

RIBF user group town meeting at the 72nd JPS annual meeting 2017

Agenda:

- 1) RIBF user group activity report (Isobe) 30 min.
- 2) Election for UEC members (Isobe) 5 min.
- 3) Nishina center report (Yoneda) 15 min.
- 4) RIBF discussion meeting (Yoshida) 5 min.
- 5) Report from the WG on the physics of unstable nuclei
(D. Suzuki) 20 min.
- 6) Others

RIBF User group activity report

- Endorsement of prior booking system of RIBF guest house.
- Highlight report from MT committee meeting.
- RIBF Thesis award 2017
 - Call for application now.
- Issue on FEE → no news
- Symposium on the RIBF 10th Anniversary.

Symposium on the RIBF 10th Anniversary

- Objective: To celebrate the 10th anniversary and our achievements. To discuss the future of RIBF.
- Talks should be covered: Review talks on the achievements. Future projects. How it all started.
- Date: Dec. 11-12, 2017
 - RIBF NP-PAC at Dec. 7-9
 - Users meeting at Dec. 13rd.
- Co-hosting with RNC: under negotiation.
- OC: UEC members, ex-UEC chair (and RNC staff).
- Any comments/suggestions on this symposium is welcome!

Election for UEC members

FY2016 UEC members

- N. Imai : CNS : Exp. (2013 - Mar. 2017)
- T. Sumikama : Tohoku : Exp. (2013 - Mar. 2017)
- A. Obertelli : Saclay : Exp. (2013 - Mar. 2017)
- K. Ogata : RCNP, Okaka : Theor. (2013 - Mar. 2017)
- M. Kimura : Hokkaido : Theor. (2013 - Mar. 2017)



Let's appreciate them
for their work.

- T. Isobe : RNC : Exp. (2015 - Mar. 2019)
- T. Nakamura : Titech : Exp. (2015 - Mar. 2019)
- S. Ota : CNS : Exp. (2015 - Mar. 2019)
- Y. Kanada-En'yo : Kyoto : Theor. (2015 - Mar. 2019)
- K. Yoshida : Niigata : Theor. (2015 - Mar. 2019)

- **Supplement Member**

- P. Fallon : Berkeley : Exp (2015 - Mar. 2017)
- J. Lee : Hong Kong : Exp (2015 - Mar. 2017)
- M. Asai : JAEA : Exp (2015 - Mar. 2017)

- Period of vote: Feb. 21 – Mar. 7
- Number of votes: 129/655 (19.7%)
 - Election two years ago: 103/590 (17.4%)
- Elected members from Experimentalist
 - Wimmer Kathrin (U-Tokyo)
 - Sakaguchi Satoshi (Kyusyu)
 - Watanabe Yutaka (KEK)
- Elected members from Experimentalist
 - Horiuchi Wataru (Hokkaido)
 - Matsumoto Takuma (Kyusyu)
- +Supplement members

FY2017 RIBF UEC members

- Apr. 2015 - Mar. 2019
 - T. Isobe : RNC : Exp. : Chair
 - T. Nakamura : Titech : Exp. : HP
 - S. Ota : CNS : Exp. : Users meeting
 - Y. Kanada-En'yo : Kyoto : Theor. : Thesis award
 - K. Yoshida : Niigata : Theor. : vice-chair, RIBF User Group List
- Apr. 2017 - Mar. 2021
 - K. Wimmer : U-Tokyo : Exp. : vice-chair → chair from FY2018
 - S. Sakaguchi : Kyusyu : Exp. : HP, Users meeting HP
 - Y. Watanabe : KEK : Exp. : Users meeting
 - W. Horiuchi : Hokkaido : Theor. : Thesis award
 - T. Matsumoto : Kyusyu : Theor. : RIBF User Group List

RIBF Status Report

Ken-ichiro YONEDA

User Liaison and Industry Cooperation Group

RIKEN Nishina Center

RIBF Users Group Town Meeting

Osaka University, Toyonaka, May 17, 2017

- Ceremony of “Nihonium” on 14 March
- RILAC upgrade schedule
- RIBF Beam Time Operation in 2nd half of FY2016
- Beam Time Plan for FY2017
- Announcements



Celemony of “Nihonium”

- On March 14 @ 上野 日本学士院
 - 皇太子殿下ご臨席
 - IUPAC会長命名宣言
 - 森田さん経緯説明
 - 理研理事長、IUPAP会長、文科大臣、内閣府特命大臣、Oganessianさん挨拶

http://www.riken.jp/pr/topics/2017/20170316_1/

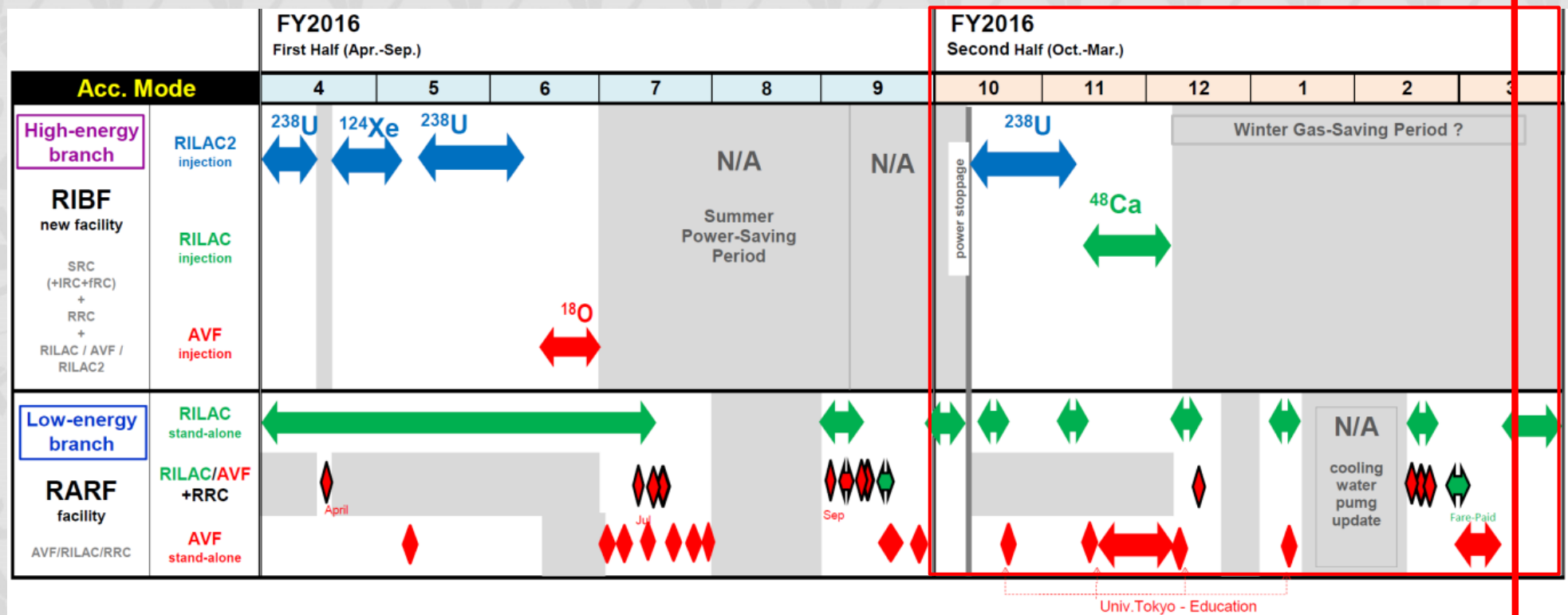
<http://www.riken.jp> からリンクがあります

RILAC upgrade schedule

- 来年度工事開始
 - → GARIS2を移設(E6へ) **6月中旬から**
- RILAC工事
 - 建屋更新7月中旬から2017年度末まで
 - イオン源、加速器更新2018年度
 - 2019年春から試運転、夏からビーム供給？
- **2019年夏まではRILAC使用不可**

- SRC/BigRIPS experiments
 “5 months” operation
 ^{238}U , ^{48}Ca

Now

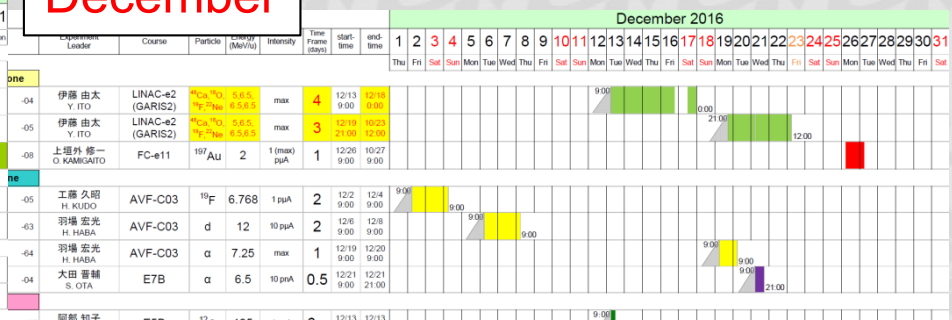
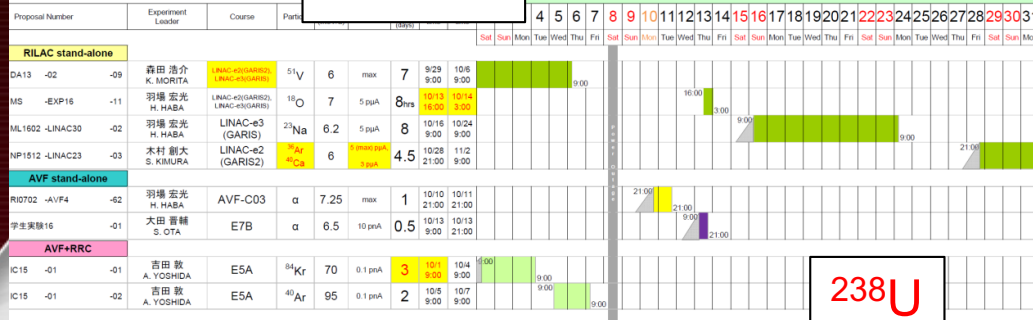




Beam Time Schedule: Oct.– Dec. 2016

October

December



238U

ImPACT

November



nucl. radius

R3 test

トラブル①

SAMURAI

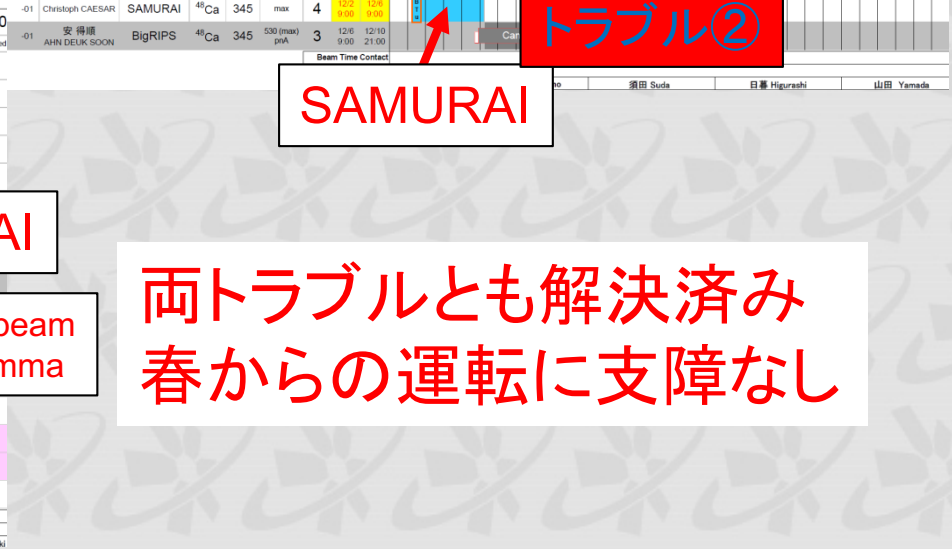
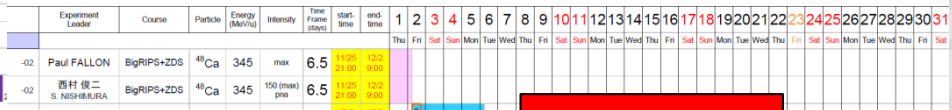
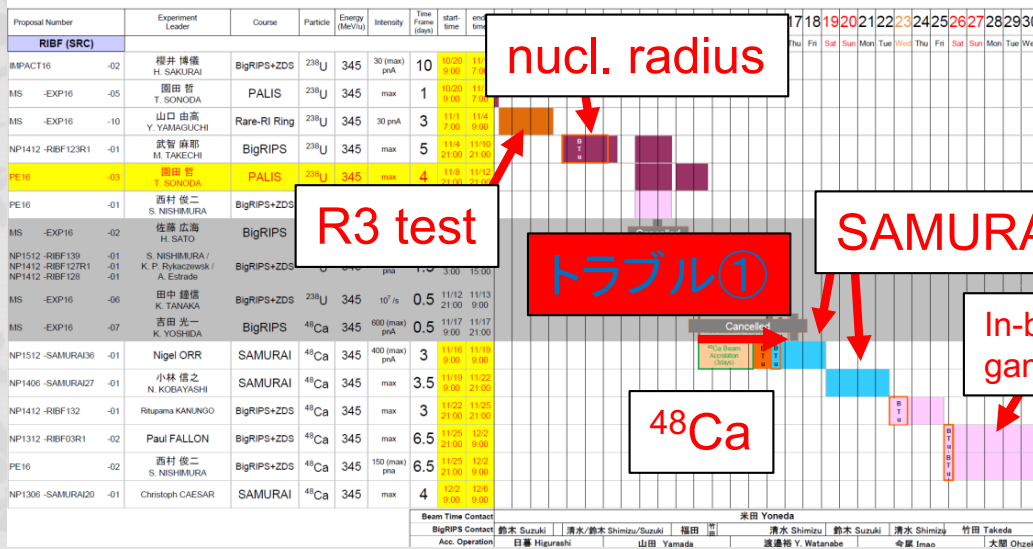
48Ca

In-beam gamma

両トラブルとも解決済み
春からの運転に支障なし

SAMURAI

トラブル②



Beam Time Contact: 鈴木 Suzuki | 清水/Shimizu/Suzuki | 福田 | 米田 Yoneda
 BigRIPS Contact: 鈴木 Suzuki | 清水/Shimizu/Suzuki | 福田 | 清水 Shimizu | 鈴木 Suzuki | 清水 Shimizu | 竹田 Takeda
 Acc. Operation: 日暮 Higurashi | 山田 Yamada | 渡邊裕 Y. Watanabe | 今尾 Imao | 大関 Ohzeki

Beam Time Schedule: Jan. – Mar. 2017

January

Proposal Number	PI/PI-Asst	Intensity	Time Frame (days)	start-time	end-time	January 2017																														
						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RILAC stand-alone DA13 -02 -10 森田 浩介 LINAC-e2 (GARIS2) ^{90}Tl 6 max 39 1/16 2/24 Canceled NP1512 -LINAC24R1 -01 伊藤 由太 LINAC-e2 (GARIS2) ^{10}B 1.2 131 max 2 1/23 1/22 NP1512 -LINAC24R1 -02 伊藤 由太 LINAC-e2 (GARIS2) ^{19}F 4.5 1/22 1/28 4.5 1/22 1/28																																				
AVF stand-alone ML1307 -AVF18 -06 工藤 久昭 AVF-C03 ^{19}F 6.768 1 pμA 3 1/5 1/8 ML1307 -AVF14 -06 小林 寛男 AVF-C03 p 12 10 (max) pμA 1 1/9 1/10 ML1501 -AVF25 -02 笠松 良典 AVF-C03 ^{18}O 6.07 1 pμA 1 1/16 1/16 RILAC+RRC ML1602 -RRC42 -01 湯ヶ井 強 E5A ^{238}U 11 2 pμA 1 3/11 1/12																																				
						Beam Time Contact: 米田 Yoneda BigRIPS Contact: Acc. Operation: 山田 渡邊裕 Y. Watanabe 今尾 Imai 大槻 Ohzeki 長友 Nagatomo 須田																														

February

Proposal Number	PI/PI-Asst	Intensity	Time Frame (days)	start-time	end-time	February 2017																														
						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RILAC stand-alone DA13 -02 -10 森田 浩介 LINAC-e2 (GARIS2) ^{90}Tl 6 max 39 1/16 2/24 Canceled AVF stand-alone IMPACT16 -03 奥野 広樹 E7 (RIFC-7A0) ^{90}Tl 12 1 pμA 6h 2/12 2/14 RI0702 -AVF4 -65 羽場 宏光 AVF-C03 d 12 10 pμA 2 2/12 2/14 RI0702 -AVF4 -66 羽場 宏光 AVF-C03 α 7.25 5 pμA 1 2/27 2/28 NP1512 -AVF33 -02 David M. Kahl E7A(CRIB) ^{26}Mg 6.6 120 (max) pμA 11 3/1 3/12 AVF+RRC IB0702 -RRC1 -100 阿部 知子 E5B ^{12}C 135 1 pμA 6hrs 2/16 2/16 IB0702 -RRC1 -110 阿部 知子 E5B ^{56}Fe 90 1 pμA 3hrs 2/21 2/21 ML1501 -RRC36 -10 富田 雅典 E5B ^{56}Fe 90 1 pμA 2hrs 2/21 2/21 ML1209 -RRC9 -36 泉 雅子 E5B ^{56}Fe 90 1 pμA 1.5hrs 2/21 2/21 AVF+RRC+RRC IB0702 -RRC1 -04 阿部 知子 E5B ^{40}Ar 160 1 pμA 5hrs 2/23 2/23 RILAC+RRC ML1501 -RRC34 -03 新藤 浩之 E3A ^{136}Xe 39 1 pμA 16hrs 2/27 2/28 MS -EXP16 -08 吉田 敦 E5A ^{136}Xe 39 0.1 pμA 3hrs 3/28 3/28 IC16 -01 -01 吉田 敦 E3A ^{136}Xe 39 1 pμA 8hrs 2/28 2/28 RILAC2+RRC NP1512 -RRC40 -02 渡辺 裕 E2B (KISS) ^{238}U 10.75 140 pμA 2 2/18 2/20																																				
						Beam Time Contact: 米田 Yoneda BigRIPS Contact: Acc. Operation: 須田 Suda 日暮 Higurashi 山田 Yamada 渡邊裕 Y. Watanabe 今尾																														

March

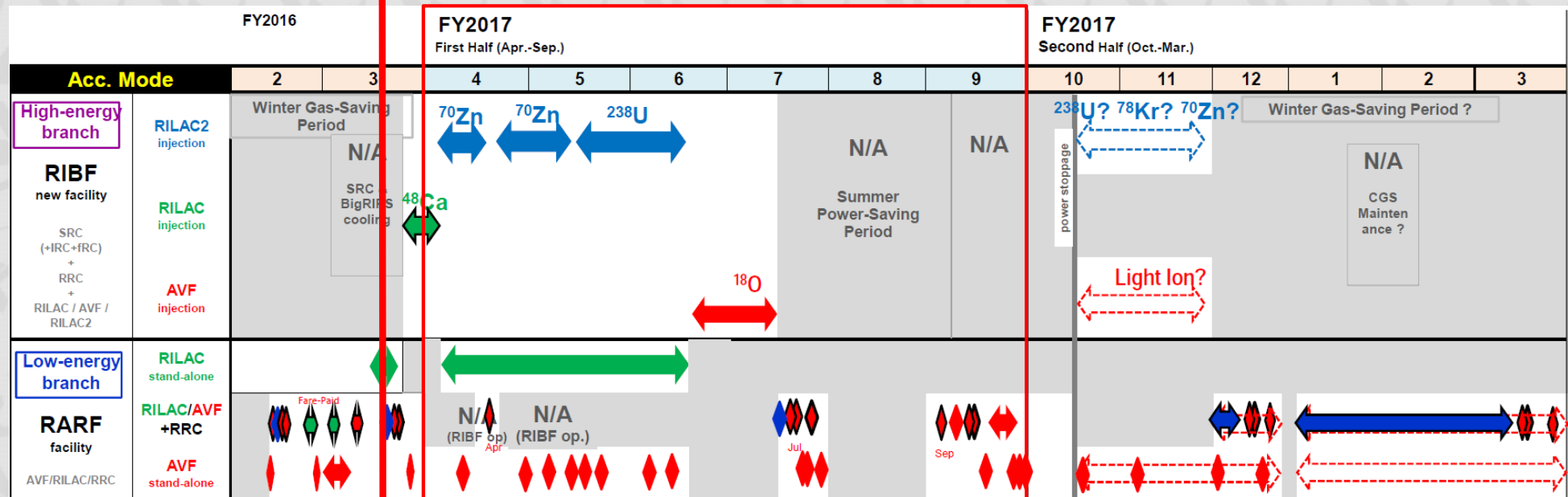
Proposal Number	PI/PI-Asst	Intensity	Time Frame (days)	start-time	end-time	March 2017																														
						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RILAC stand-alone NP1512 -LINAC25 -01 加治 大哉 LINAC-e3 (GARIS) ^{40}Ar 6 5 (max) pμA 9 3/17 3/26 NP1512 -LINAC25 -02 加治 大哉 LINAC-e3 (GARIS) ^{27}Al 6 5 (max) pμA 1 3/28 3/29 DA13 -02 -12 森田 浩介 LINAC-e3 (GARIS) ^{90}Tl 7.5 1 pμA 4.5 3/15 3/16 AVF stand-alone NP1512 -AVF33 -02 David M. Kahl E7A(CRIB) ^{26}Mg 6.6 120 (max) pμA 11 3/1 3/12 RB0702 -AVF4 -07 羽場 宏光 AVF-C03 d 12 10 pμA 2 3/29 3/30 AVF+RRC IC15 -01 -03 吉田 敦 E5A ^{84}Kr 70 0.1 pμA 20hrs 3/14 3/17 IC15 -02 -01 吉田 敦 E5A ^{84}Kr 70 0.1 pμA 40hrs 3/14 3/17 IB0702 -RRC1 -111 阿部 知子 E5B ^{56}Fe 90 1 pμA 3hrs 3/23 3/23 ML1501 -RRC36 -11 富田 雅典 E5B ^{56}Fe 90 1 pμA 2hrs 3/23 3/23 ML1209 -RRC9 -37 泉 雅子 E5B ^{56}Fe 90 1 pμA 1.5hrs 3/23 3/23 IB0702 -RRC1 -112 阿部 知子 E5B ^{40}Ar 95 1 pμA 5hrs 3/23 3/23 ML1209 -RRC9 -38 泉 雅子 E5B ^{40}Ar 95 1 pμA 1.5hrs 3/23 3/23 IB0702 -RRC1 -113 阿部 知子 E5B ^{12}C 135 1 pμA 6hrs 3/24 3/24 ML1209 -RRC9 -39 泉 雅子 E5B ^{12}C 135 1 pμA 1.5hrs 3/24 3/24 RILAC+RRC ML1501 -RRC34 -04 新藤 浩之 E3A Au 18.4 1 pμA 8hrs 3/6 3/6 MS -EXP16 -09 吉田 敦 E5A ^{197}Au 18.4 0.1 pμA 3hrs 3/6 3/6 RILAC2+RRC MS -ACC16 -10 堀西 輝高 E18/M11 ^{51}V 6 4 (max) pμA 2.5 3/1 3/1 NP1512 -RRC41 -02 平山 真一 E2B (KISS) ^{136}Xe 10.75 200 pμA 2 3/18 3/20																																				
						Beam Time Contact: 米田 Yoneda BigRIPS Contact: Acc. Operation: 今尾 Imai 大槻 Ohzeki 長友 Nagatomo 須田 Suda 安 Ahn 日暮 Higurashi																														

To start SRC with ^{48}Ca

Beam time plan of FY2017

- 1st attempt – ^{70}Zn from RILAC2
- spring-summer SRC operation till mid July
- operation days in total - ???

Now



Beam Time Schedule plan: April – June 2017

April

Proposal Number	Leader	Particle	Energy (MeV/u)	Intensity	Time Frame (days)	start-time	end-time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
RILAC stand-alone																																							
DA13 -02	-11	森田 浩介 K. MORITA	LINAC-e2 (GARIS2)	⁵⁰ Ti 51V	6.1	max	90	4:2	9:00	8:1	9:00																												
AVF stand-alone																																							
R10702 -AVF4	-68	羽場 宏光 H. HABA	E7B	α	7.25	15 pμA	1	4:18	9:00	4:17	9:00																												
MS -EXP17	-01	山口英齊 H. Yamaguchi	E7A(CRIB)	⁷ Li	5.6	1.65 pμA	2	4:29	9:00	5:1	9:00																												
AVF+RRC																																							
IB0702 -RRC1	-111	阿部 知子 T. ABE	E5B	⁵⁶ Fe	90	1 pμA	3hrs	4:22	12:00	4:22	12:00																												
ML1501 -RRC36	-11	富田 雅典 M. TOMITA	E5B	⁵⁶ Fe	90	1 pμA	2hrs	4:22	14:00	4:22	14:00																												
ML1209 -RRC9	-37	泉 雅子 M. IZUMI	E5B	⁵⁶ Fe	90	1 pμA	1.5hrs	4:22	15:30	4:22	15:30																												

Proposal Number	Experiment Leader	Course	Particle	Energy (MeV/u)	Intensity	Time Frame (days)	start-time	end-time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
RIBF (SRC)																																								
DA16 -01	-01	安得福 AHN DEUK SOON	BigRIPS+ZDS	⁴⁸ Ca	345	330 (max) pμA	3	9:00	4:2	9:00																														
NP1312 -SAMURAIBR1	-01	T. KOBAYASHI / Y. TOGANO	SAMURAI	⁷⁰ Zn	345	max	6	4:8	9:00	4:14	9:00																													
NP1412 -RIBF134	-01	Kathrin WIMMER	BigRIPS+ZDS	⁷⁰ Zn	345	max	4.5	4:14	4:18	21:00																														
NP1512 -RIBF142	-01	David STEPPENBECK	BigRIPS+ZDS	⁷⁰ Zn	345	max	2.5	4:18	21:00																															
NP1406 -RIBF44R1	-02	Oleg Tarasov	BigRIPS+ZDS	⁷⁰ Zn	345	300 (max) pμA	8	4:28	9:00																															

SAMURAI

In-beam gamma

⁷⁰Zn

⁷⁰Zn

May

Proposal Number	Leader	Particle	Energy (MeV/u)	Intensity	Time Frame (days)	start-time	end-time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
RILAC stand-alone																																							
DA13 -02	-11	森田 浩介 K. MORITA	LINAC-e2 (GARIS2)	⁵⁰ Ti 51V	6.1	max	90	4:2	9:00	8:1	9:00																												
AVF stand-alone																																							
MS -EXP17	-01	山口英齊 H. YAMAGUCHI	E7A(CRIB)	⁷ Li	5.6	3.3 pμA	2	4:29	9:00	5:1	9:00																												
R10702 -AVF4	-68	羽場 宏光 H. HABA	E7B	α	7.25	15 pμA	1	4:18	9:00	4:17	9:00																												
R10702 -AVF4	-70	羽場 宏光 H. HABA	AVF-C03	α	12	10 pμA	2	4:17	9:00	5:17	9:00																												
R10702 -AVF4	-71	羽場 宏光 H. HABA	E7B	α	7.25	15 pμA	1	4:18	9:00	5:21	9:00																												
ML1307 -AVF14	-07	小林 義男 Y. KOBAYASHI	E7B	p	12	10 pμA (max)	1	5:25	9:00	5:25	9:00																												

BRIKEN

new isotope

²³⁸U

SEASTAR

June

Proposal Number	Leader	Course	Particle	Energy (MeV/u)	Intensity	Time Frame (days)	start-time	end-time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RILAC stand-alone																																							
DA13 -02	-11	森田 浩介 K. MORITA	LINAC-e2 (GARIS2)	⁵⁰ Ti 51V	6.1	max	90	4:2	9:00	8:1	9:00																												
AVF stand-alone																																							
R10702 -AVF4	-72	羽場 宏光 H. HABA	E7B	α	7.25	15 pμA	1	4:18	6:12	9:00	9:00																												
R10702 -AVF4	-73	羽場 宏光 H. HABA	E7B	α	7.25	15 pμA	1	4:18	9:00	5:18	9:00																												
RIBF (SRC)																																							
NP1512 -RIBF139	-02	S. NISHIMURA / K. P. Rykaczewski / A. Serrano / G. Kiss	BigRIPS+ZDS	²³⁸ U	345	max	14	5:25	6:8	9:00	9:00																												
NP1412 -RIBF128	-02	K. P. Rykaczewski / A. Serrano / G. Kiss	BigRIPS+ZDS	²³⁸ U	345	30 (max) pμA	1	6:8	6:9	9:00	9:00																												
MS -EXP17	-02	福田 直樹 N. FUKUDA	BigRIPS	²³⁸ U	345	35 (max) pμA	1	6:8	6:9	9:00	9:00																												
NP1306 -RIBF102	-01	Walter HENNING	BigRIPS+ZDS	²³⁸ U	345	35 (max) pμA	5	6:8	6:14	9:00	9:00																												
MS -EXP17	-03	藤田 啓 T. SONODA	PALLS	²³⁸ U	345	max	1	6:14	6:15																														
IMPACT17	-01	櫻井 雅雄 H. SAKURAI																																					
MS -EXP17	-04	田中 健信 K. TANAKA																																					
NP1406 -SAMURAI19R1	-01	Dominic ROSSI																																					

¹⁸O

ImPACT(OEDO)

SAMURAI + NeuLAND

Beam Time Schedule plan: July – Sept. 2017

August

										August 2017																																					
Proposal Number	Experiment Leader	Course	Particle	Energy (MeV/u)	Intensity	Time Frame (days)	start-time	end-time		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31							
										Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu
RILAC+RRC																																															
NP1512 -RRC41	-03	平山 賢一 Y. HIRAYAMA	E2B (KISS)	¹³⁶ Xe	10.75	250 pA	4	9:1	9:5																																						
Beam Time Contact										米田 Yoneda																																					
BigRIPS Contact										長友 Nagatomo																																					
Acc. Operation										須田 Suda																																					
										日暮 Higurashi																																					
										山田 Yamada																																					
										渡邊裕																																					

July

										July 2017																																					
Proposal Number	Experiment Leader	Course	Particle	Energy (MeV/u)	Intensity	Time Frame (days)	start-time	end-time		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31							
										Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon
AVF stand-alone																																															
ML1701 -AVF41	-01	小森 有希子 Y. KOMORI	AVF-C03	¹¹ B	9.1	300 pA	0.5	7:21	7:21																																						
R0702 -AVF4	-74	羽場 宏光 H. HABA	AVF-C03	α	7.25	15 pA	1	7:23	7:24																																						
R0702 -AVF4	-75	羽場 宏光 H. HABA	AVF-C03	α	12	10 pA	2	7:29	7:31																																						
AVF+RRC																																															
IB0702 -RRC1	-114	阿部 知子 T. ABE	ESB	⁴⁰ Ar	95	1 pA	5hrs	7:19	7:19																																						
ML1209 -RRC9	-40	泉 雅子 M. IZUMI	ESB	⁴⁰ Ar	95	1 pA	1.5hrs	7:19	7:19																																						
IB0702 -RRC1	-115	阿部 知子 T. ABE	ESB	⁵⁶ Fe	90	1 pA	3hrs	7:25	7:25																																						
ML1501 -RRC36	-12	高田 雅典 M. TOMITA	ESB	⁵⁶ Fe	90	1 pA	2hrs	7:25	7:25																																						
IB0702 -RRC1	-116	阿部 知子 T. ABE	ESB	¹² C	135	1 pA	6hrs	7:27	7:27																																						
ML1209 -RRC9	-41	泉 雅子 M. IZUMI	ESB	¹² C	135	1 pA	1.5hrs	7:27	7:27																																						
RILAC+RRC																																															
NP1512 -RRC37	-01	Philip Walker	E2B (KISS)	¹³⁶ Xe	10.75	250 pA	2	7:18	7:18																																						
RIBF (SRC)																																															
NP1406 -SAMURAI19R1	-01	Dominic ROSSI	SAMURAI	¹⁶ O	230	300 pA	8	6:24	7:2																																						
NP1512 -SAMURAI37	-01	Thomas AUMANN	SAMURAI	¹⁶ O	230	300 pA	5.5	7:3	7:8																																						
NP1512 -SAMURAI34	-01	Miguel MARQUES	SAMURAI	¹⁶ O	230	300 pA	6	7:8	7:14																																						
Beam Time Contact										米田 Yoneda																																					
BigRIPS Contact										安 阿津																																					
Acc. Operation										日暮																																					
										福井 Fukuda																																					
										末 Suzuki																																					
										渡邊裕 Y. Watanabe																																					
										今尾 Imao																																					
										大関 Ohzeki																																					
										長友																																					

**SAMURAI
+ NeuLAND**

September

										September 2017																																				
Proposal Number	Experiment Leader	Course	Particle	Energy (MeV/u)	Intensity	Time Frame (days)	start-time	end-time		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						
										Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
AVF stand-alone																																														
ML1501 -AVF14	-08	小林 義男 Y. KOBAYASHI	AVF-C03	p	12	10 pA (max)	1	9:16	9:17																																					
R0702 -AVF4	-76	羽場 宏光 H. HABA	AVF-C03	α	7.25	15 pA	1	9:24	9:25																																					
ML1501 -AVF25	-03	笠松 良輔 Y. KASAMATSU	AVF-C03	¹⁸ O	6.07	1 pA	1	9:27	9:28																																					
ML1701 -AVF40	-01	横山 明彦 A. YOKOYAMA	AVF-C03	⁷ Li	6	1 pA	1	9:30	10:1																																					
AVF+RRC																																														
IB0702 -RRC1	-117	阿部 知子 T. ABE	E5B	¹² C	135	1 pA	6hrs	9:6	9:6																																					
ML1209 -RRC9	-42	泉 雅子 M. IZUMI	E5B	¹² C	135	1 pA	1.5hrs	9:6	9:6																																					
ML1501 -RRC34	-05	新藤 浩之 H. SHINJO	E3A	⁶⁶ Kr	66	1 pA	1	9:8	9:9																																					
IB0702 -RRC1	-118	阿部 知子 T. ABE	E5B	⁵⁶ Fe	90	1 pA	3hrs	9:12	9:12																																					
NP1012 -RR47	-01	西畑 浩希 H. NISHIBATA	E6 (RIPS)	²² Ne	70	200 (max) pA	5	9:18	9:23																																					
AVF+RRC+RRC																																														
IB0702 -RRC1	-05	阿部 知子 T. ABE	E5B	⁴⁰ Ar	160	1 pA	5hrs	9:14	9:14																																					
ML1209 -RRC9	-43	泉 雅子 M. IZUMI	E5B	⁴⁰ Ar	160	1 pA	1.5hrs	9:14	9:14																																					
RILAC+RRC																																														
NP1512 -RRC41	-03	平山 賢一 Y. HIRAYAMA	E2B (KISS)	¹³⁶ Xe	10.75	250 pA	4	9:1	9:5																																					
Beam Time Contact										米田 Yoneda																																				
BigRIPS Contact										渡邊裕																																				
Acc. Operation										今尾 Imao																																				
										大関 Ohzeki																																				
										長友 Nagatomo																																				
										須田 Suda																																				

<http://www.nishina.riken.go.jp/rarfmt/pc.html>

Backlog experiments

beam	# exp	days
Light ions	4	24.5
^{18}O	5	28.5
^{48}Ca	5	22
^{70}Zn	8	43.5
^{78}Kr	4	28
^{124}Xe	3	18
^{238}U	12	63.5
Total	41	228

FY2016 – 79 days of PAC-approved exps done
FY2015 – 62 days of PAC-approved exps done

Announcement (1/2)

- On-Campus Accommodation
 - 今年度下期スケジュール分から各実験に3部屋仮予約を実施
 - 予約を「取れない」ことがある
 - 共用促進が「カレンダー」作成、3部屋予約完了日を周知
 - 予約は基本的に理研(CNS,KEK)アシスタント経由で行う
- NP-PAC
 - Next: December 7-9, 2017
 - 次回から
 - Proposalのページ数は10ページ以内(Appendixをつけてよい)**
 - プレゼン時間厳守(PACコメントに対する書面での回答を受け付ける)**
- 論文リスト
 - 公開する
 - 実験実施後4年以上経過して投稿論文なしのケースはPACで経緯説明を求める

Announcements (2/2)

- RIBF Symposium and Mini-Workshop

http://www.nishina.riken.go.jp/ulic/ulic_apply.html

[Symposium]

Objective: Exchange views among researchers in a relevant field.

Maximum amount of financial support: 500,000 JPY

Deadline: Application must be submitted in March and in September.

[Mini-Workshop]

Objective: To solve specific problem. Analysis meeting is acceptable.

Maximum amount of financial support: 150,000 JPY

Deadline: Applications will be accepted all the time being reviewed and evaluated immediately.

RIBF discussion

<http://indico2.riken.jp/indico/categoryDisplay.py?categId=50>

aiming at making a stronger collaboration among theory and experiment related to physics at RIBF, and at achieving maximum outputs from RIBF

90-min. sessions on experiment and theory with a long discussion time

Organizing committee:

T. Uesaka, M. Sasano , H. Z. Liang (RNC), T. Nakatsukasa (Tsukuba),
D. Nishimura (TUS), K. Yoshida (Niigata)

+

Local organizers

The theme is determined based on the interests of local people.

RNC supports travel expenses of the lecturers.

2016

03 Aug: The tetra-neutron system @ Tohoku Univ.

04 Mar: Charge radii studies through laser spectroscopy @ RIKEN

2015

27 Nov: Single-particle states from one-nucleon removal reactions @ Univ. Tokyo

08 July: Neutron-proton correlations @ Univ. Hong Kong

02 Mar.: Heavy-ion reaction and multi-nucleon transfer @ Univ. Tsukuba

2014

25 Sep.: Cluster states probed by reaction experiments @ Kyoto Univ.

31 July: Isovector spin giant resonances at the extreme of large A/Z @ RIKEN

04 Mar.: Nuclear EOS probed by direct reaction @ Kyushu Univ.

2013

24 July: Exotic modes of nuclear rotation @ RIKEN

24 May: Nuclear mass @ RIKEN

21 Feb.: Neutron skin and photonuclear reaction @ Hokkaido Univ.

2012

27 Dec.: Fission in heavy nuclei @ Niigata Univ.

24 Sep.: Gamma-ray spectroscopy of medium-heavy neutron-rich nuclei @ Tohoku Univ.

25 July: Deformed halo structure @ RIKEN

24 May: r-process @ RIKEN

15th: On the tetra-neutron system

Local organizers: K. Sekiguchi and K. Miki

Experimental studies of the tetra-neutron system by using RI-beam

S. Shimoura (CNS, Univ. Tokyo)

Study of four-body resonance of tetra-neutron system

E. Hiyama (RNC)

Progress report of working group for physics with unstable nuclei

Nobu Imai

CNS

*RIBF user group town meeting during the JPS annual meeting
March 17, 2017 Osaka University, Toyonaka*

WG members



N. Imai, S. Michimasa, S. Ota, H. Yamaguchi



Y. Watanabe



M. Asai, F. Minato, K. Nishio, T. Sato, Y. Usuno



N. Aoi, H.J. Ong, E. Ideguchi, T. Shima



D. Kaji, H. Habu, Y. Ichikawa, T. Isobe, K. Itahashi, H. Liang, K. Morimoto, S. Nishimura, T. Onishi, H. Otsu, M. Sasano, T. Sonoda, S. Sumikama, D. Suzuki, H. Ueno, T. Uesaka, J. Zenihiro



M. Yamagami



HOKKAIDO
UNIVERSITY

W. Horiuchi



H. Fujioka



S. Sakaguchi, T. Teranishi



M. Takechi



T. Yamaguchi

九州大学
KYUSHU UNIVERSITY



TOHOKU
UNIVERSITY

K. Hagino, N. Iwasa



東京大学
THE UNIVERSITY OF TOKYO

T. Abe, M. Niikura



東京工業大学
Tokyo Institute of Technology

T. Nakamura

member of working group

- 42 members (with 16 members from RNC)
- Core members:
 - Imai (Chair, CNS)
 - Sasano (Vice chair, RNC)
 - Isobe (Secretary , RNC)
 - Fukuda (RNC), Niikura (Tokyo), Ong (RCNP), Sakaguchi (Kyushu), Suzuki (RNC), Watanabe (KEK), Yamagami (Aizu)

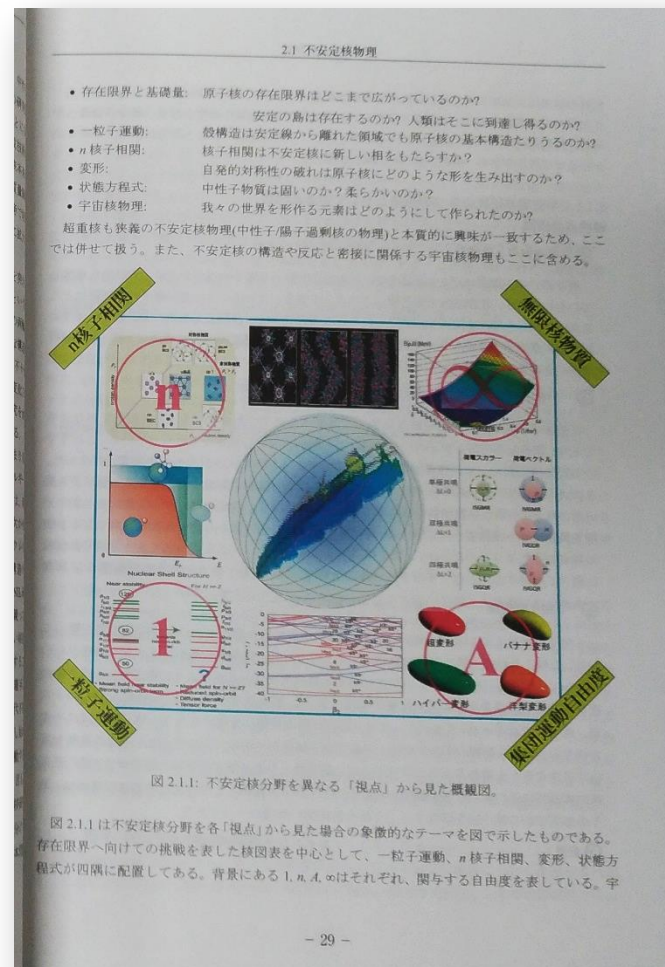
History (1/3): early dates

December 22, '15	First WG-wide meeting at the RIBF conference room
January 5, '16	Meeting with RNC RNC presented future plans of RIBF. WG presented requests from domestic users. RNC asked WG to provide four physics subjects that merit Nobel prizes.
January 7 to 12, '16	discussion among WG members via emails.
January 13, '16	discussion among core members.

New white paper for next 5 years

Last edition:

Genshikaku Kenkyu, Vol. 57 Suppl. 2 ('13)



History (2/3): workshops

March 11, '16	RNC	存在限界 陽子軸 limit of stability Z-axis
March 23, '16	RNC	存在限界 中性子軸 limit of stability N-axis
April 27, '16	RCNP	量子多体系の物理(殻構造、変形、 n 核子相関) quantum many body problem
June 9, '16	RNC	アルファクラスター相関 alpha cluster structure
October 20, '16	RNC	宇宙核物理勉強会 nuclear astrophysics
October 20/27, '16	RNC	状態方程式勉強会 equation of states

History (3/3): editorial meetings

- WG members provide texts and figures.
- Core members edit. Gather once in every two weeks at RNC.
- Preliminary draft by March 31, 2017. Will be reviewed by WG.

February 1, '17	1 to 3 pm	@306	Preliminary draft from each group (as per request by Imai on January 17)
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February 16, '17	3 to 5 pm	@306
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March 13, '17	1 to 3 pm	@306
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March 27, '17	1 to 3 pm	@406	Planned.
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Version 2013



2.1 不安定核物理

2.1.1 序

1. 6つの視点と基本問題
2. 現存の施設、検出器の概観
3. 新しい施設、検出器の提案

2.1.2 各論

1. 存在限界と基礎量
2. 1粒子運動
3. n 核子相関
4. 変形
5. 状態方程式
6. 超重核
7. 宇宙核物理

2.1.3 他のWGとの連携

2.1.4 タイムライン

2.1.5 リソース

2.1.6 まとめと展望

2.1.7 謝辞

Version 2017

「想定読者は、粒子物理学に興味を持っている学部生レベル」

(Target readers are undergraduate students highly aware of subatomic physics.)

- **Introduction (今井)**
 - Brief research history of unstable nuclei in Japan
 - Facilities, institutions, global partners
- **Search for the limit of nuclei (今井)**
 - SHE/ New isotopes (and $4n$)/ deformation and high spin (今井/市川)
 - fusion and multi-nucleons transfer reactions (西尾/渡邊)
 - EOS (銭廣/大田/民井/武智)
- **Many-body physics (新倉/鈴木)**
 - shell structure (鈴木)
 - alpha cluster (山口/笹野)
 - NN correlation (仁/近藤)
 - deformation (新倉)
- **Mechanism of direct reactions (坂口)**
- **Nuclear astrophysics (笹野)**
 - Light elements (山口)
 - Heavy elements (梶野)

Schedule

March 31, '17 Preliminary first draft will be sent for review by WG members.

April 28, '17 First draft will be complete.

October, '17 JPS fall meeting; Final version.

Homework

Discuss possibility of nuclear physics research at ILC

→ discussion will start after April.