

# **6th Open Meeting for the Hyper-Kamiokande Project**

## **Report of Contributions**

Contribution ID: 0

Type: **not specified**

## HyperK potential to study the leptonic unitarity triangle

*Thursday 29 January 2015 14:40 (20 minutes)*

I would like to discuss the potential path for Hyper-K and its upgrade to constrain the Unitarity Triangle of the leptonic sector.

**Primary author:** Dr KONAKA, Akira (TRIUMF/RCNP)

**Presenter:** Dr KONAKA, Akira (TRIUMF/RCNP)

**Session Classification:** Physics Potentials

**Track Classification:** Physics Potential

Contribution ID: 1

Type: **not specified**

## Opening remark

*Thursday 29 January 2015 10:30 (20 minutes)*

I will present backgrounds, meeting goals, and meeting outline.

### **Length (min.) request (including discussion time)**

20

**Primary author:** Prof. SHIOZAWA, Masato (ICRR, The University of Tokyo)

**Presenter:** Prof. SHIOZAWA, Masato (ICRR, The University of Tokyo)

**Session Classification:** Opening Session

**Track Classification:** Opening Session

Contribution ID: 2

Type: **not specified**

## Spectrometry of the Earth core using Hyper-K : Sensitivity study

*Thursday 29 January 2015 15:20 (15 minutes)*

Neutrino oscillation is sensitive to the electron density of the media. Hyper-K has a potential to measure the electron density of the deep Earth by measuring atmospheric neutrino oscillation. By combining the electron density and the matter density, we can measure the average chemical composition as the ratio of atomic number ( $Z$ ) to atomic mass ( $A$ ). We report the sensitivity of Hyper-K as the  $Z/A$  spectrometer. We also report the systematic uncertainty of oscillation probabilities derived from matter density models.

### **Length (min.) request (including discussion time)**

15 min

**Primary author:** Dr TAKETA, Akimichi (Earthquake Research Institute)**Co-author:** Prof. ROTT, Carsten (SKKU)**Presenter:** Dr TAKETA, Akimichi (Earthquake Research Institute)**Session Classification:** Physics Potentials**Track Classification:** Physics Potential

Contribution ID: 3

Type: **not specified**

## Detector design studies for CDR

*Thursday 29 January 2015 10:50 (20 minutes)*

I will give overview of detector design studies and their future plan for CDR.

### **Length (min.) request (including discussion time)**

20

**Primary author:** Prof. SHIOZAWA, Masato (ICRR, The University of Tokyo)

**Presenter:** Prof. SHIOZAWA, Masato (ICRR, The University of Tokyo)

**Session Classification:** Cavity and Tank

**Track Classification:** Cavity and Tanks

Contribution ID: 4

Type: **not specified**

## Summary and plan

*Thursday 29 January 2015 13:50 (10 minutes)*

summary and plan of detector design studies.

### **Length (min.) request (including discussion time)**

10

**Primary author:** Prof. SHIOZAWA, Masato (ICRR, The University of Tokyo)

**Presenter:** Prof. SHIOZAWA, Masato (ICRR, The University of Tokyo)

**Session Classification:** Cavity and Tank

**Track Classification:** Cavity and Tanks

Contribution ID: 5

Type: **not specified**

## Canadian Electronics R&D

*Friday 30 January 2015 13:10 (20 minutes)*

We will report on progressing testing new signal shaping circuits (designed by Polish group) using 100MHz, 250MHz and 500 MHz digitizers. Will discuss medium term plans for making a full prototype digitizer boards. Will also report on latest progress on RapidIO communications tests.

### **Length (min.) request (including discussion time)**

20

**Primary author:** Mr LINDNER, Thomas (TRIUMF)

**Presenter:** Mr LINDNER, Thomas (TRIUMF)

**Session Classification:** DAQ and Electronics

**Track Classification:** DAQ and Electronics

Contribution ID: 6

Type: **not specified**

## HK Sensitivity to Sterile Neutrinos and Lorentz Violation

*Thursday 29 January 2015 15:00 (20 minutes)*

I will present studies of Hyper-K's potential sensitivity to sterile neutrino oscillations induced by the parameters  $|U_{\mu 4}|^2$  and  $|U_{\tau 4}|^2$  and isotropic Lorentz-violating parameters from the Standard Model Extension (SME). These sensitivity studies are based on SK analyses, scaled up to equivalent HK livetimes.

### **Length (min.) request (including discussion time)**

20 minutes

**Primary author:** Dr HIMMEL, Alexander (Duke University)**Presenter:** Dr HIMMEL, Alexander (Duke University)**Session Classification:** Physics Potentials**Track Classification:** Physics Potential



Contribution ID: 7

Type: **not specified**

## DAQ R&D status in Japan and US

*Friday 30 January 2015 12:50 (20 minutes)*

DAQ R&D status in Japan and US

### **Length (min.) request (including discussion time)**

20

**Primary author:** Dr HAYATO, Yoshinari (Kamioka obs., ICRR, Univ. of Tokyo)

**Presenter:** Dr HAYATO, Yoshinari (Kamioka obs., ICRR, Univ. of Tokyo)

**Session Classification:** DAQ and Electronics

**Track Classification:** DAQ and Electronics

Contribution ID: 8

Type: **not specified**

## Cavity design and optimization

*Thursday 29 January 2015 11:10 (20 minutes)*

This talk discusses the HK cavity design and its optimization.

### **Length (min.) request (including discussion time)**

15+5min

**Primary author:** Dr TANAKA, Hide-Kazu (ICRR, University of Tokyo)

**Presenter:** Dr TANAKA, Hide-Kazu (ICRR, University of Tokyo)

**Session Classification:** Cavity and Tank

**Track Classification:** Cavity and Tanks

Contribution ID: 9

Type: **not specified**

## HK calibration: introduction and overview

*Friday 30 January 2015 13:50 (10 minutes)*

This talk discusses overview and plan of HK detector calibration WG.

### **Length (min.) request (including discussion time)**

10min

**Primary author:** Dr TANAKA, Hide-Kazu (ICRR, University of Tokyo)

**Presenter:** Dr TANAKA, Hide-Kazu (ICRR, University of Tokyo)

**Session Classification:** Detector Calibration

**Track Classification:** Detector Calibration

Contribution ID: 10

Type: **not specified**

## Calibration Source Deployment System

*Friday 30 January 2015 14:00 (20 minutes)*

In current Super-K calibration, we need much manpower and working time. We have to automate these works in Hyper-K, which is 20 times larger than Super-K. We are planning to install a new deployment system in the Super-K detector as one of R&D's for Hyper-K. We report the current status.

### **Length (min.) request (including discussion time)**

15+5 min.

**Primary author:** Dr SUZUKI, Atsumu (Kobe University)**Presenter:** Dr SUZUKI, Atsumu (Kobe University)**Session Classification:** Detector Calibration**Track Classification:** Detector Calibration

Contribution ID: **11**

Type: **not specified**

## NuPRISM Overview

*Friday 30 January 2015 17:35 (20 minutes)*

The current status of the nuPRISM detector for T2K and Hyper-K will be presented.

### **Length (min.) request (including discussion time)**

20 min.

**Primary author:** Prof. WILKING, Michael (Stony Brook University)

**Presenter:** Prof. WILKING, Michael (Stony Brook University)

**Session Classification:** Near Detectors

**Track Classification:** Near Detectors

Contribution ID: 12

Type: **not specified**

## Hyper-K Event Reconstruction

*Friday 30 January 2015 15:25 (20 minutes)*

The current status of the Hyper-K event reconstruction algorithm for Hyper-K will be presented.

### **Length (min.) request (including discussion time)**

20 min.

**Primary author:** Prof. WILKING, Michael (Stony Brook University)

**Presenter:** Prof. WILKING, Michael (Stony Brook University)

**Session Classification:** Software

**Track Classification:** Near Detectors

Contribution ID: 13

Type: **not specified**

## **EC/IBR report and proto-collaboration**

*Friday 30 January 2015 09:00 (20 minutes)*

**Presenter:** NAKAYA, Tsuyoshi (Kyoto University)

**Session Classification:** Opening Session

Contribution ID: 14

Type: **not specified**

## **Cavity design and optimization II**

*Thursday 29 January 2015 11:30 (20 minutes)*

**Presenter:** Dr ISHIDA, Taku (KEK)

**Session Classification:** Cavity and Tank



Contribution ID: 15

Type: **not specified**

## Tank design and optimization

*Thursday 29 January 2015 12:50 (20 minutes)*

**Presenter:** NAKAYAMA, Shoei (ICRR, The University of Tokyo)

**Session Classification:** Cavity and Tank

Contribution ID: **16**

Type: **not specified**

## **Pressure-resistance of photo-sensor and cover**

*Thursday 29 January 2015 13:10 (20 minutes)*

**Presenter:** NISHIMURA, Yasuhiro

**Session Classification:** Cavity and Tank

Contribution ID: 17

Type: **not specified**

## **Background study for thin outer-detector**

**Presenter:** YANO, Takatomi

Contribution ID: **18**

Type: **not specified**

## LED Calibration System

*Friday 30 January 2015 14:20 (15 minutes)*

Pulsed LEDs are a possible light source for integrated calibration systems for Hyper Kamiokande. The status and plans for the R&D on such systems in the UK will be presented.

### **Length (min.) request (including discussion time)**

15 - 20 minutes

**Primary author:** Dr MCCAULEY, Neil (University of Liverpool)

**Presenter:** Dr MCCAULEY, Neil (University of Liverpool)

**Session Classification:** Detector Calibration

**Track Classification:** Detector Calibration

Contribution ID: 19

Type: **not specified**

## Overview and source water studies in Mozumi

*Friday 30 January 2015 09:20 (15 minutes)*

WG2 summary especially on pure water system.

Main strategy, main problem(source water), all the options, cost estimations will be shown. (Hopefully...)

### **Length (min.) request (including discussion time)**

15min.

**Primary author:** Dr SEKIYA, Hiroyuki (ICRR/IPMU)

**Presenter:** Dr SEKIYA, Hiroyuki (ICRR/IPMU)

**Session Classification:** Water System

**Track Classification:** Water System

Contribution ID: 20

Type: **not specified**

## Status of the Photosensor Test Facility at TRIUMF

*Friday 30 January 2015 10:05 (25 minutes)*

I will present the latest status of the PTF at TRIUMF

### Length (min.) request (including discussion time)

25

**Primary author:** Dr FEUSELS, Tom (University of British Columbia)

**Presenter:** Dr FEUSELS, Tom (University of British Columbia)

**Session Classification:** Photo-detector and Accessories

**Track Classification:** Photo-detector and Support

Contribution ID: 21

Type: **not specified**

## Gd Studies in Mozumi

*Friday 30 January 2015 09:35 (10 minutes)*

The current status of the EGADS project will be discussed.

### **Length (min.) request (including discussion time)**

10 minutes

**Primary author:** Prof. VAGINS, Mark (IPMU)

**Presenter:** Prof. VAGINS, Mark (IPMU)

**Session Classification:** Water System

**Track Classification:** Water System

Contribution ID: 22

Type: **not specified**

## Summary and prospects of physics group activities

*Thursday 29 January 2015 15:50 (20 minutes)*

I will discuss the activities of physics working groups.

### **Length (min.) request (including discussion time)**

20 min

**Primary author:** YOKOYAMA, Masashi (University of Tokyo)

**Presenter:** YOKOYAMA, Masashi (University of Tokyo)

**Session Classification:** Physics Potentials

**Track Classification:** Physics Potential



Contribution ID: 23

Type: **not specified**

## Background Study for thin Hyper-K OD

*Thursday 29 January 2015 13:30 (20 minutes)*

We will discuss about the effect of thinner OD, especially for background.

### **Length (min.) request (including discussion time)**

15+5 min.

**Primary author:** Dr YANO, Takatomi (Kobe Univ.)

**Presenter:** Dr YANO, Takatomi (Kobe Univ.)

**Session Classification:** Cavity and Tank

**Track Classification:** Cavity and Tanks

Contribution ID: 24

Type: **not specified**

## Supernova study with Hyper-K

*Thursday 29 January 2015 15:35 (15 minutes)*

We will discuss about the physics ability of Hyper-K about several Supernove detection.

### **Length (min.) request (including discussion time)**

12+3 min.

**Primary author:** Dr YANO, Takatomi (Kobe Univ.)

**Presenter:** Dr YANO, Takatomi (Kobe Univ.)

**Session Classification:** Physics Potentials

**Track Classification:** Physics Potential

Contribution ID: 25

Type: **not specified**

## NuPRISM Analysis Overview

*Friday 30 January 2015 17:55 (20 minutes)*

An overview of the status and results of the ongoing NuPRISM analyses and the planned future analysis work.

### **Length (min.) request (including discussion time)**

20

**Primary author:** Dr SCOTT, Mark (TRIUMF)

**Presenter:** Dr SCOTT, Mark (TRIUMF)

**Session Classification:** Near Detectors

**Track Classification:** Near Detectors

Contribution ID: 26

Type: **not specified**

## Computing for Hyper-K

*Friday 30 January 2015 15:55 (20 minutes)*

An overview of the current computing strategy and plans will be given. The simulation production status will be presented.

### **Length (min.) request (including discussion time)**

20min

**Primary author:** Prof. DI LODOVICO, Francesca (Queen Mary, University of London)

**Presenter:** Prof. DI LODOVICO, Francesca (Queen Mary, University of London)

**Session Classification:** Software

**Track Classification:** Software

Contribution ID: 27

Type: **not specified**

## Performance evaluation of the 50 cm box-and-line dynode photomultiplier tube

*Friday 30 January 2015 10:30 (25 minutes)*

A box-and-line photomultiplier tube (PMT) with a 50 cm diameter size was developed by Hamamatsu. Its performance is superior to the conventional PMT used in Super-Kamiokande. We measured various performance of the PMT in detail. The specification and usability will be reported.

### Length (min.) request (including discussion time)

30

**Primary authors:** Mr JIANG, Miao (Kyoto University); Dr NISHIMURA, Yasuhiro (ICRR); Mr OKAJIMA, Yuji (Tokyo Institute of Technology)

**Presenter:** Mr JIANG, Miao (Kyoto University)

**Session Classification:** Photo-detector and Accessories

**Track Classification:** Photo-detector and Support

Contribution ID: 28

Type: **not specified**

## Test of new photodetectors in a water tank

*Friday 30 January 2015 11:15 (20 minutes)*

The second phase of the proof test with three 50 cm box-and-line photomultiplier tubes has started since 2014 summer. A calibration and basic performance measurement in the tank were performed. In addition, eight 20 cm hybrid photodetectors and five 50 cm PMTs with a high quantum efficiency have been also evaluated continuously from 2013 and its operational period will reach a year. This talk will present the recent progress and stability monitor of the photodetectors.

### **Length (min.) request (including discussion time)**

20

**Primary author:** Dr NISHIMURA, Yasuhiro (ICRR)**Presenter:** Dr NISHIMURA, Yasuhiro (ICRR)**Session Classification:** Photo-detector and Accessories**Track Classification:** Photo-detector and Support

Contribution ID: 29

Type: **not specified**

## Photodetector R&D progress and plan

*Friday 30 January 2015 11:35 (15 minutes)*

Ongoing R&D status and plan in near future will be presented.

### **Length (min.) request (including discussion time)**

15

**Primary author:** Dr NISHIMURA, Yasuhiro (ICRR)

**Presenter:** Dr NISHIMURA, Yasuhiro (ICRR)

**Session Classification:** Photo-detector and Accessories

**Track Classification:** Photo-detector and Support

Contribution ID: 30

Type: **not specified**

## Off-Axis angle optimisation studies

*Thursday 29 January 2015 14:00 (20 minutes)*

We will present sensitivity studies performed with the VaLOR analysis framework to determine the optimum off-axis angle for T2HK. Studies assumed a total integrated beam power of 7.5MW years and 320kA horn current.

**Length (min.) request (including discussion time)**

20

**Primary author:** Mr SHAH, Raj (Oxford University)**Presenter:** Mr SHAH, Raj (Oxford University)**Session Classification:** Physics Potentials**Track Classification:** Physics Potential



Contribution ID: **31**

Type: **not specified**

## Recent updates to the WCSim software package

*Friday 30 January 2015 15:05 (20 minutes)*

WCSim is an open-source, Geant4-based code that was designed to simulate water Cherenkov detectors. In this talk, I will discuss features which have been added to the code since the last HK open meeting.

### **Length (min.) request (including discussion time)**

20 minutes

**Primary author:** O'SULLIVAN, Erin (Duke University)

**Presenter:** O'SULLIVAN, Erin (Duke University)

**Session Classification:** Software

**Track Classification:** Software

Contribution ID: 32

Type: **not specified**

## Generalized Neutrino Event Generator

*Friday 30 January 2015 15:45 (10 minutes)*

HK will require software to interface between atmospheric flux models, the HK detector geometry, and neutrino interaction simulators as the first step in an atmospheric MC. This talk will introduce software currently under development for SK which is intended to be easily portable to an experiment like HK, and easily expandable to non-atmospheric neutrino fluxes.

### Length (min.) request (including discussion time)

10

**Primary author:** KACHULIS, Christopher (Boston University)**Presenter:** KACHULIS, Christopher (Boston University)**Session Classification:** Software**Track Classification:** Software

Contribution ID: 33

Type: **not specified**

## Applications of Water-based Liquid Scintillator in the T2K Near Detector

*Saturday 31 January 2015 10:15 (20 minutes)*

A fine-grained, water-based liquid scintillator detector to replace the current passive water + plastic scintillator target in FGD2 in the T2K ND280 tracker system would allow the direct tracking of low energy hadrons emitted by neutrino interactions on oxygen. We are currently building a 1-cell prototype using the WbLS developed at BNL to test for light output.

### Length (min.) request (including discussion time)

18 minutes (15+3)

**Primary authors:** Mr TANAKA, Hirohisa A. (University of British Columbia/Institute of Particle Physics); Prof. YEN, Stanley (TRIUMF)

**Presenter:** Prof. YEN, Stanley (TRIUMF)

**Session Classification:** Near Detectors

**Track Classification:** Near Detectors

Contribution ID: 34

Type: **not specified**

## UK DAQ activities

*Friday 30 January 2015 13:30 (20 minutes)*

The UK is currently developing designs for Data Acquisition Systems (DAQ) for the full-scale detectors. The design of the system is being driven by ongoing physics studies. An overview of such studies and a conceptual design for a DAQ system will be outlined.

### **Length (min.) request (including discussion time)**

30 minutes

**Primary author:** Dr BARR, Giles (University of Oxford)

**Co-authors:** Dr FINCH, Alex (Lancaster University); Dr DEWHURST, Debra (University of Oxford); Prof. DI LODOVICO, Francesca (Queen Mary University of London); Dr O'KEEFFE, Helen (Lancaster University); Dr KORMOS, Laura (Lancaster University); Dr SHORT, Sam (Queen Mary University of London); Dr NICHOLLS, Tim (STFC Rutherford Appleton Laboratory); Dr STEWART, Trevor (STFC Rutherford Appleton Laboratory)

**Presenter:** Dr BARR, Giles (University of Oxford)**Session Classification:** DAQ and Electronics**Track Classification:** DAQ and Electronics

Contribution ID: 35

Type: **not specified**

## A Magnetized Muon Range Detector for TITUS

*Saturday 31 January 2015 09:30 (20 minutes)*

We clarify the design of the magnetized Muon Range Detector (MRD) for the proposed TITUS intermediate detector. Such an magnetized MRD would contain muons from interactions in the water Cherenkov detector, and would lend an extra advantage to the detector - the capacity to distinguish neutrino and antineutrino events, through the observation of the muon charge. We address both practical considerations and the foreseen event reconstruction performance.

### Length (min.) request (including discussion time)

20

**Primary author:** RAYNER, Mark (Université de Genève)**Presenter:** RAYNER, Mark (Université de Genève)**Session Classification:** Near Detectors**Track Classification:** Near Detectors

Contribution ID: 36

Type: **not specified**

## TITUS: Introduction to the Intermediate Detector and Physics

*Saturday 31 January 2015 09:00 (30 minutes)*

The Tokai Intermediate Tank with Unoscillated Spectrum (TITUS) is a proposed new near detector for the Hyper-Kamiokande beam programme. The baseline design for TITUS features a 2 ktonne water Cherenkov (WC) detector at a distance of ~2 km from the J-PARC neutrino beam. TITUS is a 'next-generation' WC detector, including technological advances such as gadolinium-loading, and LAPPD photosensors. In addition, the detector will be partially enclosed by a magnetised muon range detector. This talk introduces the nominal design of TITUS, and details the physics potential of its WC component.

### Length (min.) request (including discussion time)

30 minutes (including 5 minutes of discussion time)

**Primary author:** Dr MALEK, Matthew (Imperial College London)

**Presenter:** Dr MALEK, Matthew (Imperial College London)

**Session Classification:** Near Detectors

**Track Classification:** Near Detectors

Contribution ID: 37

Type: **not specified**

## A 3D grid-like neutrino near detector with a water target, WAGASCI

*Saturday 31 January 2015 09:50 (25 minutes)*

A test experiment, T-59, to develop a 3D grid-like neutrino near detector with a water target for measurement of neutrino cross sections at the T2K near detector hall was approved by J-PARC PAC. We are developing the detector to reduce the uncertainty on neutrino cross sections for T2K oscillation analyses. A new idea, a 3D grid-like structure of scintillator bars, is adopted to detect tracks of charged particles with 4pi angular acceptance and high efficiency. Advantages of this detector over the current T2K neutrino near detector are larger angular acceptance and larger mass ratio of water to scintillator bars. The current status of the test experiment and the future potential to upgrade the detector to a near detector of T2HK will be presented.

### Length (min.) request (including discussion time)

25 min.

**Primary author:** Dr MINAMINO, Akihiro (Kyoto University)**Presenter:** Dr MINAMINO, Akihiro (Kyoto University)**Session Classification:** Near Detectors**Track Classification:** Near Detectors

Contribution ID: 38

Type: **not specified**

## Summary of the Software session and Prospects

*Friday 30 January 2015 16:15 (15 minutes)*

In this talk, I will summarize current status of software development and discuss future prospects.

### **Length (min.) request (including discussion time)**

15

**Primary author:** Dr MIURA, Makoto (Kamioka Observatory, ICRR, University of Tokyo)

**Presenter:** Dr MIURA, Makoto (Kamioka Observatory, ICRR, University of Tokyo)

**Session Classification:** Software

**Track Classification:** Software



Contribution ID: 39

Type: **not specified**

## **J-PARC status and upgrade plans**

*Friday 30 January 2015 16:50 (25 minutes)*

**Presenter:** Prof. KOSEKI, Tadashi (KEK)

**Session Classification:** J-PARC and Beamline

Contribution ID: 40

Type: **not specified**

## Neutrino beam-line status and upgrade plans

*Friday 30 January 2015 17:15 (20 minutes)*

**Presenter:** Prof. FUJII, Yoshiaki (KEK)

**Session Classification:** J-PARC and Beamline

Contribution ID: 41

Type: **not specified**

## Update on Development of ETEL/ADIT 11" HQE PMT's

*Friday 30 January 2015 09:45 (20 minutes)*

As of the end of January we have received ten prototype 11" HQE PMT's from the ETEL R&D facility in the U.K. We present preliminary results on PMT performance from testing at the University of Pennsylvania. Plans for further testing and development are also presented.

### **Length (min.) request (including discussion time)**

15 minutes + 5 minutes for questions

**Primary author:** SVOBODA, Robert (UC Davis)

**Co-authors:** KEARNS, Ed (Boston University); KLEIN, Josh (University of Pennsylvania)

**Presenter:** KEARNS, Ed (Boston University)

**Session Classification:** Photo-detector and Accessories

**Track Classification:** Photo-detector and Support

Contribution ID: 43

Type: **not specified**

## Introduction

*Friday 30 January 2015 14:55 (10 minutes)*

**Presenter:** Prof. WALTER, Chris (Duke)

**Session Classification:** Software

Contribution ID: 44

Type: **not specified**

## Summary

*Saturday 31 January 2015 10:55 (1 hour)*

**Session Classification:** Summary

Contribution ID: 45

Type: **not specified**

## Overview of the Hyper-Kamiokande Project

*Saturday 31 January 2015 14:00 (10 minutes)*

**Presenter:** Prof. SHIOZAWA, Masato (ICRR, The University of Tokyo)

**Session Classification:** Inaugural Symposium of the Hyper-Kamiokande Proto-collaboration

Contribution ID: 46

Type: **not specified**

## The J-PARC Neutrino Beam Facility

*Saturday 31 January 2015 14:10 (10 minutes)*

**Presenter:** Prof. KOBAYASHI, Takashi (KEK)

**Session Classification:** Inaugural Symposium of the Hyper-Kamiokande Proto-collaboration

Contribution ID: 47

Type: **not specified**

## The International Proto-Collaboration

*Saturday 31 January 2015 14:20 (15 minutes)*

**Presenter:** Prof. DI LODOVICO, Francesca (Queen Mary, University of London)

**Session Classification:** Inaugural Symposium of the Hyper-Kamiokande Proto-collaboration



Contribution ID: 48

Type: **not specified**

## International Cooperation

*Saturday 31 January 2015 14:35 (15 minutes)*

**Presenter:** Prof. WALTER, Chris (Duke University)

**Session Classification:** Inaugural Symposium of the Hyper-Kamiokande Proto-collaboration

Contribution ID: 49

Type: **not specified**

## **Memorandum for the Promotion of the Hyper-Kamiokande Project**

*Saturday 31 January 2015 14:50 (15 minutes)*

**Presenters:** Prof. YAMAUCHI, Masanori (KEK); Prof. KAJITA, Takaaki (University of Tokyo)

**Session Classification:** Inaugural Symposium of the Hyper-Kamiokande Proto-collaboration

Contribution ID: 50

Type: **not specified**

## Closing

*Saturday 31 January 2015 15:05 (10 minutes)*

**Presenter:** Prof. NAKAYA, Tsuyoshi (Kyoto)

**Session Classification:** Inaugural Symposium of the Hyper-Kamiokande Proto-collaboration

Contribution ID: **51**

Type: **not specified**

## Registration

Contribution ID: 52

Type: **not specified**

## The WAGASCI Detector

*Wednesday 28 January 2015 11:15 (25 minutes)*

**Presenter:** Dr MINAMINO, Akihiro (Kyoto University)

**Session Classification:** Near Detector/Flux Meeting

Contribution ID: 53

Type: **not specified**

## TITUS Introduction

*Wednesday 28 January 2015 09:00 (10 minutes)*

**Presenter:** Prof. DI LODOVICO, Francesca (Queen Mary, University of London)

**Session Classification:** Near Detector/Flux Meeting

Contribution ID: 54

Type: **not specified**

## TITUS Analysis

*Wednesday 28 January 2015 09:10 (35 minutes)*

**Presenter:** Dr HADLEY, David (University of Warwick)

**Session Classification:** Near Detector/Flux Meeting

Contribution ID: 55

Type: **not specified**

## TITUS Sensitivities

*Wednesday 28 January 2015 09:45 (15 minutes)*

**Presenter:** Dr SHORT, Sam (Queen Mary University of London)

**Session Classification:** Near Detector/Flux Meeting



Contribution ID: 56

Type: **not specified**

## TITUS MRD

*Wednesday 28 January 2015 10:00 (15 minutes)*

**Presenter:** Dr RAYNER, Mark (Université de Genève)

**Session Classification:** Near Detector/Flux Meeting

Contribution ID: 57

Type: **not specified**

## nuPRISM Introduction

*Wednesday 28 January 2015 10:15 (25 minutes)*

**Presenter:** Prof. WILKING, Michael (Stony Brook University)

**Session Classification:** Near Detector/Flux Meeting

Contribution ID: 58

Type: **not specified**

## nuPRISM Analysis

*Wednesday 28 January 2015 10:40 (35 minutes)*

**Presenter:** Dr SCOTT, Mark (TRIUMF)

**Session Classification:** Near Detector/Flux Meeting

Contribution ID: 59

Type: **not specified**

## report

**Presenter:** SHIOZAWA, Masato (Kamioka Observatory, ICRR, Univ. of Tokyo)

Contribution ID: **60**

Type: **not specified**

## **report**

*Thursday 29 January 2015 09:00 (20 minutes)*

**Presenter:** Prof. SHIOZAWA, Masato (ICRR, The University of Tokyo)

**Session Classification:** Convener Meeting