Review: *How to Find a Habitable Planet* by James Kasting

*How to Find a Habitable Planet* by James Kasting is a comprehensive examination of not only the ways we are searching for a habitable planet but what makes a planet habitable and how we could determine if a planet we find is habitable or not. Although a slow read due to the immense amount of data given throughout the book it is a worthwhile read that successfully looks into our quest to find a habitable planet. It is successful because of the way Kasting organized the book by starting with our own planet, Earth, and what is required to be habitable, moving on to the possibility of other habitable planets and whether or not Earth is rare, and then the different methods of finding planets.

The first thing Kasting goes into is the Earth and what makes it habitable, and this is an important thing to look at. Understanding how our planet became and has stayed habitable is a good way to base observations on other planets against to see if they could also be habitable. Kasting manages to do so in a very logical manner going through planet formation, climate and atmosphere, while offering a lot of scientific data to back up observations. For example, Kasting very effectively uses graphs to show and interpret data such as the ice-albedo instability graph showing the effects of glaciation over the earth and extrapolating that to how it could affect other planets habitability.

From here Kasting takes a looks at habitability from a broader standpoint of how a potentially habitable planet needs a certain environment around it using our solar system as an example. This is a very effective method to delve into what makes a planet habitable and is handled very well. Specifically in this section the “goldilocks” zone, or habitable zone, is looked at as Venus and Mars can be related to our sun’s habitable zone. One of the big successes of this book is Kasting’s objectiveness, especially in this section. The “rare Earth” hypothesis is brought up and Kasting gives the facts on all of the different angles of a habitable planet developing, the pessimistic and optimistic views, and then lets you decide for yourself with little pushing either way.

It isn’t till the end that it moves on from theory of what a planet needs to be habitable, and goes to the actuality of finding planets and how we can determine whether or not they are habitable. Most of the different methods for finding planets are discussed in depth and then what we should look for to determine if the planet is habitable. This is done very well as it has been throughout the book and from here the reader is given information the future of our search for a habitable planet.

This book is a very worthwhile read. Although it is a slow read it manages to stay interesting and propose interesting questions to be considered which keeps the reader’s attention. The facts are presented in appealing ways and the graphs effectively convey information that helps the reader interpret all of the data. If one is interested in the search for habitable extra solar planets then this book is highly recommended based on its unbiased presentation of facts presented in a way that is easily understood because of thorough explanation.