

Fermilab-Chicago Psec Timing Planning Meeting

Organizing Committee

**Saturday, Mar. 17, 2018: University of Chicago
Physics Research Center PRC201; 933 E. 56th St**

Version 7b March 14, 2018

AGENDA

Organizing Committee

Andrey Elagin (Chicago;Co-Chair), Henry Frisch (Chicago;Co-Chair), Ron Lipton (Fermilab;Co-Chair), Luciano Ristori (Fermilab;Co-Chair), Ed Blucher (Chicago), Steve Brice (Fermilab), Marcela Carena (Fermilab), Petra Merkel (Fermilab), Michael Minot (Incom), Razmik Mirzoyan (MPI, Munich), Pasha Murat (Fermilab), Sergei Nagaitsev (Fermilab), Stephen Parke (Fermilab), Erik Ramberg (Fermilab), Dave Schmitz (Chicago), Qian Sen (IHEP Beijing), Maria Spiropulu (Cal Tech), Bob Wagner (ANL), Yau Wah (Chicago), Yifang Wang (IHEP Beijing), Matt Wetstein (Iowa State), Peter Wilson (Fermilab)

8:00 - 8:30 Coffee

8:30 - 9:00 **Session 1: Fermilab-Chicago Collaboration** **Chairs: Frisch and Spiropulu**

Welcome and Introduction

Homage to Anatoly Ronzhin

Areas of Common Interest and Discovery Potential

Andrey, Ron, Luciano, Henry
All

Joe Lykken

9:00 - 10:15 **Session 2: Increasing the Reach of the Current Fermilab Program** **Chairs: McBride and Wilson**

Combinatorics Background Rejection Using Psec Timing in Rare Kaon Decays

The Optical TPC, Mirrors, Baffles, and Liouville's Theorem in 3D Fixed-Target Experimental Configurations That Use Psec Resolution and Optical Path Lengths

Exploiting Psec Timing in Mu2e

What New Beam Dynamics Can Be Measured With Psec Timing in Accelerator Physics?

Wah

Elagin/Frisch
Gatto/Ristori

Murat

Nagaitsev

10:30-10:45 Coffee

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10:45-11:30	Session 3: Opportunities: Energy Frontier: Colliders	Chairs: Nahn and Jindariani
	Unique New Physics Flavor Signatures with Small SM Backgrounds	Dobrescu
	New Capabilities in Measuring Vertices and Displaced Vertices using Psec Resolution	Apresyan
	Vertexing Photons using Psec Resolution: Methods, Precision	Gray
11:30-11:45	Session 4: Opportunities: Neutrinos I: CP-Violation and Mass Ordering	Chairs: Himmel and Schmitz
	Opportunities from Psec Timing in SBNF in the DUNE Era	Dharmapalan
12:00-12:45	Lunch on the 3rd Floor of the PRC	
1:00-2:30	Session 5: Opportunities: Neutrinos II Dirac/Majorana	Chairs: Parke and Parke
	Chicago Institutional Opportunities	E. Isaacs
	What Is the Impact of a Positive Detection in $0\nu\beta\beta$ -decay?	Machado
	Is g_A quenched in $0\nu\beta\beta$ -decay? (consequences for the "crab" plot)	Ben Kay
	Summary of Existing Efforts and Specs for a Very Large Liquid Scintillator Detector to Search for $0\nu\beta\beta$	Mastbaum
	Long-Term Development Towards a Very Large Directional Liquid Scintillator Detector	Wetstein
	Would the OTPC Technique with Cherenkov/Scintillation Separation Benefit JUNO?	Qian Sen
2:30-4:00 (max)	Session 6: Long-Term Facility Planning	Chairs: Elagin, Merkel
	Test-Beam TOF Program Development	Rominsky
	Long-Term Development of Large-area Psec TOF Systems for the HL-LHC, CEPC, VLC, LHeC, ILC, and EIC	Denisov
	Panel Discussion: People/Facilities/Funding Needed for Psec Development	Apresyan, Frisch, Lipton, Merkel
	Summary and Action Items	Spiropulu

End of Saturday Schedule: Thanking Staff, and Goodbyes