

**INAF**

ISTITUTO NAZIONALE  
DI ASTROFISICA

SRT-0 SRT-1

# THE SARDINIA RADIO TELESCOPE



EMILIO MOLINARI - OAC





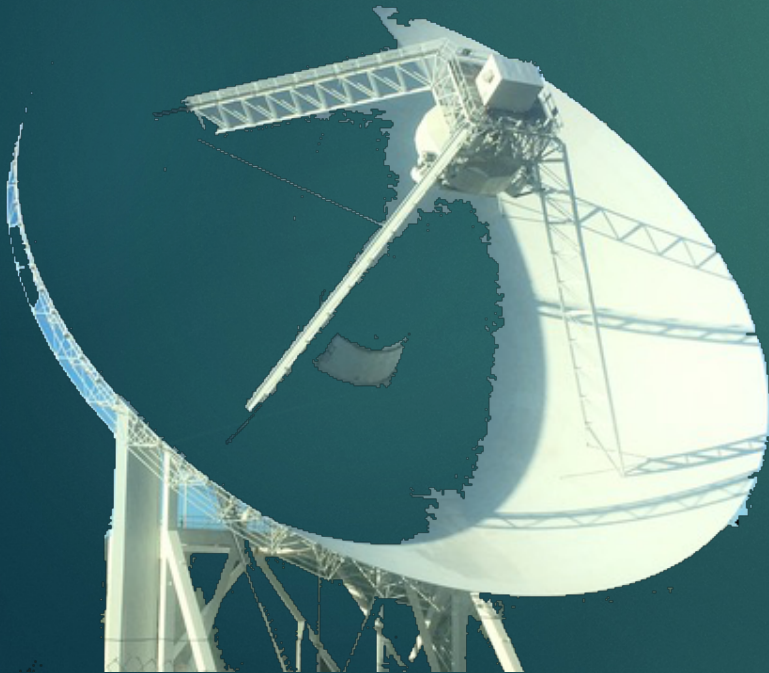


OAC

OSSERVATORIO ASTROFISICO DI CATANIA

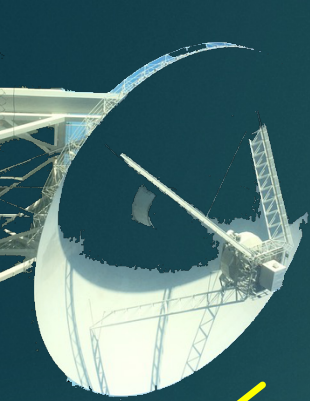
OSSERVATORIO ASTROFISICO DI ARCETRI

ISTITUTO DI RADIOASTRONOMIA



**VLBI**  
**EUSST**  
**PON-SRT** (in 10')  
**DISCOS**  
**BANDA\_S**  
**ORP**  
**SDR**  
**SAD**  
**SETI**  
**SUNDISH**  
**SRT-1 D&D**





- 64m primary mirror with active surface
- Gregorian shaped configuration
- 7.9m secondary mirror.
- 6 focal positions, frequency agility
- Frequency range: 0.3 – 116 GHz
- Elevation range: 5° - 90°
- Azimuth range:  $\pm 270^\circ$
- Azimuth slewing speed: 51°/min
- Elevation slewing speed: 30°/min

P band  
305-425 MHz

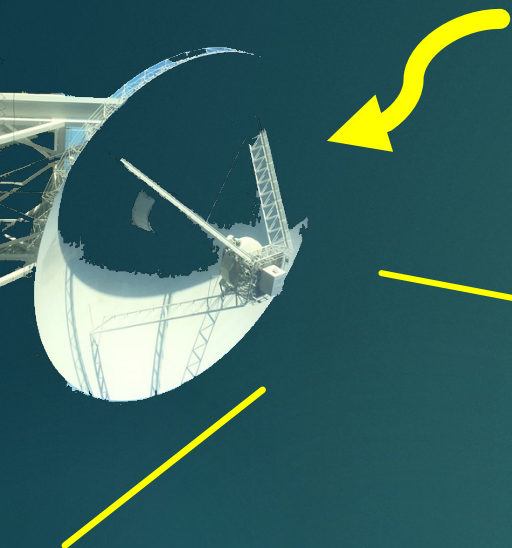
L band  
1.3-1.8 GHz

C band  
5.7-7.7 GHz

K band  
18-26 GHz

**today**





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C band  
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K band  
18-26 GHz

**today**

K+Q+W band  
VLBI

S band  
3.0-4.5 GHz

C-low band  
4.2-5.6 GHz

Q band m-beam  
33-50 GHz

W band camera  
80-106 GHz

**tomorrow -> SRTPON**

W band m-beam  
75-106 GHz



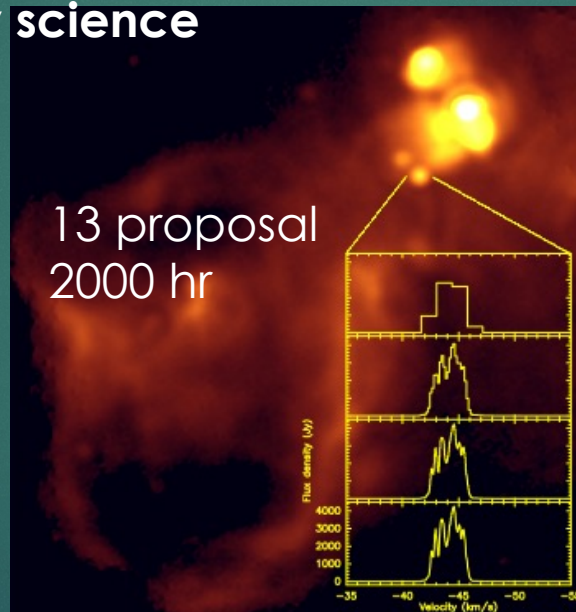
# a bit of history



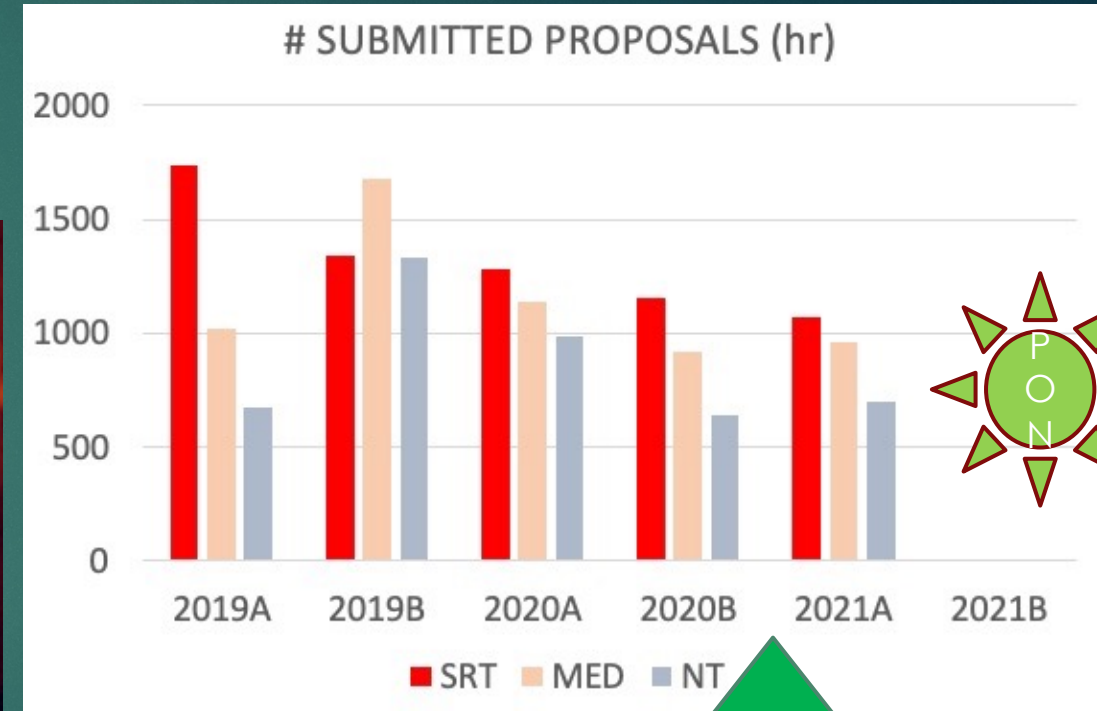
2013,  
inaguration



2016,  
early science



2019,  
offer to community

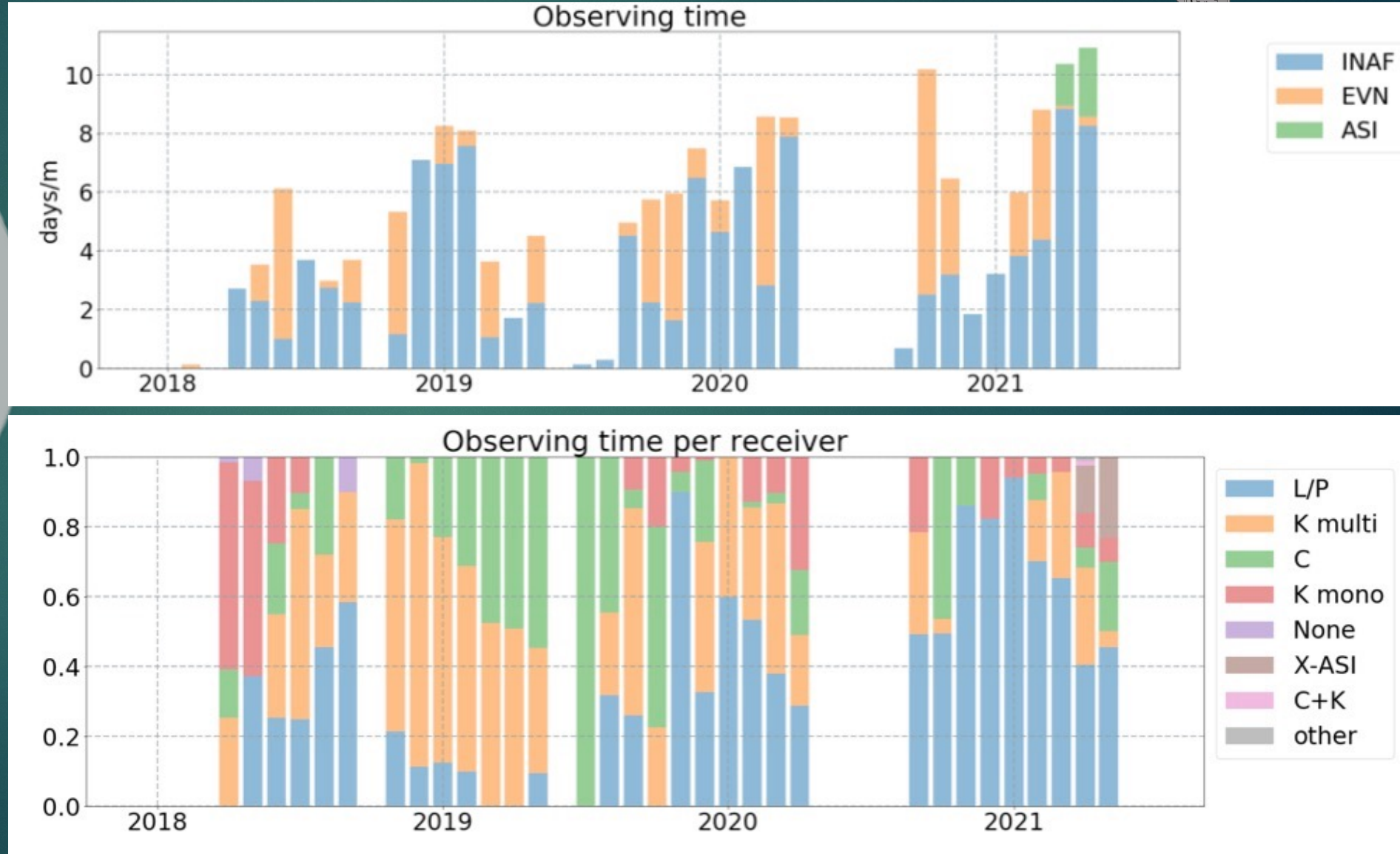
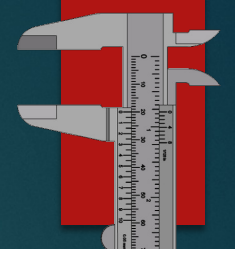


TAC - INAF

EVN

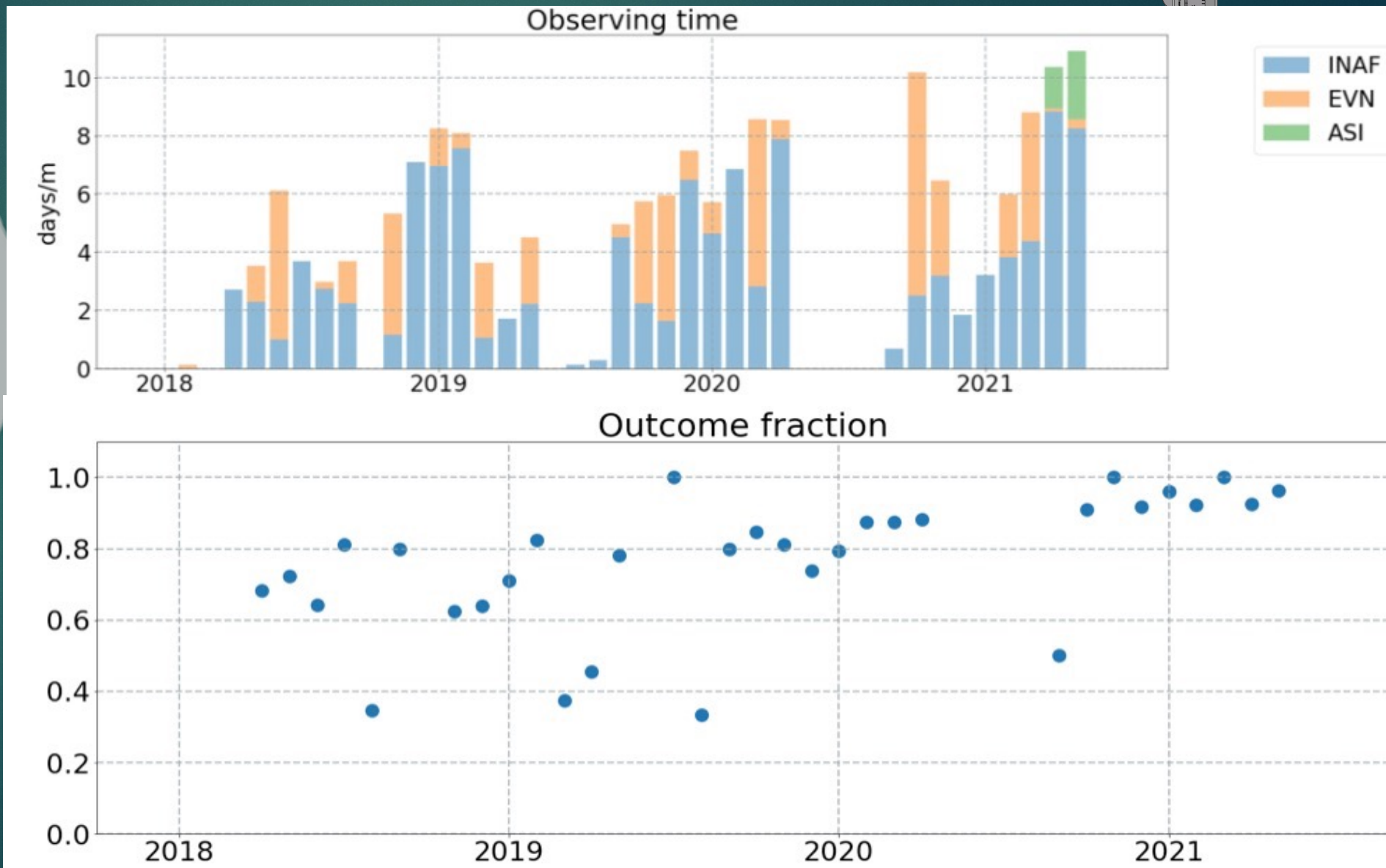
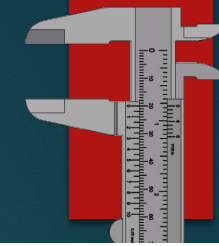
ORP H2020

# SRT metrics

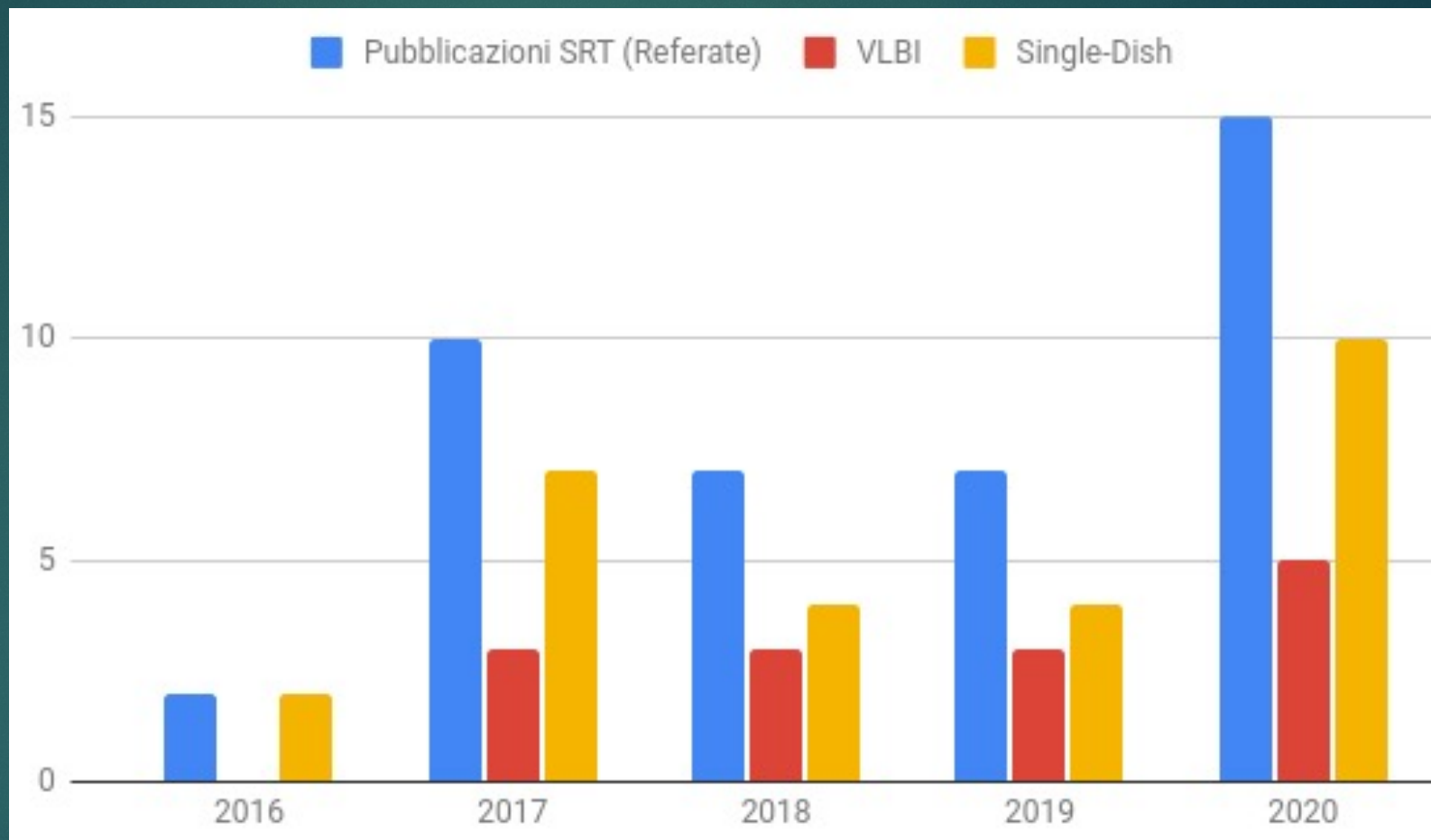




# SRT metrics



# production



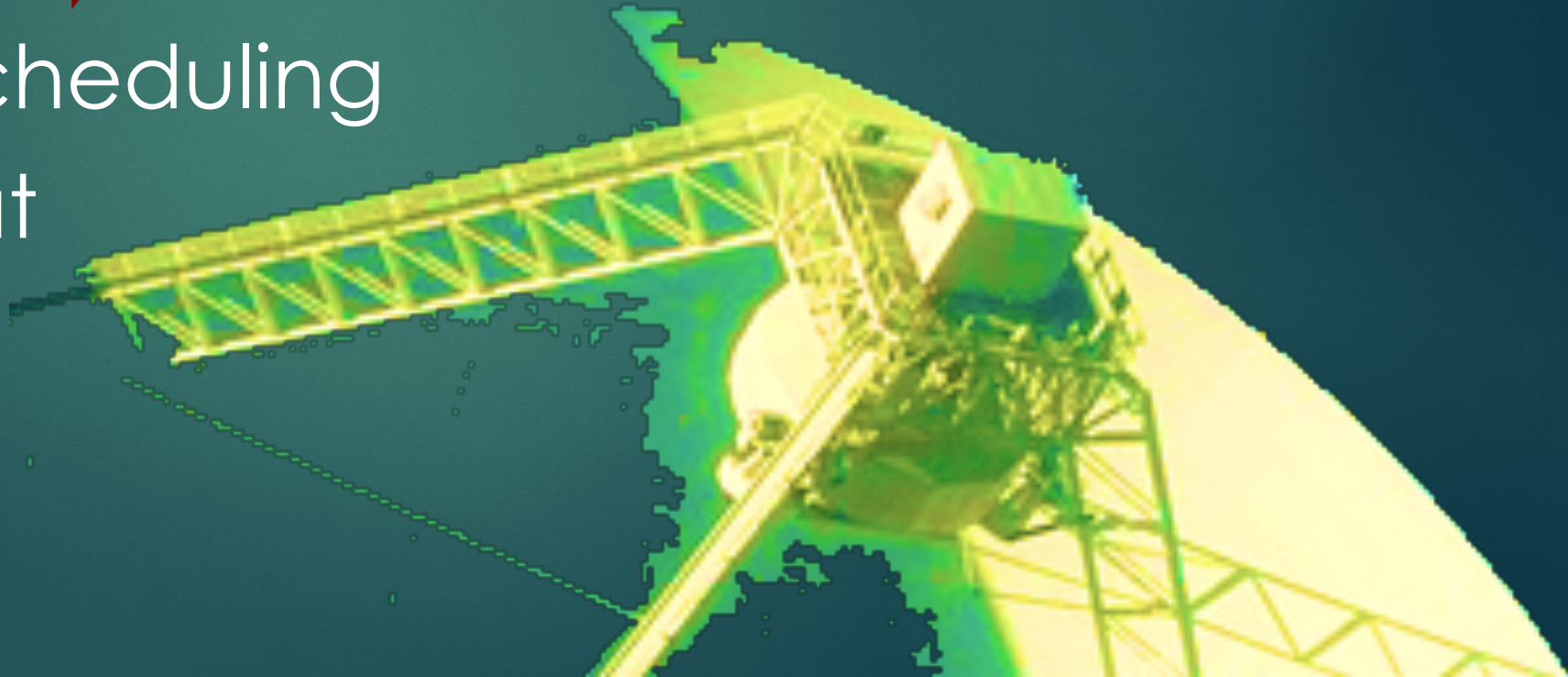
[http://www.srt.inaf.it/astronomers/science\\_srt/](http://www.srt.inaf.it/astronomers/science_srt/)



# toward the future



- ▶ spectro mode
- ▶ more freqs (➡ PON-SRT)
- ▶ dynamic scheduling
- ▶ data format
- ▶ archive
- ▶ outreach





# SRT-1 D&D (S.Casu)

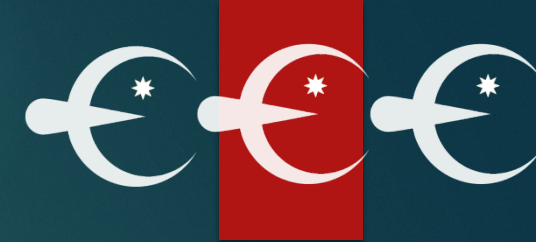
the new visitor center



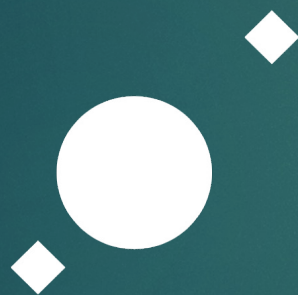
didactic antenna



# funding SRT



- ▶ 60 building M€
- ▶ 2 M€/yr

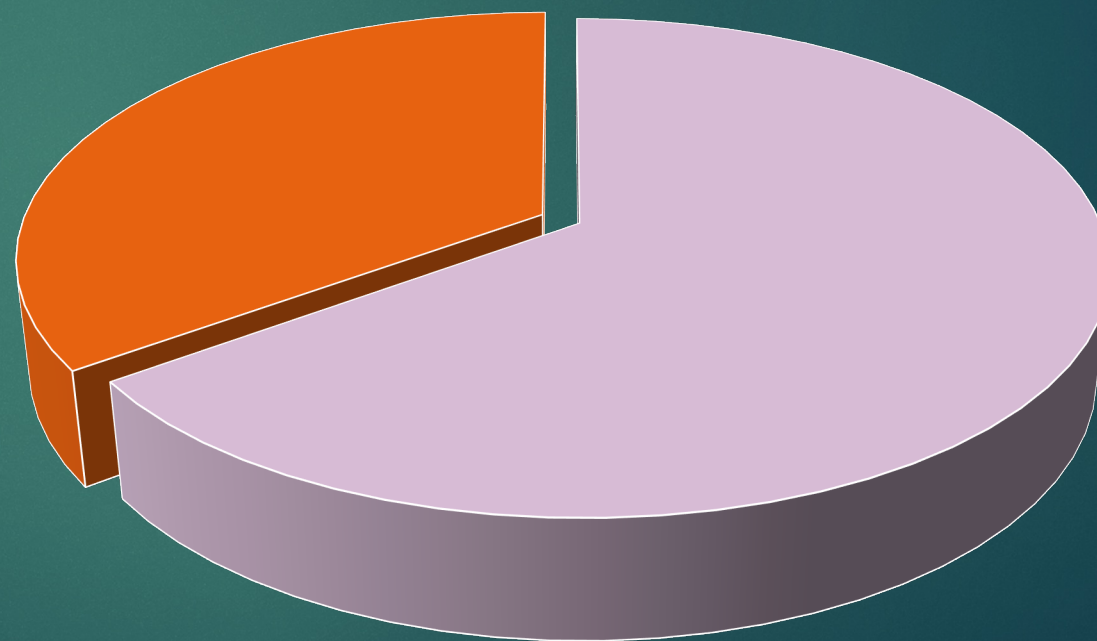


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yearly needs 2M€



■ INFR ■ TDs



# critical issues



- ▶ funding: SRT is included in OA-Ca where  $>50\%$  admin work is linked to SRT, sometimes a confusing mix
- ▶ heavily understaffed



# critical issues



► funding  
where  
to SRT,

rapid response for INFR  
vs  
administrative timing

OA-Ca  
linked  
sing mix

► heavily understaffed



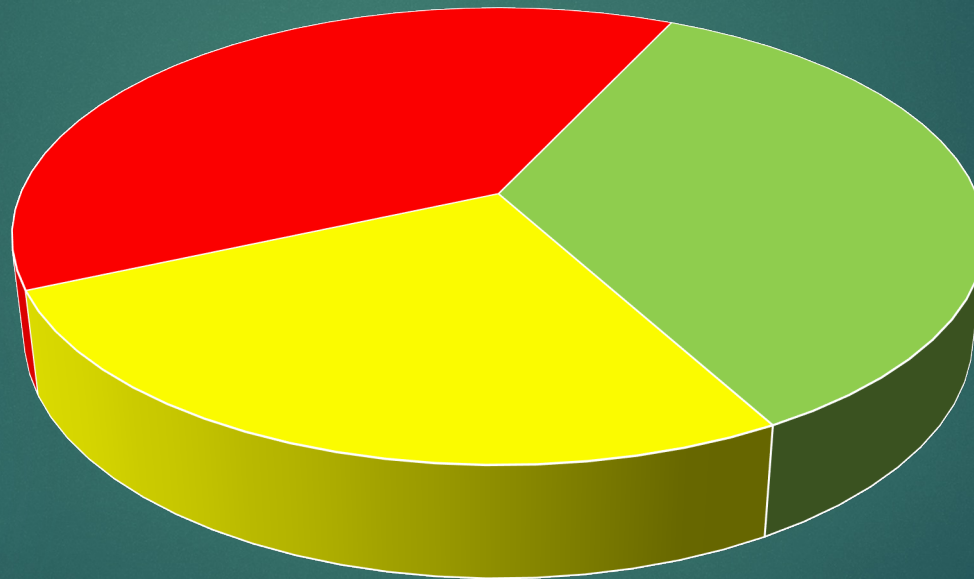
28.5 FTE to 100%

(hopefully) hiring:

electrotechnician  
electronics  
informatics  
software

telescope operators

## THE PEOPLE FOR SRT



■ staff ■ TD ■ missing

RDO



RECEIVERS

METROLOGY

BACKENDS

ICT

CNTRL S/W

USER SUPP

SITE MNGR

MECHANICS

SCHEDLING





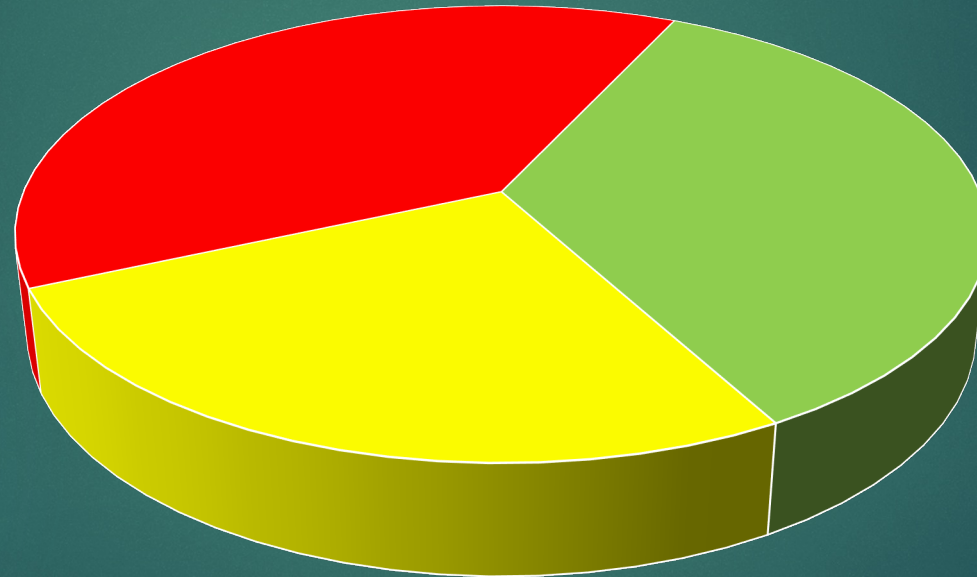
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## THE PEOPLE FOR SRT



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RECEIVERS

METROLOGY

BASIS

LAB

IC

CNTRL S/W

USER SUPP

SITE MNGR

MECHANICS

SCHEDLING

TrTec

ADM

D&D



# THE PEOPLE FOR SRT





# THE PEOPLE FOR SRT



CLAUDIO PILI   JOSE' MUSMECI   ANTONIO PODDIGHE   ALBERTO PELLIZZONI   ALESSANDRO NAVARRINI   ANDREA POSSENTI   PAOLA CASTANGIA   TORE ARESU   ALBERTO PILLONI   MARTA ZONCA BURGAY   GIAMBATTISTA SERGIO   FABRIZIO ZORCOLO   FILIPPO MACCAGNI   STEFANO PALMAS   FRANCESCO GAUDIO MONTE   ENRICO URRU   FRANCO BUFFA   ANDREA SABA   MATTEO MURGIA   ANDREA TARCHI

ELISE EGRON   ADINA MASCOJA   ANNA CORSO   (MOGLIE DI LEO)   SILVIA LEURINI   IGNAZIO PORCEDDU   RENATA SCHIRRU   TIZIANA COIANA   PINO MELIS   TONINO PISANU   ANTONIETTA FARA   NICOLA PINTUS

PINO CALLEDDE (esterno)   DELPHINE PERRODIN   LEO MUREDDU   VALENTINA VACCA   ANNARELLA STERA   GIAN LUIGI DEIANA   SILVIA CASU   SARA LORU   ALESSIO TROIS   FRANCESCA LOI   GABRIELE SURCIS   MATTEO BACHETTI   FEDERICA GOVONI   TERESA CARIA   PAOLO SOLETTA   SABRINA MILIA   GIUSEPPE CARBONI





**and now the future !**