

**LABORATORI NAZIONALI DEL GRAN SASSO**

**SEMINAR ANNOUNCEMENT**

On April 22, 2008, at 2:30 pm, **Tatsuhiko Naka** from **Nagoya University** will give a seminar entitled:

**"Directional Dark Matter  
Detection with Nuclear Emulsion"**

Abstract

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We know the existence of dark matter in our galaxy from observation of rotation velocity. This dark matter may exist as Weakly Interacting Massive Particle(WIMP). Recently, Many experiment search the WIMP by measurement of energy spectrum of nuclear recoil to WIMP in underground. However If we can detect the direction of nuclear recoil, we can confirm the existence of WIMP with high reliability because we can think WIMP signal have directivity. Nuclear emulsion may be promising dark matter detector because they have high resolution and high density. We developed very high resolution nuclear emulsion. We call this "Nano Imaging Tracker(NIT)". I confirm to be able to recognize the nuclear recoil track by using the low velocity ion and neutron. Now I'm doing R&D of background rejection, higher resolution NIT and scanning of nuclear recoil track. So, I will talk about the status of R&D and prospect.

**(“B. Pontecorvo” room)**