Blueshift - August 31, 2009

[intro music]

Sara Mitchell: Welcome to the August 31st, 2009 episode of Blueshift, brought to you from NASA's Goddard Space Flight Center. We've dedicated three episodes this summer to sharing the story of astronomical data - how we get it, what we can do with it, and why it's so important to use data to communicate in science. This episode will wrap up our summer series, as we discuss an interesting new research project that wants to find out what makes astronomical images attractive and informative.

Anita Krishnamurthi spoke with Randall Smith of the Harvard-Smithsonian Center for Astrophysics about this research and some interesting early results!

Anita Krishnamurthi - So Randall, you're involved in a very interesting project about aesthetics and astronomy. Tell us a little bit about the idea behind this project.

Randall Smith - Our idea was to look at what are people actually getting out of all of the images that astronomers are now generating from sources like the Hubble Space Telescope, the Chandra X-ray Observatory, the Spitzer Telescope. We have a nunmber of very interesting satellites, very interesting datasets coming down, and there's been a lot of press releases and other information that goes out to the public, but very little study of what are people really getting out of it. What are they learning about astronomy. Are they enjoying the images? Basically we're putting this information out there, we wanted to study what are people getting out of it.

Anita Krishnamurthi - OK, so how did you go about examining this question?

Randall Smith - Our first two approaches were to do a very broad survey, and we wanted to do a survey with as many people as we could possibly get, and so we used the Astronomical Picture of the Day site (with their permission), and put a link on that site - which is visited by a million people or more a day - to our survey. We had that link up for a few weeks, and we got about ten thousand responses, which was, for this kind of study, a gigantic number. Frequently only five hundred or so responses would be condidered a good number. We also did a separate series of focus groups with about ten people each ranging from complete novices who knew nothing really about astronomy and were just picked up off the streets, not so to speak, all the way to professional astronomers, and then we asked them a series of questions and recorded their answers.

Anita Krishnamurthi - Can you tell us a little bit about any of the data you've already obtained, and any preliminary results that you might be willing to discuss?

Randall Smith - We've come up with some very interesting preliminary results. Nothing is quite complete yet, but answered a number of questions that we had just setting out. For example, one of the long-standing issues was whether or not, when you distributed an image - an image that was hopefully beautiful in and of itself - in some cases astronomical images have been shown in museums, so we know that they can be beautiful in and of themeselves - but we were curious to know whether or not explaining what the image was about would help people understand it better, and what impact that would have. And what we found was somewhat surprising, although not totally so. And it's that people think the images are more attractive if they're given more information about them. So we provided an image with no text, an image

with a very short text, and an image with a longer descriptive text going along with it. And we found that people who saw the text felt the image was more attractive. So basically we discovered that people, once they know what the image is about, they find the image itself better, more interesting, and more attractive.

Anita Krishnamurthi - So how far along in the project are you now? Are you nearing completion? Do you still have a lot of data gathering to do?

Randall Smith - We have almost finished sort of what we consider the first stage of the project. We've finished the first survey and the focus groups, and we've analyzed much of the data. We're now in the process of writing up the first papers, and we forsee a series of papers, in a range of journals, from a purely aesthetic journal, interested in how people perceive images, to some articles in journals more interested in public outreach.

Anita Krishnamurthi - OK, what is the take-away that you want people in the community to get from this project?

Randall Smith - Well, what we really were hoping is that we could do a better job of communicating astronomical images and astronomical results to the public. That was our overarching goal. The interest in aesthetics and how people perceive it is interesting, but there is a significant amount of money put into creating these images, and it would be good if we can get the best bang for our buck out of it, to give the public what they're paying for, something that was somewhat surprising to us, because it's not true in a general art sense, necessarily. You don't need to understand an artwork, or understand the context behind an artwork, to find it attractive. But apparently it does make a big difference to understand the background to an astronomical image, when judging how attractive it is.

Anita Krishnamurthi - Hmm. Fascinating. So what are the next steps for this project?

Randall Smith - We have submitted another proposal to the Smithsonian Institution, asking for funding to do work going into museums, and doing surveys in museums, showing astronomical pictures in different forms, asking people what they get out of it, and studying what they look at and how long. We would also be interested in doing some eye motion studies, they're called, where you show people images and text and study where they're looking. Do they spend more time looking at the image, do they spend more time reading the text? How do people get the information out of a press release, so to speak? And how can we make that information transfer better?

Sara: People may say that a picture is worth a thousand words, but clearly astronomical images are even better when you have the picture and a thousand words! To see some pretty pictures, and learn about the science behind them, visit our website at: universe.nasa.gov/blueshift

You can also follow us on Twitter as nasablueshift.

I'd like to close this episode with a very special shout-out to Anita Krishnamurthi, who has been the producer of Blueshift since we started in 2007. She got us going and has been absolutely essential in keeping our momentum. Anita is moving on to another position, and we wish her the best of luck!

We'll be back in mid-September with another behind-the-scenes look at astrophysics at NASA. Until then, this is Sara Mitchell, bringing the Universe closer to you with Blueshift.

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