

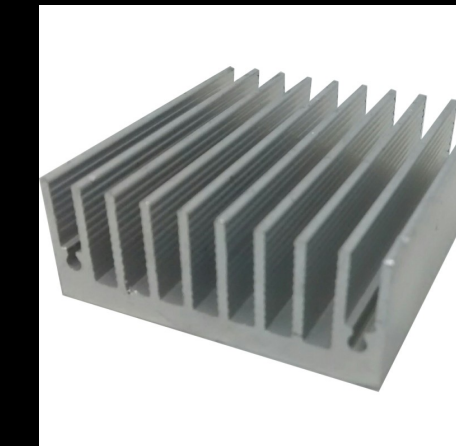
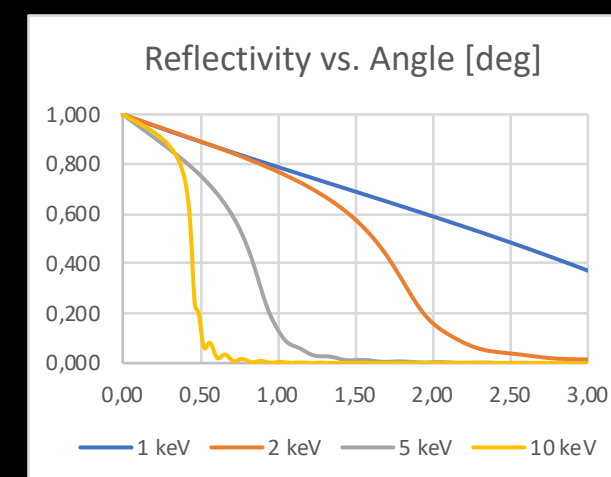
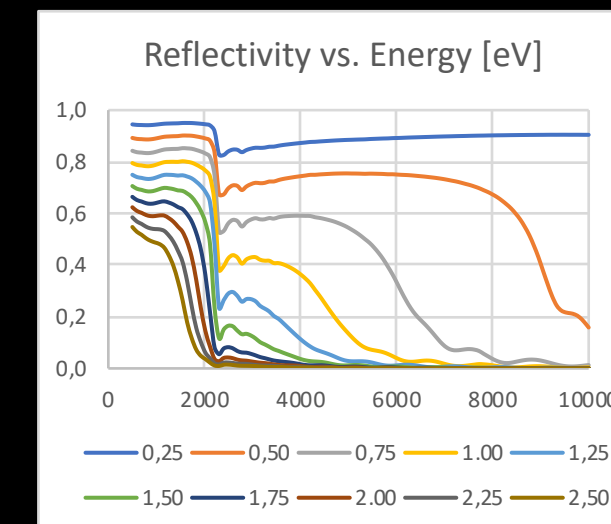
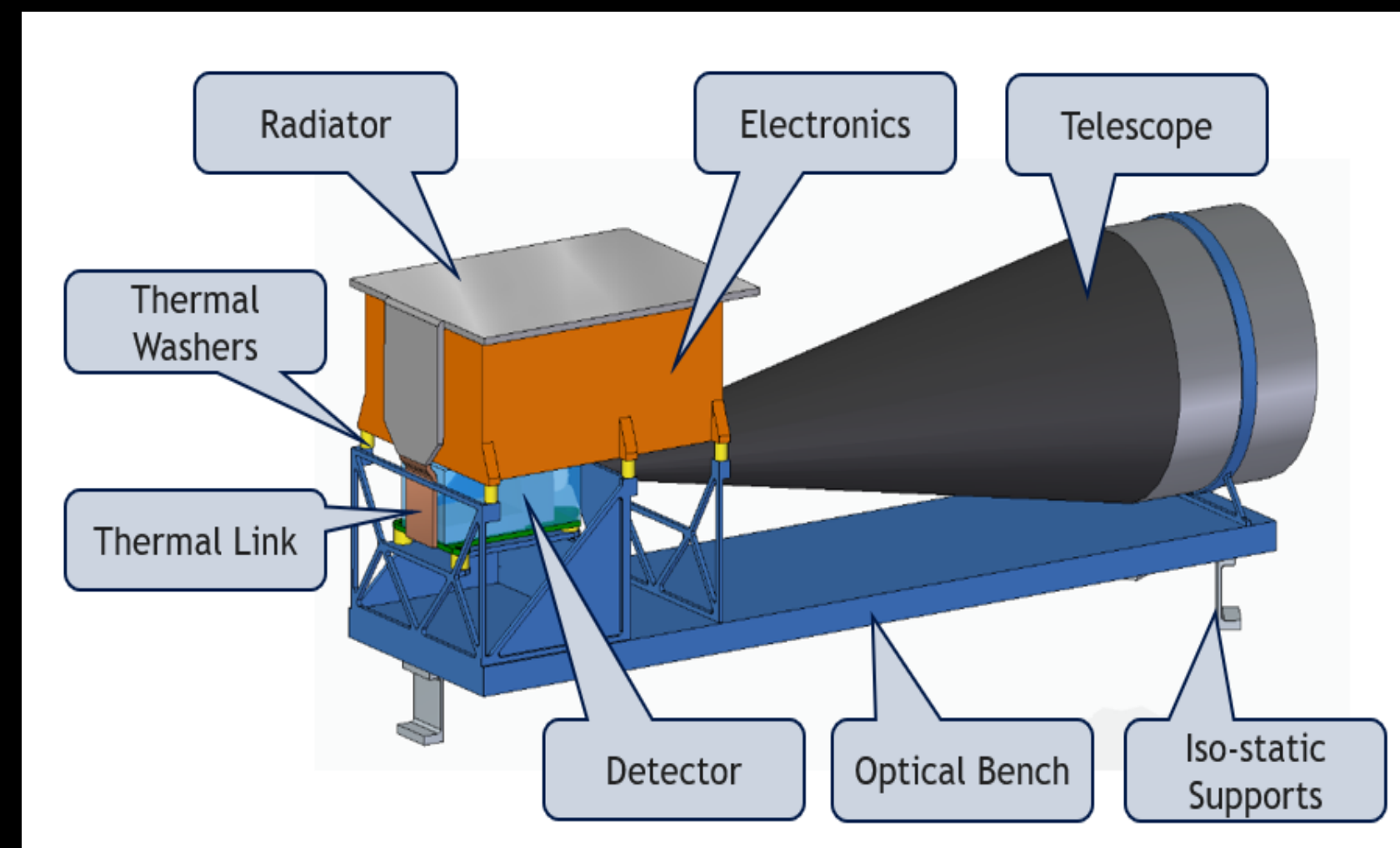
PULSARS AS GPS: NEXT GENERATION INSTRUMENTS

Mechanical Design

- Optical bench
- Electronics
- Focal Plane
- Thermal Concept

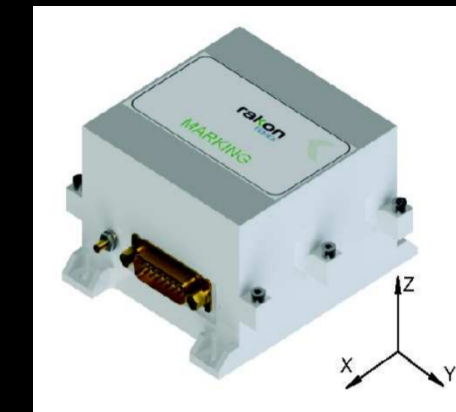
Material

- Layer : 1Au 0.025μm
- Layer2: NiCo 20.000μm
- Substrate: Al₂O₃ 200.000μm



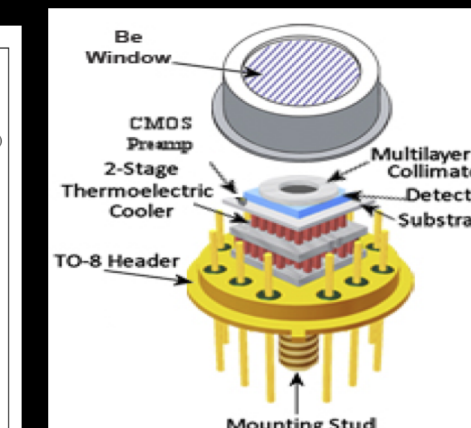
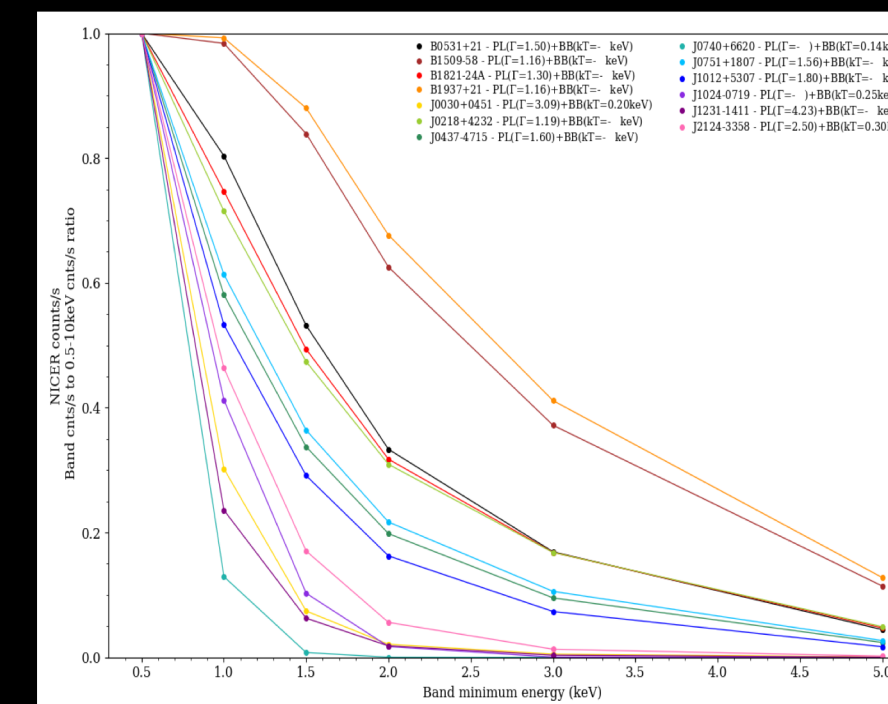
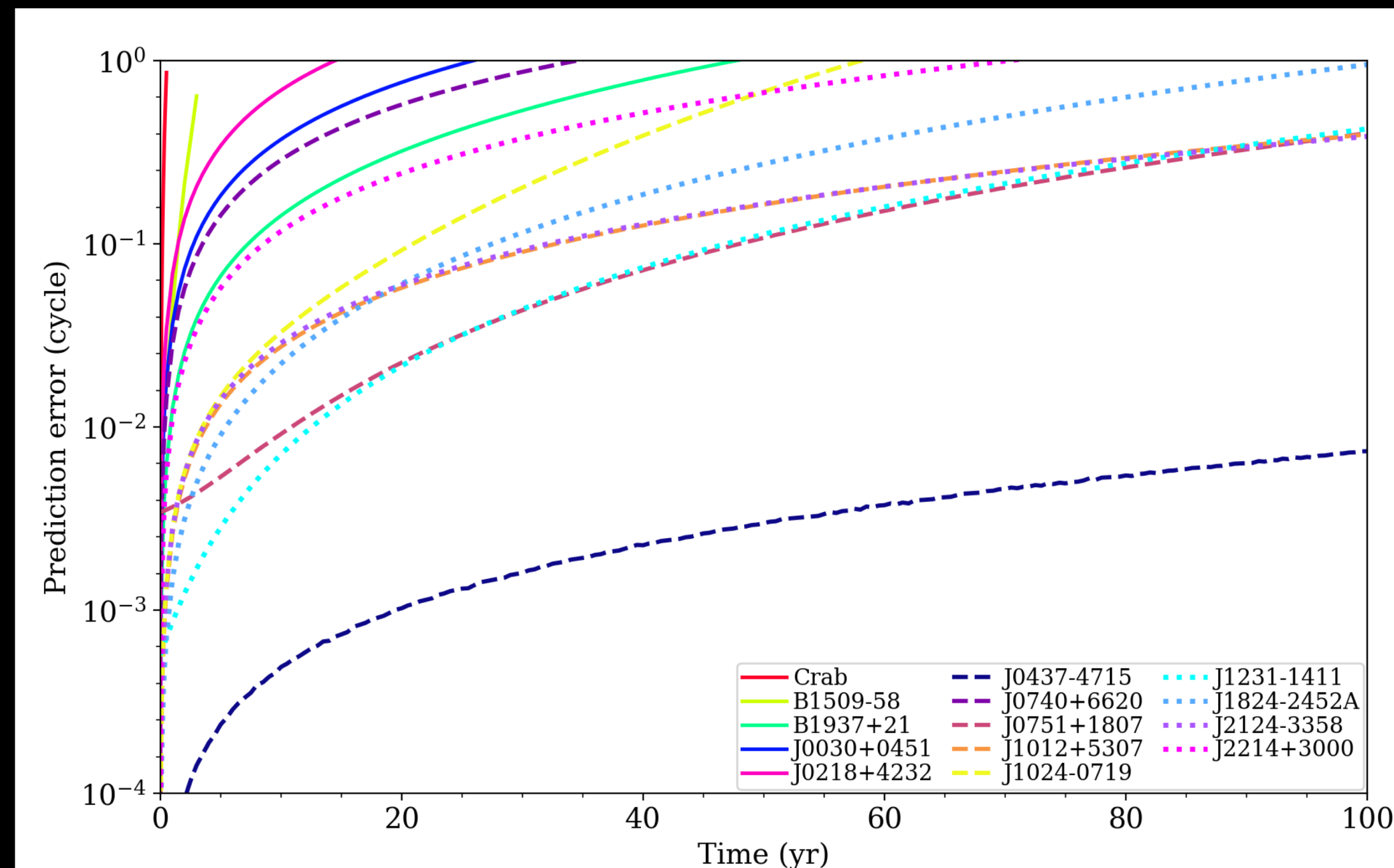
Thermal control

Passive thermal control



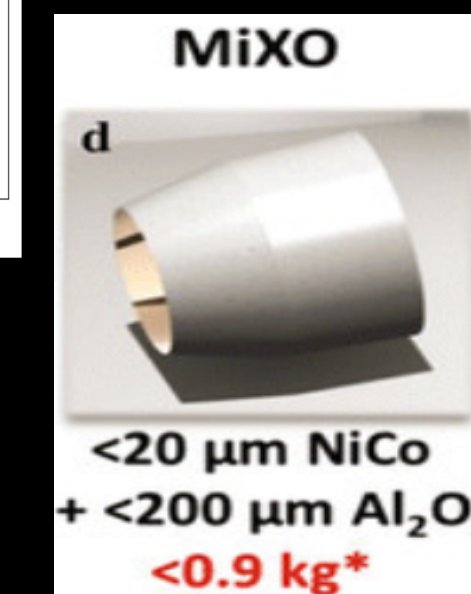
Clock

RAKON high precision clock



Detectors

SSD (timing accuracy)
CMOS (imaging capability)



Optics

Miniature lightweight
X-ray Optics
Metal-ceramic hybrid
mirrors

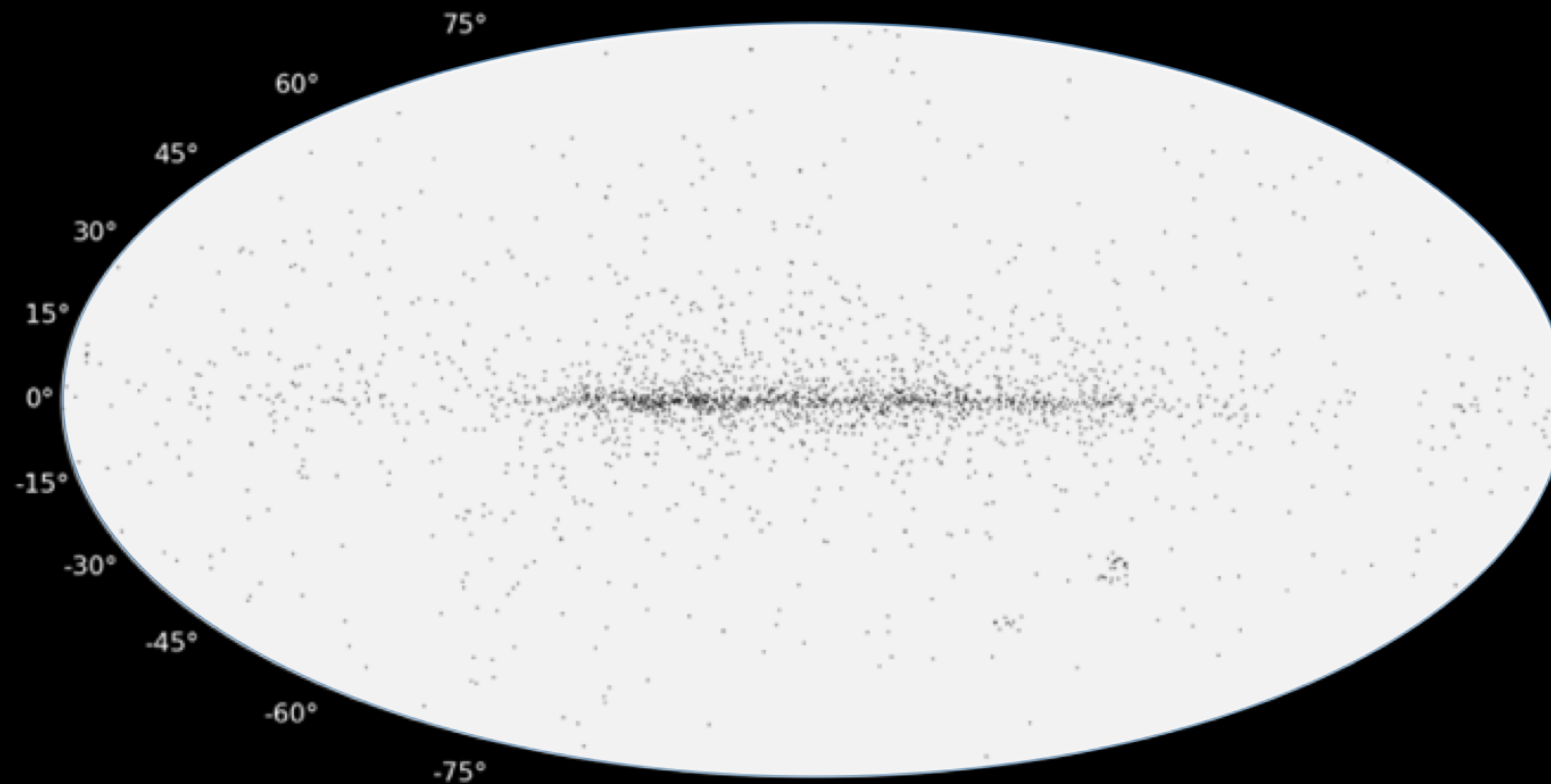
in collaboration with



Aeroespacial

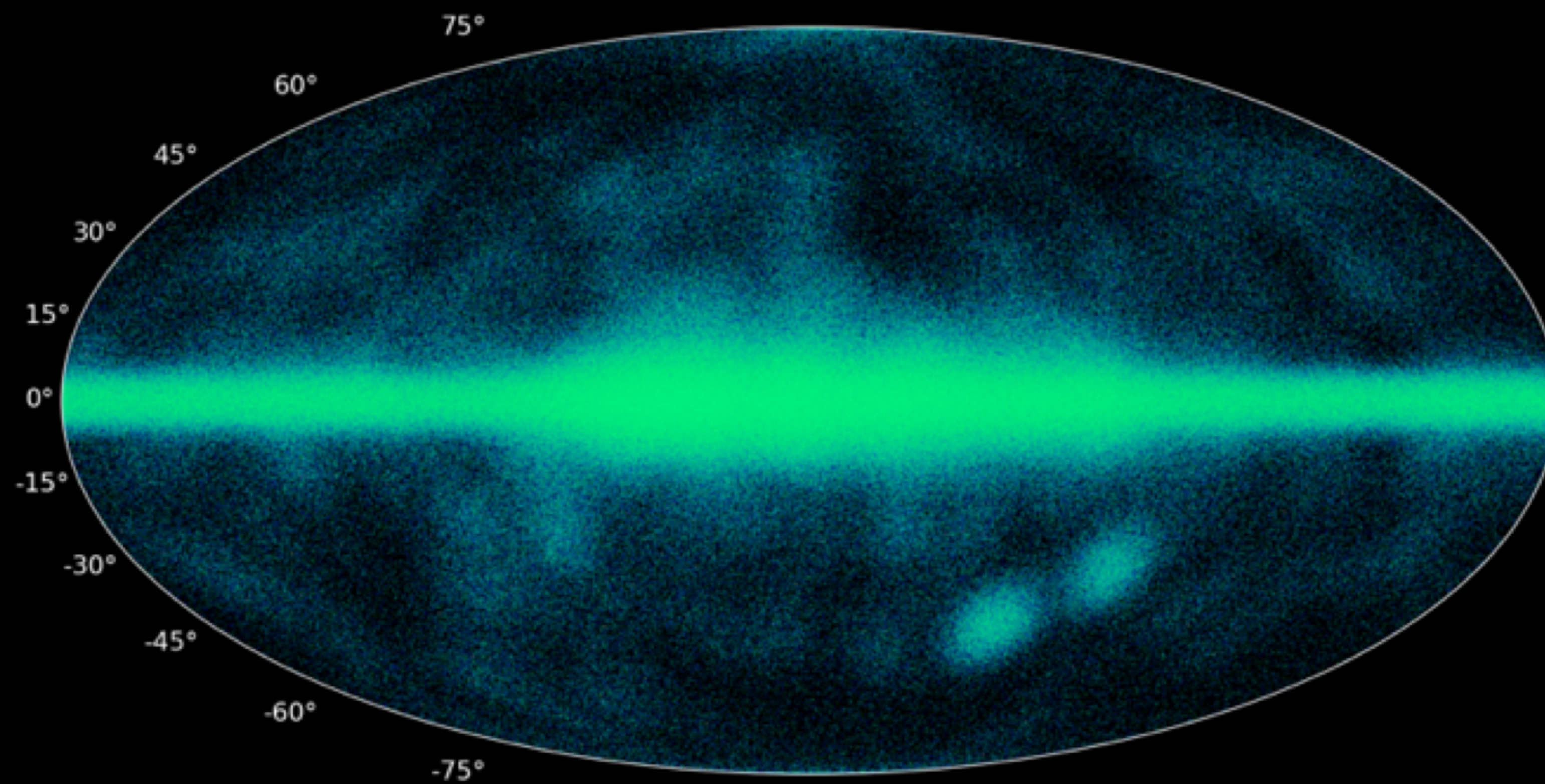


OBSERVED NEUTRON STAR POPULATION IN 2020

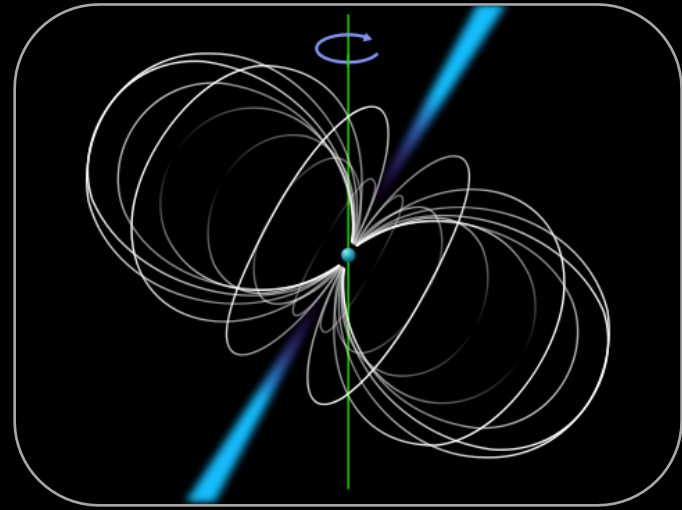


Credit: ATNF

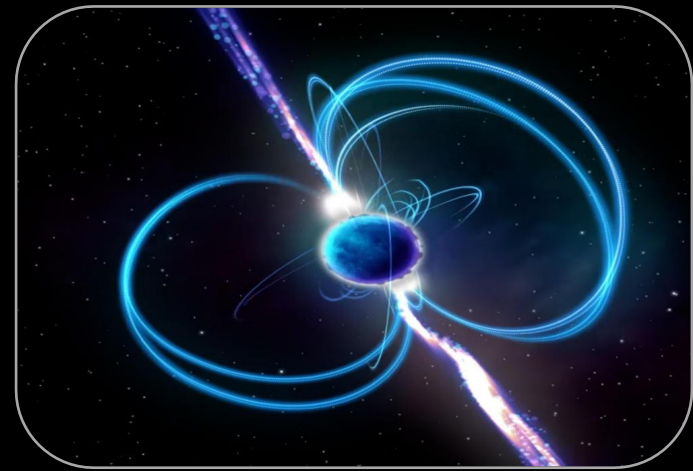
EXPECTED NEUTRON STAR POPULATION...



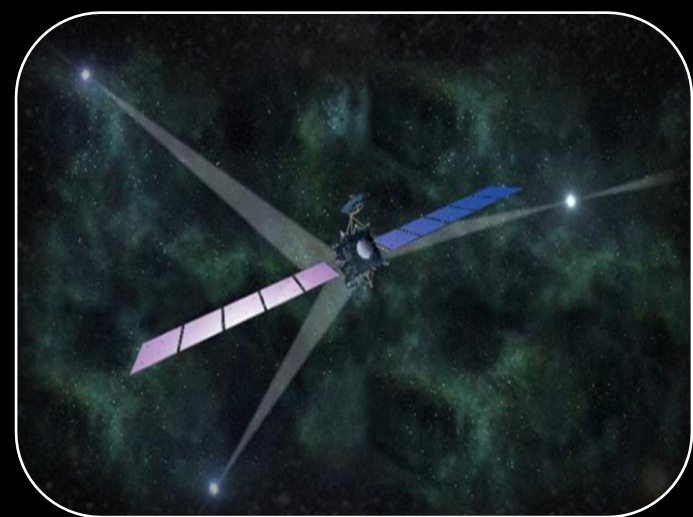
Credit: N. Rea 2021



This is not a real pulsar... stop dreaming about dipoles.



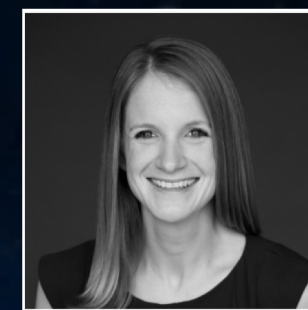
Newly discovered long periodic radio transients are challenging our understanding of pulsars.



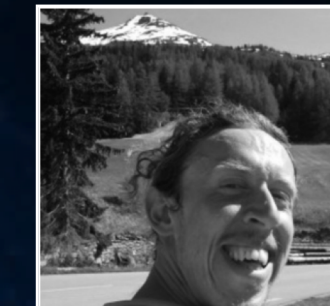
We will soon be able to travel beyond the Solar System and come back to tell the next generations.

THANKS!

*Dr. Vanessa Graber (JdC)
Dr. Emilie Parent*



*Dr. Daniele Viganò (now ERC)
Dr. Francesco Coti Zelati (JdC, soon RyC)*



*Dr. Alice Borghese (JdC)
Mr. Michele Ronchi*



*Ms. Clara Dehman
Mr. Abubakr Ibrahim*



*Dr. Stefano Ascenzi
Dr. Rajath Sathyaprakash*



*Mr. Celsa Pardo
Dr. Alessio Marino*



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