

# The CAST Experiment: Status report

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The CAST (Cern Axion Solar Telescope) experiment has been looking at the Sun for more than a decade now in its quest of observing a signal coming from the conversion of the axions in the telescope's magnetic field. Such a signal has not been observed thus allowing the collaboration to set only an upper limit to the axion - photon coupling constant in the parameter space. The final results will be presented as well as a new set of detectors that are looking into the dark sector. The new detectors, currently in operation, are KWISP which is directly sensitive to the chameleon coupling to matter, INGRID which is probing the chameleon coupling to photons and CAST - CAPP that is looking for dark matter axions. Also an additional dark matter axion detector, the RADES system, will be installed this year. While the search of axions is now limited to ones that are constituents of the galactic halo, the experiment continues to look at the Sun in an effort to see a signal of solar chameleons which are created in the Sun's tachocline via Primakoff effect and are particle candidate constituents of the dark energy in the Universe.

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