



Skynet
JUNIOR SCHOLARS

Skynet Junior Scholars: Sharing the Universe with Blind / Low Vision Youth

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Abstract: Skynet Junior Scholars, a new project funded by the National Science Foundation, aims to engage middle school youth including youth with visual and hearing impairments, in investigating the universe with the same tools professionals use. Project deliverables include:

1) Online access to optical and radio telescopes, data analysis tools, and professional astronomers, 2) An age-appropriate web-based interface for controlling remote telescopes, 3) Inquiry-based standards-aligned instructional modules. From an accessibility perspective, the goal of the Skynet Junior Scholars project is to facilitate independent access to the project deliverables to the greatest extent possible given existing accessibility technologies. Our poster conveys our experience in field-testing SJS activities with 29 blind/low vision youth attending a Lion's Camp 2013 in Rosholt WI. Through observations and preliminary results from pre/post surveys and interviews, we learned that rather than creating a new interest in STEM for these youth, we successfully engaged already motivated youth with exciting accessible options.

Skynet Junior Scholars at Lions Camp WI 2013

Amazing Space Tactile Images

Braille readers appreciate tactile and descriptions.

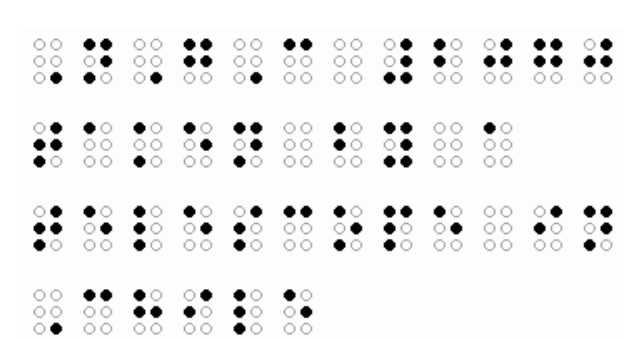
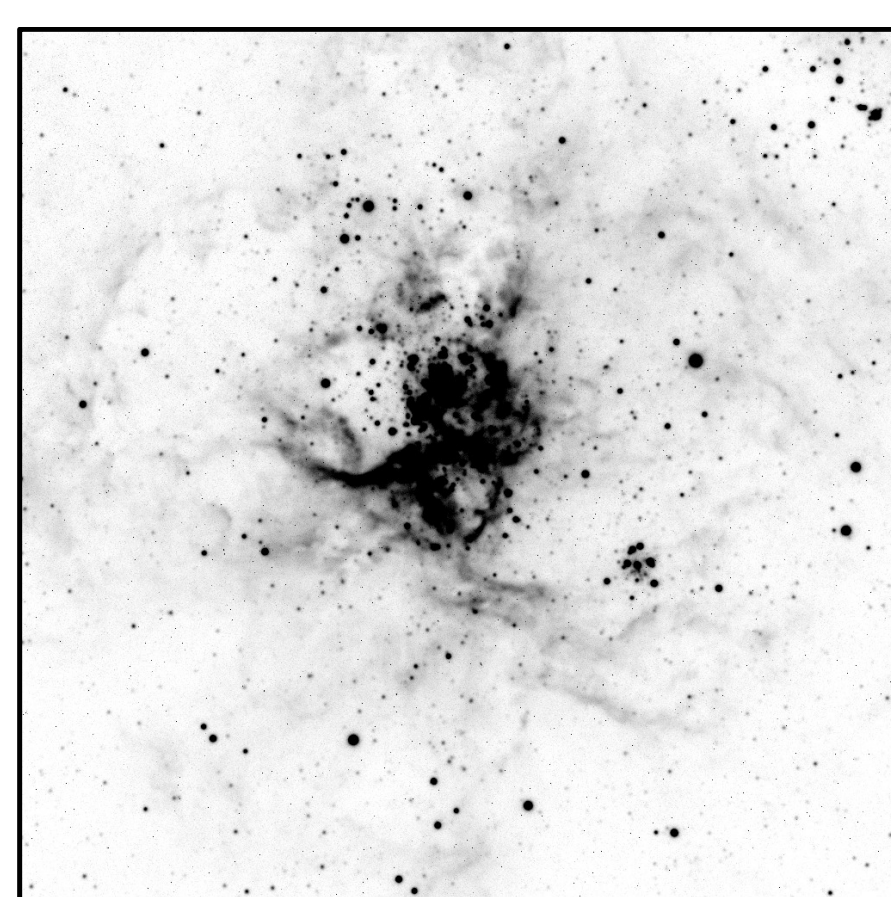


Remote Observing with Skynet & One's own tactile+Braille image!

An accessibility objective is to ensure that the web applications conform to the W3C Web Content Accessibility Guidelines (WCAG) version 2.0 at level AA.



Lions Camp 2013
NGC 2070 taken by a telescope in Chile



Skynet Junior Scholars Tactile Image

Experiencing Telescopes ...

Seeing the Sun safely and Stars!



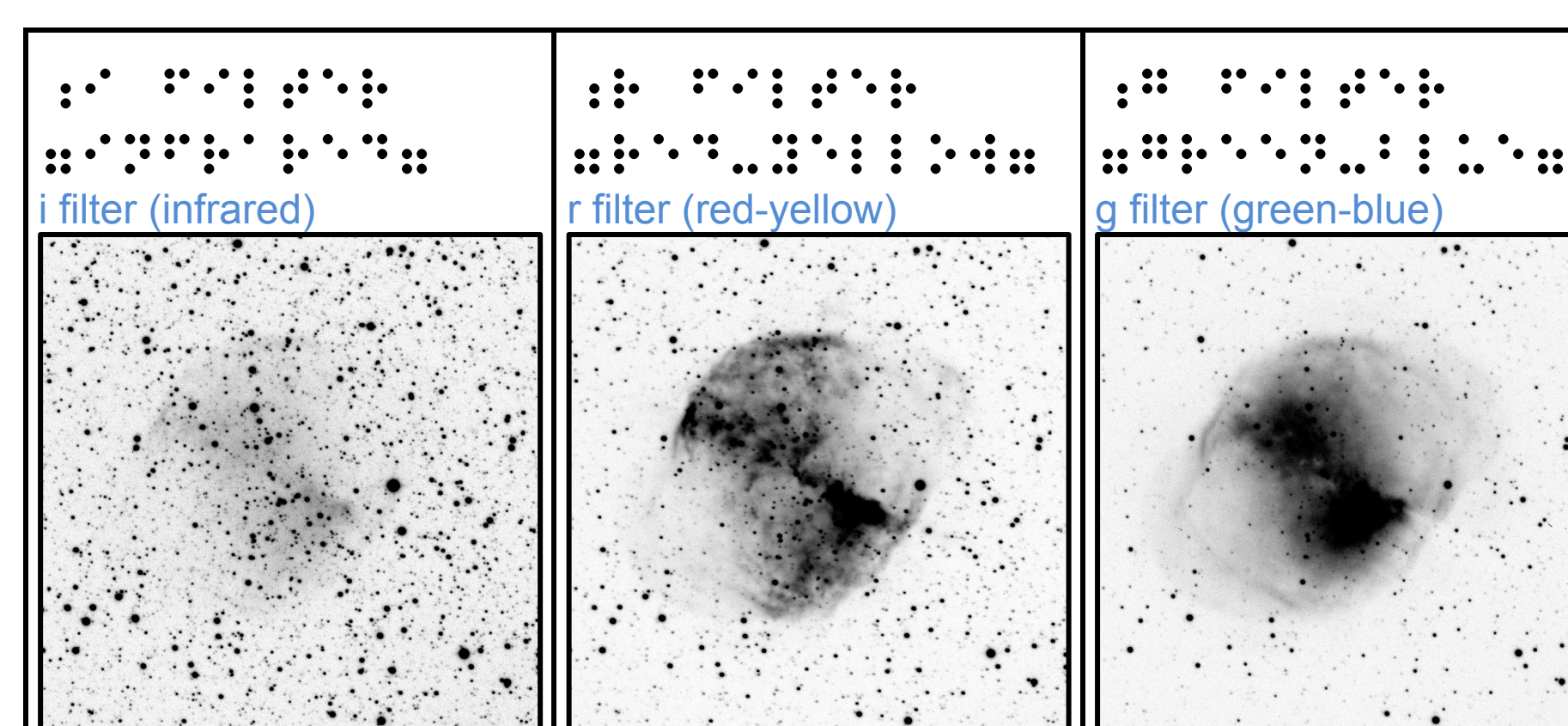
From an accessibility perspective, the goal of the Skynet Junior Scholars project is to facilitate independent access to the project deliverables to the greatest extent possible given existing accessibility technologies. The Lions Club of Williams Bay, WI donated a Thermoform Graphics Machine to Yerkes Observatory in 2003; this machine enables us to create tactile images for our blind and low vision youth participants.

Explorations include Tactile+Braille

...with Blind Journalist Testing & Approval!

Filters transmit specific wavelengths of light. Do filters make a difference?

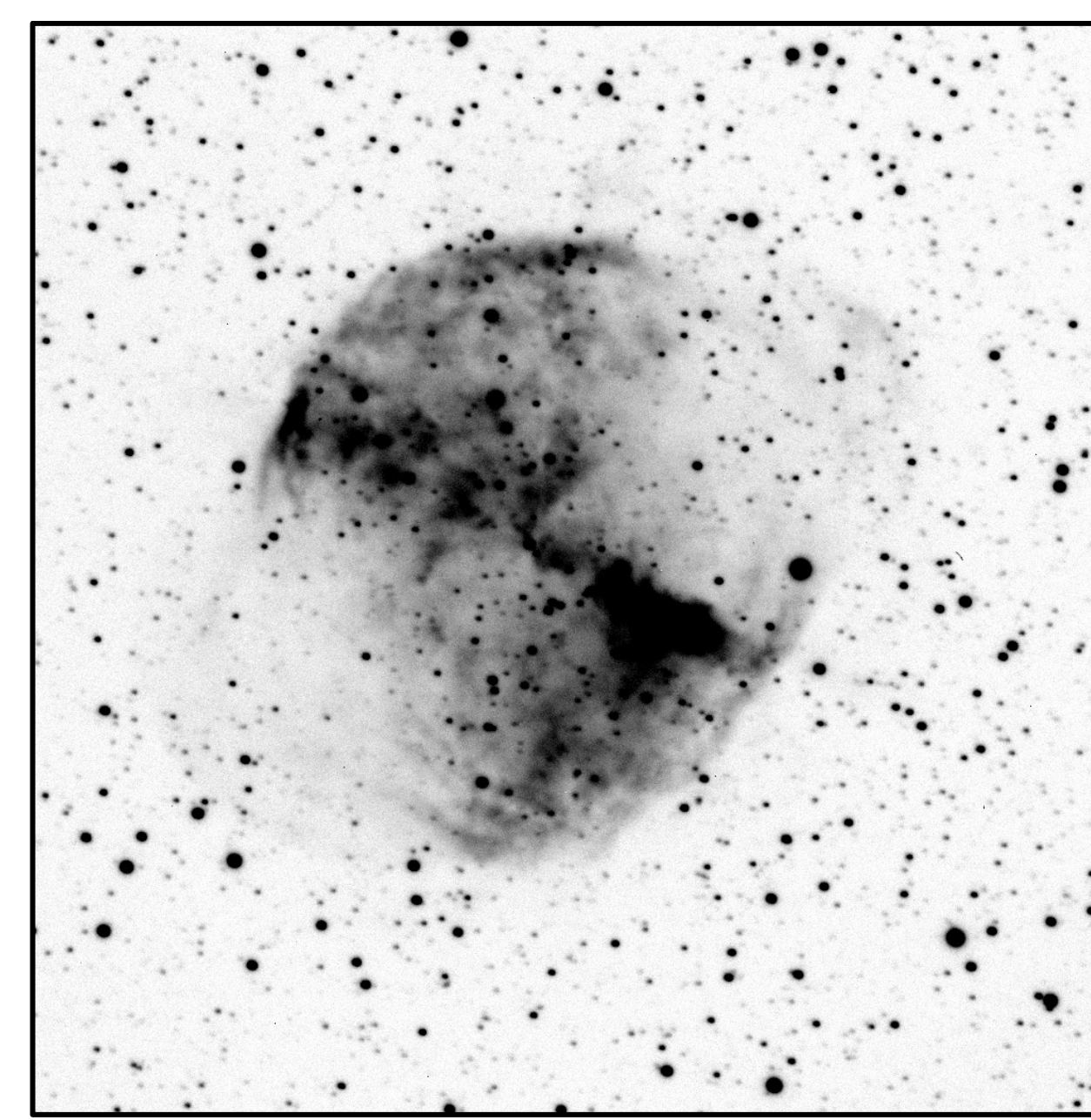
M27 Dumbbell, a planetary nebula, in 3 filters: i, r, g. Compare them!



Observation 756703-005 Skynet Junior Scholars Tactile Image
Approved KWatson, Braille_Pilters_M27_grade2adJ

M27 Dumbbell, a planetary nebula, imaged with r filter (red-yellow), Yerkes 41 inch telescope. ID 8875535

Braille representation of the M27 Dumbbell nebula image.



Observation 756703-003 Skynet Junior Scholars Tactile Image
Approved by KWatson, Braille_Pilters_M27_rfilter_grade2adJ

Audio & Captioning Video-Tutorials To include Deaf and Hard of Hearing

The screenshot shows the Skynet web application interface. On the left, there is a navigation menu with sections: My Observations, Tools, Account Management, and Questions/Problems. The main area displays a star chart with various Messier objects labeled. A 'Location/Time' menu is highlighted, showing options like 'Az/El Grid', 'RA/Dec Grid', 'Galactic Plane', 'Stars', 'Solar System', 'Messier Catalog', 'Bright Radio Catalog', and 'Simulate Sky Brightness'. A 'Show/Hide' menu is also visible. A text box at the bottom states: 'You can change what's displayed by selecting options in the Location/Time menu, and the Show/Hide Menu.'