ENTRY No. 50

NAME OF MACHINE Meditron DATE June 1989

INSTITUTION Nihon Medi-Physics Co., Ltd. Takarazuka Facility

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IN CHARGE H. Tobiki REPORTED BY Y. Tanaka

HISTORY AND STATUS

DESIGN, date ... Model tests TCC CS-30

ENG DESIGN, date

CONSTRUCTION, date Aug. Nov., 1974

FIRST BEAM, date (or goal) Nov., 1974

MAJOR ALTERATIONS Addition of Yoke Iron

New Magnet PS

COST, ACCELERATOR

COST, FACILITY, total

FUNDED BY Nihon Medi-Physics Co., Ltd.

ACCELERATOR STAFF, OPERATION AND DEVELOPMENT

SCIENTISTS ... ENGINEERS 5

TECHNICIANS 7 CRAFTS

GRAD STUDENTS involved during year

OPERATED BY ... Research staff or ... Operators

OPERATION ... hr/wk, On target ... hr/wk

TIME DISTR. in house 100 %, Outside ... %

BUDGET, op & dev

FUNDED BY

RESEARCH STAFF, not included above

USERS, in house ... outside

GRAD STUDENTS involved during year

RESEARCH BUDGET, in house

FUNDED BY

MAGNET

POLE FACE, diameter (compact) 96. cm, R extraction 42. cm

R injection ... cm

GAP, min ... cm, Field ... kG
max ... cm, Field ... kG } at ... Ampere turns

AVERAGE FIELD at R ext 17.5 kG

B max/ <B>

NUMBER OF SECTORS { compact ... / separated ... } Spiral, max .. deg

SECTOR ANGLE (SSC) ... deg

TRIMMING COILS

CONDUCTOR, material and type

STORED ENERGY (cryogenic) ... MJ

POWER : main coils 50 max, kW ; current stability 10^{-5}

trimming coils ... max, kW ; current stability ...

WEIGHT : Fe 20 tons ; coils ... tons

COOLING system

ION ENERGY (bending limit) E/A = ... q^2/a^2 MeV/amu

(focusing limit) E/A = ... q^2/a^2 MeV/amu

ACCELERATION SYSTEM

DEES, number 2 ; angle 90 deg

BEAM APERTURE ... cm ; DC Bias 1.5 kV

TUNED by, coarse ... fine ...

RF ... to ... mHz, stable ±

Orb F ... to ... mHz

HARMONICS, RF/Orb F, used

DEE - Gnd, max ... kV, min gap ... cm

STABILITY, (pk-pk noise)/(pk RF volt)

ENERGY GAIN, max ... kV/turn

RF PHASE, stable to ± ... deg

RF POWER input, max ... kW

FREQUENCY MODULATION, rate ... /s

modulator, type

beam pulse, width

VACUUM SYSTEM

OPERATING PRESSURE 5×10^{-6} Torr or mbar

PUMPS, No, Type, Size 1 x 10" D.P.

1 x 4" D.P.

ION SOURCES

PIG type

INJECTION SYSTEM

EXTRACTION SYSTEM

FACILITIES FOR RESEARCH

SHIELDED AREA, fixed ... m^2 ; movable ... m^2

TARGET STATIONS 3 in 1 rooms

STATIONS served at same time, max

MAG SPECTROGRAPH, type

COMPUTER model

OTHER FACILITIES

CHARACTERISTIC BEAMS

PARTICLE	ENERGY (MeV) Goal	Achieved	CURRENT (pμA) Internal	External
proton	26	26	200	50
SECONDARY				(part/s)

BEAM PROPERTIES

	MEASURED	CONDITIONS
PULSE WIDTH	RF deg	pμ A of ... MeV ... ions
PHASE EXC, max	RF deg	pμ A of ... MeV ... ions
EXTRACT eff	%	pμ A of ... MeV ... ions
RESOL ΔE/E	%	pμ A of ... MeV ... ions
EMITTANCE (π mm. mrad) { ... axial / ... rad }		pμA of ... MeV ... ions

OPERATING PROGRAMS, time distribution

BASIC NUCLEAR PHYSICS .. SOLID STATES PHYSICS ....

BIOMEDICAL APPLICAT. .... ISOTOPE PRODUCTIONS ....

REFERENCES/NOTES

PLAN VIEW OF FACILITY, NOTEWORTHY FEATURES, COMMENTS