



ARC CENTRE OF EXCELLENCE FOR
GRAVITATIONAL WAVE DISCOVERY

GWIC REPORT TO IUPAP 2024–2026

Gravitational Wave International Committee · IUPAP Working Group 11

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WITH DAVID SHOEMAKER (MIT), GWIC SECRETARY



GWIC connects the whole GW community



Oversees the field's key meetings

Amaldi, LISA Symposium, GWADW, Dawn



Awards the Braccini Prize

Best PhD thesis in gravitational waves



Advises funding agencies

Briefed the GW Agency Committee, May 2026



Supports early-career scientists

New GWECS network: online career meetings

15

member projects &
communities, plus
IUPAP AC2 and IAU
liaisons

~300

events seen by LIGO,
Virgo and KAGRA

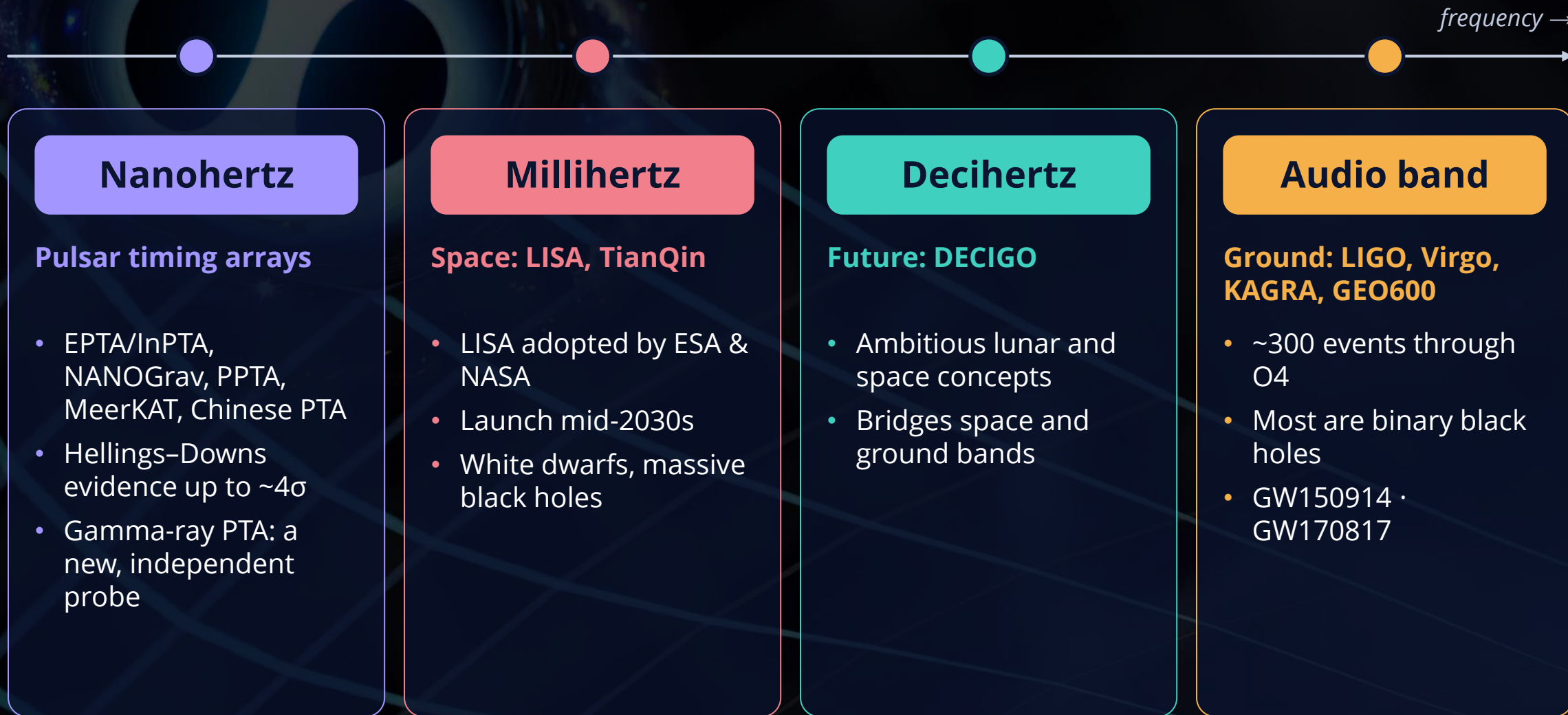
1000+

participants at Amaldi
16 + GR24, Glasgow

100+

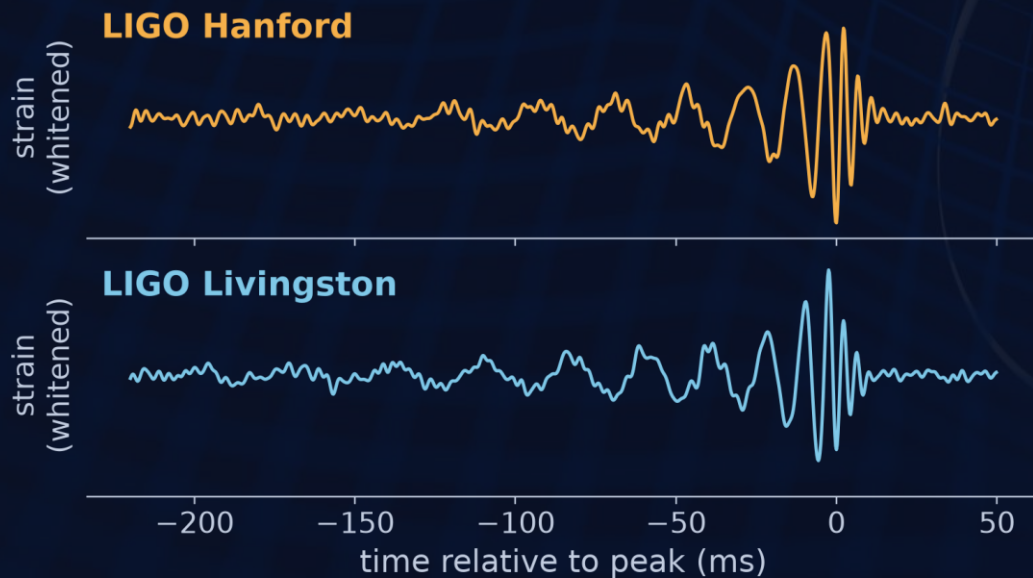
millisecond pulsars
timed worldwide

One science, four frequency bands



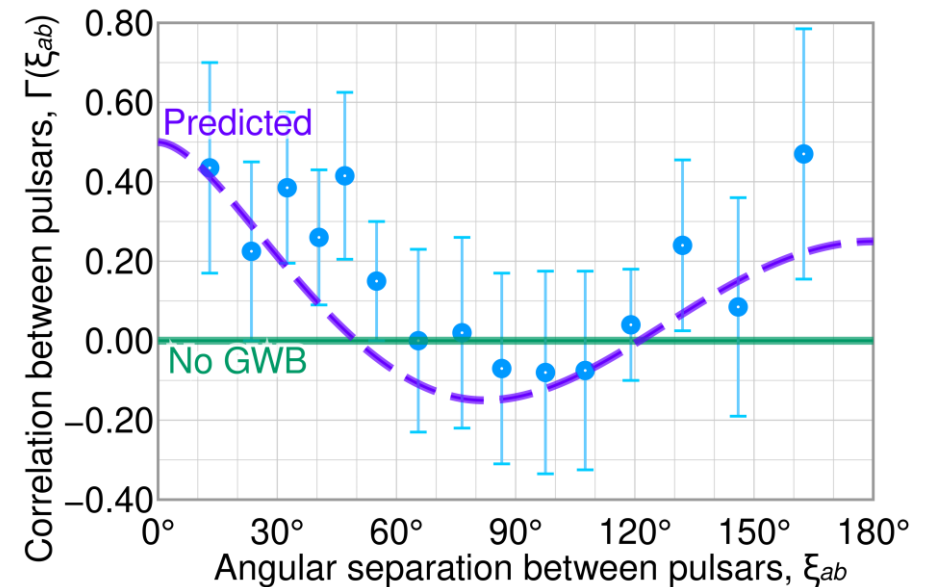
Headline science

GW250114: the loudest signal yet



Network SNR 80 (GW150914: 26) · two $\sim 33 M_{\odot}$ black holes at ~ 400 Mpc · Hawking's area theorem confirmed
LIGO open data (GWOSC), whitened, 30–350 Hz

Hellings–Downs correlation



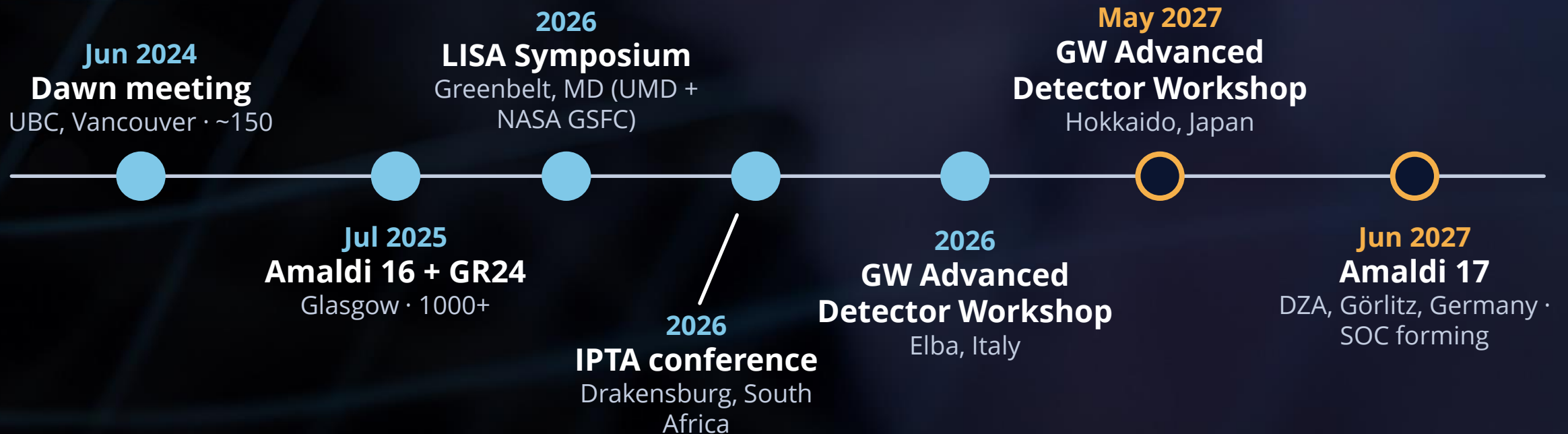
Pulsar-pair correlations vs. angle (NANOGrav 15-yr) follow the predicted curve

Figure: Cmglee, CC BY-SA 4.0, Wikimedia Commons



2017 Nobel Prize in Physics · Weiss, Barish & Thorne, for LIGO and the observation of gravitational waves

Meetings that GWIC oversees



● **Held**

○ **Upcoming**

Also: IPTA annual meeting (South Africa, 100+)

Next decade: new structure, new detectors

LVK → IGWN (2027)?

International Gravitational Wave Network

- New collaborative structure for science and facility coordination
- Transition from late 2026; fully operational 2027
- Next LIGO–Virgo–KAGRA run organised with the IGWN perspective
- Saves on infrastructure

LIGO-India

Funded, site secured, construction underway

Early 2030s

LISA

Adopted ESA–NASA mission

Mid-2030s

Einstein Telescope

European site selection well advanced

3rd gen.

Cosmic Explorer

US site exploration; global R&D

3rd gen.

Australian detector ?

AAL exploratory funding: sites & industry

Study

Summary

1

A thriving field in every band

Hundreds of detections, PTA evidence, LISA adopted

2

GWIC connects the community

Meetings, Braccini Prize, Agency Input, GWECS

3

Coordination matters more than ever

IGWN, LIGO-India and 3rd-generation detectors

Thank you! David Shoemaker will take questions.