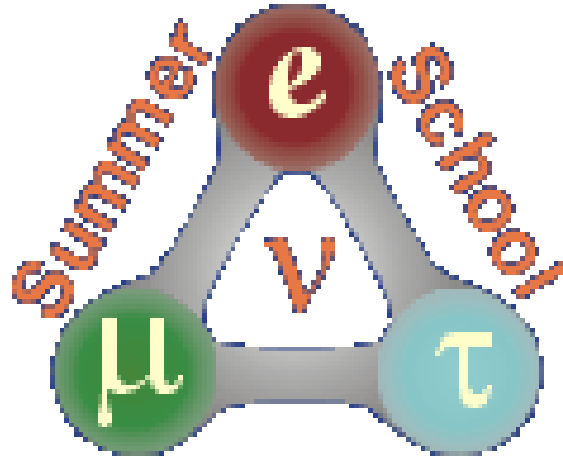


# International Neutrino Summer School 2009



## Report of Contributions

Contribution ID: **0**

Type: **Bus**

## **Bus From Pheasant Run to Wilson Hall, Fermilab**

*Monday, 6 July 2009 08:00 (45 minutes)*

Contribution ID: **1**

Type: **Lecture**

# Welcome

*Monday, 6 July 2009 08:45 (15 minutes)*

**Presenter:** BRICE, Steve (Fermilab)

Contribution ID: 2

Type: **Lecture**

## Standard Model I

*Monday, 6 July 2009 09:00 (1h 15m)*

**Presenter:** WILLENBROCK, Scott (University of Illinois, Urbana-Champaign)

Contribution ID: 3

Type: **Lecture**

# The Framework I

*Monday, 6 July 2009 10:45 (1h 15m)*

**Presenter:** KAYSER, Boris (Fermilab)

Contribution ID: 4

Type: **Lecture**

## Neutrino Sources

*Monday, 6 July 2009 13:00 (1h 15m)*

**Presenter:** FORMAGGIO, Joe (MIT)

Contribution ID: 5

Type: **Lecture**

# Detector Basics I

*Monday, 6 July 2009 14:45 (1h 15m)*

**Presenter:** MESSIER, Mark (Indiana University)

Contribution ID: 6

Type: **Tutorial**

## Introduction to the Tutorial Sessions

*Monday, 6 July 2009 16:00 (30 minutes)*

**Presenters:** HARRIS, Debbie (Fermilab); BRICE, Steve (Fermilab)



Contribution ID: 7

Type: **Bus**

## **Bus From Wilson Hall to Kuhn Barn**

*Monday, 6 July 2009 16:30 (30 minutes)*

Contribution ID: 8

Type: **Social**

## Barbecue

*Monday, 6 July 2009 17:00 (3h 30m)*

Contribution ID: 9

Type: **Bus**

## **Bus From Kuhn Barn to Pheasant Run**

*Monday, 6 July 2009 20:30 (30 minutes)*

Contribution ID: **10**

Type: **Social**

## Registration and Reception

*Sunday, 5 July 2009 19:00 (1h 30m)*

Contribution ID: **11**

Type: **Bus**

## **Bus From Pheasant Run to Wilson Hall, Fermilab**

*Tuesday, 7 July 2009 08:15 (45 minutes)*

Contribution ID: **12**

Type: **Bus**

## **Bus From Pheasant Run to Wilson Hall, Fermilab**

*Wednesday, 8 July 2009 08:15 (45 minutes)*

Contribution ID: **13**

Type: **Bus**

## **Bus From Pheasant Run to Wilson Hall, Fermilab**

*Thursday, 9 July 2009 08:15 (45 minutes)*

Contribution ID: **14**

Type: **Bus**

## **Bus From Pheasant Run to Wilson Hall, Fermilab**

*Friday, 10 July 2009 08:15 (45 minutes)*



Contribution ID: **15**

Type: **Bus**

## **Bus From Pheasant Run to Geneva Metra Station**

*Saturday, 11 July 2009 09:45 (30 minutes)*

Contribution ID: **16**

Type: **Bus**

## **Bus From Geneva Metra Station to Pheasant Run**

*Saturday, 11 July 2009 21:45 (30 minutes)*

Contribution ID: 17

Type: **Bus**

## **Bus From Pheasant Run to Geneva Metra Station**

*Sunday, 12 July 2009 09:45 (30 minutes)*

Contribution ID: **18**

Type: **Bus**

## **Bus From Geneva Metra Station to Pheasant Run**

*Sunday, 12 July 2009 19:45 (30 minutes)*

Contribution ID: **19**

Type: **Bus**

## **Bus From Wilson Hall, Fermilab to Pheasant Run**

*Tuesday, 7 July 2009 16:00 (45 minutes)*

Contribution ID: **20**

Type: **Bus**

## **Bus From Wilson Hall, Fermilab to Pheasant Run**

*Wednesday, 8 July 2009 16:00 (45 minutes)*

Contribution ID: **21**

Type: **Bus**

## **Bus From Wilson Hall, Fermilab to Pheasant Run**

*Thursday, 9 July 2009 14:45 (45 minutes)*

Contribution ID: 22

Type: **not specified**

## **Bus From Wilson Hall, Fermilab to Pheasant Run**

*Friday, 10 July 2009 17:15 (45 minutes)*



Contribution ID: **23**

Type: **Bus**

## **Bus From Pheasant Run to Wilson Hall, Fermilab**

*Monday, 13 July 2009 08:15 (45 minutes)*

Contribution ID: **24**

Type: **Bus**

## **Bus From Pheasant Run to Wilson Hall, Fermilab**

*Tuesday, 14 July 2009 08:15 (45 minutes)*

Contribution ID: 25

Type: **Bus**

## **Bus From Pheasant Run to Wilson Hall, Fermilab**

*Wednesday, 15 July 2009 08:15 (45 minutes)*

Contribution ID: **26**

Type: **Bus**

## **Bus From Pheasant Run to Wilson Hall, Fermilab**

*Thursday, 16 July 2009 08:15 (45 minutes)*

Contribution ID: 27

Type: **Bus**

## **Bus From Pheasant Run to Wilson Hall, Fermilab**

*Friday, 17 July 2009 08:15 (45 minutes)*

Contribution ID: **28**

Type: **Bus**

## **Bus From Wilson Hall, Fermilab to Pheasant Run**

*Monday, 13 July 2009 16:00 (45 minutes)*

Contribution ID: **29**

Type: **Bus**

## **Bus From Wilson Hall to Kuhn Barn**

*Tuesday, 14 July 2009 16:00 (30 minutes)*

Contribution ID: **30**

Type: **Bus**

## **Bus From Kuhn Barn to Pheasant Run**

*Tuesday, 14 July 2009 20:30 (30 minutes)*



Contribution ID: **31**

Type: **Bus**

## **Bus From Wilson Hall, Fermilab to Pheasant Run**

*Wednesday, 15 July 2009 14:45 (45 minutes)*

Contribution ID: **32**

Type: **Bus**

## **Bus From Wilson Hall, Fermilab to Pheasant Run**

*Thursday, 16 July 2009 14:45 (45 minutes)*

Contribution ID: **33**

Type: **Bus**

## **Bus From Wilson Hall, Fermilab to Pheasant Run**

*Friday, 17 July 2009 17:15 (45 minutes)*

Contribution ID: **34**

Type: **Lecture**

## Standard Model II

*Tuesday, 7 July 2009 09:00 (1h 15m)*

**Presenter:** WILLENBROCK, Scott (University of Illinois, Urbana-Champaign)

Contribution ID: 35

Type: **Lecture**

## The Framework II

*Tuesday, 7 July 2009 10:45 (1h 15m)*

**Presenter:** KAYSER, Boris (Fermilab)

Contribution ID: **36**

Type: **Lecture**

## Detector Basics II

*Tuesday, 7 July 2009 13:00 (1h 15m)*

**Presenter:** MESSIER, Mark (Indiana University)

Contribution ID: 37

Type: **Lecture**

## Supernova & Solar Neutrinos

*Tuesday, 7 July 2009 14:45 (1h 15m)*

**Presenter:** BEACOM, John (Ohio State University)

Contribution ID: **38**

Type: **Tutorial**

## **Tutorial Session**

*Tuesday, 7 July 2009 17:15 (1h 15m)*



Contribution ID: **39**

Type: **Q&A**

## **Q&A Session**

*Tuesday, 7 July 2009 19:30 (1 hour)*

Contribution ID: **40**

Type: **Lecture**

## The Framework III

*Wednesday, 8 July 2009 09:00 (1h 15m)*

**Presenter:** KAYSER, Boris (Fermilab)

Contribution ID: 41

Type: **Lecture**

# Neutrinoless Double Beta Decay I

*Wednesday, 8 July 2009 10:45 (1h 15m)*

**Presenter:** VOGEL, Petr (Caltech)

Contribution ID: 42

Type: **Lecture**

# Big Bang Neutrinos

*Wednesday, 8 July 2009 13:00 (1h 15m)*

**Presenter:** FORMAGGIO, Joe (MIT)

Contribution ID: 43

Type: **Lecture**

## Neutrino Cross-Sections

*Wednesday, 8 July 2009 14:45 (1h 15m)*

**Presenter:** ZELLER, Sam (LANL)

Contribution ID: 44

Type: **not specified**

## Tutorial Session

*Wednesday, 8 July 2009 17:15 (1h 15m)*

**Presenter:** HUBER, Patrick (Virginia Tech)

Contribution ID: 45

Type: **Lecture**

## The Framework IV

*Thursday, 9 July 2009 09:00 (1h 15m)*

**Presenter:** KAYSER, Boris (Fermilab)

Contribution ID: 46

Type: **Lecture**

# Neutrino Mass & Cosmology

*Thursday, 9 July 2009 10:45 (1h 15m)*

**Presenter:** HANNESTAD, Steen (Aarhus University)



Contribution ID: 47

Type: **Lecture**

## Detector Basics III

*Thursday, 9 July 2009 13:00 (1h 15m)*

**Presenter:** MESSIER, Mark (Indiana University)

Contribution ID: **48**

Type: **Tutorial**

## **Tutorial Session**

*Thursday, 9 July 2009 15:30 (1h 15m)*

Contribution ID: **49**

Type: **Tutorial**

## **Tutorial Session**

*Thursday, 9 July 2009 17:15 (1h 15m)*

Contribution ID: **50**

Type: **Q&A**

## Q&A Session

*Thursday, 9 July 2009 19:30 (1 hour)*

Contribution ID: 51

Type: **Lecture**

## Neutrino Experiment History

*Friday, 10 July 2009 09:00 (1h 15m)*

**Presenter:** HEEGER, Karsten (University of Wisconsin, Madison)

Contribution ID: 52

Type: **Lecture**

# Ultra-High Energy Neutrinos

*Friday, 10 July 2009 10:45 (1h 15m)*

**Presenter:** ADAMS, Jenni (University of Canterbury)

Contribution ID: 53

Type: **Special**

## **Tours of Fermilab Neutrino Facilities**

*Friday, 10 July 2009 13:00 (2h 30m)*

Contribution ID: 54

Type: **Special**

## **Fermilab Wine & Cheese Seminar**

*Friday, 10 July 2009 15:30 (1h 45m)*

**Presenter:** DE GOUVEA, Andre (Northwestern University)



Contribution ID: 55

Type: **Lecture**

## Neutrinoless Double Beta Decay II

*Monday, 13 July 2009 09:00 (1h 15m)*

**Presenter:** WILKERSON, John (University of North Carolina)

Contribution ID: 56

Type: **not specified**

# Mixing Parameters I

*Monday, 13 July 2009 10:45 (1h 15m)*

**Presenter:** PARKE, Stephen (Fermilab)

Contribution ID: 57

Type: **Lecture**

# Accelerator Physics I

*Monday, 13 July 2009 13:00 (1h 15m)*

**Presenter:** WILDNER, Elena (CERN)

Contribution ID: 58

Type: **Lecture**

## Reactor Experiments

*Monday, 13 July 2009 14:45 (1h 15m)*

**Presenter:** HEEGER, Karsten (University of Wisconsin, Madison)

Contribution ID: 59

Type: **Tutorial**

## Tutorial Session

*Monday, 13 July 2009 17:15 (1h 15m)*

Contribution ID: **60**

Type: **Q&A**

## Q&A Session

*Monday, 13 July 2009 19:30 (1 hour)*

Contribution ID: **61**

Type: **Lecture**

## Mixing Parameters II

*Tuesday, 14 July 2009 09:00 (1h 15m)*

**Presenter:** PARKE, Stephen (Fermilab)

Contribution ID: **62**

Type: **Lecture**

## Neutrino Models I

*Tuesday, 14 July 2009 10:45 (1h 15m)*

**Presenter:** ALTARELLI, Guido (INFN Rome)



Contribution ID: **63**

Type: **Lecture**

## Accelerator Physics II

*Tuesday, 14 July 2009 13:00 (1h 15m)*

**Presenter:** WILDNER, Elena (CERN)

Contribution ID: **64**

Type: **Lecture**

## Beta Decay and Neutrino Mass

*Tuesday, 14 July 2009 14:45 (1h 15m)*

**Presenter:** WILKERSON, John (University of North Carolina)

Contribution ID: 65

Type: **Social**

**Steak Fry**

*Tuesday, 14 July 2009 16:30 (4 hours)*

Contribution ID: **66**

Type: **Lecture**

# Accelerator Experiments I

*Wednesday, 15 July 2009 09:00 (1h 15m)*

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

Contribution ID: 67

Type: **Lecture**

## Accelerator Physics III

*Wednesday, 15 July 2009 10:45 (1h 15m)*

**Presenter:** WILDNER, Elena (CERN)

Contribution ID: **68**

Type: **Lecture**

## Accelerator Experiments II

*Wednesday, 15 July 2009 13:00 (1h 15m)*

**Presenter:** SAOULIDOU, Niki (Fermilab)

Contribution ID: **69**

Type: **not specified**

## Tutorial Session

*Wednesday, 15 July 2009 15:30 (1h 15m)*

Contribution ID: **70**

Type: **Tutorial**

## **Tutorial Session**

*Wednesday, 15 July 2009 17:15 (1h 15m)*



Contribution ID: 71

Type: **not specified**

## Q&A Session

*Wednesday, 15 July 2009 19:30 (1 hour)*

Contribution ID: 72

Type: **Lecture**

## Neutrino Models II

*Thursday, 16 July 2009 09:00 (1h 15m)*

**Presenter:** ALTARELLI, Guido (INFN Rome)

Contribution ID: 73

Type: **Lecture**

# Leptogenesis I

*Thursday, 16 July 2009 10:45 (1h 15m)*

**Presenter:** NIR, Yossi (Weizmann Institute)

Contribution ID: 74

Type: **Lecture**

## Neutrino Factory & Beta Beams I

*Thursday, 16 July 2009 13:00 (1h 15m)*

**Presenter:** GOMEZ-CADENAS, JJ (IFIC(UV/CSIC))

Contribution ID: 75

Type: **Tutorial**

## Student Presentation Session I

*Thursday, 16 July 2009 15:30 (1h 15m)*

Contribution ID: 76

Type: **Tutorial**

## Student Presentation Session II

*Thursday, 16 July 2009 17:15 (1h 15m)*

Contribution ID: 77

Type: **Social**

## Farewell Dinner

*Thursday, 16 July 2009 19:00 (2 hours)*

Contribution ID: 78

Type: **Lecture**

## Neutrino Models III

*Friday, 17 July 2009 09:00 (1h 15m)*

**Presenter:** ALTARELLI, Guido (INFN Rome)



Contribution ID: 79

Type: **Lecture**

## Leptogenesis II

*Friday, 17 July 2009 10:45 (1h 15m)*

**Presenter:** NIR, Yossi (Weizmann Institute)

Contribution ID: **80**

Type: **Lecture**

## Neutrino Factory & Beta Beams II

*Friday, 17 July 2009 13:00 (1h 15m)*

**Presenter:** GOMEZ-CADENAS, JJ (IFIC(UV/CSIC))

Contribution ID: **81**

Type: **Special**

## **Fermilab Wine & Cheese Seminar**

*Friday, 17 July 2009 15:30 (1h 45m)*

**Presenter:** SUZUKI, Yoichiro (ICRR Tokyo)