

Triton Fun Company

Science Newsletter January 2007

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Picture Perfect Planets

J. Bartlett

Special points of interest:

- Planet pictures
- Triton Fun stuff
- Superfluous questions

We are always looking for **contributors** to the Science Newsletter. If you would like to write an article about a science subject you are excited about, or contribute a superfluous question, or if you would like to be on our **mailing list** for future newsletters, please e-mail us at:

science@tritonfun.com

I have been fascinated by planets since my father first showed me views of Jupiter and Saturn through his 4.5" reflecting telescope when I was in the 4th grade. The views of these planets were utterly enthralling to my elementary school mind, even through the modest aperture of my fathers scope. I was thrilled by the fact that I was seeing other worlds, in some respects similar to Earth, with their cloud belts and storm systems, rings and entire systems of planet sized moons! I was hooked on space from that point on and increasingly my thoughts turned to space travel and visiting the planets in order to make first hand observations. About that same time the TV show 'Star Trek' was in syndication; a local TV station advertised the show with the tag line "Have you ever wanted to visit other planets?" That intrigued me; I started watching the show and have been a trekkie ever since. My dual fascinations with planets and with Star Trek are probably largely responsible for my earning an Aerospace Engineering degree and my career working on the Space Shuttle Main Engine program, which in my opinion is the next best thing to warp drive.

At any rate, I didn't actually own a telescope until many years later when I was a sophomore in college. In 1994, Comet Shoemaker-Levy 9 was about to smash into the planet Jupiter. I had

heard that a moderately sized scope would probably be capable of seeing the impacts. I just knew that I had to get a scope and see these impacts for myself. I contacted a local astronomy club and inquired about telescopes for sale. Indeed there was a 'scope for sale, a 10" equatorial reflecting telescope.

I eventually learned how to set up that 10" scope efficiently and in the dark and though the scope was optimized for viewing deep sky objects, I relished the views of Jupiter and Saturn that I was able to achieve. I had long thought about doing astrophotography of the planets but at the time CCD cameras were amazingly expensive and film photography seemed far too labor intensive.

I have since graduated and have gone to work on the Space Shuttle Main Engine Program. I decided it was time to fulfill my dream of doing astrophotography. But isn't astrophotography equipment still really expensive - more expensive than even my telescope? I searched the websites of the major amateur astronomy vendors and I was elated to find some relatively low cost cameras. I eventually ordered an LPI (Lunar/Planetary Imager, with image processing software) from an on-line vendor



Magnificent Saturn

Photos by J. Bartlett

and within a couple of weeks I was ready to start doing astrophotography ! My dream had come true !

My first target was Magnificent Saturn. Of all the planetary bodies I have shot with my imager, Saturn seems to be the most photogenic. I have dozens of images of Saturn as I continually try to top the image quality of earlier images of the planet.



Moon: Wow! Look at that detail !

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Picture Perfect Planets, continued

Jupiter on the other hand is more challenging. Intuitively one might think that Jupiter would be easier to image since it is larger than Saturn and much closer to Earth. However, for the budding amateur planetary scientist, a good image of Jupiter reveals a wealth of information, such as cloud banding, festoons and other large atmospheric systems and even shadows of the Galilean moons on the Jovian cloud tops. A bland so-so image of Jupiter is easy to take, but only occasionally are atmospheric conditions such that I have been able to take what I consider to be truly spectacular images of Jupiter.

The moon is a fun and relatively easy object to photograph. The moon is bright and doesn't require a long exposure. Most people I show my images to are really excited and impressed with my lunar shots.



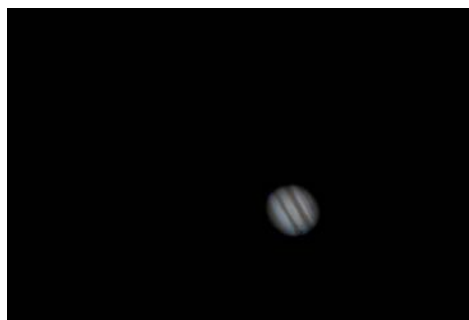
Dig those ridges, craters and mare !



**Jupiter: banded structure and spots !
Photos: J. Bartlett**

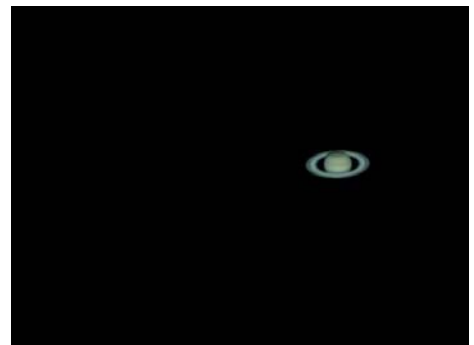


Love those craters on the Moon !



Jupiter: bands are atmospheric jet streams

The great thing is that now the ability to take astrophotos of planets and even deep sky objects is within the reach of many people with limited budgets who have only modest equipment. Most telescopes with a clock drive should be capable of using these exciting imaging products from the likes of Celestron, Meade, Orion, etc., etc. I take my scope out into the back yard to image every chance I get and I definitely enjoy showing off my planet pictures! And they just keep getting better and better.



Saturn: note banded structure



Saturn: in the depths of space

Astrophotography: If you have some cool astrophotography pictures and would like to publish them in our Science Newsletter, please let us know. You can e-mail us at: science@tritonfun.com

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Magnetosphere hats



Binoculars -4x30's



Sputnik shirts

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** Send us your superfluous questions for a future issue ! They can be on any subject. The funnier, the better. M.D., our editor, appreciates the help and will send you a free Triton Fun coffee mug as compensation for your question. Or write an article for us and be read by professional and amateur astronomers and scientists in the U.S. and Canada ! **

Superfluous Questions:

1. On what day did Dr Emmett Brown invent time travel (in the movie "Back to the Future") ?
a) October 26, 1985 b) July 15, 1953 c) November 5, 1955 d) May 17, 1972
2. What was the name of his invention which made time travel possible ?
a) absolute rotor b) turbo turbine c) flux capacitor d) zip drive
3. What was the name of the town that Marty McFly lived in ?
a) Hill Valley, California b) Peabody, Missouri c) Crispin, Nevada d) San Francisco, California
4. What car model was the time machine built into ?
a) a Chevy b) an Oldsmobile c) a Delorean d) an Edsel

—> ANSWERS in next months issue of the Science Newsletter ! <—

** ANSWERS to December's Superfluous Questions: 1. c) foot 2. b) Virgo Stellar Stream 3. c) Natira 4. a) Chromium