中国科学技术大学
University of Science and Technology of China

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Design of a Non-vacuum-cooling compact scientific CCD camera

University of Science and Technology of China
Yi Feng

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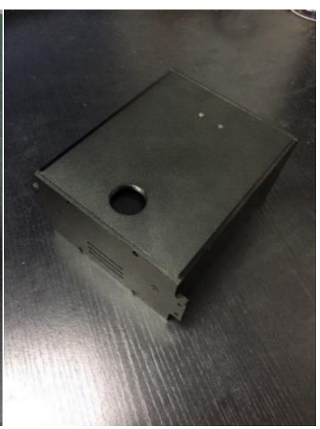
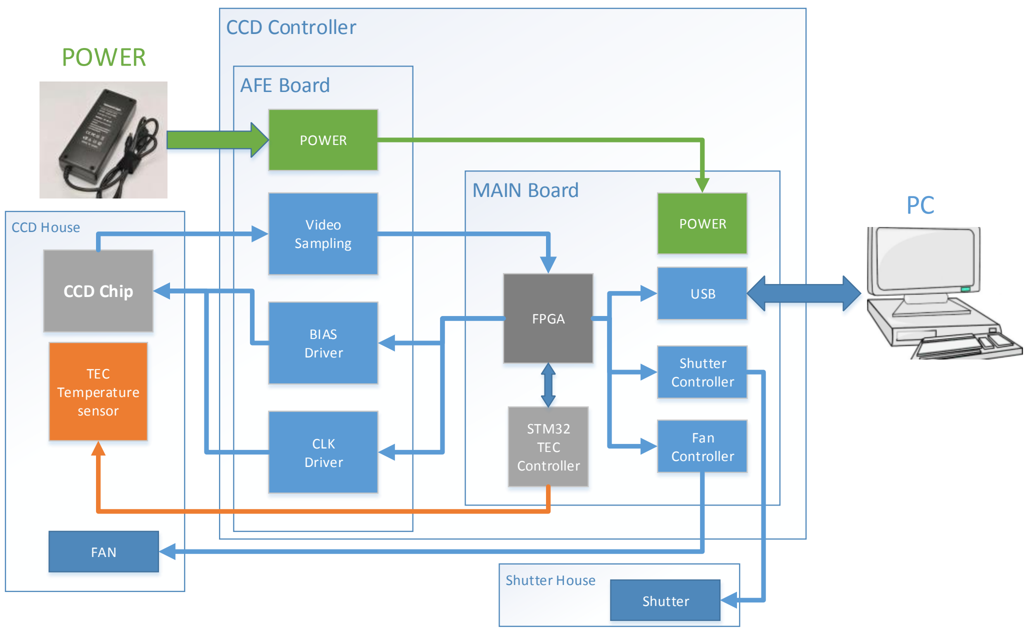
CCD(Charge-Coupled Device), it is a photoelectric conversion device. Its ultra-low noise and high quantum efficiency make it work well in particle physics, high energy physics, nuclear physics and astrophysics.

For the wide range of uses of CCD cameras, we have developed a non-vacuum-cooling (NVCC) scientific CCD camera. Its advantages are small size, low noise, and easy control.





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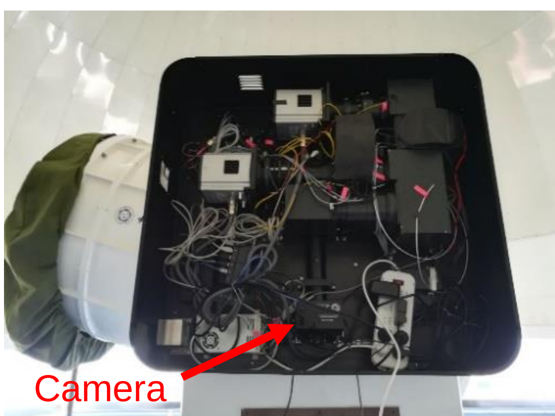
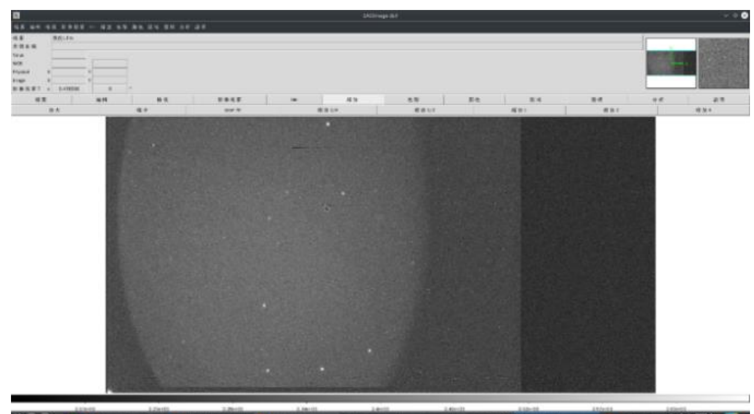
Test results of readout noise and gain

Readout Rate(pixels/s)	Readout Noise/e^- (Gain/e^-/ADU)	Readout Noise/e^- (Gain/e^-/ADU)
500K	9.29(0.53)	18.88(1.11)
1M	10.11(0.56)	16.73(1.09)
2.5M	11.47(0.59)	16.04(1.08)
5M	-	17.18(1.05)

The camera is currently used at De-lingha Observatory.





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Introduction →

Design →

← Result