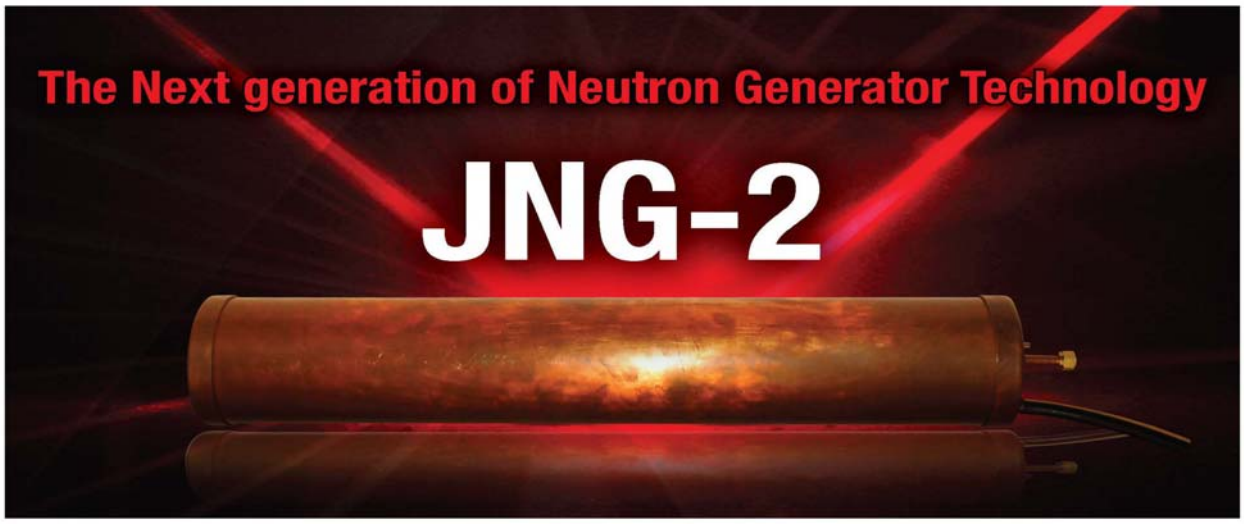
The Next generation of Neutron Generator Technology
下一代中子发生器科技



What is the Innovation?
创新之处在哪里？

A new discovery in plasma physics has led to a patented breakthrough neutron generator technology that achieves superior performance at lower costs.
等离子体物理中一个新发现引起中子发生器专利技术突破，以较低的成本实现了卓越的性能。

Why is it a leading technology?
为什么说它是领先科技？

A smaller and more compact device, adaptable and easily customizable to suit multiple applications in scientific research and industry.
一款更小巧更紧致的仪器，适应性强，易于定制以适应多种科研和工业方面的应用。

A simplified design allows more reliable performance and a longer operating life.
简化的设计允许更可靠的性能和更长的运行寿命

Reduced input power requirements and scalability for higher powered devices with a greater neutron output.
降低的输入功率要求和带更大的中子输出的更高功率设备的可扩展性。

Significantly reduced manufacturing costs mean a more affordable end product.
大大降低了的制造成本意味着更实惠的终端产品

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What are the applications? 有什么用途？

Research and Nuclear Industry: 研究和核工业

Calibrating neutron detectors for spontaneous fission neutrons and higher energy neutrons including AmBe sources, neutron activation analysis, transuranic waste assay, and neutron radiography.

用于自发裂变中子和较高能量中子包括AmBe源，中子活化分析，超铀废物化验，以及中子射线照相的校准中子探测器。

Security: Ship and air luggage security inspection, detection of explosives, chemical weapons and drugs.

安检：船运航运行李安检检查，爆炸物、化学武器及药物检测

Mining: Oil exploration and detection, on-line assaying of various materials (such as cement and coal).

矿山：石油勘探与检测，各种物质（如胶结物何煤炭）在线分析检验

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Technical Features: 技术特征

• Neutrons emitted are monoenergetic at 2.45MeV for D-D interactions and 14MeV for D-T interactions

中子发射单色D-D反应热量为2.45MeV， D-T反应为14MeV

• The neutron source behaves like a point source, localised to a central dense plasma core spread over a few cm. The neutrons are emitted isotropically.

中子源就像一个点源，位于中心密致的等离子体核心, 散开几厘米，各向同性中子发射

• An output of 10^6 n/s at 30cm gives a dose rate of 30 μSv/hr (3 mrem/hr). Exposure to 10^8 n/s at 30cm gives a dose rate of up to 2 mSv/hr (2 rem/hr).
在30cm处10^6 n/s输出剂量率为30 μSv/hr (3 mrem/hr). 30cm处，暴露于10^8 n/s剂量率达到2 mSv/hr (2 rem/hr).

• Our plasma discharge exhibits the unusual property of separate voltage and current control. This effect makes our discharge device extremely stable and easy to control. Neutron output can be controlled by varying the discharge voltage and current.
我们的等离子放电展示了独立的电压和电流控制的不寻常的特性，使得放电装置极其稳定，易控制。中子输出可通过变化放电电压和电流控制。

• Our device typically operates at half the voltages of accelerator based neutron tubes, making power supply requirements more accessible and operation much safer. This radical difference negates the need for SF6 insulating gas and other expensive measures for power supply lines.
根据中子管， 我们设备通常使用加速器中子管一半的电压，使得电压供应要求更容易操作安全地多。这种根本的区别使得SF6无需使用绝缘气体和其它用于电源线路的昂贵的措施。

• No maintenance required. No warm up time.
无需维护，无预热时间
• The device can be refuelled and serviced at the end of the operating life to extend its overall lifetime.
该设备在使用寿命结束时可重新添加燃料和维修以延长整体寿命。

Technical Specifications:

Product Id:	JNG-2	JNG-3
DD Neutron Yield	$1*10^5$ n/s	$1*10^6$ n/s
DT Neutron Yield	$1*10^7$ n/s	$1*10^8$ n/s
Voltage	45kV	65kV
Current	2mA	5mA
Power Consumption	90W	325W
Case Diameter	13cm	13cm
Case Length	65cm	65cm
Weight	13kg	13kg
Projected Lifetime	3-5 years	3-5 years

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