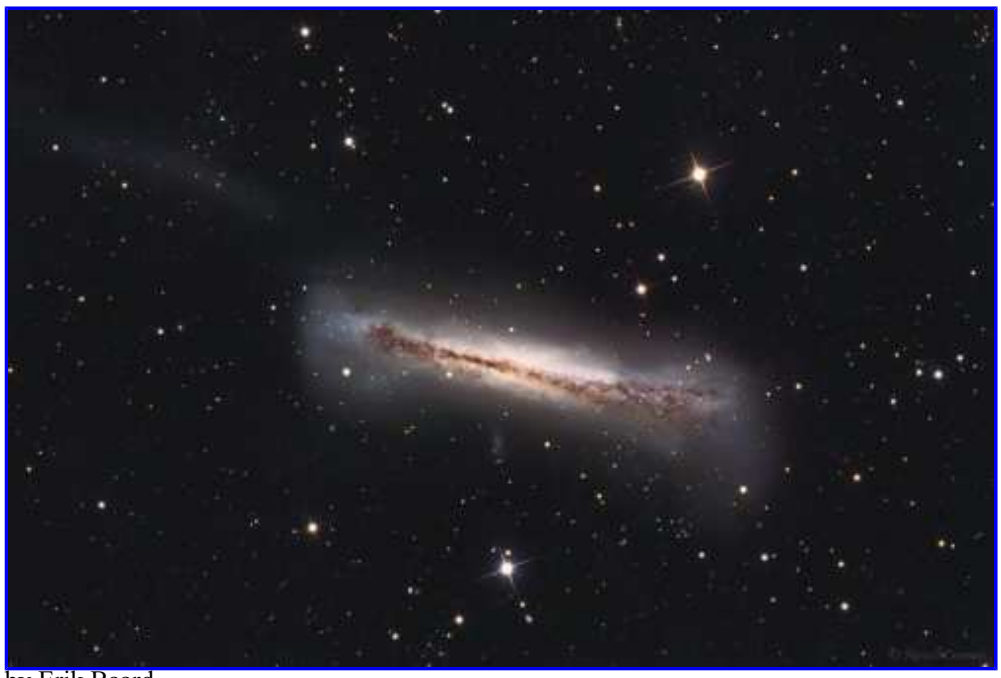
# Nature Calendar

## Your Urban Wilderness Community

## Is Your Universe Half Bright or Half Dimmed?

May 18, 2008 by naturecalendar



by Erik Baard

As New York City sloshes out of another rainy Sunday, let's take comfort in a new discovery that the universe shines twice as brightly as we'd believed.

Scientists collaborating in Europe and Australia reported in the most recent Astronomical Journal Letters that half of cosmic light is blocked by dust clouds before it can reach our eyes and telescopes. Personally, I find that to be a good thing – clouds foster life on Earth and in the heavens alike. Dust between the stars is comprised of the elements and compounds that can eventually assemble into rocky planets, plants, and animals and the very physical phenomenon we call thought.

And the dust is itself beautiful. When grains absorb starlight, they heat up and re-emit it as a nebular glow, as seen above in the photo of galaxy NGC 3628 by Russell Croman.

Not a bad tradeoff for a less crystalline cosmic view.

Astrophysicists have known for years that they had a major screw-up creeping around somewhere in their calculations – the radiance of dust was greater than the totality of stars themselves!

Cristina Popescu of the University of Central Lancashire and Richard Tufts of the Max Plank Institute for Nuclear Physics cranked out a better model using fresh observational data from 10,000 disc-shaped galaxies. By comparing myriad viewing angles, the two were able to determine how much light was obscured by dust in galaxies that face us straight on. From there they could factor in other slants, accounting for the billions of nuclear furnaces (hey, remember solar energy is just piggybacking on a totally unregulated reactor sited very far away) of each galaxy.

By pinning down that sample, astronomers and astrophysicists were able to return to the greater challenge of finding out how much all that exists is obscured, grain by grain.

"It is somewhat poetic that in order to discover the full glory of our Universe we first had to appreciate the very small" said Alister Graham from the Swinburne University of Technology.It's also sad that our view of the universe is even more greatly obscured by mundane nonsense like poorly designed street lamps and personal property lights, the headlights of often unneeded cars, and routine commercial lighting. Wildlife also suffers from confused diurnal rhythms and navigation due to excessive artificial lighting. Get involved in fighting this problem as a responsible homeowner, corporate citizen, or neighborhood advocate by linking up with SELENE NY (Sensible and Efficient Lighting to Enhance the Nighttime Environment) or the Amateur Astronomers Association.

---

**Possibly related posts: (automatically generated)**

- Galaxies Twice as Bright as They Seem, Study Finds

Posted in Astronomy, Bronx, Brooklyn, Manhattan, Parks, Queens, Staten Island | Tagged amateur astronomers association, amateur astronomy, Astronomical Journal Letters, Astronomy, astrophysics, cosmic, cristina popescu, dust, erik baard, life, light pollution, max plank institute for nuclear physics, NGC 3628, richard tufts, russell croman, selene ny, sensible and efficient lighting to enhance the nighttim, swinburne university of technology, universe, university central lancashire, urban ecology, urban environment | No Comments

Trackback URI | Comments RSS

## Leave a Reply

Name (required)

Mail (will not be published) (required)

Website

**Submit Comment**

- **Archives**
  - May 2008 (24)
  - April 2008 (10)
  - March 2008 (5)

- **Categories**
  - Amphibians (8)
  - Astronomy (4)
  - Atlantic Ocean (10)
  - Birds (17)
  - Bronx (18)
  - Brooklyn (26)
  - butterflies (7)
  - carrots (1)
  - Crustaceans (9)
  - Edible Plants (10)
  - Estuary (17)
  - Fall (5)
  - Fish (17)
  - Flowers (16)
  - Fresh Water (15)
  - Fungi (3)
  - Gardens (14)
  - Geology (11)
  - Grasses (8)
  - Insects (10)
  - Invertebrates (11)
  - Lakes (6)
  - Long Island Sound (5)
  - Mammals (7)
  - Manhattan (19)
  - New York Harbor (18)
  - Parks (30)
  - Plants (18)
  - Ponds (10)
  - Queens (23)
  - Recreation (16)
  - Reptiles (2)
  - Snakes (1)
  - Spring (22)
  - Staten Island (23)

- Streams (4)
- Summer (17)
- Trees (16)
- Uncategorized (17)
- Vertebrates (9)
- Water (20)
- Weather (4)
- wild eyed (8)
- Winter (3)

## Pages

- About Us and Contact Info

Blog at WordPress.com. | Theme: Mistylook by Sadish.