TAROT

RAPID ACTION TELESCOPE FOR TRANSIENT OBJECTS

Télescopes à Action Rapide pour les Objets Transitoires

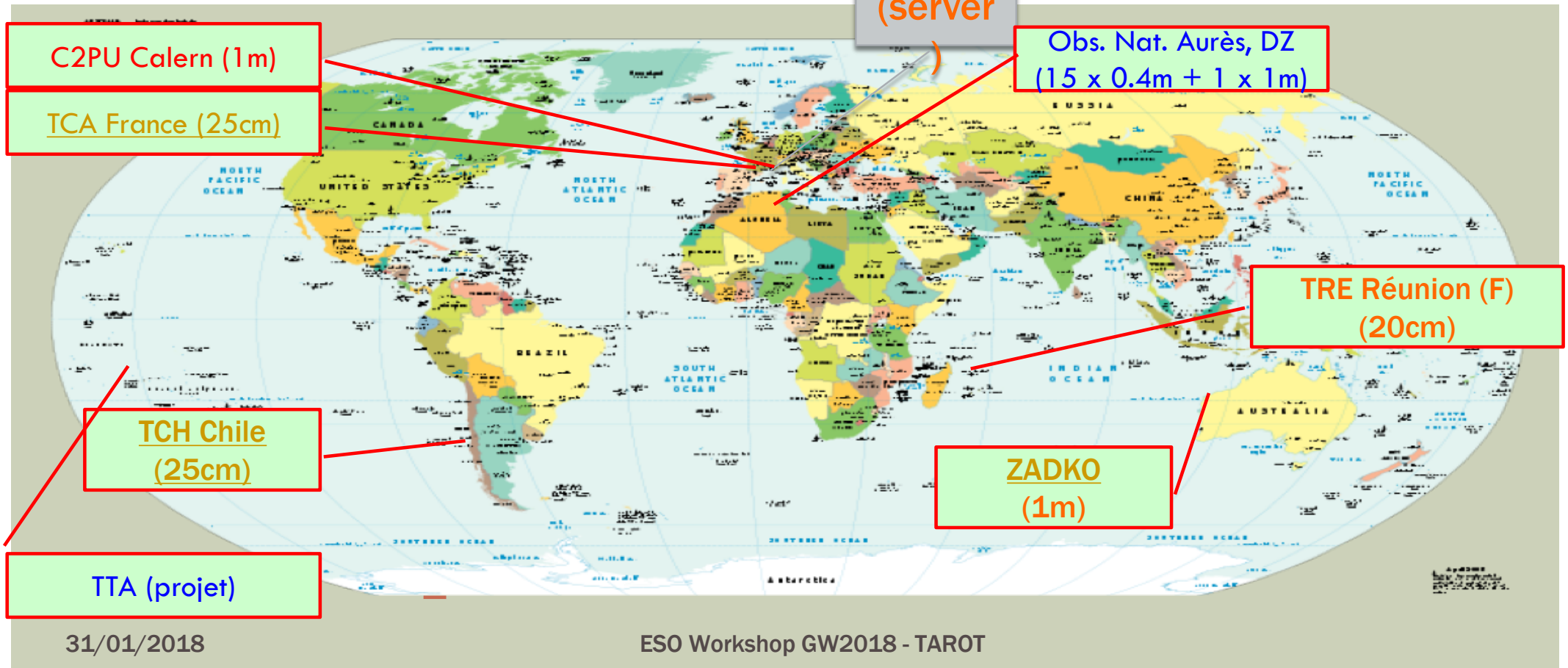
Michel Boër

ESO GW Workshop

31/01 – 01/02/2018

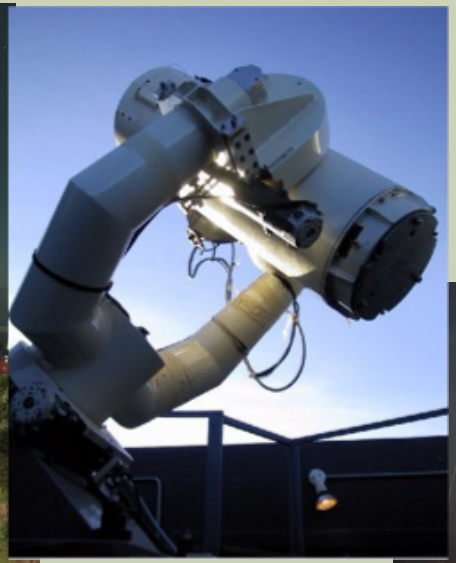
TZAC

TAROT-ZADKO AND SOON AURES N.O.
WIDE FIELD OF VIEW WORLDWIDE NETWORK

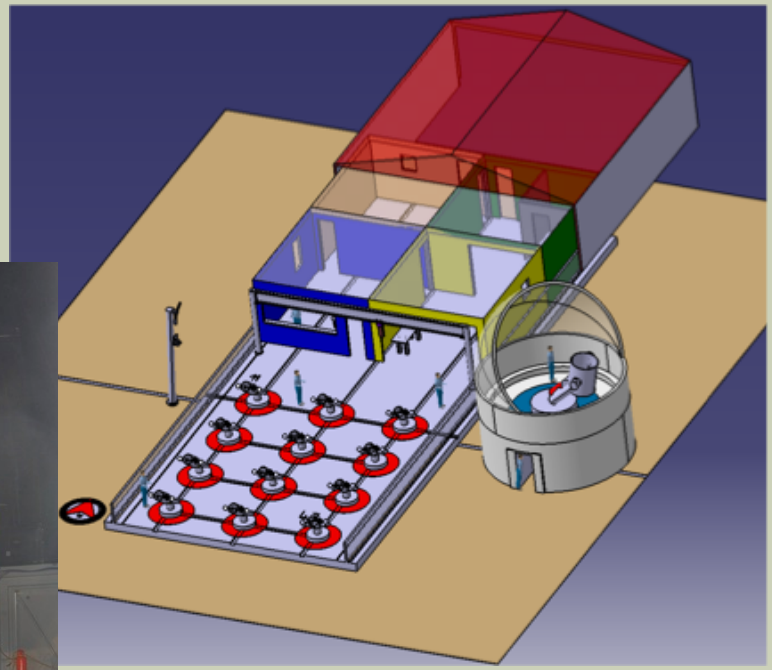


TAROT NETWORK AND SOON RAMSES

TAROT Network



RAMSES @ Aures Obs (2018)

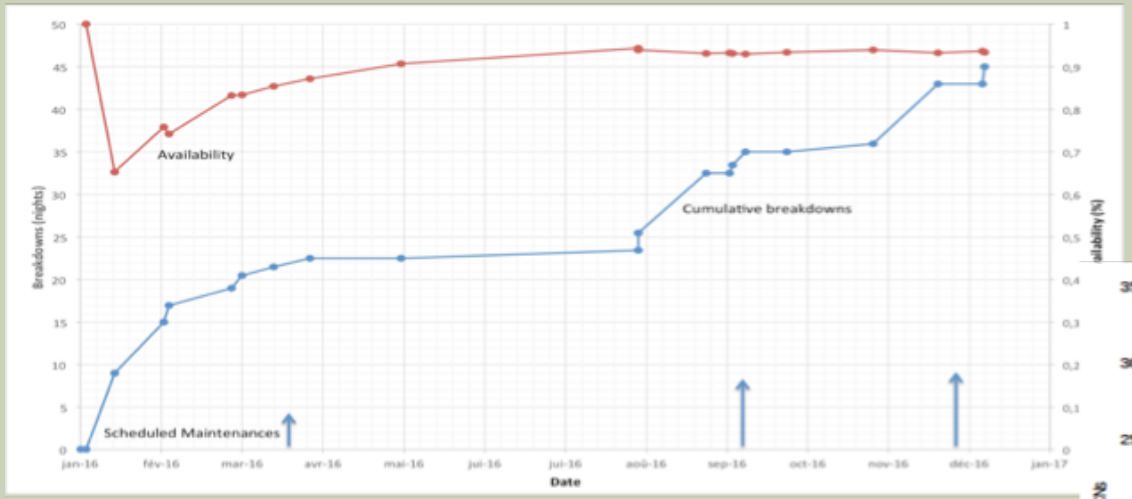


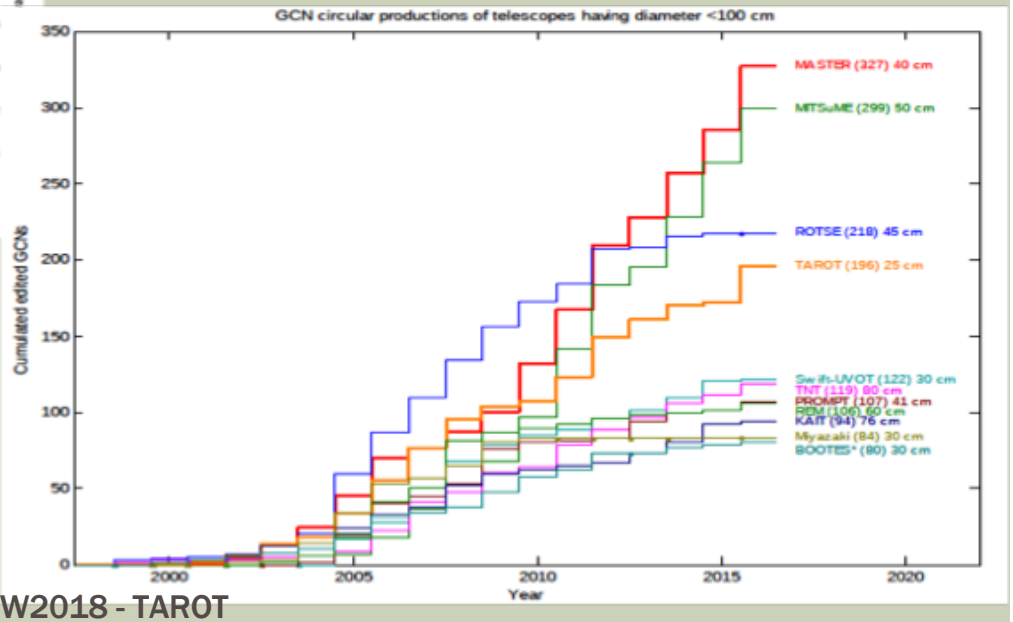
TAROT IN A NUTSHELL

- Small, wide fov, rapid instruments
  - 25cm, 2° fov (TCH/TCA)
  - 18cm, 4° fov (TRE)
- Est. 1999
- Longitude/Latitude network
- Sloan filters (TCA/TCH)
- Camera replacement in progress
- Foressen, larger telescopes (40 – 50cm)
- Association: 1m Zadko telescope, UWA, Gingin Australia
- In project:
  - TAROT – Tahiti (with CNES OGT)
  - RAMSES@ONA (Algeria), telescope farm (in construction)

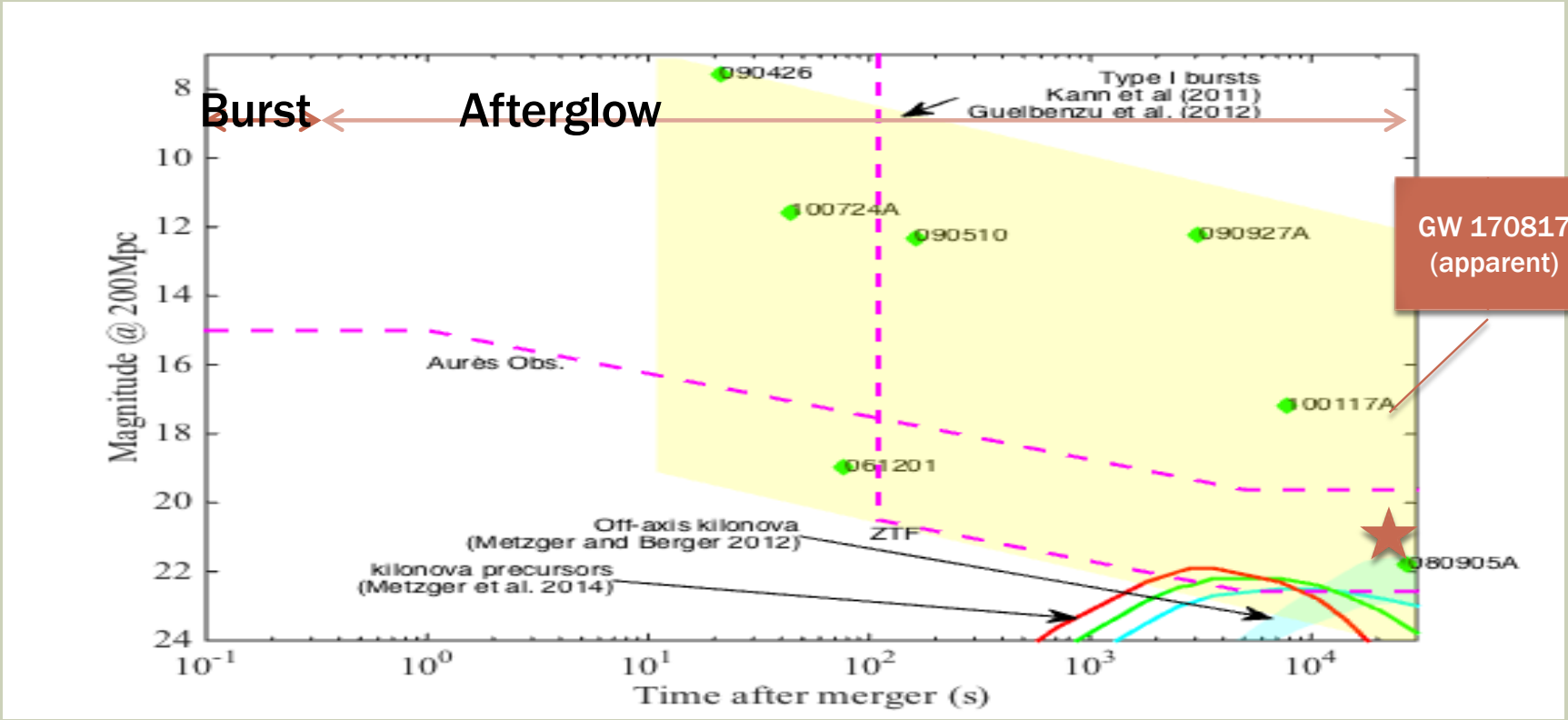
- Objectives
  - Prompt event and early afterglow
- Follow-up of GW alerts since S6 of LIGO-Virgo (earlier version)
- During O1 and O2
  - Observation of all events from first alerts
  - GCN sent
- People:
  - M. Boër
  - A. Klotz
  - R. Laugier (until 2017)
  - L. Eymar (from 2017)
  - K. Noysena (PhD)
  - B. Gendre (Now UWA)
  - D. Coward (Zadko, UWA)
  - J. Moore – A. Burrel, UWA
  - CNES/CNRS/UWA

HIGHLY EFFICIENT TELESCOPES





THE SEQUENCE OF EVENTS SNAPSHOT AND SENSITIVITY



TAROT – O3

- TAROT is a rapid, high throughput instrument
  - Focussed on the beginning of the EM transient
  - Able to explore wide areas
- TAROT is more efficient if positions, and update of, are transmitted ASAP
  - We are currently designing tools for a more efficient automatic early pointing
  - And repointing when the position is updated or information comes in (e.g. GW170817)
- No threshold problem for TAROT
  - It is designed for automated exploration of the transient sky
- Other ongoing programs
  - Swift
  - Neutrinos (TATOO - ANTARES)
  - Fermi-GBM (subthreshold)
  - Remote Space Objects with CNES
  - Chilean program on variable stars
  - Soon SVOM

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