

SKY & TELESCOPE



© ISTOCKPHOTO.COM / BIORAVEN

On the cover:
Thanks to new technology, the search for extraterrestrial intelligence is moving into a higher gear.

FEATURES

COVER STORY

22 Closing in on E.T.
SETI hasn't picked up any signals from E.T., but with new technology, prospects are looking brighter.
By Seth Shostak

32 The Universe of Archimedes
Archimedes tackled the size of the universe with grains of sand, and in the process found an entirely new system for large numbers.
By Alan Hirshfeld

72 Fast or Slow?
Your scope's focal ratio affects your images, and here's how.
By Jesper Sørensen

32



November 2010

VOL. 120, NO. 5

THIS MONTH'S SKY

- 40 **Northern Hemisphere's Sky**
By Fred Schaaf
- 43 **November's Sky at a Glance**
- 45 **Binocular Highlight**
By Gary Seronik
- 46 **Planetary Almanac**
- 48 **Sun, Moon, and Planets**
By Fred Schaaf
- 51 **Exploring the Solar System**
By Don Parker and Jeff Beish

55 **Celestial Calendar**
By Alan MacRobert

63 **Deep-Sky Wonders**
By Sue French

67 **Going Deep**
By Ken Hewitt-White

S&T TEST REPORT

36 **PlaneWave's 12.5-inch CDK Astrograph**
Born in the age of digital imaging, this astrograph leaves little to be desired.
By Dennis di Cicco



Find us on Facebook and Twitter



55

HIROYUKI HIDA

ALSO IN THIS ISSUE

- 6 **Spectrum**
By Robert Naeye
- 8 **Letters**
- 10 **50 & 25 Years Ago**
By Leif J. Robinson
- 14 **News Notes**
- 20 **Cosmic Relief**
By David Grinspoon
- 60 **New Product Showcase**
- 70 **Telescope Workshop**
By Gary Seronik
- 76 **Gallery**
- 86 **Focal Point**
By William H. Waller

SKY & TELESCOPE (ISSN 0037-6604) is published monthly by Sky & Telescope Media, LLC, 90 Sherman St., Cambridge, MA 02140-3264, USA. Phone: 800-253-0245 (customer service/subscriptions), 888-253-0230 (product orders), 617-864-7360 (all other calls). Fax: 617-864-6117. Website: SkyandTelescope.com. © 2010 Sky & Telescope Media, LLC. All rights reserved. Periodicals postage paid at Boston, Massachusetts, and at additional mailing offices. Canada Post Publications Mail sales agreement #40029823. Canadian return address: 2744 Edna St., Windsor, ON, Canada N8Y 1V2. Canadian GST Reg. #R128921855. POSTMASTER: Send address changes to Sky & Telescope, PO Box 171, Winterset, IA 50273. Printed in the USA.

S&T ILLUSTRATION: LEAH TISCIONE