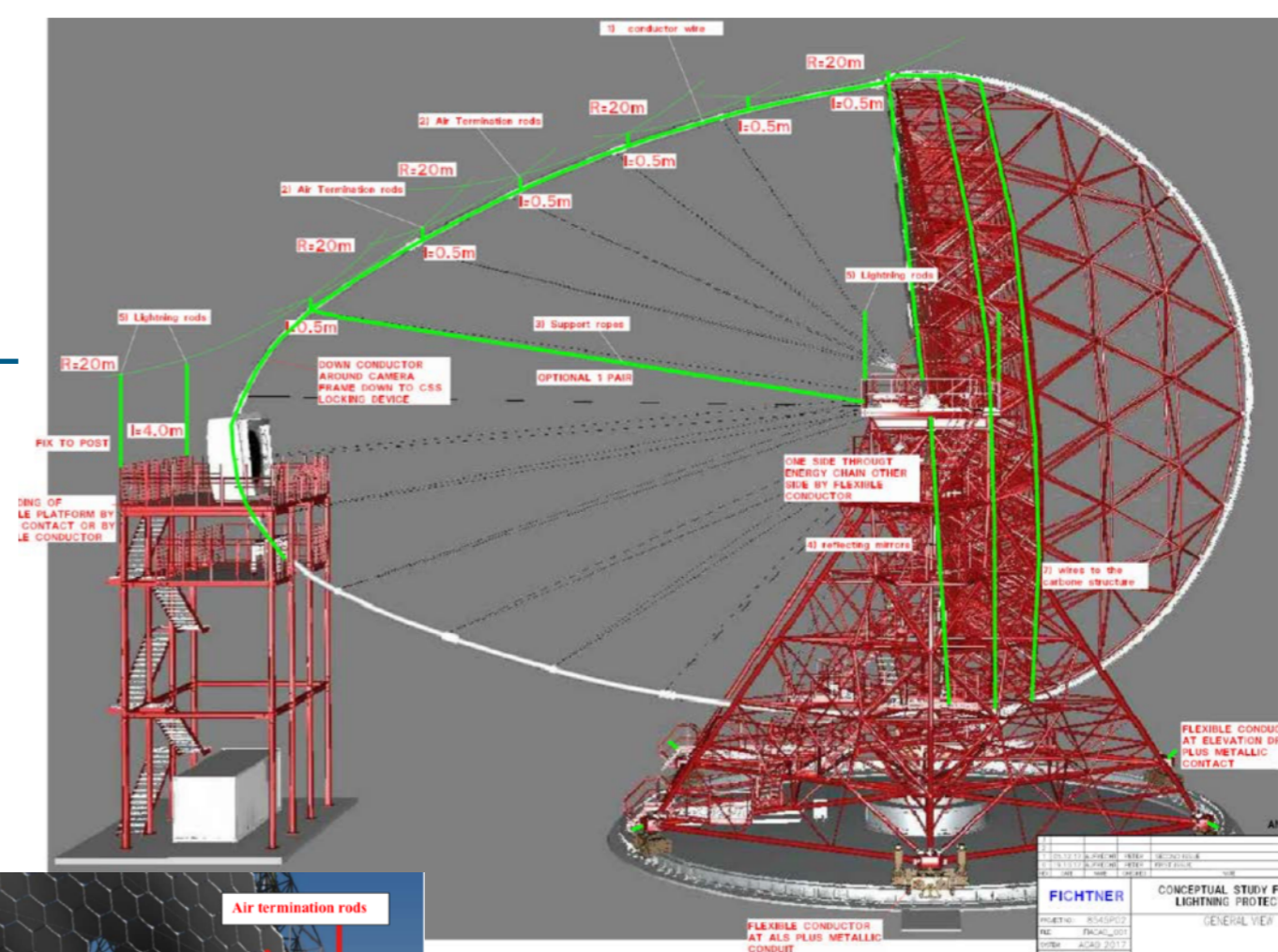
The end

Problems in design of passway to elevation drive: We have re-route the passway

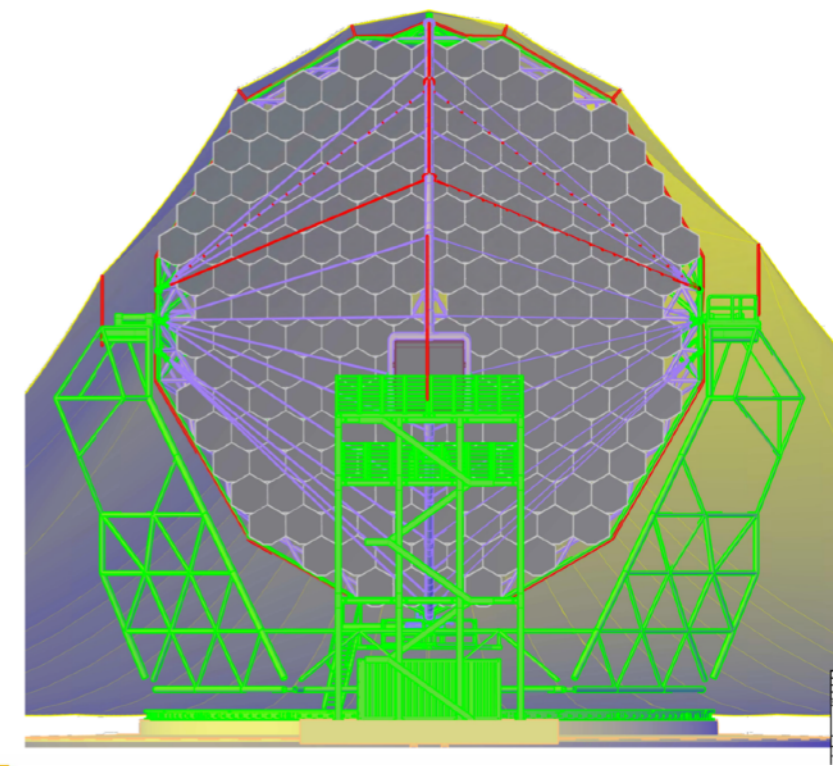


Lightening protection

- Josef Eder together with the company Fichtner developed a design for the lightening protection of the LST.
- The details are being worked out and installed before winter.
- The current is conducted downwards over the locking system to the earth.
- ***Earth connection from foundation must be connected to rail.***
- Earth connection of electric grid must be defined as well



Rolling sphere method



Sun shade

- Problem: In summer time there are two weeks when the sun is focussed directly on the MAGIC counting house and grilling it.
- Solution: We want to install a passive sunshade in the

