

GRACE UNDER PRESSURE (/)

[BLOG \(/\)](#)[ABOUT \(/ABOUT.HTML\)](#)[ACT NOW \(/ACT-NOW.HTML\)](#)[UPDATES \(/UPDATES.HTML\)](#)[THESIS \(/THESIS.HTML\)](#)[CONTACT \(/CONTACT.HTML\)](#)

BLOG BY GRACE C. YOUNG

LOOKING UPWARDS THIS SUMMER ([HTTP://WWW.GRACEUNDERTHESEA.COM/BLOG/LOOKING-UPWARDS-THIS-SUMMER](http://www.graceunderthesea.com/blog/looking-upwards-this-summer))

5/25/2017

0 Comments (<http://www.graceunderthesea.com/blog/looking-upwards-this-summer#comments>)

Excited to announce that I've accepted a research position this summer at NASA's Frontier Development Lab (<http://frontierdevelopmentlab.org/>) in Mountain View, CA. I'll be working alongside other scientists and engineers for eight weeks in an intensive research accelerator focused on artificial intelligence.

"Hosted by the SETI Institute and NASA Ames and supported by leaders in AI from the private sector, such as IBM, Nvidia, Autodesk and Miso Technologies, FDL brings together teams of experts in the physical sciences and specialists in data science and machine learning for an intense 8-week concentrated study on topics important to NASA – and to humanity's future. The format encourages rapid iteration and prototyping to create outputs with meaningful application, papers and conference posters."

My cohort's particular focus is 3D shape modeling of near-earth objects, a topic closely related to my thesis on underwater 3D shape modeling.



Image: G. Young Credit Mission 31.

STILL TEAM OCEAN

Ocean and space are commonly pitted against each other – upward vs downward, astronaut vs aquanaut, etc.



AUTHOR

Grace is an MIT ocean engineer, aquanaut, and scientist with Cousteau's Mission 31. She's currently a PhD student at University of Oxford and chief scientist for the *Pisces IV* deepsea submarine.

Tweets by @grace_h2o



Grace
@grace_h2o

Don't think I've ever seen an unhappy dog at the beach, or been an unhappy Grace at the beach :D...

[instagram.com/p/BUzB2zIBRG/](https://www.instagram.com/p/BUzB2zIBRG/)

47



Grace
@grace_h2o

Just me and some weeds. JUST KIDDING. This is "the deadliest plant in the U.K." Hemlock Water...

[instagram.com/p/BUtH4bB6P/](https://www.instagram.com/p/BUtH4bB6P/)

30 Me



Grace
@grace_h2o

Just learned about Mesophotic.org AWESOME DATABASE #mesophotic

[Embed](#)[View on Tw](#)

INSTAGRAM

[RSS Feed \(/1/feed\)](#)

CATEGORIES

All (/blog/category/all)
Arts & Science
(/blog/category/arts-science)

GRACE UNDER PRESSURE (/)

[BLOG \(/\)](#)[ABOUT \(/ABOUT.HTML\)](#)[ACT NOW \(/ACT-NOW.HTML\)](#)[UPDATES \(/UPDATES.HTML\)](#)[THESIS \(/THESIS.HTML\)](#)[CONTACT \(/CONTACT.HTML\)](#)

Geo 2011 Explorer of the Year Kenny Broad plans to highlight the topic in his Red Planet vs Blue Planet

(<https://www.nationalgeographic.org/dc/events/red-planet-vs-blue-planet/>) session at the National Geographic Explorer's Festival

(<https://www.nationalgeographic.org/explorers-festival/2017/>) this June. I delve into the debate's history in my undergraduate thesis *Missiles and Misconceptions: Why We Know More About the Dark Side of the Moon Than the Depths of the Ocean*

(<https://dspace.mit.edu/handle/1721.1/92685#file-area>), TEDx Talk Why We Know More About the Moon Than the Depths of the Ocean

(<https://www.youtube.com/watch?v=L3hrtaL9B1k>), and in an interview

(<https://www.instagram.com/p/BQlrsSBBU12/?taken-by=gracecalvertyoung>) for an upcoming PBS documentary based on Ben Hellwarth's awesome book SEALAB

(https://www.amazon.com/Sealab-Americas-Forgotten-Quest-Ocean/dp/0743247450/ref=sr_1_1?ie=UTF8&qid=1495725519&sr=8-1&keywords=Sealab%3A+America%27s+Forgotten+Quest+to+Live+and+Work+on+the+Ocean+Floor).

(https://www.amazon.com/Sealab-Americas-Forgotten-Quest-Ocean/dp/0743247450/ref=sr_1_1?ie=UTF8&qid=1495725519&sr=8-1&keywords=Sealab%3A+America%27s+Forgotten+Quest+to+Live+and+Work+on+the+Ocean+Floor).

(https://www.amazon.com/Sealab-Americas-Forgotten-Quest-Ocean/dp/0743247450/ref=sr_1_1?ie=UTF8&qid=1495725519&sr=8-1&keywords=Sealab%3A+America%27s+Forgotten+Quest+to+Live+and+Work+on+the+Ocean+Floor).

(https://www.amazon.com/Sealab-Americas-Forgotten-Quest-Ocean/dp/0743247450/ref=sr_1_1?ie=UTF8&qid=1495725519&sr=8-1&keywords=Sealab%3A+America%27s+Forgotten+Quest+to+Live+and+Work+on+the+Ocean+Floor).

(https://www.amazon.com/Sealab-Americas-Forgotten-Quest-Ocean/dp/0743247450/ref=sr_1_1?ie=UTF8&qid=1495725519&sr=8-1&keywords=Sealab%3A+America%27s+Forgotten+Quest+to+Live+and+Work+on+the+Ocean+Floor).

It's not an either-or debate, however. We can explore both.

I'm looking forward to this summer opportunity at NASA for a number of reasons. I'm eager to learn from NASA methods that will enhance our underwater 3D modeling techniques while sharing what we've learned underwater. The experience will also provide another perspective on how public-private partnerships can work effectively to achieve defined research objectives. I believe public-private partnerships like NASA FDL and what I observed at CERN OpenLab, are the key to tackling our most urgent ocean research objectives---a vision I outlined in my 2015 TIME op-ed (<http://time.com/4029379/cern-for-the-oceans/>). Finally, I'm excited to spend weekends diving, surfing, and reuniting with West Coast friends.



(<https://www.facebook.com/FabienCousteauOL31/>)

pnref=story)

[research-mission\)](#)

[Edgertronic](#)

(</blog/category/edgertronic/>)

[Marine Robotics](#)

(</blog/category/marine-robotics/>)

[Mission 31](#)

(</blog/category/mission-31/>)

[Mission 31 Training](#)

(</blog/category/mission-31-training/>)

[Ocean Reports & Facts](#)

(</blog/category/ocean-reports-facts/>)

[Outreach](#)

(</blog/category/outreach/>)

[Research](#)

(</blog/category/research/>)

[Sailing & Adventures](#)

(</blog/category/sailing-adventures/>)

[Sea Creatures](#)

(</blog/category/sea-creatures/>)

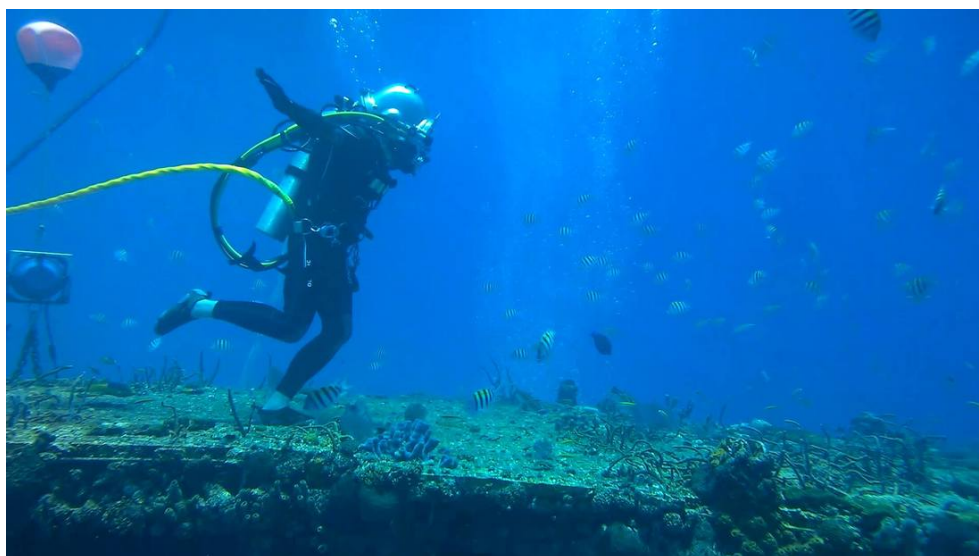


Image: G. Young credit Mission 31

Many astronauts are also aquanauts, but most people don't realize more people have been to space than have lived underwater (<http://www.bbc.com/future/story/20140411-i-have-lived-underwater>)! Several acquaintances work in both arenas: *Pisces VI* submarine owner Scott Waters (<http://www.graceunderthesea.com/blog/submarines-in-kansas-yes-pisces-vi-to-bring-deep-sea-research-to-the-masses>) is also on a space advisory board. FDL founding member, Jordan McRae,

GRACE UNDER PRESSURE (/)

- [BLOG \(/\)](#)[ABOUT \(/ABOUT.HTML\)](#)[ACT NOW \(/ACT-NOW.HTML\)](#)[UPDATES \(/UPDATES.HTML\)](#)
- [THESIS \(/THESIS.HTML\)](#)[CONTACT \(/CONTACT.HTML\)](#)

That said, I'm committed to Team Ocean. I'm personally drawn to water, a connection many humans have (see Wallace J. Nichols book Blue Mind: The Surprising Science That Shows How Being Near, In, On, or Under Water Can Make You Happier, Healthier, More Connected, and Better at What You Do. ([0 Comments \(<http://www.graceunderthesea.com/blog/looking-upwards-this-summer#comments>\)](https://www.amazon.com/Blue-Mind-Surprising-Healthier-Connected/dp/0316252115/ref=sr_1_1?ie=UTF8&qid=1495725909&sr=8-1&keywords=Blue+Mind%3A+The+Surprising+Science+That+Shows+How+Being+Near%2C+In%2C+On%2C+or+Under+Water+Can+Make+Moreover, engineering-wise, while space may seem more exotic, I'd argue the ocean, particularly the deep ocean, is a more challenging work environment considering that that E&M waves, upon which wifi, GPS, and many modern innovations are based, do not work, and salt water kills electronics. We're forced to innovate.</p></div><div data-bbox=)

0 Comments

Sort by Oldest



Add a comment...

Facebook Comments Plugin

[GRACE UNDER PRESSURE \(/twitter.com/grace_h2o\)](http://twitter.com/grace_h2o)

[MORE BLOG \(ALL\) \(http://www.graceunderthesea.com/blog/category/all\)](http://www.graceunderthesea.com/blog/category/all)
[WHAT'S M31 ABOUT? \(http://www.graceunderthesea.com/blog/whats-mission-31-about-this-is-worth-the-watch\)](http://www.graceunderthesea.com/blog/whats-mission-31-about-this-is-worth-the-watch)
[UNDERSEA GRADUATION \(http://www.graceunderthesea.com/blog/undersea-graduation\)](http://www.graceunderthesea.com/blog/undersea-graduation)