中国科学院
CHINESE ACADEMY OF SCIENCES

中国科学院高能物理研究所
Institute of High Energy Physics, Chinese Academy of Sciences

怀柔科学城
HUAIROU SCIENCE CITY

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HEPS

HEPS

HEPS

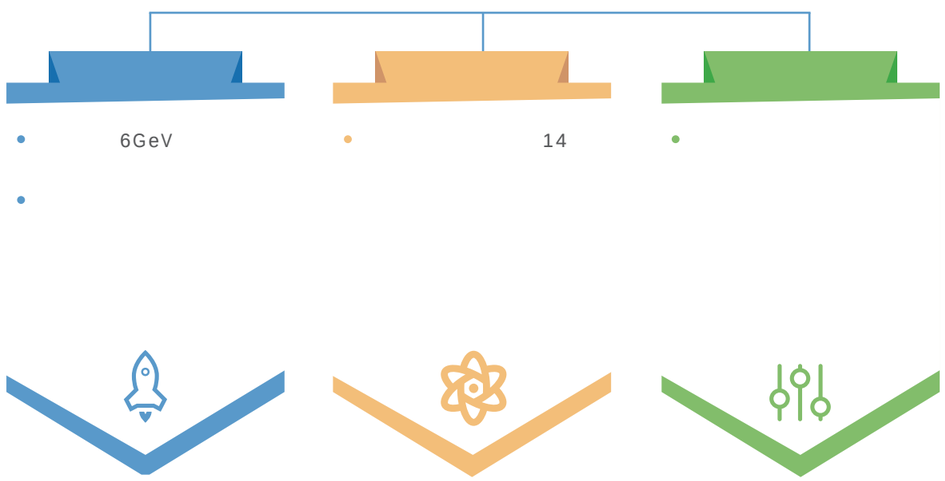
HEPS 12.5

“ ”

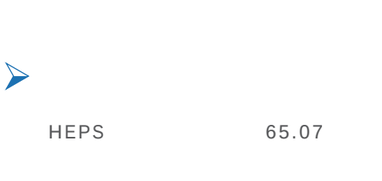
HEPS

HEPS

HEPS 6.5 2019 2019-2025 2025

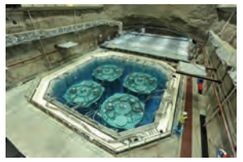


HEPS 65.07



2017 5

BEPC
BES
YBJ
BFEL
BESIII III
BEPCII
BSRF
DYB
CSNS
ADS —ADS
HXMT
HEPS
JUNO
LHAASO X



2012 3

2016

2016 4 5 BEPCII $1 \times 10^{33}/cm^2/s$

100 2016

BSRF 2000 SARS

03 NPGLAGNJC

V

X
(0.001 10nm X 0.001 0.1nm
) W.K. 1895

X
1912 , X ,
X

○ X

○ . .

V /.. /.

0..7

○ 1896 X

V

X X
X

X 4-12
X

1947

1-

2-

3-

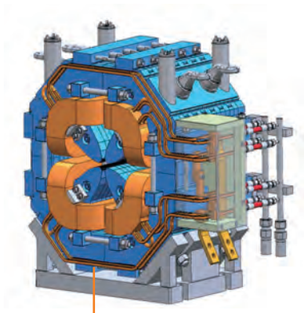
7BA 80T/m 300A DBPM

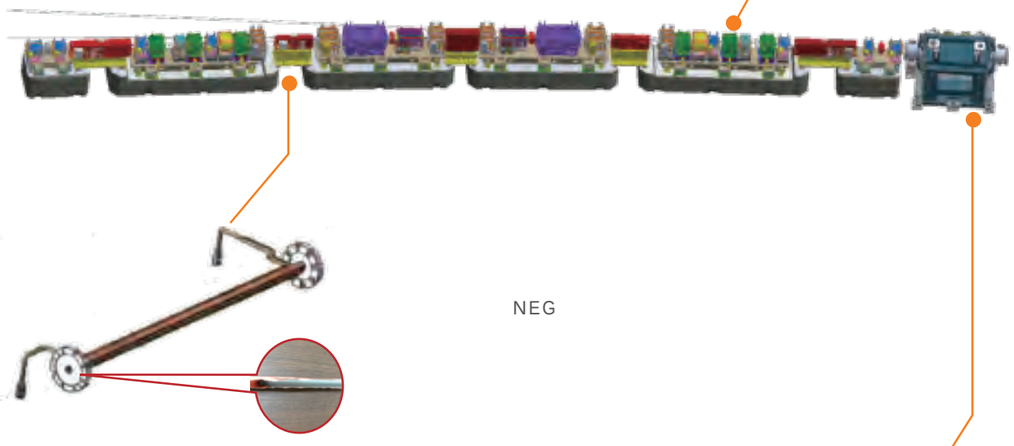
NEG 60pm·rad BEPCII

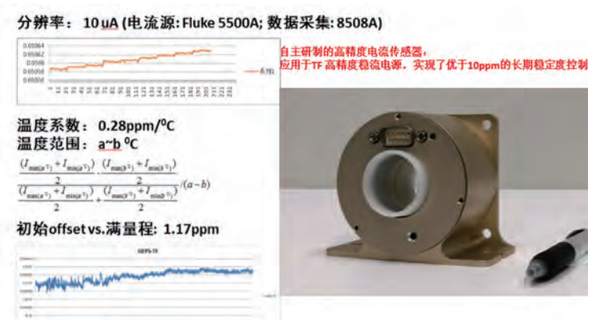
80T/m

2.5

±0.05mm





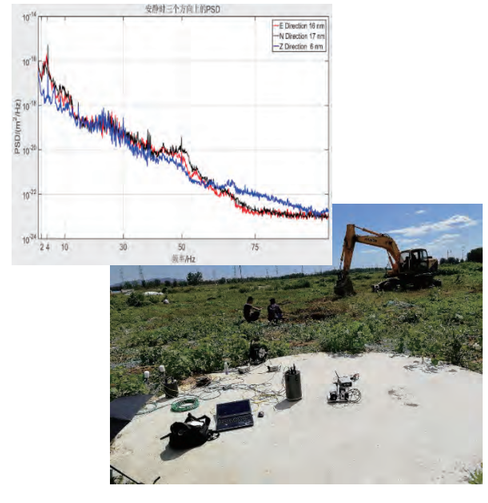


166MHz

NEG

20~40%

K



1-100Hz

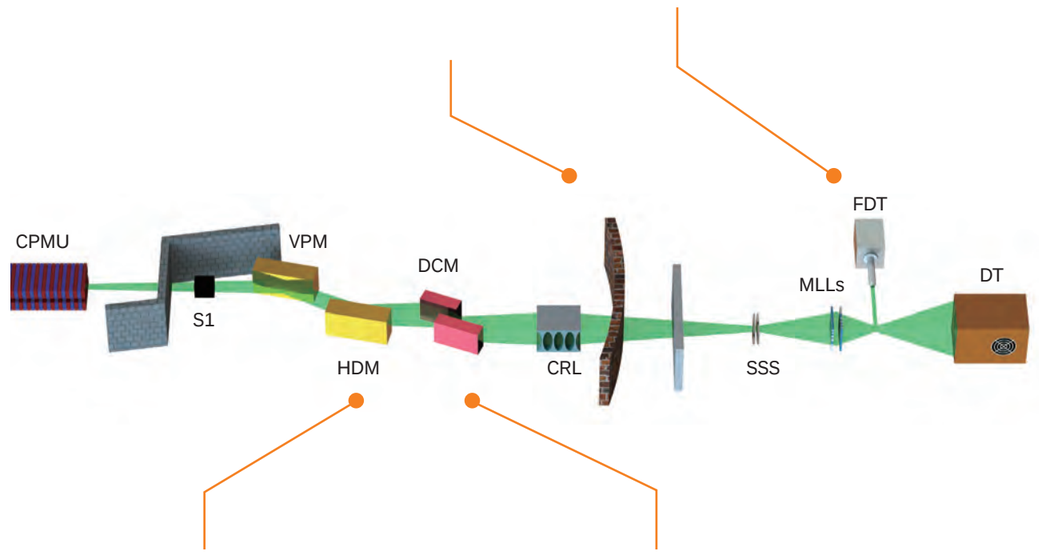
25nm

(FCNQ+RD FCNQ (FCNQ+RD FCNQ

30nm X

<20μm

X ≥ 50keV



800W

40nrad

±0.55kPa

—

32nrad

(FCNQ+RD FCNQ

FCNQ

FCNQ

HEPS

,

FCNQ

—

—

—

HEPS

50

30

HEPS

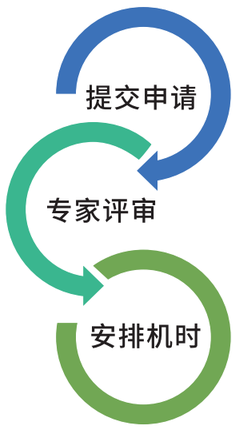
1μm

HEPS

7000
- 除去集中维护检修期，全年运行10个月，约7000小时

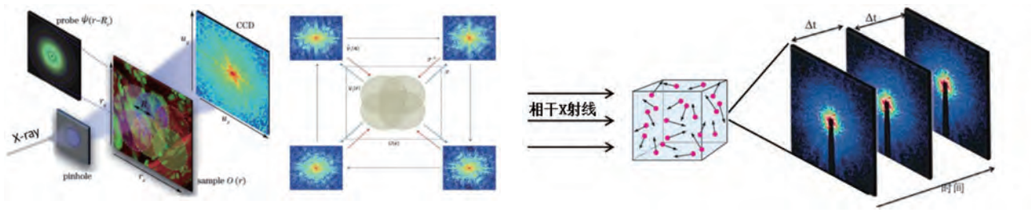
4000+
- 向用户供光4000~5000小时/站

70%
- 保证所外共享率不低于70%



HEPS

- DCT
- X
-
- CT



“

”

HEPS X SRX

4

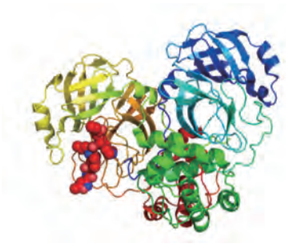
3D “

2025 ”

HEPS

X

HEPS CT

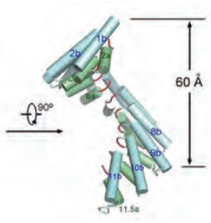


2003

SARS

2012

TAL



2005

DNA

2012

“ ”

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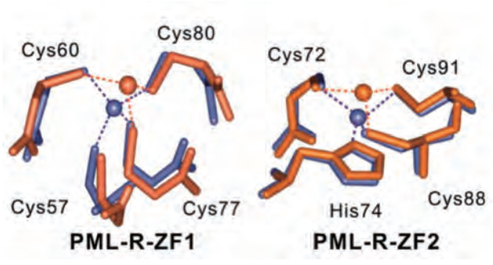
Science 308, 5730, 1887(2005)



“ ”

Science 328, 240(2010) “ 2010 ” “ 2010 ”

V

2016 12 8

X

SRX CT X X SRX CT

9900

3D

“ ”

6 18.5 “ ”

CurrentBiology

9.7 Cell

Cell

Top5 210

2000

10

○ “ ”

SRX CT SRX- - -

3D PC-CT 3D