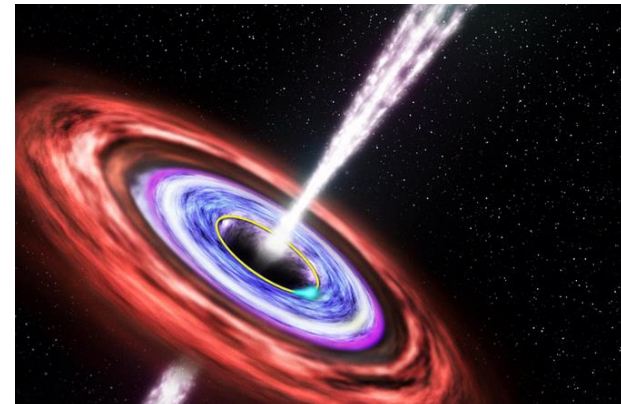
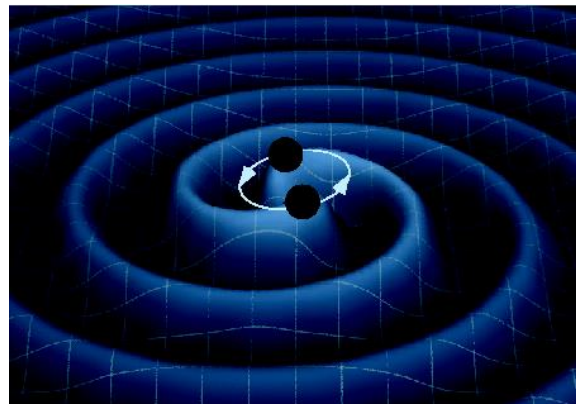
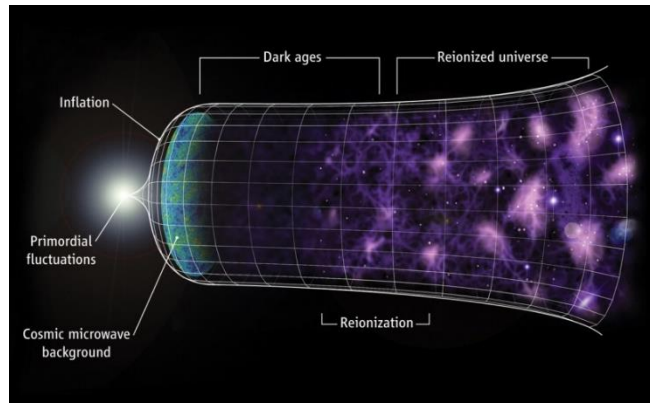


Physics of the Cosmos Town Hall



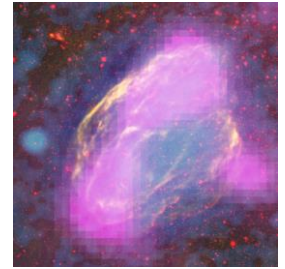
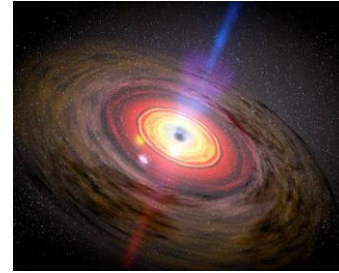
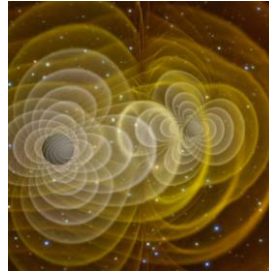
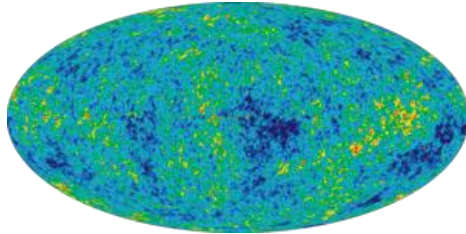
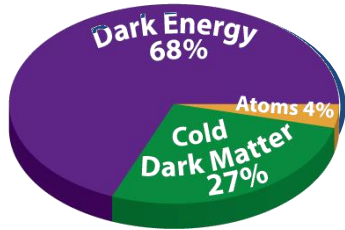
John W. Conklin

University of Florida (jwconklin@ufl.edu)

Chair, Physics of the Cosmos Program Analysis Group

18 March 2019

Physics of the Cosmos Science Objectives

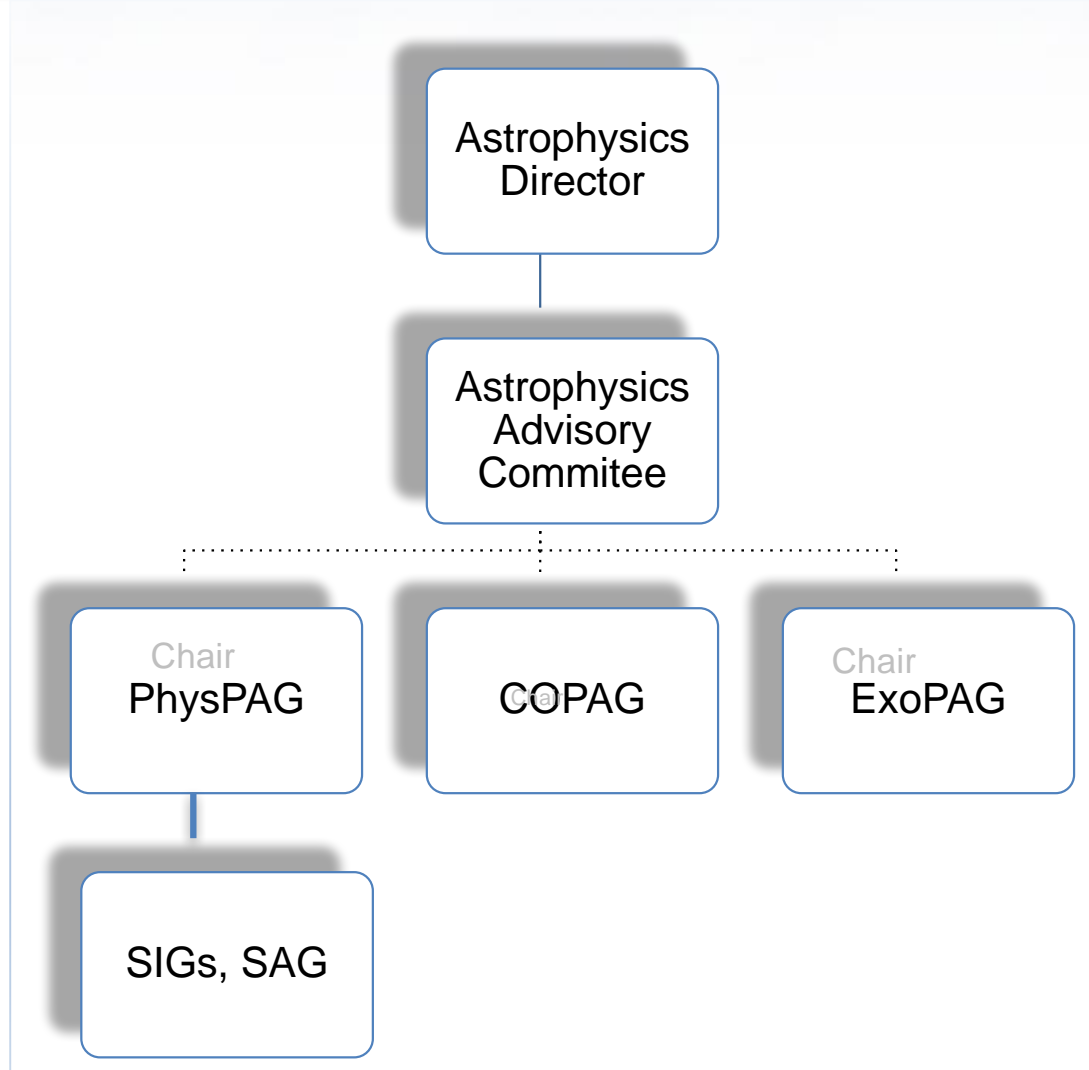


- Increase our knowledge of dark energy
- Precisely measure cosmological parameters governing evolution of the universe and test inflation hypothesis of Big Bang
- Test validity of Einstein's General Theory of Relativity and investigate nature of spacetime
- Understand formation and growth of massive black holes and their role in evolution of galaxies
- Explore behavior of matter and energy in its most extreme environments

PhysPAG EC Membership

Name	Affiliation	Area of Expertise	Term Ends
Ralph Kraft	SAO	X-Ray SIG	Dec 2018
Henric Krawczynski	Washington Univ. in St. Louis	Gamma-Ray SIG	Dec 2018
Igor Moskalenko	Stanford Univ.	CR SIG	Dec 2018
John Conklin (Chair)	Univ. of Florida	GW SIG	Dec 2019
Jim Beatty	Ohio State Univ.	CR SIG	Dec 2019
Sylvain Guiriec	George Washington Univ.	Gamma-Ray SIG	Dec 2019
Kelly Holley-Bockelmann	Vanderbilt Univ.	GW SIG	Dec 2019
John Tomsick	UC Berkeley	Gamma-Ray SIG / X-Ray SIG	Dec 2019
Kevin Huffenberger	Florida State Univ.	CoSSIG/IP SIG	Dec 2020
James Rhoads	GSFC	CoSSIG	Dec 2020
Graça Rocha (Vice Chair)	JPL	IP SIG/CoSSIG	Dec 2020
Abigail Vieregg	Univ. of Chicago	IP SIG / CR SIG	Dec 2020
Nicolas Yunes	Montana State Univ.	GW SIG	Dec 2020
Ryan Hickox	Dartmouth College	XR SIG	Dec 2021
Marcos Santander	Univ. of Alabama	CR SIG	Dec 2021

Communication Pathways



PhysPAG Impact: 4 recent examples

- 1. 2015 – Paul Hertz charge to PAGs to review large mission concepts that could be funded in prep for Astro2020**
 - ⇒ 4 STDTs: HabEx, LUVOIR, Lynx, OST
 - PhysPAG report, Section 2d: Importance of Probe-Class Missions
- 2. 2016 – Paul Hertz Charge to PAGs on Astrophysics Probes**
 - ⇒ 10 PI-led Probe Concept Studies
- 3. 2018 – NASA considered delaying Asto2020 decadal; PAGs issued a survey of Astro community**
 - ⇒ 72% of respondents said delay not needed
 - ⇒ 54% of respondents identified as PCOS
 - ⇒ Today Astro2020 decadal following original schedule
- 4. 2019 – MMA SAG and SIGs help organize and make connections across the astrophysics community to prepare science white papers**

PCOS @ AAS HEAD Monterey

- **PCOS Town Hall (today, now)**
 - Astrophysics Division Program Update, Stefan Immler, NASA HQ
 - New Technology Process Across NASA APD, Thai Pham, GSFC (remote)
 - GW SIG update, Guido Mueller, University of Florida
 - Discussion of PhysPAG future directions, Terri Brandt, NASA GSFC
- **X-Ray SIG Session (Tuesday 12:00 – 1:30 PM)**
 - Session Chair: Robert Petre, NASA GSFC
- **NASA Multi messenger Science Analysis Group Session (Tuesday 7:30 – 9:30 PM)**
 - Session Chair: Terri Brandt, NASA GSFC
- **Gamma-Ray SIG (Wednesday 12:00 – 1:30 PM)**