

NASA Ice, Cloud, and Land Elevation Satellite-2 Mission Applications

Quarterly Newsletter | October 23, 2023



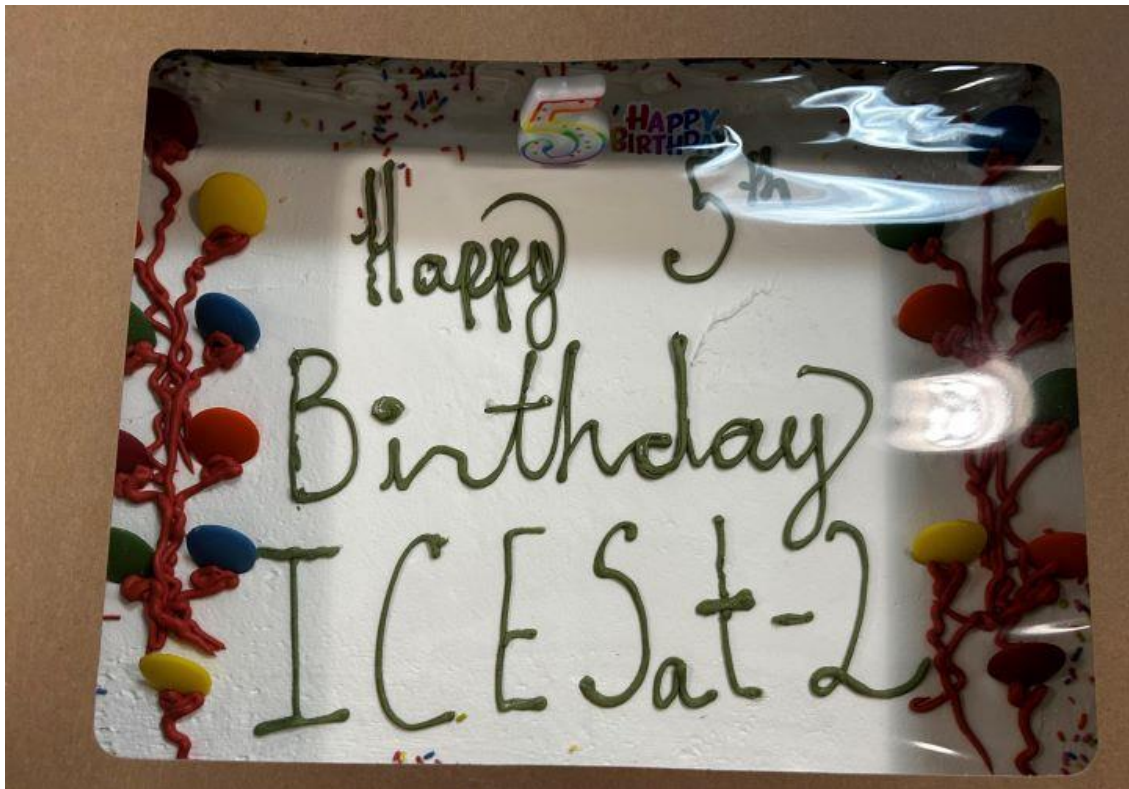
Celebrating 5 Years In Space & Fuel for More!

Welcome to the latest ICESat-2 Applications newsletter! Thank you for your ongoing support of the mission, as we just passed the five year anniversary! Today's topics include the mission's five year birthday celebration, senior review results, request for your contribution to NASA's progress on the Decadal Survey, new ICESat-2 science team and new personnel, upcoming events and recent papers. Please scroll down for more!

This newsletter is being penned by Molly Brown, a member of the Applications Team, because our longtime leader in applications, Sabrina Delgado Arias, is moving on to another position! She has taken the job of Associate Program Manager for the Equity and Environmental Justice Program and the Ecological Conservation Program at NASA Headquarters. We will so miss her, and wish her luck in her new job! We are looking for a new Mission Applications Lead, scroll down for the link to the job application site.

Best,

The [ICESat-2 Applications Team](#)



ICESat-2 five year birthday celebration

Since its 2018 launch, ICESat-2's height-measuring laser has fired more than 1,500 trillion photons, all to precisely track changes in Earth's ice, water, forests and land. It celebrated its fifth year in space on September 15, 2023.

Watch a really nice four minute video about about the mission below:



Senior Review Results summary from Tom Neumann, ICESat-2 Project Scientist

At the end of the day on Sept 29th, the mission received ICESat-2 Senior Review results. The Senior Review consisted of a written proposal submitted in April and an oral presentation back in June.

There were four separate metrics all missions going through the process were scored on:

Adjectival Summary Science Score: We scored Excellent, the best possible score. That of course is a testament to the awesome science results that are coming out weekly. If you haven't looked lately, have a look here: <https://icesat-2.gsfc.nasa.gov/publications>. None of these papers would be possible without ATLAS, the observatory, the data products, the distribution,

the user guides, the documentation, and all of the support you've given to the science community (NSIDC, CryoCloud, Icepyx, SlideRule, among many others). I really consider this one a collective success – everyone owns and should take credit for this.

Technical Performance: We scored Excellent, the best possible score. And that reflects the awesome performance of ATLAS and the Observatory and the care that the teams take in carefully monitoring their health and performance. ATLAS remains healthy, and the outlook is really bright (green). NASA Goddard has always displayed technical excellence, and you've carried that legacy forward.

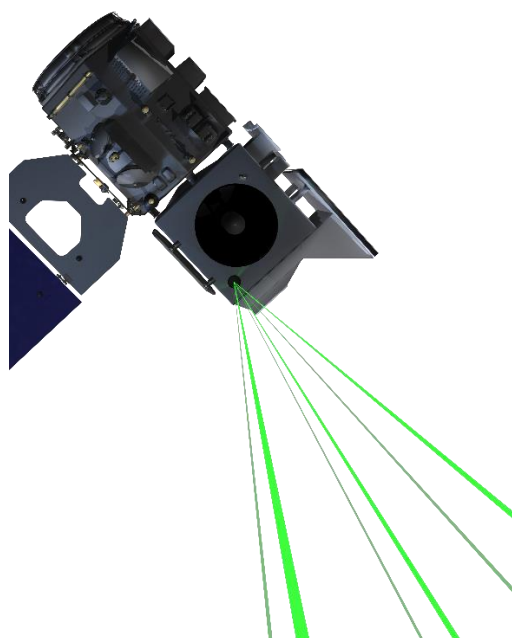
Utility Score: We scored Very High, which is also the best possible score. This metric reflects the use of our data by our applied science users and other US Government agencies (USGS, NGA, NOAA, and so on). ICESat-2 ranked third among the missions going through the 2023 Senior Review, ranking just behind Terra and Aqua. Which is some fantastic company. Big thanks are due to Sabrina Delgado-Arias and Molly Brown for building those bridges and connecting us with those communities. I would also like to thank NSIDC and NASA groups making user-friendly tools for data discovery and ease of use. And of course our fantastic suite of data products.

Cost Risk: We scored Low, which is again, the best possible score. This metric reflects our collective dedication to making the best use of the taxpayer money entrusted to us.

These results have earned us another three years of support, through 30 Sept 2026 assuming all continues to go well with ATLAS. We've had a few people move on to other opportunities, and a few more will be moving in the coming months. I'd like to particularly thank them for their efforts and wish them well in their future endeavors.

I hope you all can take a moment to reflect on our successes to date – you all have been a part of that.

[Read Panel Report](#)



Cycle 21 ICESat-2 tracks: September 19-December 18, 2023

The URL below shows files which contain the nominal mission orbits and beam locations for ICESat-2, the files have seven tracks per orbit: one for each of the six beams of ICESat-2, and the seventh for the Reference Ground Track (RGT). The reference track is an imaginary line through the six-beam pattern that is handy for getting a sense of where the orbits fall on Earth, and which the mission uses to point the observatory.

[Access Tracks](#)

Input to decadal review questions

The Committee who is reviewing NASA's response to the Decadal Survey is soliciting community feedback on the agencies' progress in implementing the 2017 decadal survey's recommendations. These recommendations were related to the science and applications, observations (including, but not limited to, Directed, Earth System Explorers and Incubation), and programmatic support required to understand our changing planet. You, as the community,

are in a unique position to evaluate the Agency's responses and provide this feedback to the Committee. This is very important, as based on this feedback the Committee can assess progress towards achieving the recommendations that ultimately help our community as a whole.

All information submitted is intended to be used as input to the Committee, and is anticipated to be made public in the future. **Please make sure you submit your responses by October 27, 2023.**

[Submit Your Response](#)

New science team

The ICESat-2 Science Team has been recompeted! The team is a group of competitively selected scientists who help define and implement ICESat-2's science goals. They provide guidance and advice to the ICESat-2 project to ensure the mission meets its science requirements. Two categories of proposals were solicited, and ICESat-2 data needed to be central for either category:

- Investigations that are using ICESat-2 data to address major needs, gaps or uncertainties in knowledge in Earth Science and especially cryospheric science.
- Investigations of exploratory nature. Efforts that aim to extract novel information from ICESat-2 data or are using ICESat-2 to investigate parts of the Earth System in a new way were especially encouraged.

Out of 50 submitted proposals, 26 were selected for awards. The expertise spans the disciplines of glaciology, sea ice science, ecosystem structure, atmospheric sciences, and relevant aspects of land, ocean, hydrologic sciences.

[Check Out the Selected Team Members](#)

With a new Science Team comes New ICESat-2 Leadership



[Helen Amanda Fricker](#) is the new Science Team Lead. She works at Scripps Institution of Oceanography, and will also be joining our Applications Team as liaison to the Science Team to foster a vibrant engagement.



Christina Moats-Xavier has taken the new Program Manager for the [NASA Mission Engagement Program](#). This new job is turning out to be instrumental in applications.



After 10 years with the ICESat-2 Applications Team, Sabrina is now serving as Associate Program Manager for the Equity and Environmental Justice Program and the Ecological Conservation Program.

ICESat-2 is seeking a new Mission Applications Lead!

[Apply Now](#)

Upcoming Applications Events and Meetings

[Space and Sustainability event in Mexico](#), **15-16 November 2023**: The International Colloquium on Space and Sustainability is a collaboration with NASA to foster discussion in Mexico about the current state of the use of Earth observation technology and its potential applications for sustainability, using data from NASA missions such as the Ice, Cloud and land Elevation Satellite-2 (ICESat-2), the Global Ecosystem Dynamics Investigation (GEDI), and the Carbon Monitoring System (CMS) initiative.

[AGU Fall Meeting in San Francisco](#), **11 - 15 December 2023**: There are a number of sessions on ICESat-2 this year, including TH33J, a townhall on Wednesday from 4-5pm on Mission Status and Highlights. Please join us there!

Publications

- **Early Adopters Handbook and Satellite Applications Guidebook:** Sabrina has been active in collaborating with NASA Headquarters to develop an interactive Early Adopter Handbook. You can access this handbook along with the Applications Guidebook released in 2022 below.

[Access Interactive Early Adopters Handbook](#)

[Access Interactive Earth Science Applications Guidebook](#)

- **ICESat-2 Literature review on Applications:** Brown, M. E., S. Delgado Arias, and M. Chesnes (2023). Review of ICESat and ICESat-2 literature to enhance applications discovery. Remote Sensing

Applications: Society and Environment. Vol.

29. <https://doi.org/10.1016/j.rsase.2022.100874>

- **There are many others! Please visit the ICESat-2 Mission Publications webpage to see additional articles:** <https://icesat-2.gsfc.nasa.gov/publications>

You are receiving this newsletter because you have expressed interest (at a meeting, conference or via email) in becoming involved with the ICESat-2 mission pre-launch application efforts.

Your participation in the ICESat-2 Applications Community helps the mission learn about research relevant to the mission goals, identify new applications for ICESat-2 data products and develop new opportunities to collaborate on exciting research relevant to policy, business, and operational activity needs.

Want to change how you receive these emails?

You can email sabrina.delgadoarias@nasa.gov to unsubscribe from this list.