



PENRITH OBSERVATORY

School of Computing, Engineering and Mathematics

Multi-messenger Astronomy Working Group (AAL)

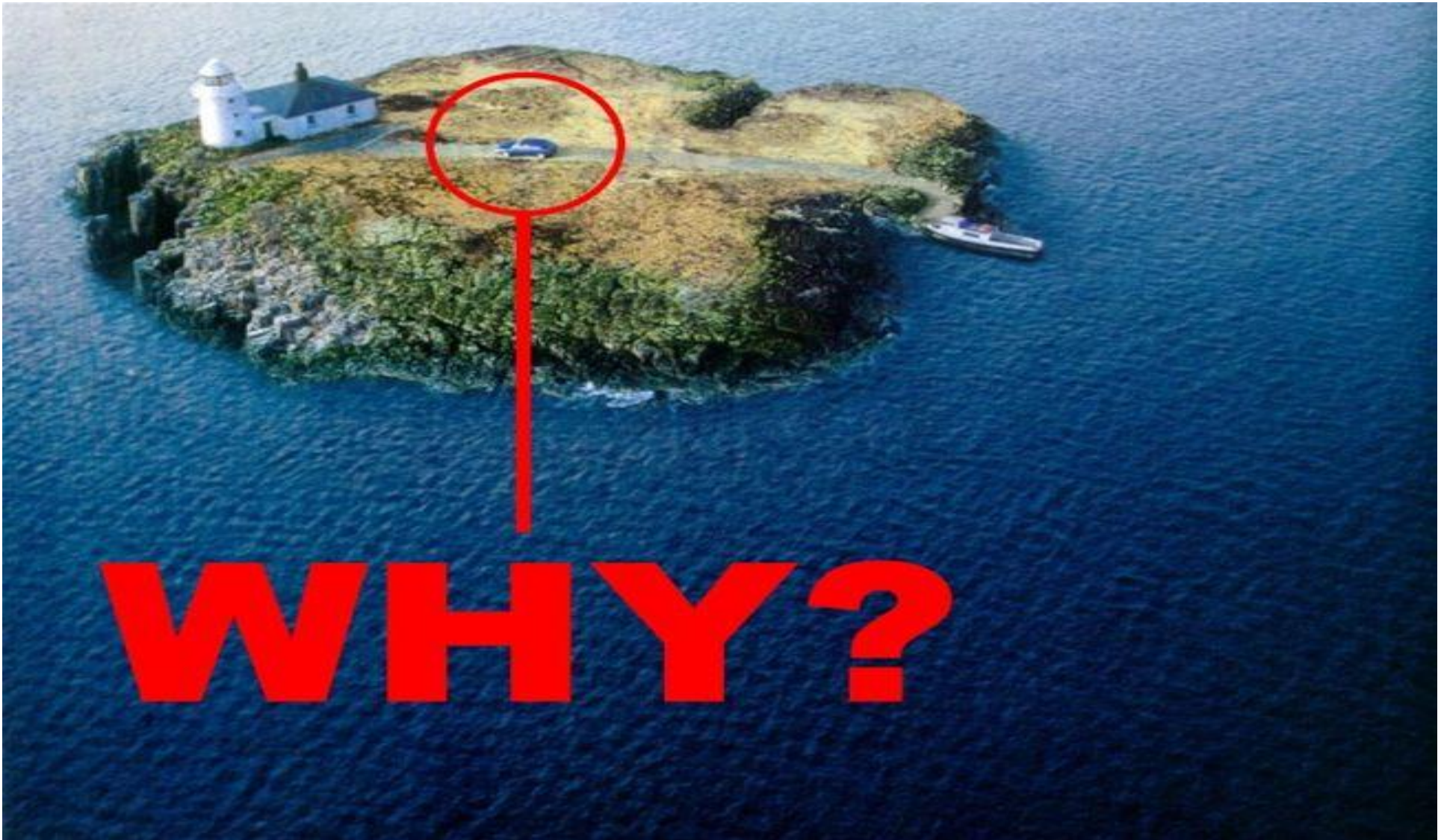
Miroslav Filipovic



westernsydney.edu.au/observatory



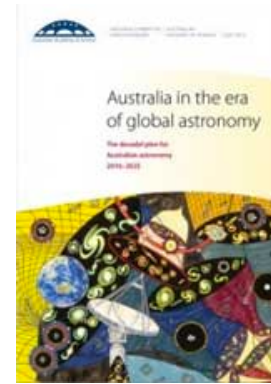
Credit: NASA/ESA and The Hubble Heritage Team STScI/AURA



WHY?



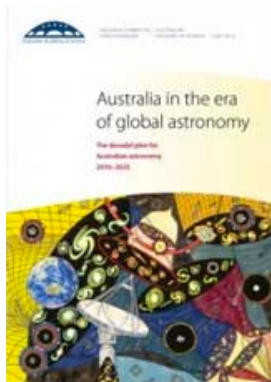
MMA-WG Scope and Purpose



- Investigate and report on the current status and future opportunities with the Pierre Auger Observatory and the Cherenkov Telescope Array, which is AAL is currently supporting, as well as neutrino facilities such as IceCube, gravitational wave detectors such as LIGO, and other relevant facilities in the field of multi-messenger astronomy;
- Advise on how to maximise Australian participation and collaboration in, and the benefits from, these projects;
- Recommend specific investments over the next 5 years in the field of multi-messenger astronomy.



MMA-WG Skillsets



- High-energy cosmic ray infrastructure
- High-energy gamma ray infrastructure
- Neutrino detection infrastructure
- Gravitational wave detection infrastructure
- Other relevant, complementary areas



CTA and X-ray, Gamma-ray ... HE...

- Pierre Auger
- eRosita
- LIGO+
- IceCube
- ...





MMA Research Themes +



PWN.SNRs.Transients.AGNs.
Pulsars.DarkMatter.BlackHoles.
DarkAccelerators.Instruments.
DATASCIENCE.GRBs....





CTA and AAL

Multi Messenger WG!!!!!!

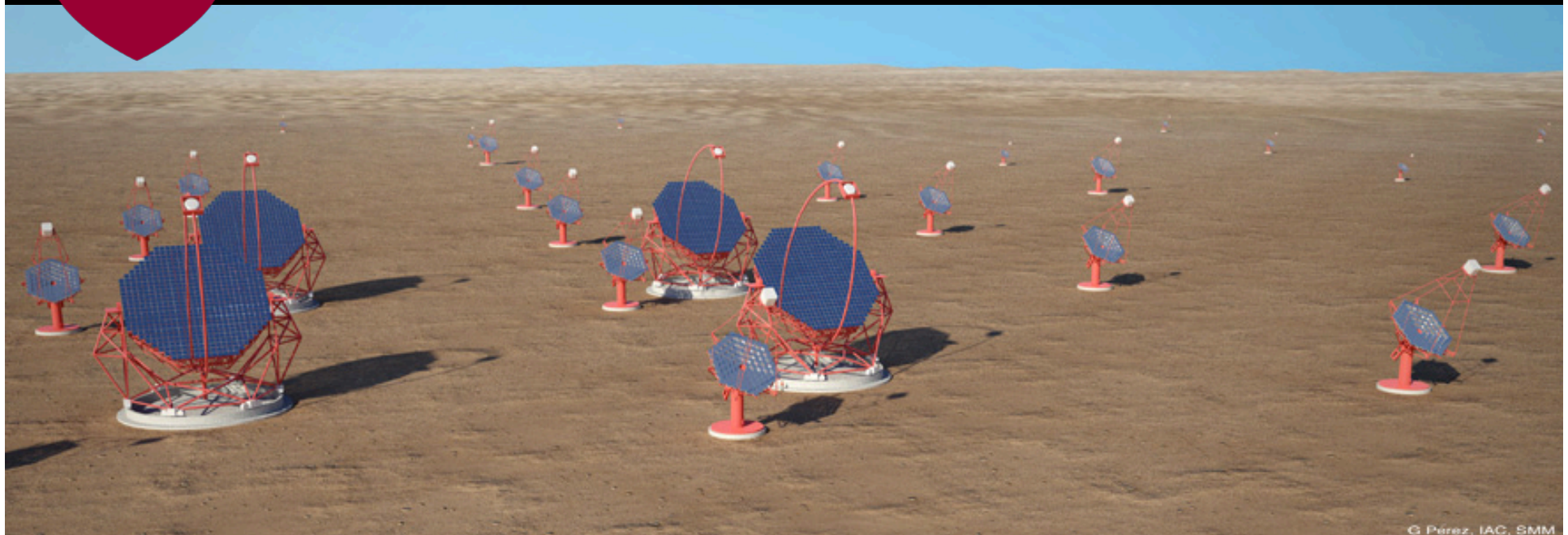


4 Membership

	Name	Institution
1	Miroslav Filipovic (Chair)	UWS
2	Roger Clay	UAdel
3	Gary Hill	UAdel
4	Duncan Galloway	Monash
5	Gavin Rowell	UAdel
6	Keith Bannister	CSIRO
7	Linqing Wen	UWA
8	Ron Ekers (AAL Board representative)	AAL / CSIRO



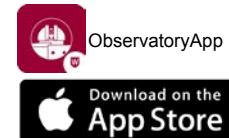
CTA and AAL



G. Pérez, IAC, SMM



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Radio...

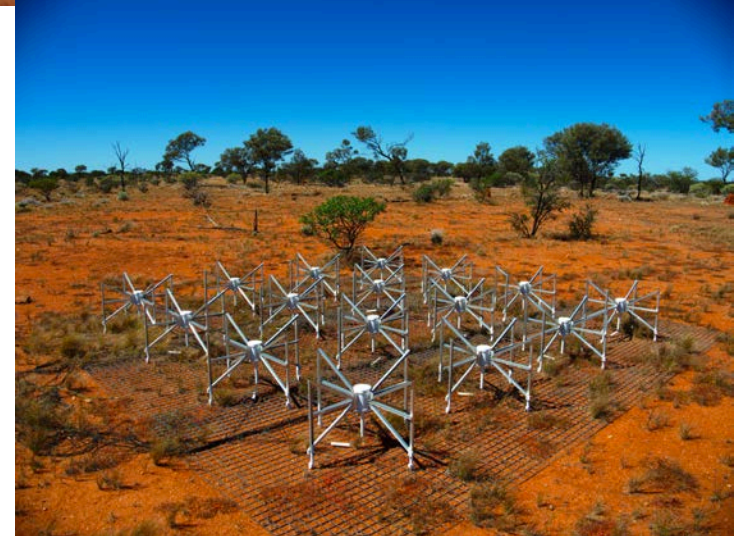


MOPRA &
ALMA

ASKAP,
ATCA

UTMOST &
MWA

eVLA...





Optical Telescopes and Instruments +

- UK-Schmidt – Taipan
- 8-m+ class Telescopes (LSST, GMT...)
- IR?!?!?!?