

# Interview of Hervé Dole

Here is the interview of Hervé Dole , he is Professor of Astrophysics at the Université Paris-Saclay in Orsay.He has written a book called « le coté obscur de l'univers ».He visited us in our school, he told us his story, his experiment, his studies, his job... And then we were able to ask him questions in English for our project.

**Soen (white group)** : Does science appeal to girls ?

**Hervé Dole** : There are fewer girls than boys in the scientific field, although it's not completely true: in medicine or biology there are many girls. But science has no gender, no matter the field there may be girls in mathematics, physics, chemistry. Girls are even better than boys! so girls, don't be afraid to go to science !

**Matis (green group)** : When you were a kid, did you already have your scientific curiosity ?

**Hervé Dole** : Yes, When I was little, I wanted to become an astronaut, I already loved science. But when you grow up, and when you go to University, you realise that your dreams are not completely in phase with reality. I wanted to become an astronomer with telescope watching the sky during the night. But then I realised that in fact this job consisted in a lot of data analysis on a computer. I didn't give up but it took time to change my perception of this job. During my studies, I met some exceptional scientists, which convinced me to become an astronomer.

**Antonin (orange group)** : What is your (scientific) dream ?

**Hervé Dole** : Well I don't know, I have already made some of them come true ! One of them was to work in space science, and to analyse data from satellites. But maybe one of my dreams will be to participate, within a big team (because you are not alone) in understanding dark matter and dark energy. It's a big challenge and if I have the opportunity to participate in a few steps of this breakthrough in these topics, I will be very happy.

**Clara** : What is your favorite discovery in science?

**Hervé Dole** : My favorite discovery in science is cosmic microwave background (CMB) discovery (Hervé Dole took part in Planck Mission which captured very precisely the CMB, one of the first signal of the primitive Universe emitted after the Big Bang) . Cosmic microwave background was discovered in 1964. This is a major discovery because it proves that the big bang is really a model that is still working. As I told you earlier, you can't prove a theory but at least we can say we are going at the right track.

**Julie.B** : To which planet do you want to go?

**Hervé Dole** : I don't know. Have you seen this drawing from NASA where they picture exoplanets in artistic way, like in a tourist advert . I like that ! To me, going to space is already a dream by itself, like going to ISS (International Space Station). Well , I guess the

only accessible planet are Mars or the Moon. no matter where to go I'm happy to go. Travelling on the earth is already very fun so travelling to another planet I think it's incredible

**Julie.F** : Do you often travel for your job?

**Hervé Dole** : Yes I travel frequently, I have family so I try not to travel a lot . Last summer I was in California because I used to work in California when I worked for NASA, a few years ago and so I frequently go in US. I travel in Europe almost every month. It's fun because you met really nice people. When you have lived in a foreign country for years. As is my case for the US so yes it's really really nice to feel that our planet is like playground .

**Leo** : Who is your favorite scientist and why?

**Hervé Dole** : I don't have particularly favorite scientist but historically I like the work of Galileo , Descartes, Newton. At that time people were working alone but it's not our case because it's very difficult to work only by yourself. Galileo and Newton made a lot of breakthrough in science. Although Descartes did not (as regards discoveries), he helped people to think in an appropriate way in science. Some of their discoveries made some of them have big problems in their lives : it was the case of Galileo who was judged and condemned because of his scientific ideas (which were true but opposite to the Church's ideas a that time).

**Manon (yellow group)** :What does your work consist in?

**Hervé Dole** : My work consists in analysing data from space and these data are taken with telescopes which target very far away galaxies. And I try to make sense of these data using theory and models. But one of my job today is to manage people from different teams. It's really nice to make people work together and the work is much faster and much more efficient than working alone.

**Ainhoa(red group)** :Why did you choose this job ?

**Hervé Dole** : I am completely fascinated by this job, I have worked in nasa , I have studied 5 years at university, I have a PhD

**Jean-evan (grey group)** :Do you think astronomy will change the world?

**Hervé Dole** :

Yes it will change the world not in our everyday life but in our conception of the world. The exemple I give is that in everyday life nobody cares if the Earth is flat or not (actually the Earth is not flat). But scientists do care ! Knowing that the Earth is not flat (but round), the Universe is expanding,...is very important for the human brain to understand where we are in the universe.