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**Probing dark sector physics through near future  
cosmological observations**

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Room A304

In recent years cosmological observations have confirmed the existence of dark matter and dark energy –both of them need physics beyond the standard model. But the particle nature of these essential components of our Universe is still unknown as their presence has been confirmed only through their gravitational effects. There have been many theoretical models and speculations about them and many near future experiments are coming up to confirm or rule out some of the most favorite models. I will present some non-WIMP models of dark matter originating from extending neutrino or axion sector. I will discuss how some of the present cosmological experiments have already put stringent constraints on these generic non-wimp models and if we are lucky, future experiments can provide us strong definite signatures of some beyond standard model physics related to dark sector.