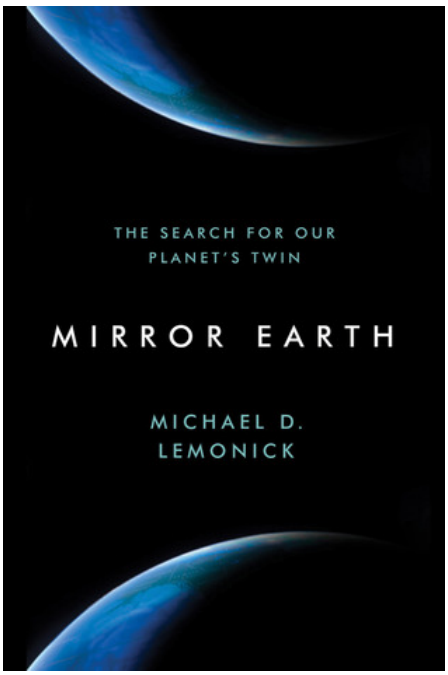

Mirror Earth: The Search for Our Planet's Twin

Michael D. Lemonick

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Mirror Earth: The Search for Our Planet's Twin Michael D. Lemonick
In the mid-1990s, astronomers made history when they detected three planets orbiting stars in the Milky Way. The planets were nothing like Earth, however: they were giant gas balls like Jupiter or Saturn. More than 500 planets have been found since then, yet none of them could support life.
Now, armed with more powerful technology, planet hunters are racing to find a true twin of Earth. Science writer Michael Lemonick has unique access to these exoplaneteers, as they call themselves, and *Mirror Earth* unveils their passionate quest. Geoff Marcy, at the University of California, Berkeley, is the world's most successful planet hunter, having found two of the first three extra-solar planets. Bill Borucki, at the NASA Ames Research Center, struggled for more than a decade to launch the Kepler mission-the only planet finder, human or machine, to beat Marcy's record. David Charbonneau, at Harvard, realized that Earths would be much easier to find if he looked at tiny stars called M-dwarfs rather than stars like the Sun-and that he could use backyard telescopes to find them!
Unlike those in other races, the competing scientists actually consult and cooperate with one another. But only one will be the first to find Earth's twin. *Mirror Earth* is poised narrate this historic event as the discovery is made.

Mirror Earth: The Search for Our Planet's Twin Details

Date	:	Published October 16th 2012 by Walker Books (first published October 1st 2012)
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Ross says

Very interesting coverage of the hunt for planets in the milky way around other stars that has taken place over the last two decades. In that time period science has gone from no known exo-planets, as they are called, to thousands at present. The hunt now is focusing on finding earth-like planets that could harbor life. A key element in the search is the Kepler satellite which is featured in this history of the search.

David James says

A good work of science journalism. Lemonick introduces us to the major figures currently searching for exoplanets, clearly explains the technologies they have devised to aid in their efforts, and summarizes what was found as of late 2012 or so. This is a rapidly moving field, and during the week that I was reading this book a couple of major announcements were made on new findings. As I read news reports I saw quotes from some of the same people Lemonick had profiled, and thanks to his eloquent writing, I felt almost as if I had been spending time with them myself, shared a bit of their excitement, and found myself cheering for them.

He has written a very human story about the quest for life far beyond our planet. Nothing, however, could be more human than the desire to learn what is presently unknown, and to realize that whatever it is, it will be far different from anything we have imagined, and far more fascinating. It will also blow our preconceptions, just as the exoplanet discoveries have, and provoke ever more questions.

Tmittman says

Well written tale of the work done by numerous astronomers. A bit of knowledge of astronomy would be helpful although not absolutely required

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Matthew says

Inspiring and breezy update on (some of) what has happened in planetary science since I last checked in about 15 years ago. Very exciting stuff about finding planets around stars other than our Sun. Good read for Christmas break if your a composer who is inspired by space!

Ben says

The book is a mix of astrophysics and human interest stories about scientists, and I'm not completely sure it works on either level.

Jeffrey McKinley says

(read 2/14/2013) This book traces the history of the field of planet hunters. Fascinating if you are interested in the possibility of other worlds in the Milky Way. The way it sounds, there may be more than we realize.

Adi says

In this amazingly detailed book of exoplanets, Michael D. Lemonick explained how scientists first found exoplanets. This is one of the best non-fiction novels I've ever read. It is about how many scientists like Bill Borucki, Geoff Marcy, Paul Butler, and many other scientists built upon each other's observations to find exoplanets.

My favorite thing about the book is that the author includes everything that related to the topic, from who found the first exoplanet to approving Kepler, all the way back from the 1960s. He explained each step of the process, how each person made a discovery, then another built upon that idea in a clear chronological order. For example, Dave Latham helped confirm the planet around the star HD 114762 that Geoff Marcy had introduced. They used a technique called "radial velocity", which sounded quite complex and intimidating when I first heard it used. However, the author did a really good job explaining each of these unknown terms. He also included many first-person quotes from the contributing scientists.

Lemonick went on to show how the launch of Kepler was made. The space satellite was a huge step forward in the exploration of exoplanets because it could find multiple candidate stars and map each transit of the planet. But getting it approved and funded by NASA was a pain. Lemonick pointed out each obstacle in that painful process and also how the scientists worked together to solve those problems. Eventually, they got the satellite approved after more than a decade, but it paid off. I liked this book because it was about space and that's always interesting. I would recommend this book to people who would like to know how exoplanets became a thing.

W. Derek Atkins says

I checked this book out from the library because I have an interest in exoplanets, and this book delivers! In this book, Michael D. Lemonick tells the history of the search for exoplanets, and will remain relevant into the future, regardless of how many more exoplanets are discovered. And even though it's a history of the search for worlds around other stars, it still contains good scientific information about those exoplanets that have been discovered up to the time of this book's publication.

I found this book very readable. The author does a great job of explaining things in language that is easily understood by laypeople, and also includes vignettes of some of the key scientists who have been involved in the search for exoplanets, which adds a very personal touch to this story. I would recommend this book to anyone who's interested in exoplanets, or to anyone who is interested in books that trace the history of science.

Paul E. Morph says

This book was recommended by Neil deGrasse Tyson so I'd just like to say 'thank you, Neil deGrasse Tyson' because this book was amazing!

The book chronicles the search for planets outside the solar system, with the ultimate goal being to find other worlds that are similar enough to Earth for us to one day colonise or, should they already be inhabited, communicate with ~~and then colonise~~. If that thought doesn't excite you, you're reading the wrong review.

The author isn't a scientist himself but a science journalist. As he discusses in the first part of the book, though, his father was a scientist and he had a love of science instilled in him practically from birth. This passion for science calls out from every word. Lemonick's enthusiasm for the subject matter is thoroughly infectious; it would take an extremely curmudgeonly soul not to get swept up.

The search is followed step-by-step in a very layman-friendly way. If you're looking for the hard science, you may want to seek out other books, but if you're after a passionately told, succinct overview of this fascinating subject, look no further. I loved every minute of this book.

Don says

Lemonick is fantastic at explaining complicated processes in an easy and engaging style. It shows in this work on the history of "planet hunting". I learned a lot about the culture of astronomers as well as the qualities of 'habitable' planets.

Michael Patrick says

So I came into this book wondering, 'Okay, even if we can infer planets similar to Earth that are 'mere' light years away, what will that ultimately mean?'. Turns out, nope, even though we might be able to 'find' them (keep in mind we're not photographing them directly), we're no better off than we were; communicating with these planets (assuming there's life capable of communicating) is a multi-year process, and travel to them is out of the question. So....

Andy Coulam says

Well explained update for those interested in astronomy, a good insight to how current mehtodology will continue to expand over the next few decades

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Immanuel says

Lemonick's book MIRROR EARTH, describes and analyzes the idea if we found a planet similar to planet earth. Lemonick writes with honesty and compassion about his experieces growing up and looking out of the stars wondering what law beyond. Lemonick also incorporates a lot of factual information with a lot of personal information about what it would be like to discover a "Mirror Earth." Overall i enjoyed the book, but at times Lemonick would go off topic and present ideas that were not related to his thesis. I recommend this book to readers who are curious about both reading someones lifetime story and learning astronomy and science.

Paul Lunger says

The search for a 2nd Earth is something that is almost a fundamental question that will help we humans answer the question "Are we alone in the universe?" & with the 1995 discovery of the planet around 51 Pegasi it opened up a whole new era in astronomy in the field of exoplanetology. In "Mirror Earth: The Search for Our Planet's Twin", Michael D. Lemonick describes the steps & history of this new field of study from the beginning concepts of who scientists were beginning to look for other planets through the launch of the Kepler telescope in 2009. In relatively layman's terms, each chapter explores the questions that were asked about the formation of Hot Jupiters & Neptunes as well as the Super Earths that were formed. There's an excitement each chapter as every new discovery is made & also a curiosity that comes out very well as the questions about just how many planets are out there. As of the books writing in 2012, while we still haven't found a mirror Earth, Lemonick does list other projects by NASA that hopefully if funded will get us closer to doing what Kepler set out to do as we in leaps & bounds get closer to realizing that we may not be alone & that planets such as this pretty blue marble we call Earth are very common.

Wajeeh Gillani says

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