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## **Future XMASS project**

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XMASS is a single phase liquid xenon (LXe) detector,  
designed for a program of physics targets.

As a first step in the program,

the XMASS-I detector started operation for direct Dark Matter search  
with 832 kg of LXe in the sensitive volume from Sep. 2010.

Various dark matter results have been provided by the XMASS-I so far.

As a future project to improve its Dark Matter sensitivity,  
we are planning to make a new detector.

Since BG reduction is the most crucial subject for higher sensitivity,  
to reduce background now we keep studying many components, such as  
development of new non-flat photo-cathode PMT,

screening of materials for all components and detail detector design with simulation study.

In this presentation, we will present detail of these future detector components  
and expected physics results from the detector.

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