Personal recollections of an astrophysicist shed new light on the 1995 discovery on 51 Pegasi b

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Mayor and Queloz in front of the dome of the EULER 1.2 m-telescope at La Silla Observatory. Credit: Springer

In recent history, a very important achievement was the discovery, in 1995, of 51 Pegasi b, the first extrasolar planet ever found around a normal star other than the Sun.

In a paper published in *EPJ H*, Davide Cenadelli from the Aosta Valley Astronomical Observatory (Italy) interviews Michel Mayor from Geneva

Observatory (Switzerland) about his personal recollections of discovering this exoplanet. They discuss how the development of better telescopes made the discovery possible. They also delve into how this discovery contributed to shaping a new community of scholars pursuing this new field of research. In closing, they reflect upon the cultural importance that the 51 Pegasi b discovery had in terms of changing our view of the cosmos.

Michel Mayor was born in Lausanne in 1942. He turned to astronomy when he did his PhD at the Geneva Observatory, where he focused on elucidating the theoretical nature of the spiral arms of galaxies, which make it possible for stars and nebulae to pass through without permanently remaining inside the arms. Later on his interest shifted to solar-type stars, and in 1991 he published the result of 15 years of work on the statistics of such solar-type stars. In hindsight, this paper played a significant role in boosting, at a later time, his interest in brown dwarfs and planets. He feels that the search for exoplanets was a direct continuation of that work.

He then relates what drove the development of a spectrograph called ELODIE, designed to offer very high sensitivity in measuring the radial velocities of stars. ELODIE commenced operation in April 1994, and Mayor and his colleague Queloz discovered 51 Peg b in July 1995. As the first planet ever discovered around a normal star other than the Sun, it was a ground-breaking achievement. A few years later, Mayor contributed to designing and building another state-of-the-art spectrograph, called HARPS, that is now allowing astronomers to probe the universe further. Altogether about 300 new exoplanets have been discovered by Mayor and his co-workers since 51 Peg b.

More information: Michel Mayor et al, Exoplanets – the beginning of a new era in astrophysics, *The European Physical Journal H* (2018). DOI: 10.1140/epjh/e2018-80063-1

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