

ENTRY NO. C12 Date 01/07/1992.....
 Name of Machine ... GANIL C01 and C02 (Upgraded : OAE (1989) and DAI (first beam June '92) projects).....
 Institution GANIL.....
 Address ... BP 5027 - F 14021 CAEN Cedex.....
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 In Charge: M. BAJARD Reported by: GANIL STAFF.....

HISTORY : see SSC1, 2 entry
MILESTONE DATES:
 Design Model Tests
 Construction First Beam
DESIGN/CONSTRUCTION BY:
 in house other
COST: Accelerator Facility
FUNDED BY:

STATUS : see SSC1, 2 entry
STAFF: Machine
 Scientists Engineers
 Technicians Students
 Research (in house/external)
 Scientists / Engineers /
 Technicians / Students /
BUDGET: Machine Funded by
 Research Funded by
TIME DISTRIBUTION:
 Basic Research (in house/external) % / %
 Applied Program (in house/external) % / %
 Development % Maintenance %

MAGNET
POLE PARAMETERS: C01 7.41
 Diameter 131.6... cm R_{extract} 48.825... cm R_{inject} C02 3.64... cm
HILL PARAMETERS: Gap (min) .21... cm B_{max} T
 (Ø AT) Gap (max) cm B_{min} T
VALLEY PARAMETERS: Gap (min) .30... cm B_{max} T
 (Ø AT) Gap (max) cm B_{min} T
AVERAGE FIELD: < B >_{min} T < B >_{max} T
NUMBER OF SECTORS: compact/separated 3... /
 sector angle deg. spiral (max) tg. = 0.033... deg.
FIELD TRIMMING: Trim Coils .. 6 (circular).....
 Harmonic Coils
 Other
CURRENT: Main Coils .. 1500... Amps Stability 10⁻⁵.....
 Trim Coils 200... Amps Stability 10⁻⁴.....
 Stored Energy (cryogenic) MJ
WEIGHT: Iron Conductor
ION ENERGY: Bending Limit E/A = 28..... q²/A² MeV/u
 Focussing Limit E/A = q/A MeV/u

ACCELERATION SYSTEM
FUNDAMENTAL ACCELERATION:
 Description: .180.º.D. resonator tuned by two movable panels
 No. of Gaps/turn ... 2 dE/dn(max) 0.18... MeV/q
 Voltage(max) 0.09... MV Harmonic f_{rf}/f_{ion} ... 3.....
 Freq 7.14... MHz Power in(max) MW
 Stability: Phase ... 2.01º Voltage 10.....
OTHER CAVITIES (Flattopping or otherwise):
 Description:
 Region of Influence: R_{min} cm R_{max} cm
 No. of Gaps/turn dE/dn(max) MeV/q
 Voltage(max) MV Harmonic f_{rf}/f_{ion}
 Freq MHz Power in(max) MW
 Stability: Phase Voltage

VACUUM SYSTEM
OPERATING PRESSURE: 7.10⁻⁶... Pascal.....
PUMPS: No. and type .1. cryo. on vacuum chamber (200001/s).....
 2. cryo. on HF resonator (20000.1/s).....

ION SOURCE(S)

Type	Intensity (mA)	ε _n = βγc (πmm mrad)	Ion Species
(a) . C01 .. ECR4 (14.5 GHz).....			
(b)			He ³⁺
(c) . C02 .. ECR3 (10 GHz).....			U ²³⁸⁺
(d)			

INJECTION SYSTEM

C01: 100kV injection line-spiral, infl Efficiency up to 65. %
 C02: 20kV injection line-Muller infl up to 25 %

EXTRACTION SYSTEM

electrostatic deflector..... Efficiency 100.... %
 + electrostatic quadrupole

CHARACTERISTIC BEAMS

Accelerated Ions	E/A (MeV/u)	Current (part μA)	
		Internal	External
(a) . C01 .. Ne ⁶⁺	1.....		4.....
(b)	0.4.....		0.2.....
(c) . C02 .. Ne ⁶⁺	1.....		1.2.....
(d)	0.4.....		0.02.....
Secondary Particles	E (MeV)	part/sec	
(a)			
(b)			
(c)			

EXTRACTED BEAM PROPERTIES:(maximum values full width)

For μA of MeV/u ions
 ΔE/E 0.5-1.5 % Δφ 12..... º of
 ε_n = βγc x 30 - 45. πmm mrad z 45..... πmm mrad

FACILITIES FOR RESEARCH : see SSC1, 2 entry

SHIELDED AREA: Fixed m² Moveable m²

Target Stations: No. Served At Same Time:

MAGNETIC SPECTROMETERS:

OTHER FACILITIES:

REFERENCES/NOTES

- (a) M.P. BOURGABEL et al. 12th Int. Conf. on cyclotron BERLIN89
- (b) C. RICAUD et al. this proceedings

PLAN VIEW OF FACILITY, COMMENTS

