

#### **FEATURES**

22 Space Missions in 2017

#### **COVER STORY:**

#### 24 The First Black Holes

Astronomers are laboring to discover how the universe's first supermassive black holes were born. By Camille M. Carlisle

## 32 Hot Products 2017

Our 19th roundup highlights the most intriguing new astronomy gear on the market. By the Editors of Sky & Telescope

## 60 "Pleiads, Rising Thro' the Mellow Shade"

Once you see the Pleiades Bubble, you'll never miss this nebulosity again. By Howard Banich

## 66 1925: An Eclipse Like No Other

New York's Roaring Twenties eclipse cut the city in half, and not where the crowds expected. By Eli Maor

Find us on Facebook & Twitter



# January 2017 vol. 133, No. 1

## **OBSERVING**

- 41 January's Sky at a Glance
- 42 Lunar Almanac & Sky Chart
- 43 Binocular Highlight By Mathew Wedel
- 44 Planetary Almanac
- 45 Under the Stars
  By Fred Schaaf
- 46 Sun, Moon & Planets
  By Fred Schaaf
- 48 Celestial Calendar By Alan MacRobert
- 52 Exploring the Solar System By William Sheehan
- 54 Deep-Sky Wonders By Sue French
- 57 Going Deep By Ted Forte

## **COLUMNS / DEPARTMENTS**

- 4 Spectrum
  By Peter Tyson
- 6 From Our Readers
- 7 75, 50 & 25 Years Ago By Roger W. Sinnott
- 10 News Notes
- 20 Cosmic Relief
  By David Grinspoon
- 72 Astronomer's Workbench By Jerry Oltion
  - 74 Gallery
- 83 Events Calendar
- 84 Focal Point
  By Franz-Josef Hambsch

#### ON THE COVER



Swathed in gas, the first black holes formed either from, or irradiated by, early stars.

© BIGSTOCKPHOTOS.COM / PITRIS

## **ONLINE**

## **TIPS FOR BEGINNERS**

New to the hobby of astronomy? Here's everything you need to jump into the fun.

skyandtelescope.com/letsgo

## **EXPLORE THE NIGHT BLOG**

Follow Contributing Editor Bob King each week as he takes readers on an adventure through the night sky. **skyandtelescope.com/king** 

## **WEBINARS**

Join *S&T* staff and contributors to learn about astrophotography, equipment, constellations, and more. **skyandtelescope.com/classroom** 

SKY & TELESCOPE (ISSN 0037-6604) is published monthly by Sky & Telescope, a division of F+W Media, Inc., 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. ©2017 F+W Media, Inc. 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 420235, Palm Coast, FL 32142-0235. Printed in the USA.