

# Contents

Preface	ix
---------	----

## 1

### Visions of Space

Space For Sale	3
Super Fast Travel Using Outer Space Could Be \$20 Billion Market, Disrupting Airlines, UBS Predicts	7
Michael Sheetz, <i>CNBC</i> , March 18, 2019	
Moon 2069: Lunar Tourism and Deep Space Launches a Century on from Apollo?	10
Monica Grady, <i>The Conversation</i> , July 31, 2019	
Soon, Hundreds of Tourists Will Go to Space: What Should We Call Them?	13
Eric Berger, <i>Ars Technica</i> , March 4, 2019	
Space Tourism Could Have Big Impact on Climate	18
David Chiga, <i>New Scientist</i> , October 26, 2010	
Space Tourism's Rubbery Rockets May Spur Climate Change	21
Dave Mosher, <i>Wired</i> , October 29, 2010	
China Plans a Solar Power Play in Space That NASA Abandoned Decades Ago	24
Eric Rosenbaum and Donovan Russ, <i>CNBC</i> , March 17, 2019	
2019 Is the Year That Space Tourism Finally Becomes a Reality: No, Really	31
Jonathan O'Callaghan, <i>Wired UK</i> , January 24, 2019	
Space Solar Power: Limitless Clean Energy from Space	34
<i>National Space Society</i> , March 15, 2014 (book review)	

## 2

### The Military in Space

In Defense of Space	41
The Moon's Role in the New U.S. Space Force	47
Paul D. Spudis, <i>Air &amp; Space</i> , August 17, 2018	
Trump's Space Force Gets the Final Frontier All Wrong	50
Peter Juul, <i>Foreign Policy</i> , March 20, 2019	
A Handshake in Space Changed US-Russia Relations: How Long Will It Last?	55
Monica Grady, <i>The Conversation</i> , July 17, 2015	

The U.S. Military Has Been in Space from the Beginning Jason Daley, <i>The Smithsonian</i> , June 19, 2018	58
Space Force or Space Corps? Kaitlyn Johnson, <i>Center for Strategic &amp; International Studies</i> , June 27, 2019	61
Renewed Space Rivalry between Nations Ignores a Tradition of Cooperation Scott Shackelford, <i>The Conversation</i> , January 10, 2019	65
Trump’s Space Force Isn’t the Only Military Space Program: Here’s What China and Russia Are Up To Kyle Mizokami, <i>Jalopnik</i> , February 25, 2019	69

### 3

#### **Legacy of the Space Race**

Past and Future Missions	75
Apollo Was NASA’s Biggest Win—But Its Legacy Is Holding the Agency Back Loren Grush, <i>The Verge</i> , July 16, 2019	79
Many People Still Believe the Moon Landing Was Fake: But Who’s Profiting? Rebecca Jennings, <i>Vox</i> , June 24, 2019	85
Q&A: Shuttle Astronaut Mike Massimino on the Legacy of Apollo 11 Jennifer Leman, <i>Scientific American</i> , July 19, 2019	90
“A Thrill Ran Through Me”: Your Memories of the Apollo 11 Moon Landing Matthew Holmes and Guardian Readers, <i>The Guardian</i> , July 19, 2019	95
The Mission That Changed Everything Robin McKie, <i>The Guardian</i> , November 29, 2008	100
Apollo 13: Lessons from the Successful Failure Geoff Loftus, <i>Forbes</i> , April 3, 2013	106

### 4

#### **NASA and the International Space Station**

Space Futures	111
What’s Next for NASA? Brian Dunbar, <i>National Aeronautics and Space Administration</i> , January 31, 2019	117
What Space Stations Will Look Like in 2030 Joe Pappalardo, <i>Popular Mechanics</i> , June 20, 2019	120
As NASA Aims for the Moon, an Aging Space Station Faces an Uncertain Future Nell GreenfieldBoyce, <i>NPR</i> , July 7, 2019	124

How Americans See the Future of Space Exploration, 50 Years after the First Moon Landing	127
Courtney Johnson, <i>Pew Research Center</i> , July 17, 2019	
NASA Seeks to Break the “Tyranny of Launch” with In-Space Manufacturing	130
Eric Berger, <i>Ars Technica</i> , July 29, 2019	
NASA Chooses Saturn’s Moon Titan as Its Next Destination	132
Mary Beth Griggs, <i>The Verge</i> , June 27, 2019	
With Opportunity Lost, NASA Confronts the Tenuous Future of Mars Exploration	135
John Wenz, <i>Smithsonian</i> , February 20, 2019	

## 5

### Space in Popular Culture

Aliens, Movies, and Fiction	141
Donald Trump’s Space Force Plans Analysed by a Sci-Fi Expert	147
Paul March-Russell, <i>The Conversation</i> , August 16, 2018	
The Science of <i>Star Trek</i>	150
David Allen Batchelor, <i>NASA Goddard Space Flight Center</i> , July 20, 2016	
Would Aliens Look Like Us?	158
Jonathan Losos, <i>NPR</i> , October 4, 2007	
More Than 1 Million People Have RSVP’d to “Storm Area 51” in the Name of Memes	161
Allegra Frank, <i>Vox</i> , July 15, 2019	
Audacious & Outrageous: Space Elevators	164
Steve Price, <i>National Aeronautics and Space Administration</i> , September 7, 2000	
Bibliography	169
Websites	173
Index	177