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【307】The DARWIN observatory for dark matter and neutrino physics

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The nature of dark matter is one of the big unknowns of our present time. Despite abundant gravitational evidence of its existence, it has so far eluded detection in particle form. Building upon established detector technologies, the DARWIN experiment will utilise liquid xenon as target to search for dark matter interactions with Standard Model particles. Its ultra-low background and 40-tonne mass will open new parameter space for WIMPs and other dark matter candidates. DARWIN's unprecedented sensitivity will also provide potential for neutrino physics and enable its use as a solar observatory. In this talk I will describe the experiment, science program, and status of the next-generation dark matter detector.

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