

Jupiter Observation Campaign

National Aeronautics and
Space Administration



Citizen Science at the Outer Planets

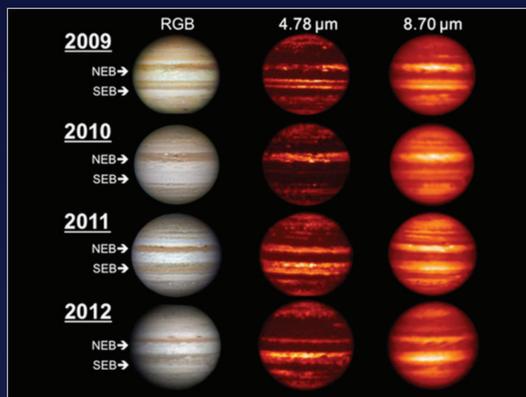
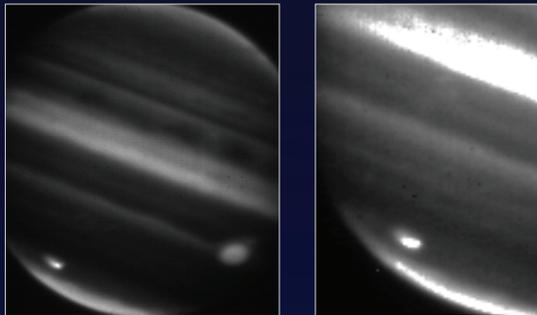
A Progress Report: Abstract Presentation Number: 1711

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In 2011 we asked the following, for outer planet observation, could NASA E/PO create or foster a public repository or network matching scientists with citizen scientists?



Amateur images (visible light, at left) with NASA IRTF views

LESSONS LEARNED

We have found existing networks that already operate quite well for amateur/professional collaborations. Some useful observations:

- Amateur observers do not want to fill out another set of forms and submit to an additional online repository. The community already shares via email and online groups.
- They don't want to submit one image per form... One email dump with multiple images is preferred.
- Active members of established groups (e.g., International Outer Planet Watch) already use a file naming convention — so this process is working for at least some subset of the community.

There may still be a role for NASA E/PO to play in strengthening the connections between the amateur and professional communities. There are untapped observers and researchers who are not yet utilizing this resource. We note that the network of dedicated amateurs is a global community, just as is planetary science.

BUT... There is also a broader general public audience who are hungry for both recent information about the outer planets and interested in learning about the skills needed to image them.

PROGRESS ON ORIGINAL GOALS

1. Expand scientific awareness and use of amateur work

While some researchers are aware of citizen science resources, others are not. We in the E/PO community can contribute by participating in science meetings and continuing to remind the community of the potential value of citizen science.

Websites and press releases can play an important role in increasing awareness of the value of amateur observations for the professional community.



Observer Christopher Go (Philippines)



Observer Anthony Wesley (Australia)

2. EPO can help by being present - i.e., being part of the conversation (email lists, online groups, in-person meetings that involve amateur observers)

By sharing the work of amateur observers via NASA channels -- especially via high-traffic websites and social media, by facilitating connections between NASA-affiliated public astronomy networks and amateur observers, and by participating in public talks and events.



Jupiter map by observer Damian Peach (UK)

3. Sharing amateur images with a broad public audience

Jupiter is one of the brightest objects in the sky, visible to casual observers everywhere, facilitating an easy human connection to the exploration of the outer planets.

The number one thing people go to NASA websites for is images. NASA E/PO can play a powerful leading role in showcasing the stunning imagery taken by astrophotographers from across the skill spectrum.

CURRENT FOCUS

Our current focus is on facilitating amateur/professional collaborations in support of the Juno mission to Jupiter. The authors are engaged in the ongoing conversation with existing amateur/professional networks. The Juno science team is counting on amateur contributions to support observations with their JunoCam instrument. Already JunoCam science lead Candy Hansen is actively engaged with amateurs, and Glenn Orton has long-standing collaborations for observing Jupiter.

An "Observing Jupiter" section is being developed for the Juno website (missionjuno.swri.edu) to showcase amateur data and provide new observers with information on how to observe the planet. NASA E/PO coordinators will play an important role in helping to determine how citizen science can best be utilized to support the mission and enrich the public's experience.

