

ENTRY NO: CU-25
Machine Name: NIH PetTrace
Date: 7/10/01 2:38:26 PM
Institution: National Institutes of Health
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HISTORY

Designed By: GE/Scanditronix
Construction Dates: 1999
First Beam Date: 2000
CHARACTERISTIC BEAMS

ions	/ energy(MeV/N)/current(pps)/power(w)
H-	16.5
D-	8.4

transmission efficiency(source to extract beam)
typical: % - **best:** %
tranverse emittance
emittance definition:
vertical: π mm mrad
horizontal: π mm mrad
longitudinal: $(\Delta) E/E$ %xdeg RF

USES

basic research: %	therapy: %
development: 5%	isotope production: 90%
other: %	maintenance: 5%
beam tuning: %	Total Time: 250h/year

TECHNICAL DATA

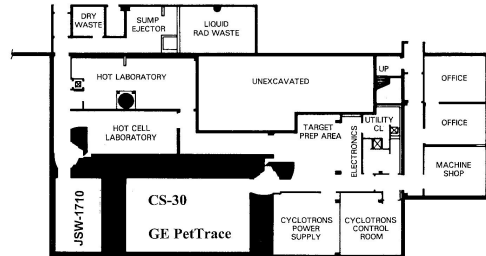
a)magnet: type: compact
Kb: MeV/A **Kf:** MeV/A
average field (min/max): T
number of magnet sectors:
hill angular width: hill angular width
spiral (max): deg
pole parameters
diameter: m
injection radius: m
extraction radius: m
hill gap: m **valley gap:** m
trim coils
-number: x2
-current(max): A-turns
harmonic coils
-number: xNsectorsx2
-current(max): A-turns
main coils
number: x2
total ampere-turns: A-turns
current: A
stored energy: MJ
weight - iron: t **coils:** t
power
main coils (total): kW
trim coils (total max): kW
refrigerator (cryogenic): kW
b)RF
acceleration

frequency range: MHz
harmonic modes:
number of dees:
number of cavities:
dee angular width: degrees
voltage
at injection: kV(peak to ground, max)
at extraction: kV(peak to ground, max)
peak: kV(peak to ground, max)
line power(max): kW
stability
phase: deg
voltage: %
injection
c)ion source:
external injection:
components:
source bias voltage: kV
injection energy: MeV/N
buncher:
injection efficiency: %
d)injector:
e)extraction

efficiency
typical: %
best: %
f)vacuum
pumps:
achieved vacuum: Pa
REFERENCES

EXPERIMENTAL FACILITIES

COMMENTS



NIH CYCLOTRON FACILITY B-3 LEVEL