

<<天文学前沿>>

图书基本信息

书名：<<天文学前沿>>

13位ISBN编号：9787111364566

10位ISBN编号：7111364562

出版时间：2012-1

出版时间：机械工业出版社

作者：J.M.T.汤普森 编

页数：417

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

<<天文学前沿>>

内容概要

在这本极具可读性的书中，来自全世界天文学领域的首席科学家们给出了其研究进展的一般看法，讲述了各自的前沿研究，并提出了他们关于未来的设想。

书中的文章主要选自世界上历史最悠久的科技期刊——皇家学会哲学学报的特刊，只不过在这里是以一种更口语化的语言呈现给广大读者。

期刊编辑对文章进行了严格精选，涵盖了宇宙大爆炸的起源、恒星和星系的演化及形成、冷暗物质、突增的太阳黑子事件以及人类对太阳系的探索。

通过该书，读者可以与作者一起分享他们在天文学前沿工作的兴奋和热情。

对于初入门或正想进入这些研究领域的青年学者来说，《天文学前沿:从大爆炸到太阳系(英文版)》不仅可以丰富他们的专业知识、扩展他们的视野，更可以为他们选择适合于自己兴趣的研究方向提供帮助。

而对于大学生和那些对这些领域的知识和发展方向有兴趣的一般读者来说，阅读这些书，既可以增进他们的科学知识，也可以助其了解这些领域的发展方向。

<<天文学前沿>>

作者简介

编者：(英国) J.M.T.汤普森

书籍目录

Foreword

Preface

Cosmology and the Big Bang

1. Thirteen Billion Years in Half an Hour

2. The Paradigm of Inflation

3. Cosmology with Varying Constants

4. Small Scales, Big Issues for Cold Dark Matter

5. Violence and Black Holes in the Hearts of Galaxies Probing the Universe

6. First Year Wilkinson Microwave Anisotropy Probe

Results: Implications for Cosmology and Inflation

7. Quest for Gravitational Waves

8. Strong-Field Tests of Relativistic Gravity with Pulsars

9. Gamma-Ray Bursts as Cosmological Probes

10. New Radio Interferometers and Data Access: Investigations of Star Formation

Stars and Conditions for Life

11. Gamma-Ray Bursts

12. Astrophysical Dust

13. The Astrophysics of Crowded Places

14. Astrochemistry: From Molecular Clouds to Planetary

Systems

15. Extrasolar Planets

Solar System and Climate Change

16. Our Solar System

17. Planetary Upper Atmospheres

18. The Solar Dynamo

19. Explosions on the Sun

20. Solar Variability, Coupling between Atmospheric Layers and Neil

Arnold

Index

章节摘录

版权页：插图：Quantum effects become crucial any time we ask a question which involves lengths scales comparable to or smaller than that of an atom. The quantum realm is a strange one indeed, divorced from everyday intuition and common sense. In it, balls can pass straight through walls and a cat can be both dead and alive at the same time. Remarkably, the theorems proven by Hawking and Penrose show that Einstein's theory very likely breaks down at some point because the typical length scales for the Universe become smaller than the size of an atom, and so quantum effects must be included. At the same time we cannot ignore gravity because near the Big Bang gravity becomes extremely strong. As a result, the combined theory we are searching for - the holy grail of modern fundamental physics - is known as quantum gravity. Whether or not quantum effects can smooth out and make finite the infinity density and temperature of the Big Bang is not known. Indeed it is one of the biggest unanswered questions in cosmology. Most researchers, perhaps, believe that they will - and hence that the cosmos may be much older than our current best estimate of thirteen billion years. But without a complete theory of quantum gravity we find only tantalizing hints.

<<天文学前沿>>

编辑推荐

《天文学前沿:从大爆炸到太阳系(英文版)》是英国皇家会前沿科技丛书之一。

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>