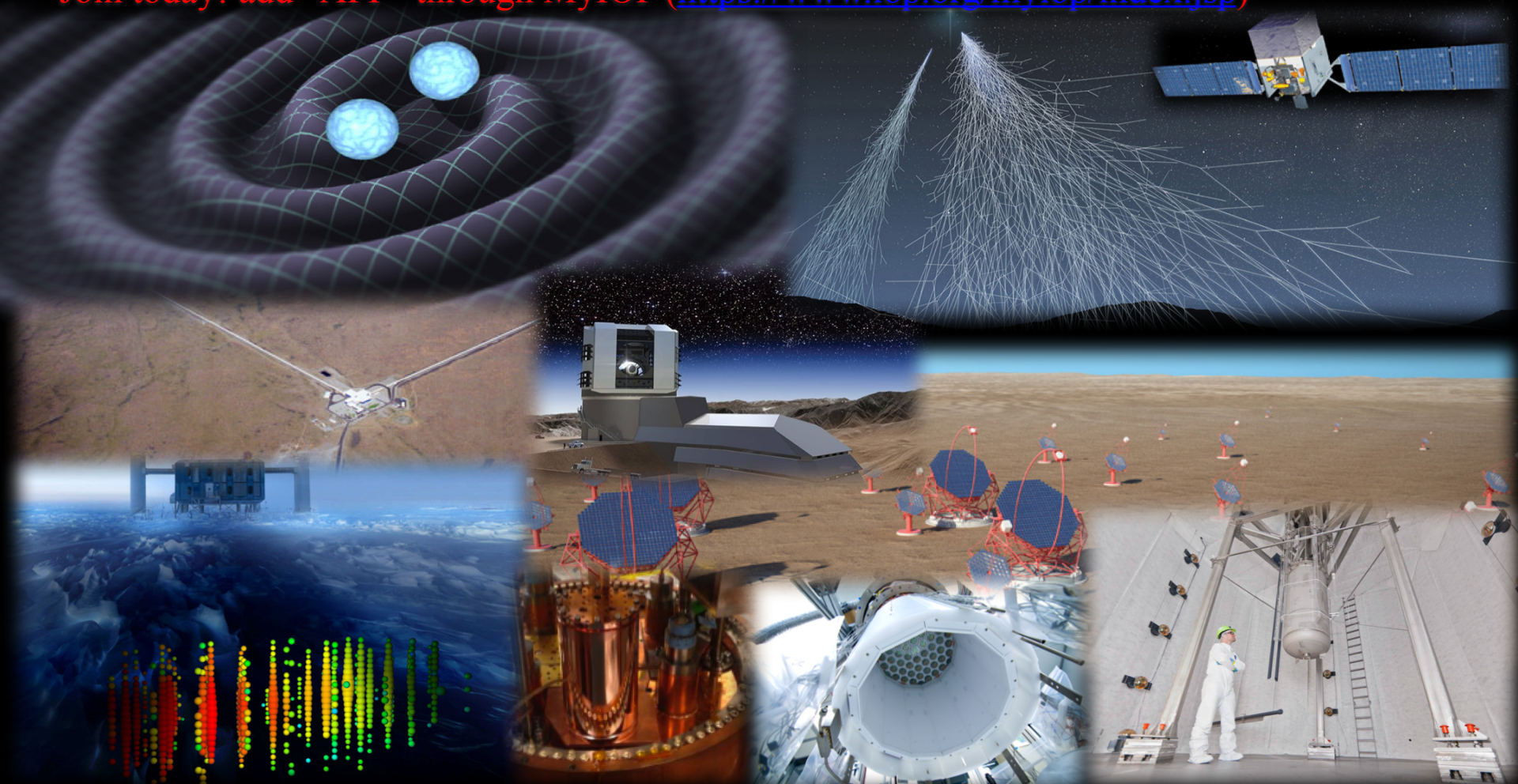


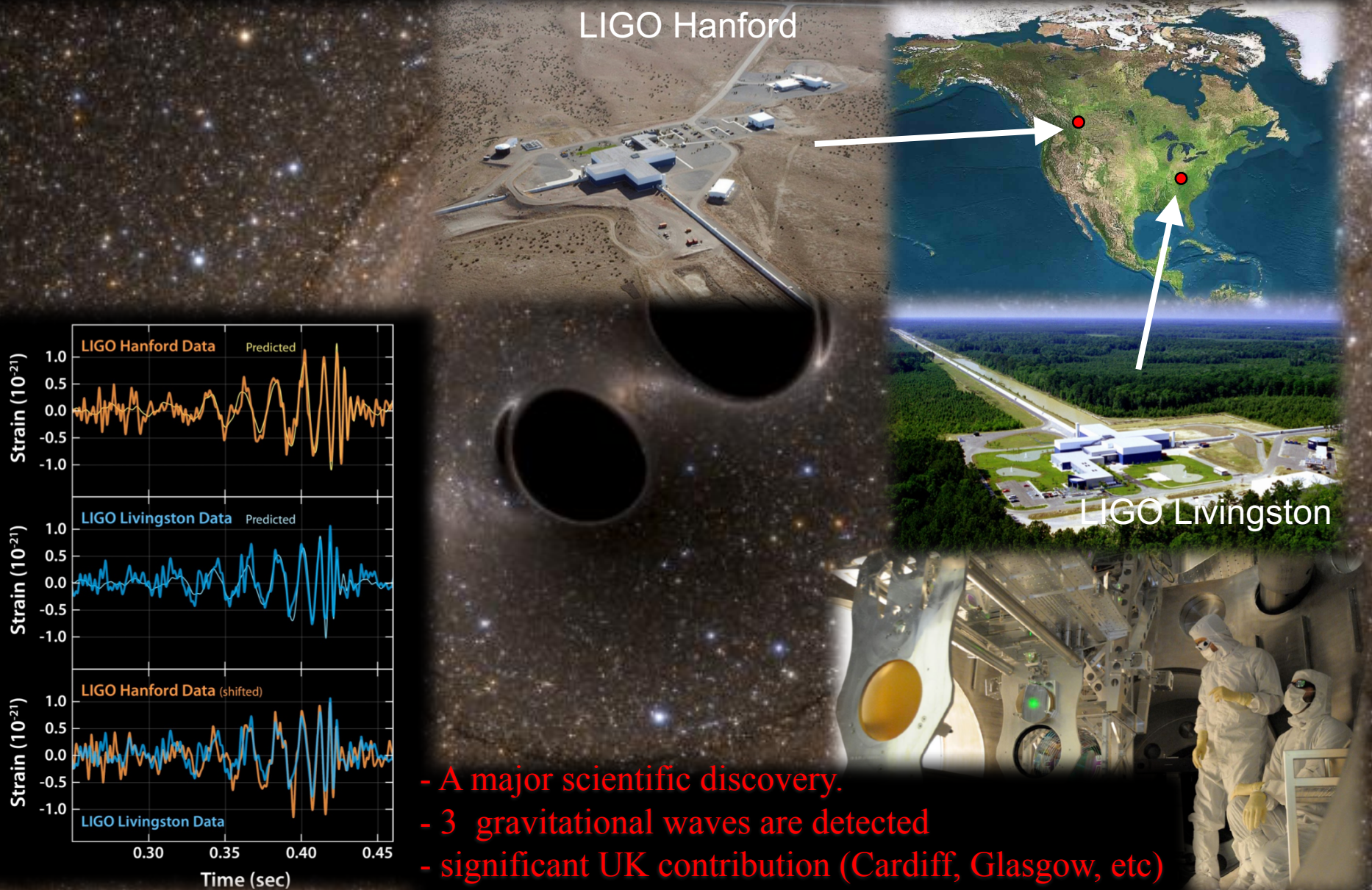
IoP Astroparticle Physics group (APP)

- APP is highly multidisciplinary, topic includes; cosmic rays, nuclear astrophysics, direct and indirect dark matter detection, neutrinoless double beta decay astrophysical neutrinos, etc.
- early career award and thesis award, organize annual meeting, workshop funding available.
- 676 members, unofficial Facebook page (<https://www.facebook.com/IOPAPP/>, 608 “likes”)
- Join today! add “APP” through MyIOP (<https://www.iop.org/myiop/index.jsp>)



Direct detection of gravitational wave (aLIGO, 2015)

First paper (Feb. 11, 2016), 1540 citation



Direct detection of gravitational wave (aLIGO, 2015)

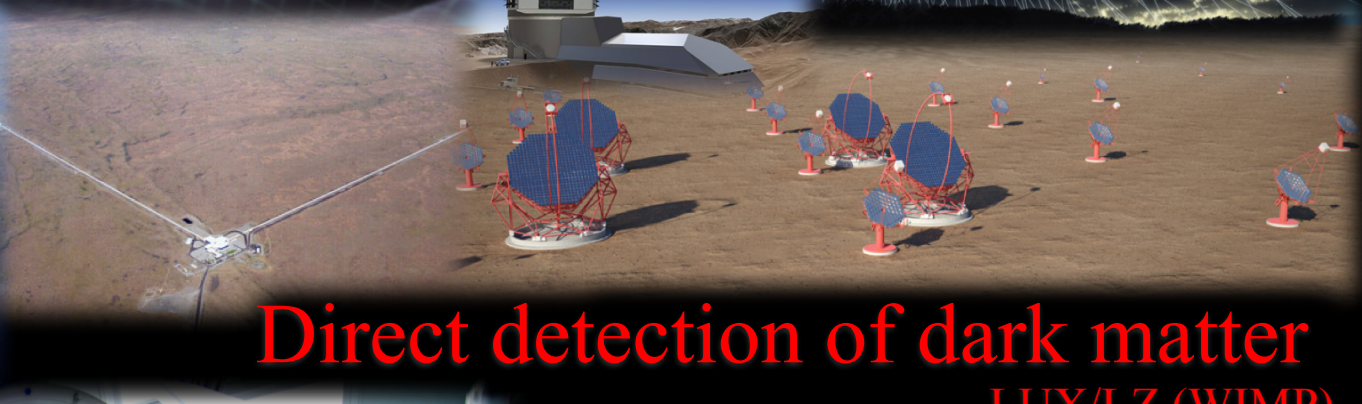
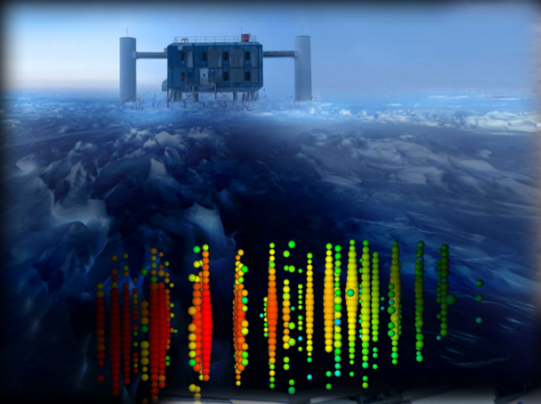
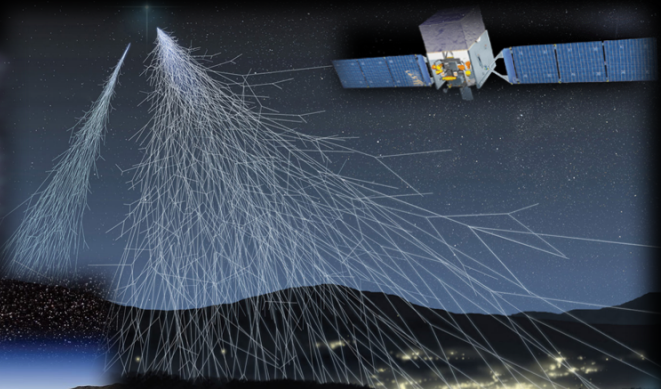
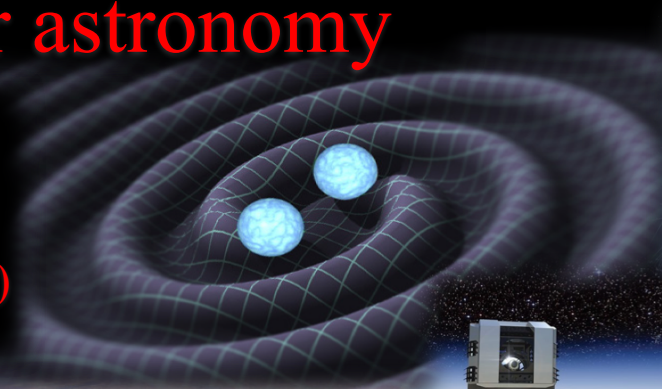
First paper (Feb. 11, 2016), 1540 citation



- A major scientific discovery.
- 3 gravitational waves are detected
- significant UK contribution (Cardiff, Glasgow, etc)

Multi-messenger astronomy

- Auger (cosmic rays)
- LIGO (gravitational wave)
- CTA (gamma rays)
- ANITA, IceCube (neutrinos)
- etc



Direct detection of dark matter

- LUX/LZ (WIMP)
- ADMX (Axion)
- etc



Other topic includes;

- nuclear astrophysics
- neutrino-less double beta decay

Thesis award, Early career award



Dr. Bradley Kavanagh
2016 thesis award



Dr. Jon Davis
2015 early career award

Even year = thesis award
Odd year = early career award

Full list of past winners

https://www.iop.org/activity/groups/subject/ap/prize/page_67116.html

Call is distributed through APP mailing list

Workshop funding

Half day workshop: up to £750

Full day workshop: up to £1500

Contact to IoP APP representatives

Chair Prof. Giles Hammond : giles.hammond@glasgow.ac.uk

New Physics in Astrophysical neutrinos

“The Universe is a poor scientist's laboratory” – Zel’dovich

Astrophysical neutrinos are natural sources to study many physics.

- What kind of astrophysics can we study from astrophysical neutrinos?
- What kind of new physics can we find from astrophysical neutrinos?
- What kind of projects do we need to study astrophysical neutrinos?