



核物理与核技术国家重点实验室

内部简报

(第10期, 2012年03月19日)



我重点实验室召开 2011 年度工作会

2011 12 2-3

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2011

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重点实验室召开 2011 年度工作会

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我实验室召开 E(U)RICA 研讨会

2011 12 14

E(U)RICA

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RIKEN

Shunji Nishimura

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RIBF

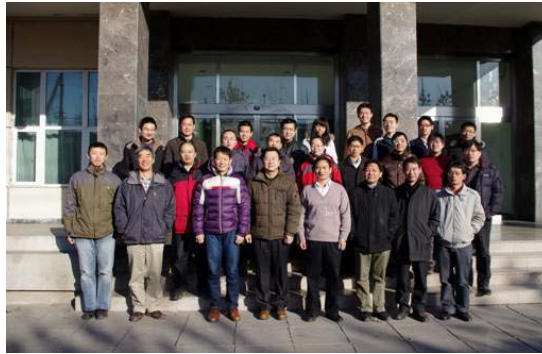
RIBF

EURICA

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E(U)RICA 研讨会与会人员合影

粒子物理与核物理学科引进二名北大百人计划人才

□

35

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2007

Nazarewicz

2006

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BESIII η τ

CMS

叶沿林教授当选亚洲核物理联合会主席

2011 11 27

ANPhA

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2009 7

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Sakai

(NuPECC)

Bracco

王晓钢教授当选为“美国物理学会会士”

2011

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- American Physical Society Fellow
- 0.5%

1982

1984

1991

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η τ

Nature Physics, Physical Review Letters, Astrophysical Journal

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150

1400

η τ

□ For seminal contributions to the theory of magnetic reconnection with broad applications to fusion and space plasmas, and to studies of waves and instabilities in complex plasmas. □

我实验室博士毕业生王尔东获 *IEEE /NPSS PAST* 毕业论文奖

2012 IEEE /NPSS PAST

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□

2008

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2006

2008

BNL

Ilan Ben-Zvi

(BNL and Stony Brook University) 2012

BNL

research associate

GaAs □

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□

□

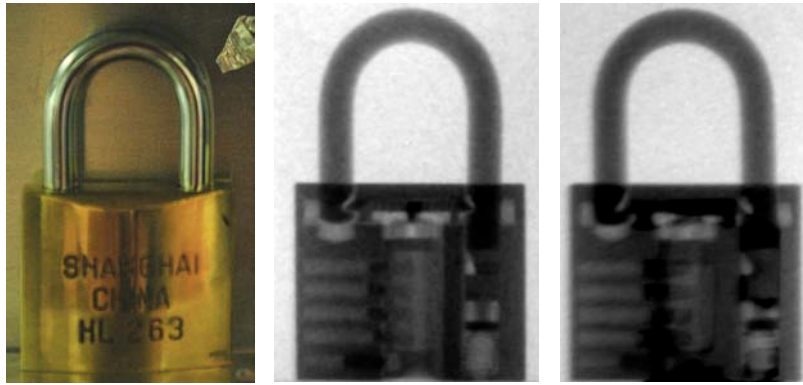
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北京大学中子成像装置建成

	RFQ				Peking University
Neutron Imaging Facility		PKUNIFTY	2012	2 20	2
MeV	RFQ				2.4×10^{11}
n/s	50		τ	2.35×10^4 n/cm ² /s	0.4
mm					

/

□



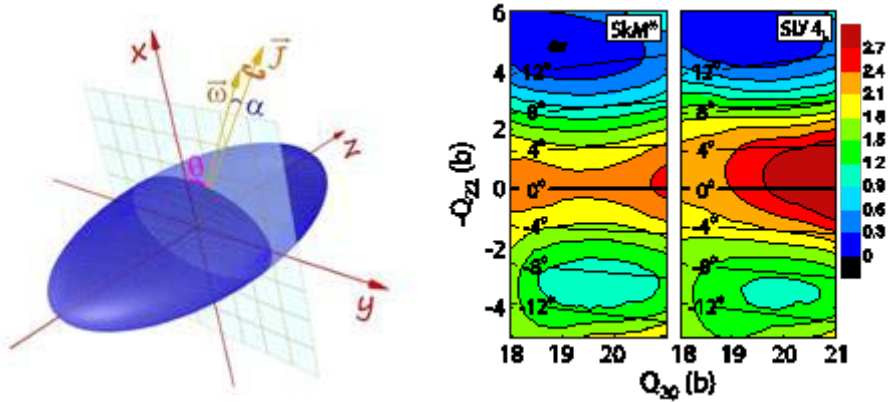
铜锁（左）及其中子成像照片，中为灌油前，右为灌油后。

 **研究进展**

高速转动量子体系转动取向的稳定性

τ
 60h
 τ
 orientation
 τ
 Skyrme Er-158
 τ

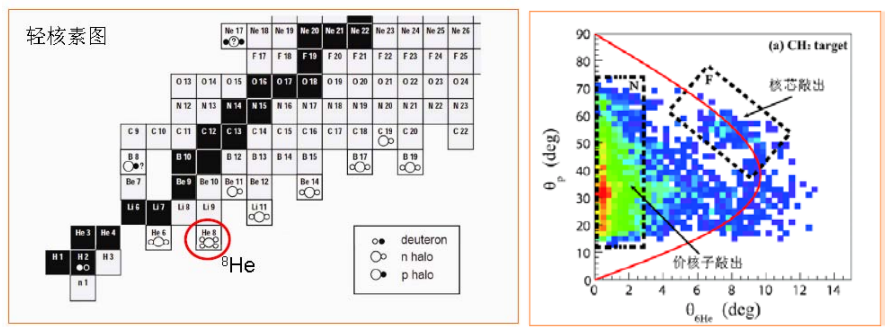
PRL, 108, 092501 (2012)



我实验室在中子滴线核 ^8He 研究取得重要进展

Phys. Lett. B 707(2012)46-51 Z.X.Cao, Y.L.Ye*, J.Xiao et al.

RIBF ^7He ^8He ^8He $Z=10$



□ 973

在顶夸克前后不对称性的研究中的新进展

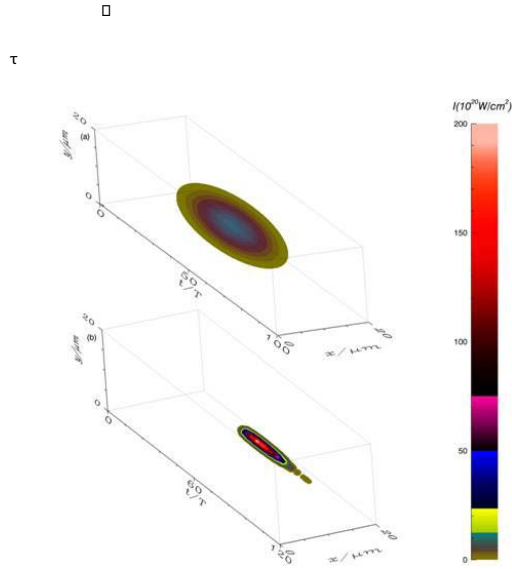
CDF 2011 1 CDF 3.4 D0 D0

Phy. Rev. Lett. (PRL, 108, 072002(2012))

激光等离子体透镜

Relativistic Intense, Short Gaussian Pulse by a Plasma Lens

Laser Shaping of a
PRL, 107, 265002 (2011)



激光透镜整形前（上图）后（下图）的激光分量分布

100GV/m

3~6

MeV

(PRL, 100, 135003 (2008); PRL, 102, 239502 (2009); PRL, 102, 239502 (2009))

PRL, 103, 245003 (2009); PRL, 107, 115002 (2011)

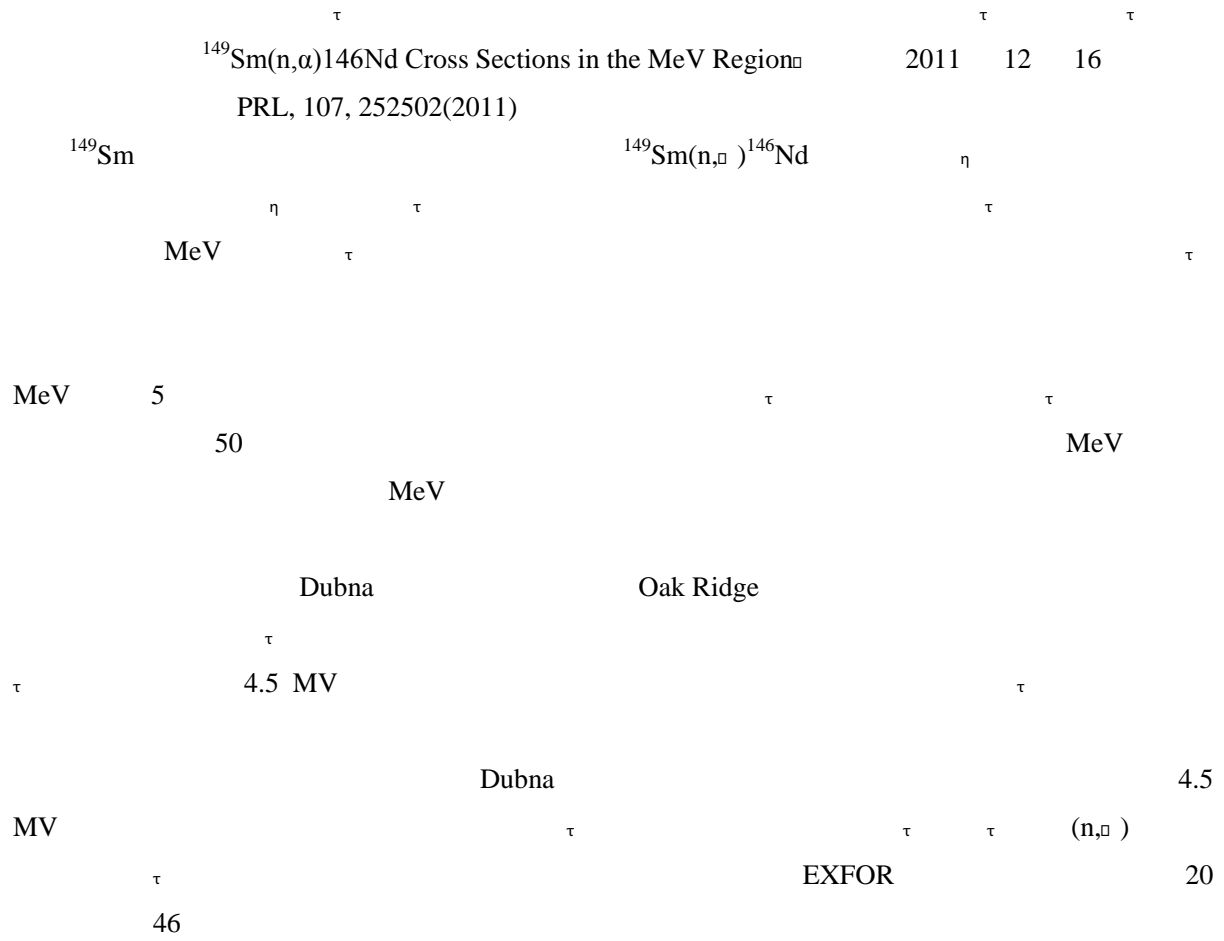
1021W/cm²

100MeV

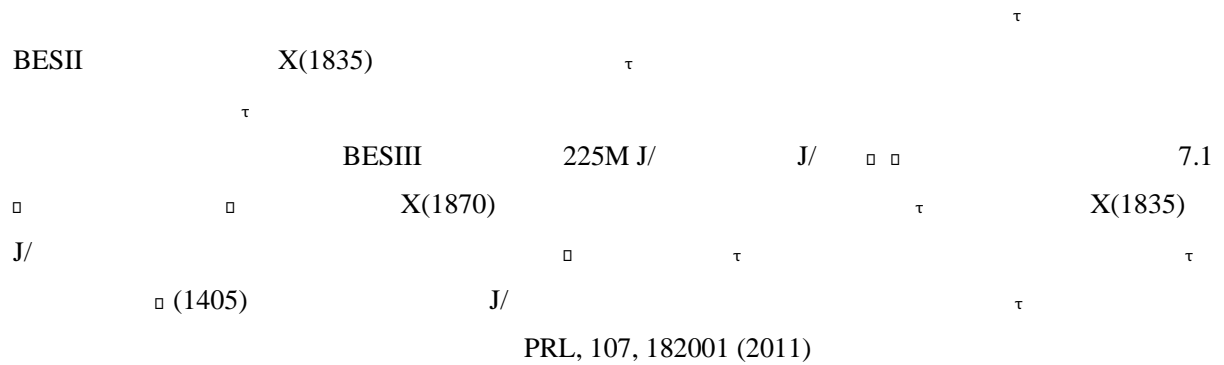
>1010 @10ps

: The present work undoubtedly breaks new ground and is of interest to many physicists

MeV 能区 $^{149}\text{Sm}(n,\alpha)^{146}\text{Nd}$ 反应截面的测量



BESIII 观察到一个新的强子态 X(1870)



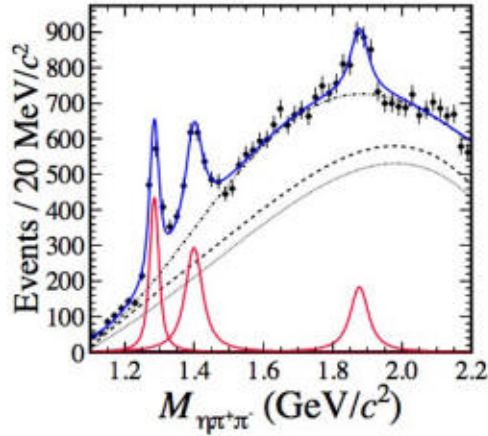


FIG. 4: Results of fit to the $M(\eta\pi^+\pi^-)$ mass distribution for events with either the $\eta\pi^+$ or $\eta\pi^-$ in the $a_0(980)$ mass window. The dotted curve shows the contribution of non- ω and/or non- $a_0(980)$ background, the dashed line also includes the contribution from $J/\psi \rightarrow b_1(1235)a_0(980)$, and the dot-dashed curve indicates the total background with the non-resonant $J/\psi \rightarrow \omega a_0^\pm(980)\pi^\mp$ included. $\chi^2/d.o.f$ is 1.27 for this fit.

III BESIII

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BESII/BEPC

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PRL

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PRL

原子核反磁转动现象的微观解释

2011 9 13

PRL, 107, 122501

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Antimagnetic Rotation Band

in Nuclei: A Microscopic Description

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105Cd

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2007

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2010 C Phys. Rev. C82, 054319 ISI Web of Knowledge
Highly Cited Papers□

《加速器物理与技术评论》杂志发表我实验室长篇评论文章

Review of Accelerator Science and Technology RAST

29 Development of Accelerator Mass Spectrometry and its Applications 2011 12
2008

2009

Tajima Habs 28 Laser Acceleration of Ions for Radiation
Therapy

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