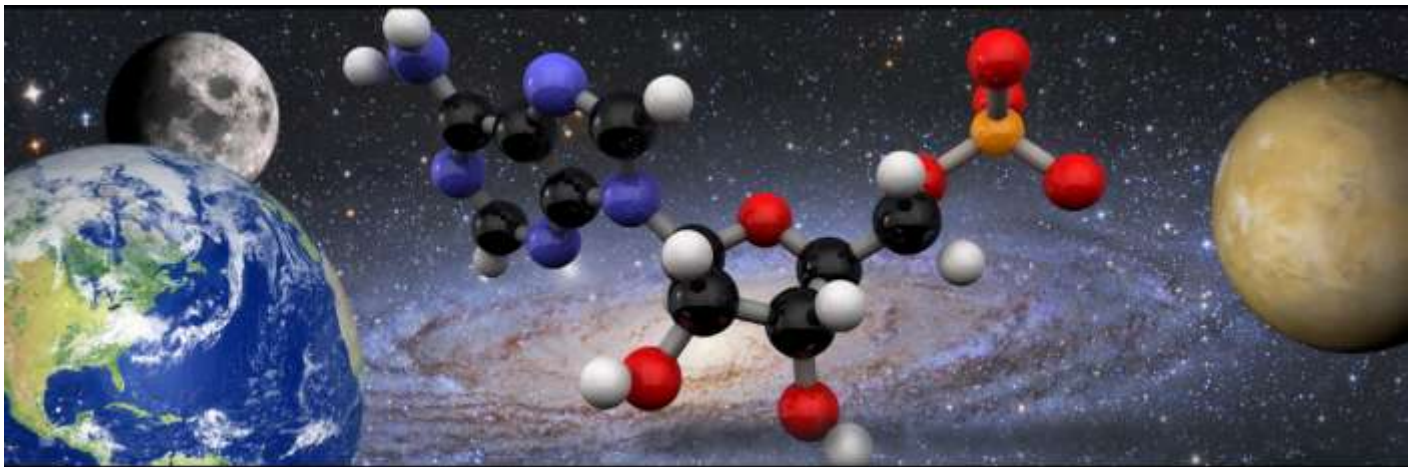
2012 Astrobiology Short Story Contest



This contest is sponsored by the New York Center for Astrobiology, a member of NASA's Astrobiology Institute program, headquartered at Rensselaer Polytechnic Institute (RPI) in Troy, NY. The New York Center for Astrobiology at RPI also involves scientists at the University at Albany (SUNY), Syracuse University, and the University at Arizona. The multi-disciplinary team of scientists from these four institutions is working to better understand the origin and distribution of life on Earth and on other planets in the Galaxy. For more information about the New York Center for Astrobiology, please visit its website at ***http://www.origins.rpi.edu***

Prizes

- An award ceremony will occur in early May 2012 for students, teachers, and parents with scientists and high school teachers associated with the New York Center for Astrobiology
- $200 for each of the best stories (up to 4 to be selected)
- An interview with the winning authors on WAMC Northeast Public Radio in Albany, NY

About the Contest

- Open to all students in grades 9-12 from Connecticut, New York, and Vermont. Eligible students within that grade-range can be from public schools, private schools, and home schools.
- One entry per student. Entries must be authored by one individual only.
- Entries must have a minimum of 500 words to a maximum of 1600 words. The format must be double-spaced; 12-point font; 1-inch margins. Graphs, images, tables, and citations are optional, and would *not* count toward the length-limit.
- If sent by mail, entries must be ***post-marked no later than Friday, March 2, 2012***. If sent electronically (pdf and doc files), the entry must be ***received no later than 5:00 PM EST on Friday, March 2, 2012***. Results of the contest will be announced by mid-April 2012.
- Entries will be assessed by a team of (i) high school teachers with expertise in the sciences, literature, and the arts, and (ii) scientists associated with the New York Center for Astrobiology.
- The short stories can range from being highly scientific to being fictional. The intent is to select up to two entries per Story Option, in which one may be highly scientific and the other may be highly fictional. In both instances, each would have been judged to be of outstanding quality. The contest-organizers fully recognize that the assessment criteria (described on page 3) will yield disparate scores for these two styles of short story. That range of scores will be calibrated by the team of reviewers.

Select ***one*** (1) of the two options described below for the development of your short story.

Story Option A	Story Option B
Imagine a terrestrial-type exomoon orbiting a Jovian-type planet within the habitable zone of a star. This exomoon has a thick, cloudy atmosphere that completely fills the sky, except for breaks in the clouds that occur about once every 400 years. When a break does occur, it is short-lived and reveals only a small area of the sky. Describe the civilization on this exomoon that has rarely seen beyond the clouds, including its culture and value system. (Supplementary information is listed below.)	Imagine a double-star system where each star has an inhabited, terrestrial-type planet within its habitable zone. One of those planets has developed an Apollo-era technology. When the orbits of those two planets bring them close enough for a launch opportunity, a mission is launched. Describe the mission and its first encounter between the habitants of these two planets. One of the planets has twice the mass of the other planet.

For this contest, please use the following definitions:

Terrestrial-type exomoon: A moon with a bulk density ~5.0 grams/cm^3, a radius of 0.8 to 1.8 Earth-radii, and orbiting an exoplanet. ***Jovian-type planet:*** Gas giant similar to Jupiter and Saturn.

Habitable zone: The distance from a star where an orbiting object with sufficient mass and atmosphere could have liquid water on its surface. The habitable zone is also called the 'Goldilocks zone'.

Supplementary information for Story Option A: This supplementary information can be considered during development of your story, but is not required. F5 star with mass ~2.8 x 10^{30} kg, luminosity ~ 3.0 x 10^{27} watts, and radius ~ 1.4 x 10^9 meters. Jovian planet with mass ~1.6 x 10^{27} kg, density ~1 .2 grams/cm^3, radius ~ 6.9 x 10^7 meters, semi-major axis of planet's orbit ~ 2.5 x 10^{11} meters, and orbital eccentricity ~ 0.00. Terrestrial-type exomoon with mass ~ 8.4 x 10^{24} kg, albedo ~ 0.67, semi-major axis of exomoon's orbit ~ 1.8 x 10^{10} meters, orbital eccentricity ~ 0.00, and rigidity of exomoon ~ 3 x 10^{10} Newtons/meter^2. The exomoon has both land and oceans.

Cover Sheet

Please include a cover sheet with the following information:

1. Your full name
2. Your mailing address
3. Your e-mail address
4. Theme of story that was selected ('Option A' or 'Option B')
5. Your current school and its address, and your current grade-level
6. The name of a sponsoring teacher (if applicable)
7. Brief paragraph (less than 100 words) describing your entry
8. Your original source of information describing this contest

To Enter

Mail a printout of your entry with the cover sheet to the following address:

Prof. John W. Delano; Associate Director, New York Center for Astrobiology;
Dept. of Atmospheric & Environmental Sciences; 1400 Washington Avenue; University at Albany;
Albany, NY 12222

Alternatively, you can submit your entry as an e-mail attachment (.doc or .pdf) to Prof. John Delano at the following address: **jdelano@albany.edu**

Questions

For questions about this contest, please contact Professor John Delano by either telephone (518-442-4479) or e-mail (jdelano@albany.edu).

Criteria for assessing the Astrobiology Short Story

(Please refer to the last bulleted item on page 1 for additional information about these criteria)

Category	*4 points*	*3 points*	*2 points*	*1 point*
Focus	The entire story is related to one of the prompts and allows the reader to understand much more about the scenario given.	Most of the story is related to one of the prompts. The story wanders off at one point, but the reader can still learn something about the scenario given.	Some of the story is related to one of the prompts, but a reader does not learn much about the scenario given.	No attempt has been made to relate the story to one of the prompts.
Organization (2x)	The story is very well organized. One idea or scene follows another in a logical sequence with clear transitions.	The story is pretty well organized. One idea or scene may seem out of place. Clear transitions are used.	The story is a little hard to follow. The transitions are sometimes not clear.	Ideas and scenes seem to be randomly arranged.
Spelling and Punctuation	There are no spelling or punctuation errors in the final draft. Character and place names that the author invented are spelled consistently throughout.	There is one spelling or punctuation error in the final draft.	There are 2-3 spelling and punctuation errors in the final draft.	The final draft has more than 3 spelling and punctuation errors.
Quality of Scientific Inferences (2x)	Scientific knowledge incorporated in the story is 1) deep, 2) extensive, 3) accurate and 4) timely.	The story incorporates 3 out of the 4 desirable qualities of scientific knowledge.	The story incorporates 2 out of the 4 desirable qualities of scientific knowledge.	The story does not provide evidence of a sufficiently high quality of scientific knowledge.
Creativity (2x)	The story contains many creative details and/or descriptions that contribute to the reader's enjoyment. The author has really used his imagination.	The story contains a few creative details and/or descriptions that contribute to the reader's enjoyment. The author has used his imagination.	The story contains a few creative details and/or descriptions, but they distract from the story. The author has tried to use his imagination.	There is little evidence of creativity in the story. The author does not seem to have used much imagination.
Setting	Many vivid, descriptive words are used to tell when and where the story took place.	Some vivid, descriptive words are used to tell the audience when and where the story took place.	The reader can figure out when and where the story took place, but the author didn't supply much detail.	The reader has trouble figuring out when and where the story took place.
Action	Several action verbs (active voice) are used to describe what is happening in the story. The story seems exciting!	Several action verbs are used to describe what is happening in the story, but the word choice doesn't make the story as exciting as it could be.	A variety of verbs (passive voice) are used and describe the action accurately but not in a very exciting way.	Little variety seen in the verbs that are used. The story seems a little boring.
Total Points				

Total Points Overall = _____ / 40