ENTRY NO: CU-27
Machine Name: NIH - CS30
Date: 7/10/01 12:44:27 PM
Institution: National Institutes of Health
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HISTORY
Designed By: The Cyclotron Corporation
Construction Dates: 1985
First Beam Date: 1986
CHARACTERISTIC BEAMS

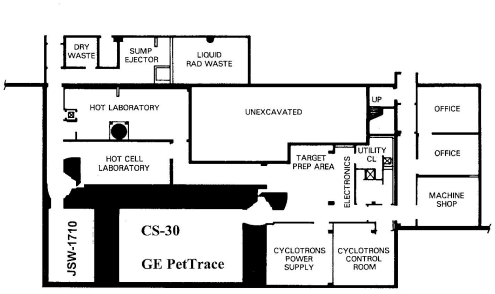
ions	/ **energy**(MeV/N)/**curre**nt(pps)/**powe**r(w)
p	26.5
d	14.8
He-3	38.1
He-4	29.6

transmision efficiency(source to extract beam)
typical: % - **best:** %
tranverse emmitance
emmitance definition:
vertical: π mm mrad
horizontal: π mm mrad
longitudinal: (Δ) E/E)%xdeg RF

USES
basic research: %
development: 5%
other: %
beam tuning: %
therapy: %
isotope production: 90%
maintenance: 5%
Total Time: 800h/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
IEEE Trans, Nucl. Sci. NS-14, 70-71 (1967) IEEE Trans, Nucl. Sci. NS-16, 500-503, (1969) Eleventh Intl. Conf. on Cyclotrons and Their Applications,Ionics Publ., pp 685-688, Tokyo (1987)
EXPERIMENTAL FACILITIES
Internal target system External beam line, 5 legs, multiple target changer on center leg. 6 hot cells for radiochemistry
COMMENTS



NIH CYCLOTRON FACILITY B-3 LEVEL