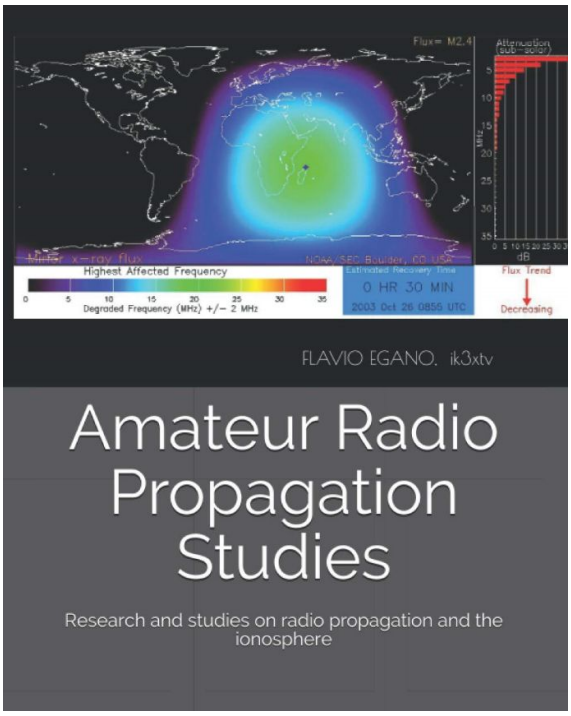

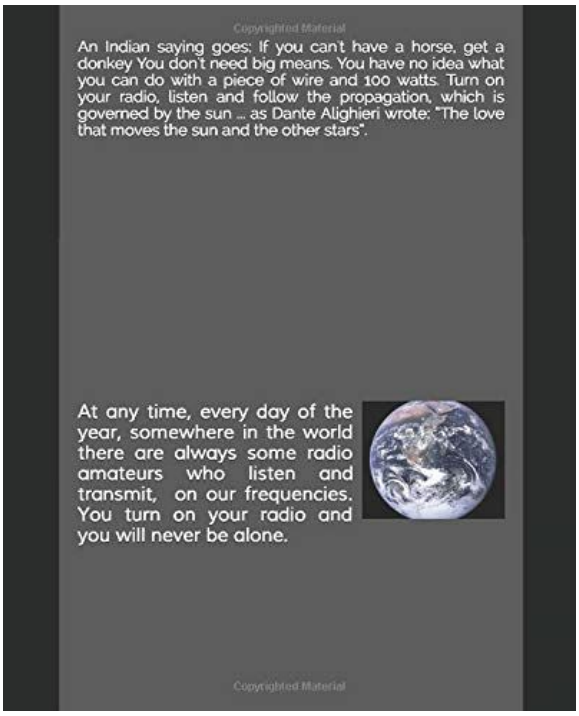

Index chapters

Introduction

The first part of this book is like a manual (up to page 20), but I tried to minimize it. I thought it was a good idea to provide general information on the ionosphere and propagation. I am aware that this will be boring to the reader. To make a cycling comparison, it is a bit like the climb you must face to get to the top, then when you get to the top, you take a breath and then, you savor the taste of the descent.

My hope is this. After this first part, I continue with my role as observer, where I have made experiments to verify the theory. The goal was to mix theory and practice with the right doses, but I'm a bad cook and therefore I don't guarantee good results. I do not have the explanation for everything but I have tried to find it and since I am curious by nature, I have tried to describe the behavior of the propagation in each single band (here again, I was forced to write some theory), aware of how elusive the propagation is. Sometimes it is not measured in minutes, but in moments. Many times, I missed a DX for a moment and many others I managed to do a Dx for another moment. But in this, there is all the charm of our activity. If there were not this uncertainty, a mobile phone would be enough.

That's the reason, because I have devoted a lot of time and several pages to one of the most elusive phenomena, which every radio amateur knows, because anyone has come across it at least once. This is the sporadic E. In a single moment, what was not you hoped to happen even in a year, can happen in that moment. More you study it, more it escapes from

you, but I think, I understand something more, but above all, I understand that a prediction of the event is impossible. It's almost like predicting lottery numbers. But it is a very fun lottery.

Then there is the whole part dedicated to my EME activity. The fascination of the Moon and of a signal that travels for hundreds of thousands of kilometers, beyond the earth's ionosphere, in the outer space, arrives on the Moon, bumps into it and then comes back. And the time it takes to go all this way can be seen on your computer screen. It is magic when you can visualize those two and a half seconds of delay, the time it takes for the radio wave to go to and from the Moon. You can "see" the speed of light. All this was made possible by digital technology and a genius like Joe Taylor, K1JT. I still remember my first contact via the Moon. I almost didn't believe it. I felt like I was one of the heroes of the Apollo mission. I too had conquered the moon.

Then I tried to study that kind of propagation. I realized how the ionosphere interacted in a decisive way on the radio waves that cross it. You will find also this, inside the book. And finally, the Meteor scatter. A technique that has something of alien. But don't get me wrong. In this case the aliens are metal "stones" that come from who knows where, but surely from outer space and therefore they are alien to our dear and old earth. Our waves hit those wandering stones and thanks to those "aliens" they are reflected on the earth. The new digital technologies help a lot here too, but they must always remain a means, not an end. This book is not to be read as a novel or short story. It should be read one piece at a time, perhaps jumping from one topic to another. Almost like a sports newspaper. I tried everything not to bore the reader, I hope I succeeded.

An Indian saying goes: If you can't have a horse, get a donkey You don't need big means. You have no idea what you can do with a piece of wire and 100 watts. Turn on your radio, listen and follow the propagation, which is governed by the sun ... as Dante Alighieri wrote: *“The love that moves the sun and the other stars”*.