ENTRY No. C41

NAME OF MACHINE AGOR DATE June 1989

INSTITUTION Institut de Physique Nucléaire - Kernfysisch Versneller Instituut

ADDRESS 91406 Orsay, France - Zernikelaan 25, 9747 AA Groningen, The Netherlands

TEL TELEX

IN CHARGE S. Galès REPORTED BY H.W. Schreuder

HISTORY AND STATUS

DESIGN, date 1986 Model tests

ENG DESIGN, date 1989

CONSTRUCTION, date 1988-1992

FIRST BEAM, date (or goal) 1992

MAJOR ALTERATIONS

COST, ACCELERATOR Mfl 33

COST, FACILITY, total

FUNDED BY

ACCELERATOR STAFF, OPERATION AND DEVELOPMENT

SCIENTISTS ENGINEERS

TECHNICIANS CRAFTS

GRAD STUDENTS involved during year

OPERATED BY Research staff or Operators

OPERATION hr/wk, On target hr/wk

TIME DISTR. in house %, 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) 188 cm, R extraction 91 cm

R injection 1,3-1,7 cm

GAP, min 7 cm, Field kG } at

max cm, Field kG } Ampere turns

AVERAGE FIELD at R ext 17-41 kG

B max/ <B>

NUMBER OF SECTORS { compact 3 / separated - } Spiral, max deg

SECTOR ANGLE (SSC) deg

TRIMMING COILS 15

CONDUCTOR, material and type NbTi

STORED ENERGY (cryogenic) 57 MJ

POWER : main coils max, kW ; current stability

trimming coils 30 max, kW ; current stability

WEIGHT : Fe 320 tons ; coils tons

COOLING system

ION ENERGY (bending limit) E/A = 600 q^2/a^2 MeV/amu

(focusing limit) E/A = 200 q^2/a^2 MeV/amu

ACCELERATION SYSTEM

DEES, number 3 ; ~~xxxx~~ in valleys ~~xxx~~

BEAM APERTURE 1.8 cm ; DC Bias ----- kV

TUNED by, coarse short fine short

RF 24 to 63 MHz, stable ±

Orb F 6 to 63 MHz

HARMONICS, RF/Orb F, used 2,3,4

DEE - Gnd, max 110 kV, min gap cm

STABILITY, (pk-pk noise)/(pk RF volt) 10^{-4}

ENERGY GAIN, max 300 kV/turn

RF PHASE, stable to ± 0,2 deg

RF POWER input, max 3*70 kW

FREQUENCY MODULATION, rate /s

modulator, type

beam pulse, width

VACUUM SYSTEM

OPERATING PRESSURE $< 10^{-7}$ Torr or mbar

PUMPS, No, Type, Size 3 cryopumps

2 turbopumps

ION SOURCES multicusp, ecr, polarized (all external)

INJECTION SYSTEM

axial

EXTRACTION SYSTEM

1.electrostatic, 2.electromagnetic

FACILITIES FOR RESEARCH

SHIELDED AREA, fixed m² ; movable m²

TARGET STATIONS in 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
p	120-200			
α	120-380			
q/A=0,3	10- 50 MeV/A			
q/A=0,14	6- 10 "			
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