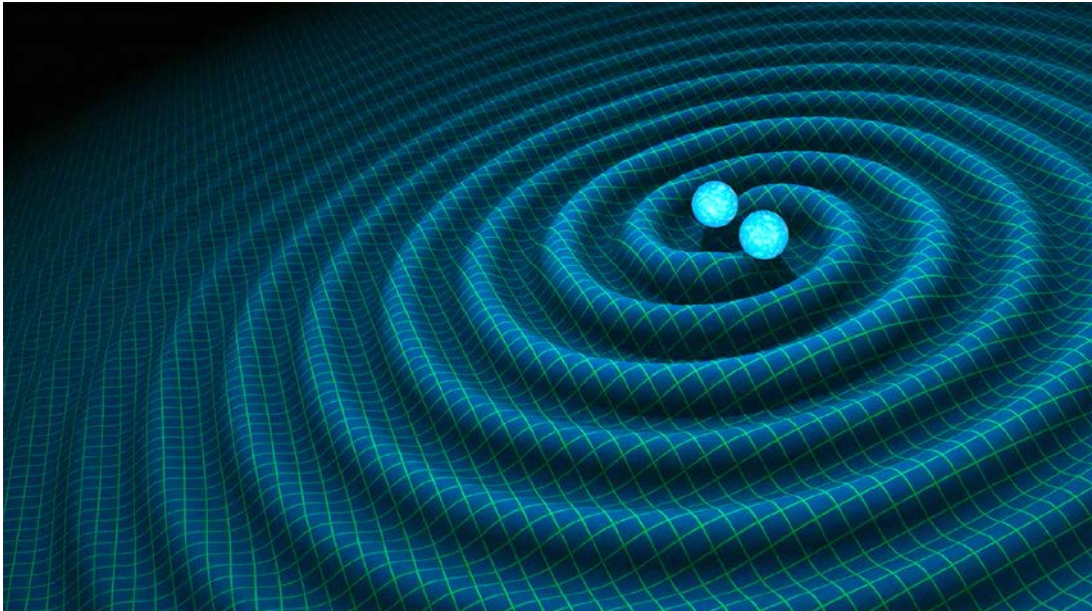




The Tenth Harvard-Smithsonian
Conference
on Theoretical Astrophysics



Scientific Program



Credit: R. Hurt/Caltech-JPL

Gravitational Wave Astrophysics

Sponsored by Raymond and Beverly Sackler and Irwin Shapiro

Monday, May 7th through Wednesday, May 9th, 2018

Sheraton Commander Hotel, 16 Garden Street, Cambridge, MA

Hosted by the Institute for Theory and Computation, Harvard University

<http://www.cfa.harvard.edu/events/2018/sackler/>

All talks are 30 minutes (25+5)

Sessions held in the George Washington Ballroom; Coffee Breaks held in the adjacent Terrace Room

Monday, 9:00AM-5:00PM

9:00-9:05AM

Charles Alcock and Avi Loeb: Welcome

Session 1: Detectors and Techniques

Session Chair: Vicky Kalogera

9:05-10:30AM

Lisa Barsotti: Current status of LIGO / Virgo

Matt Evans: Future ground-based detectors

Karsten Danzmann: LISA

10:30-11:00AM *Coffee Break*

11:00-11:30AM

Maura McLaughlin: PTA

Session 2: Data analysis + parameter estimation + Model Selection

Session Chair: Jim Moran

11:30AM-12:30PM

Alessandra Buonanno: Numerical / analytical relativity

Duncan Brown: Template-based search techniques

12:30-2:00PM *Lunch Break*

2:00-3:00PM

MariaAlessandra Papa: Continuous source search techniques

Neil Cornish: Parameter estimation (methods review)

3:00-3:30PM *Coffee Break*

3:30-4:00PM

Will Farr: Model Selection

Session 3: Source populations

Session Chair: Ramesh Narayan

4:00-5:00PM

Ilya Mandel: Black hole binary formation – field (common envelope)

Selma de Mink: Black hole binary formation – field (non-common envelope)

Tuesday, 9:00AM-5:30PM

Session 3: Source populations, cont'd

Session Chair: Ramesh Narayan

9:00-10:30AM

Fred Rasio: Black hole binary formation – dynamical

Smadar Naoz: Black hole binary formation – galactic nuclei

Deirdre Shoemaker: Black hole binary - simulations

10:30-11:00AM *Coffee Break*

Session Chair: Josh Grindlay

11:00AM-12:30PM

Dan Holz: Neutron star binary - source population

Stephan Rosswog: Neutron star binary - simulations

Monica Colpi: SMBH binaries

12:30-2:00PM *Lunch Break*

2:00-3:30PM

Stan Woosley: Outcomes of core-collapse supernovae

Adam Burrows: GW from core-collapse supernovae

Marta Volonteri: Cosmic Evolution of Black Hole Mergers and the Stochastic Gravitational
Wave Background

Session 4: Results from LIGO O1/O2

3:30-4:00PM *Coffee Break*

Session Chair: Irwin Shapiro

4:00-5:30PM

Ben Farr: BBH detections in O1/O2

Bangalore Sathyaprakash: Tests of GR

Paolo Pani: Alternative theories of gravity

Wednesday, 9:00AM-12:30PM

Session 5: Electromagnetic counterparts + follow-up

Session Chair: Edo Berger

9:00-11:00AM

Wen-fai Fong: Short GRBs

Brian Metzger: Kilonova models

Raffaella Margutti: Radio/X-ray counterparts

Bence Kocsis: EM counterparts for LISA sources

11:00-11:30AM *Coffee Break*

11:30AM-12:30PM

Panel on EM follow-up

Marcelle Soares-Santos, Mansi Kasliwal, Stephen Smartt, Philip Cowperthwaite, Lindy Blackburn

12:30PM **End of Conference**

Wednesday, 6:30-10:00PM

(6:30PM)

Reception

(7:00PM)

Banquet Dinner in the Mount Vernon Ballroom

(8:30PM)

After-Dinner Talk by Rai Weiss with introductory remarks by Avi Loeb
