



*November 21, 2014: Planetary Science Subcommittee
Nancy Chabot, SBAG Chair*

Future SBAG Meetings:

- January 6 – 7, 2015: 12th SBAG Meeting, Phoenix, AZ
 - January 8-10, 2015: **AstroRecon** (Conference on Spacecraft Reconnaissance of Asteroid and Comet Interiors), Phoenix, AZ
- June 29 – July 1, 2015: 13th SBAG Meeting, Washington, DC



12th SBAG Meeting:
January 6 – 7, 2015,
Phoenix, AZ

Meeting logistics, draft
agenda at:
<http://www.lpi.usra.edu/sbag/>

SBAG 12 MEETING – Day 1: Tuesday, January 6, 2015

8:30 am: Welcome & Logistics - Nancy Chabot

8:40 am: Review and discussion of SBAG 11 findings -
Lindley Johnson

9:10 am: Planetary Science Division Update – Jim Green

10:05 am: BREAK

10:15 am: Mission Briefs – Updates and Recent Highlights

New Horizons– Alan Stern

Dawn – Carol Raymond

11:00 am: Research and Analysis Program: – Jonathan Rall

11:45 am: Cartography Research & Analysis Group –
Samuel Lawrence

12:10 pm: LUNCH

1:30 pm: Mission Briefs – Updates and Recent Highlights

NEOWISE – James Bauer

OSIRIS-REx – Dante Lauretta

2:15 pm: NEO Program - Lindley Johnson

3:15 pm: BREAK

3:25 pm: Mission Briefs – Updates and Recent Highlights

Rosetta – Mike A’Hearn

Hayabusa 2 – Paul Abell

4:10 pm: Xtronaut – Dante Lauretta

4:30 pm: Discussion of SBAG documents

5:00 pm: Discussion of possible findings – Nancy Chabot



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SBAG 12 MEETING – Day 2: Wed., January 7, 2015

8:30 am: Asteroid Redirect Mission Activities - Michele Gates

9:30 am: Candidate ARM Targets – Paul Chodas

10:15 am: *BREAK*

10:30 am: Accessible NEOs – Brent Barbee

11:00 am: Strategic Knowledge Gaps and Other SBAG
Contributions to Exploration Goals – TBD (NASA Exploration
Scientist?)

11:30 am: Continued discussion of SBAG documents

12:00 *LUNCH*

1:30 pm: SBAG Technology Activities – John Dankanich

2:15 pm: Planetary Balloon Missions

BOPPS – Andy Cheng

OPIS – Terry Hurford

Future Program Plans – Lindley Johnson

3:05 pm: *BREAK*

3:15 pm: Status Updates

NEA Scout – Julie Castillo-Rogez

AIDA – Andy Cheng

Cartographic Software for Small Bodies – Tim Titus

NIAC Study for Planetary Defense – Bong Wie

Mars Comet Siding Spring Encounter – Casey Lisse

5:00 pm: Discussion of possible findings – Nancy Chabot

6:00 pm: *Meeting of the SBAG Steering Committee*



ROSES 2014:

Guest Investigator and Participating Scientist Opportunities

The SBAG community would appreciate specific updates on:

1) **Dawn at Ceres Guest Investigator Program** – This program will contribute to maximizing the science at Ceres, but there is not a lot of time to get those selected in place prior to the start of the Ceres encounter. A status update on this and a timeline would be valuable for the community to hear.

2) **Hayabusa 2 Participating Scientist Program** - This has been listed as being in the ROSES 2014 call and the NSPIRES website says it will be out in December 2014. Having an update about when the community might expect this opportunity to be posted would be worthwhile.

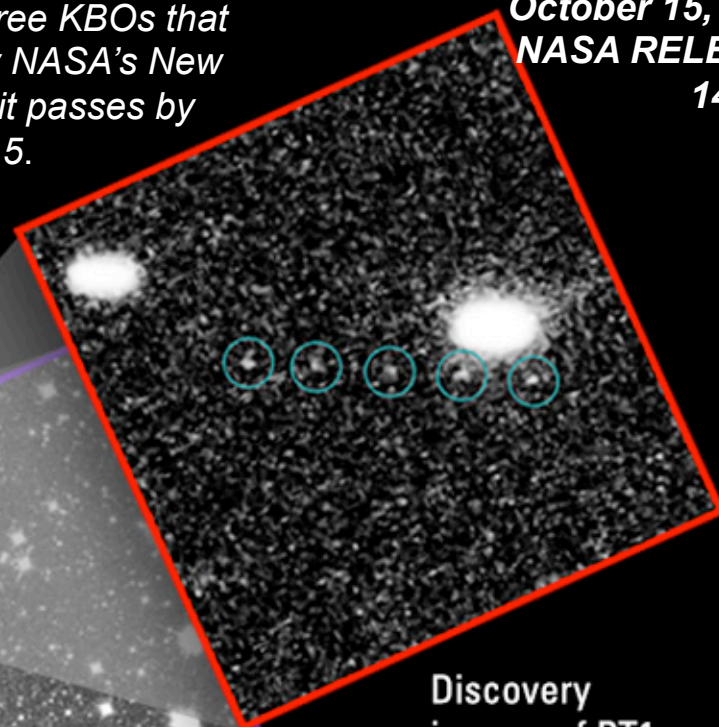
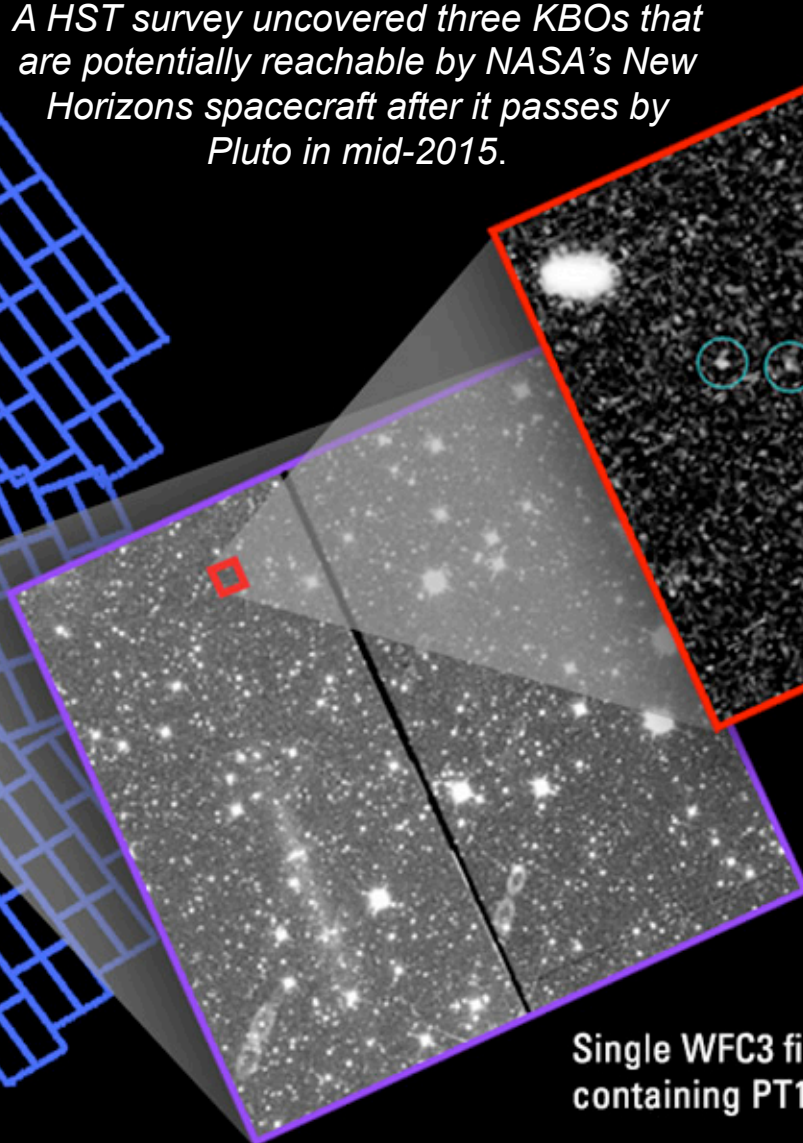
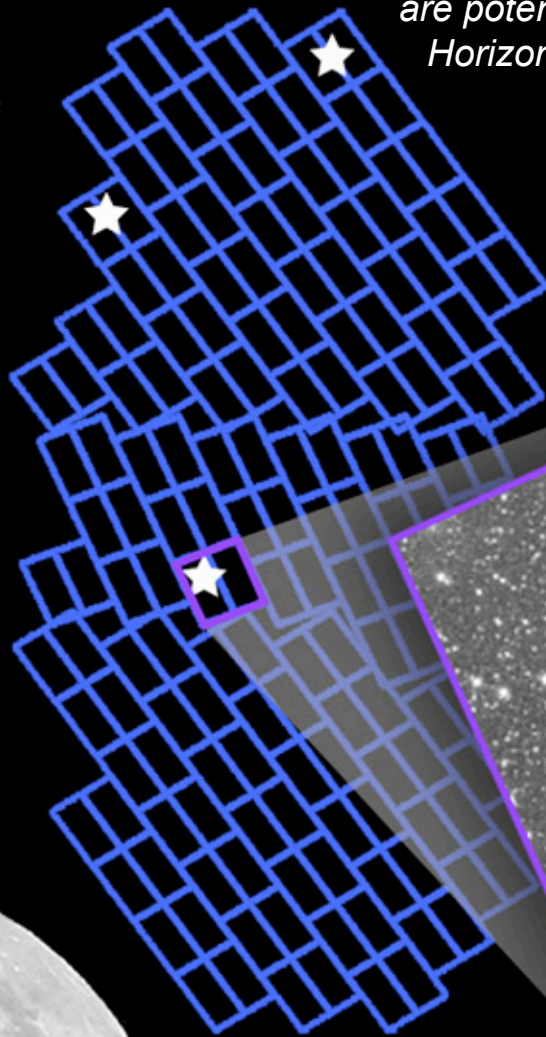
NASA's Hubble Telescope Finds Potential Kuiper Belt Targets for New Horizons Pluto Mission

Search area:
83 Hubble
WFC3 fields
Locations of
potentially
targetable
discoveries
shown

A HST survey uncovered three KBOs that are potentially reachable by NASA's New Horizons spacecraft after it passes by Pluto in mid-2015.

October 15, 2014
NASA RELEASE
14-281

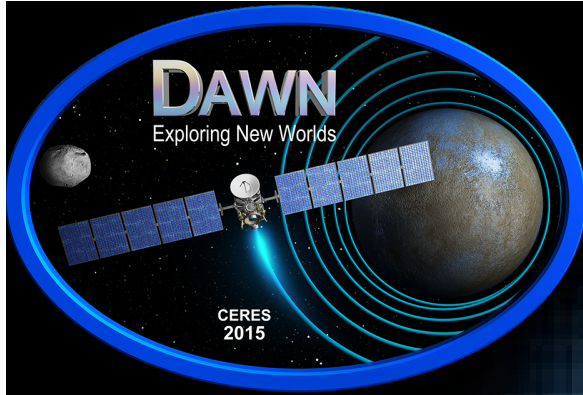
Full moon,
at same
scale



Single WFC3 field,
containing PT1

Discovery
images of PT1

The three KBOs identified each are ~1 billion miles beyond Pluto. Two are estimated to be as large as 55 km; the third perhaps as small as 25 km.



Dawn at Ceres



- The ice-rich dwarf planet is:
 - Twice the size of Enceladus
 - Warm (surface temperature > 200K)
 - Hydrostatic in shape
 - Low Density: 2088 kg/m^3 (70% rock, 30% ice)
 - Covered with altered minerals: Brucite [$\text{Mg}(\text{OH})_2$] and carbonates detected on surface (Milliken and Rivkin 2009)
- Dawn will orbit and comprehensively map the dwarf planet Ceres from March 2015 until mid-2016
- Its payload is well suited to searching for evidence of activity on Ceres' surface
 - Look for recent and past deposits of outgassed material (and ice)
 - Constrain the thermophysical properties
 - Link surface composition to geologic processes