

Ewine van Dishoeck studied chemistry at Leiden University in the Netherlands and then switched to astrochemistry following a brief spell studying with physicist Alexander Dalgarno at Harvard University in the US in 1980. Completing a PhD at Leiden on the excitation and breaking up of molecules within interstellar gas clouds, she then went back across the Atlantic to take up a position in Harvard's Society of Fellows in order to pursue her research on the interstellar medium under Dalgarno.

After carrying on her research at Princeton University and the California Institute of Technology, she moved back to the Netherlands in 1990. Here she was able to take advantage of the impending launch of the European Space Agency's Infrared Space Observatory, a vital asset for studying the emission from interstellar water molecules that in the end took off in 1995. In the meantime, she took charge of Mayo Greenberg's astrophysics laboratory at Leiden in order to carry out experiments for interpreting space-based observations.

While continuing with her own theoretical research and overseeing the experimental work, van Dishoeck became ever more prominent as a scientific leader. She coordinated a programme to study water molecules in a wide range of protostars using ESA's Herschel Space Observatory and from 1999 onwards took up a number of key positions overseeing development of the first truly international astronomical observatory – the Atacama Large Millimeter/submillimeter Array in Chile.

According to astrophysicist Reinhard Genzel, van Dishoeck's role in ALMA may well have been decisive, since it was she who persuaded scientists from many different nations to work together on the project. "She has a way that is very persuasive and positive," he says. "And she has been able to communicate this positivity to young people and science organisations. It is a terrific gift."