Youth Capture the Colorful Cosmos

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Select Your Target

The telescope will take an image of your selected target.
Prior to selecting your target, you can click on the thumbnail to see a detailed view.

Solar System
- Moon
- Jupiter
- Jupiter's Moons
- Venus
- Saturn
- Mars
- Sun
- Asteroid

Stars & Nebulae
- Hercules Cluster
- Orion Nebula
- Pleiades
- Ring Nebula
- Milky Way
- Sagittarius A
- Dumbbell Nebula
- Trifid Nebula
- Lagoon Nebula
- Eagle Nebula
- Crab Nebula
- Cyg X-1
- Messier 46
- Messier 15
- Beehive Cluster
- CQ Cepheus

Galaxies & Beyond
Adjust Your Telescope Settings

The options you choose will be sent to the telescope and it will take your image tonight using these settings.

Andromeda Galaxy
Object Type: Galaxy  Distance: 2 million light years  Constellation: Andromeda

Field of View

Normal View - 1°
   Good setting for most objects

There is only one field of view option for this object.

Exposure Time

15 seconds
30 seconds
45 seconds
60 seconds

Filter Selection

- No Filter
  all light let through

- Red Filter
  only red light let through

- Green Filter
  only green light let through

- Blue Filter
  only blue light let through

- Multiple Filters
  multiple images to make color picture

CONTINUE
miami science museum

THE FUTURE BEGINS HERE.
• Underserved and rural school district
• 41 program participants
• 2 Merit classes
• 6 weeks (Jan – Feb)
Field trip to the museum
In 2013, the Museum of York County partnered with York Middle School science teacher Cassie Carroll to offer 8th grade students the opportunity to research, learn and photograph the cosmos using the Harvard-Smithsonian Astrophysical Observatory.

The goal of the Youth Capture the Colorful Cosmos (YCCC) program is to use hands-on exercises to teach participants how to control the MicroObservatory robotic telescopes over the internet and take their own astronomy images of the universe. The YCCC program promotes increased interest, awareness and knowledge of astronomy content, understanding of technology and proficiency in real scientific research skills.

"I learned that astronomy is an ever changing science."

The 41 program participants requested images via the MicroObservatory Guest Observer Portal. Images are taken by a computerized telescope, such as the one shown at left located in Amado, Arizona. Students then accessed their images by web. The original, unprocessed images are black and white, such as the image at left of the Orion Nebula.

Students uploaded their images into the MicroObservatory photo editing software installed on their classroom computers. The software offers exercises to help students learn how to process and edit their images. They were able to create a realistic rendering of the celestial object or use their imaginations to enhance the image, such as the colorized image at left of the Orion Nebula.

Manipulating the photos is what I enjoyed most!

When finished with their projects, students were asked to write poems to creatively describe their images. Each student's name and poem is displayed alongside their artwork in this exhibit.

"I didn't realize there was so much to see in outer space!"
Orion Nebula

Gravity collapsing clouds of dust
Closet star-forming region to us
Look for the brightness of new stars
1500 light years in the unknown
The beauty of space is being shown

By Holly Wilson
College Park Aviation Museum
Stars after stars
Stars close and far
They seem so close but galaxies away
I pick out a star to own to bright my day
-Markese Miller
U.S. Space & Rocket Center
Over 2500 children a year use Harvard-Smithsonian lesson plans and curriculum in our Space Camp® program.
2650 High School students have participated in the Youth Capture the Colorful Cosmos program since its debut in December 2011.

Over 3000 students will have participated by December 2013.
In 2012 the Space Camp® program hosted students from 55 countries, with international students accounting for 14% of our yearly attendance.
Our plans for this Summer include adding a multimedia display to our Great Telescopes exhibit to showcase weekly images and astronomy poems.