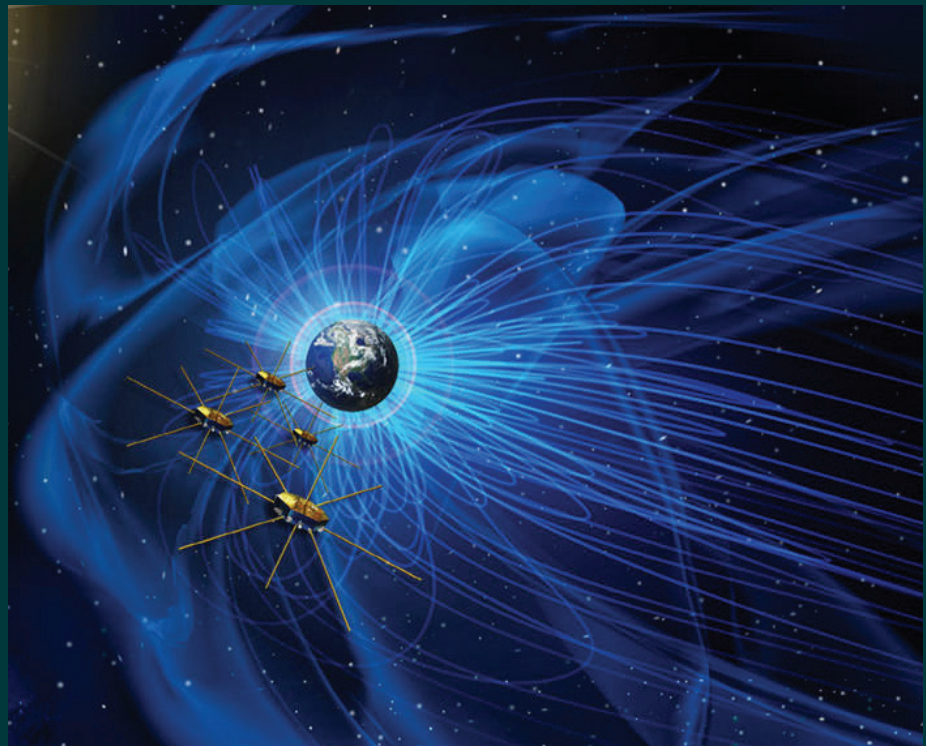
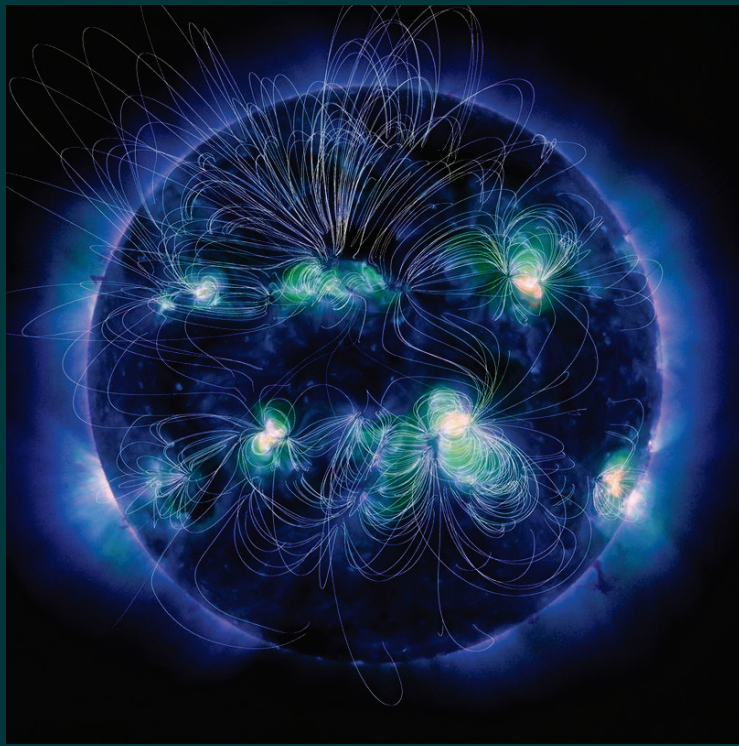




HPAC: Heliophysics Advisory Committee Report to the Space Studies Board

**At the SSB Meeting
Irvine, CA
November 7-8, 2018**



HPAC Membership

- Just in case you don't know our current list:
 - Mike Liemohn (Incoming Chair, University of Michigan)
 - Vassilis Angelopoulos (University of California, Los Angeles)
 - Darko Filipi (Adcole Maryland Aerospace)
 - Larisa Goncharenko (MIT Haystack Observatory)
 - George Ho (Johns Hopkins University Applied Physics Laboratory)
 - Lynn Kistler (University of New Hampshire)
 - James Klimchuk (NASA Goddard Space Flight Center)
 - Tomoko Matsuo (University of Colorado at Boulder)
 - William Matthaeus (University of Delaware)
 - Mari Paz Miralles (Harvard-Smithsonian Center for Astrophysics)
 - Paul Cassak (West Virginia University)
 - Cora Randall (University of Colorado, Boulder)
- And those that just rotated off of HPAC:
 - Jill Dahlburg (Outgoing Chair, Naval Research Laboratory)
 - Heather Elliott (Southwest Research Institute)
 - Bart De Pontieu (Lockheed Martin)
 - Roger Smith (University of Alaska)

HPAC Activities in 2018

- HPAC met in April 2018 at NASA HQ
 - Finalized our feedback on the R&A charge
 - Heard various reports from NASA HQ
 - Several findings and recommendations
- HPAC had two telecons in October 2018
 - GPRAMA assessment of the Heliophysics Division
 - Voted unanimously for **green** ratings for all 3 annual performance indicators
- Our next meeting: December 18-20, 2018 at NASA HQ
- Other stuff that I do as HPAC chair:
 - Emails and calls with NASA HQ for logistics, agendas, and final reports of these meetings
 - Attend the NASA Science Committee meetings
 - Late August at Ames and Nov at HQ
 - Make presentations to CSSP and SSB, as requested

NASA Heliophysics and the Decadal

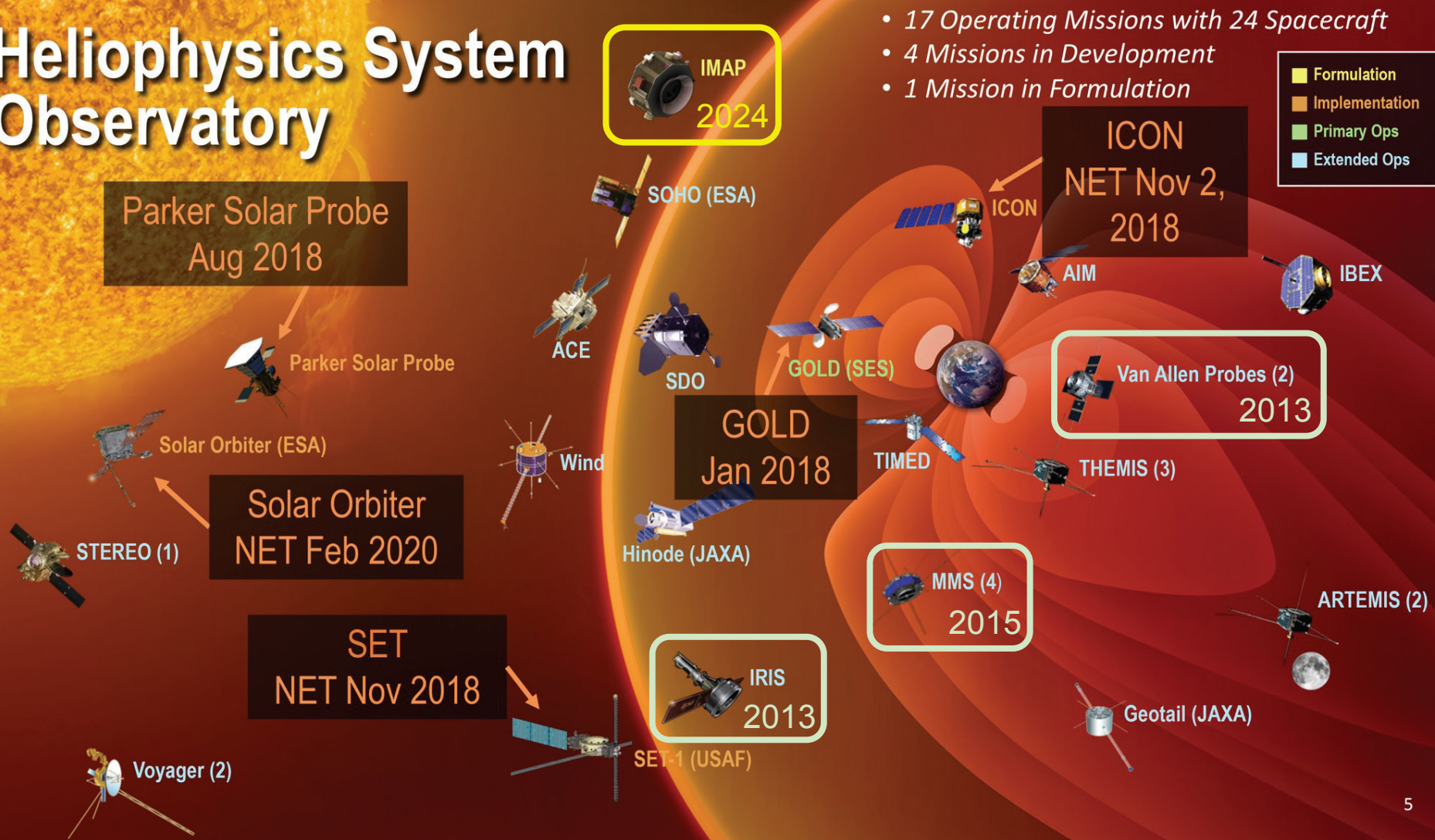
- Solar and Space Physics Decadal Survey released in 2013
 - We are at the halfway point right now

NASA FY19 President's Budget Request (PBR) and FY18 Appropriation Support:

0.0 Complete the current program	Extended operations of current operating missions as recommended by the 2017 Senior Review; 5 missions currently in development, including two recently launched (GOLD and Parker), and ICON, SET, Solar Orbiter
1.0 Implement DRIVE (Diversify, Realize, Integrate, Venture, Educate)	Implemented DRIVE initiative wedge in FY15; fully funded in FY18 and onwards
2.0 Accelerate and expand Heliophysics Explorer program	Decadal recommendation of every 2-3 years; Explorer mission AO released in 2016; plan to release next draft Explorer AO in 2019. Notional mission cadence will continue to follow Decadal recommendation going forward. Increased frequency of Missions of Opportunity (MO), including rideshares on IMAP and Tech Demo MO.
3.0 Restructure STP as a moderate scale, PI-led flight program	IMAP mission (STP-5) selected in 2018 as a PI-led mission with an LRD in 2024
4.0 Implement a large LWS GDC-like mission	Start of mission formulation targeted for NET 2021. RFI call for innovative ideas yielded 65 responses – inputs provided to GDC STDT that started in 2018.

New Heliophysics spacecraft in development

Heliophysics System Observatory



Voyager spacecraft at the heliopause

- Voyager 2 is crossing the sheath now, soon in interstellar space

