

Status of the PANDA-CJT

PANDA Meeting
Paris
September 2012

The logo for GSII, consisting of the letters 'G', 'S', and 'I' in a bold, black, sans-serif font. The second 'I' is stylized with a vertical yellow bar and a small orange circle above it.

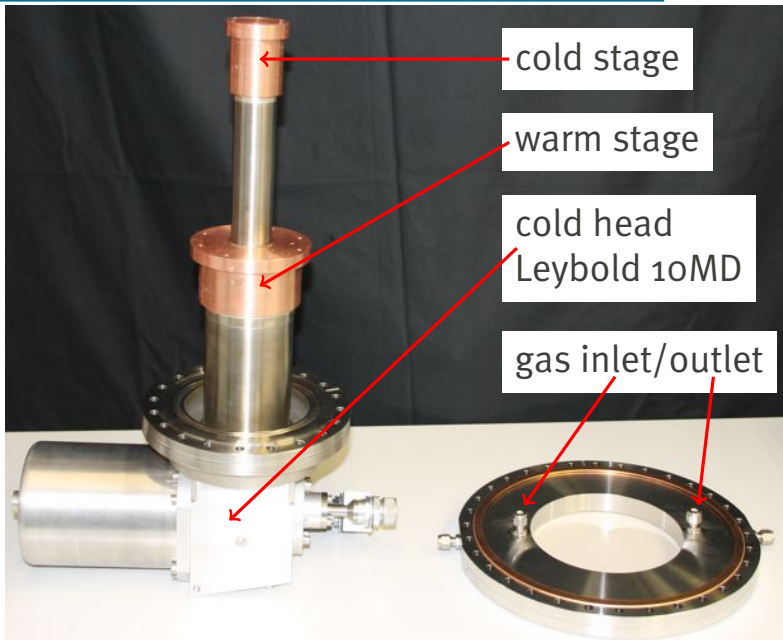
Bundesministerium
für Bildung
und Forschung



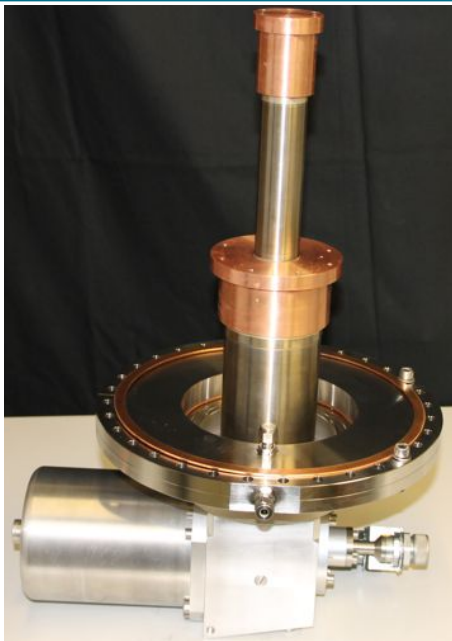
WESTFÄLISCHE
WILHELMS-UNIVERSITÄT
MÜNSTER

Alexander Täschner
(taschna@uni-muenster.de)

Assembly of the new cluster source (I)



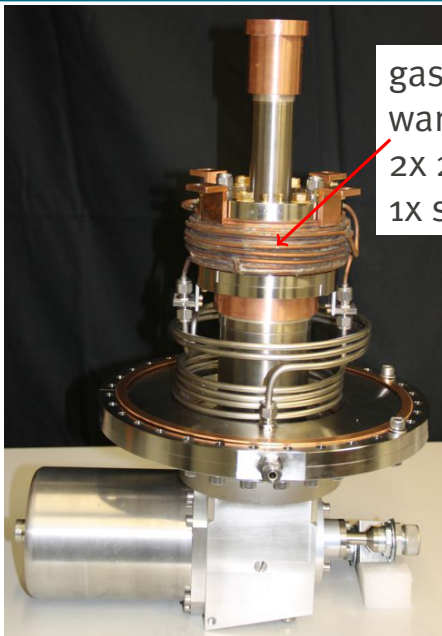
Assembly of the new cluster source (II)



Assembly of the new cluster source (III)



Assembly of the new cluster source (IV)



gas cooler at
warm stage
2x 25 W heater
1x silicon diode

Assembly of the new cluster source (V)



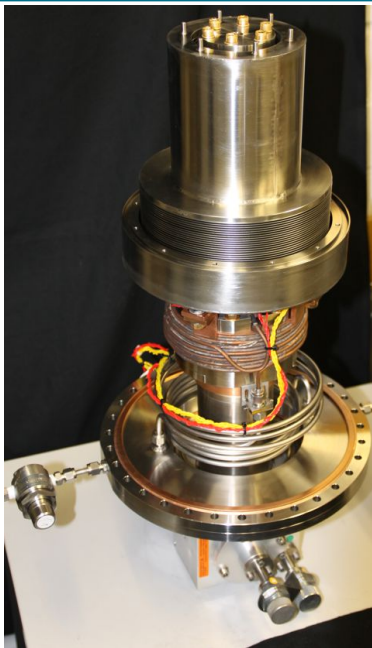
gas cooler at
cold stage
2x 50 W heater
2x silicon diode

system tested for leaks
up to 30 bar with helium

Assembly of the new cluster source (VI)



Assembly of the new cluster source (VII)



Test of the new cluster source + pumping system



Slow control system



- CompactRIO arrived in Münster
- cRIO-9074 equipped with 7 modules:
 - 1x NI-9476 digital output
 - 2x NI-9425 digital input
 - 1x NI-9264 analog output
 - 1x NI-9205 analog voltage input
 - 1x NI-9208 analog current input
 - 1x NI-9871 RS485 ports
- further assistance needed from the Warsaw group

Summary and outlook

- Status of the final cluster-jet target for \bar{P} ANDA
 - Design and construction is ongoing
 - cluster source is assembled and tested successfully using a nozzle with $\approx 60 \mu\text{m}$
 - new pumping system works as expected
 - new hydrogen purifier tested
 - minimum temperature (hydrogen flow: 5.6 l/min)
16.5 K at cool stage / 42.5 K at warm stage
 - Preparations for the vertical target pipe systems ongoing
- Further studies
 - Systematic studies of the slit collimators ongoing
 - First tests of mass measurements with clusters produced from the gas phase using a 0.5 mm orifice at the scattering chamber and a permanent magnet (surface magnetization $\approx 1.4 \text{ T}$) in conjunction with the MCP detector show promising results