The coldest place in nature that we find is interstellar space, at \( \sim 3 \) K on the absolute temperature scale. What happens when we cool matter further towards absolute zero? At these so-called “ultracold” temperatures, the quantum nature of matter becomes more pronounced and particles become more wavelike. In particular, bosons cooled to a critical temperature will collapse into the lowest energy state, creating a macroscopic matter wave known as a Bose-Einstein condensate (BEC). Predicted in 1924 by Einstein and Bose and experimentally realized in 1995, this new state of matter is achieved for atoms that are cooled to the nK-regime. These fascinating systems have become extremely popular platforms for physicists for their potential to create quantum computers and simulate exotic solid-state systems due to their quantum mechanical properties and long-lived coherences. In this talk, I will give an overview of BEC physics and discuss experiments involving a spinor BEC, whose wave function is described with an additional well-defined, internal spin.