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HOLIFIELD HEAVY ION RESEARCH FACILITY #36

- NATIONAL FACILITY FOR HEAVY ION RESEARCH
- ACCELERATORS
  - 25-MV TANDEM ACCELERATOR
  - OAK RIDGE ISOCHRONOUS CYCLOTRON (ORIC)
- EXPERIMENTAL APPARATUS
- USER SUPPORT
  - TECHNICAL ASSISTANCE
  - ACCOMMODATIONS

#36

Table 1.1. Distribution of users who participated in research programs at the Holifield during the twelve-month period between October 1, 1988, and September 30, 1989

Institutions	Number of Researchers
U.S. UNIVERSITIES	
Colorado School of Mines	1
Eastern Kentucky University	1
East Carolina University	1
Furman University	2
Georgia State University	5
Georgia Institute of Technology	5
Hope College	1
Indiana University	1
JIHIR	1
Louisiana State University	2
Mississippi College	1
Mississippi State University	4
Naval Academy	1
ORAU	4
Oregon State University	4
Tennessee Technological University	4
Texas A&I University	1
Texas A&M University	12
University of Florida	6
University of Kentucky	3
University of Maryland	7
University of Michigan	1
University of North Carolina	1
University of Pennsylvania	1
University of Pittsburgh	4
University of Rochester	7
University of Southern Colorado	1
University of Tennessee	12
Vanderbilt University	17
Washington University	5
Western Kentucky University	4
Yale University	4
	124
NATIONAL LABORATORIES	
Idaho National Energy Laboratory	1
Lawrence Berkeley Laboratory	4
Lawrence Livermore National Laboratory	2
Oak Ridge National Laboratory	34
	41
NON-U.S. INSTITUTES	
BARC (India)	1
BHU (India)	1
CEN/Saclay (France)	2
Inst. Kernphysik, Julich (Germany)	2
MSI, Stockholm (Sweden)	1
Nazionale di Fisica Nucleare (Italy)	9
Oxford University (United Kingdom)	1
Ruder Boskovic Inst. (Yugoslavia)	1
University of Copenhagen (Denmark)	1
University of Heidelberg (Germany)	1
University of Leuven (Belgium)	1
University of Seville (Spain)	1
University of Sussex (United Kingdom)	1
University of Mexico (Mexico)	2
	25
Total	190

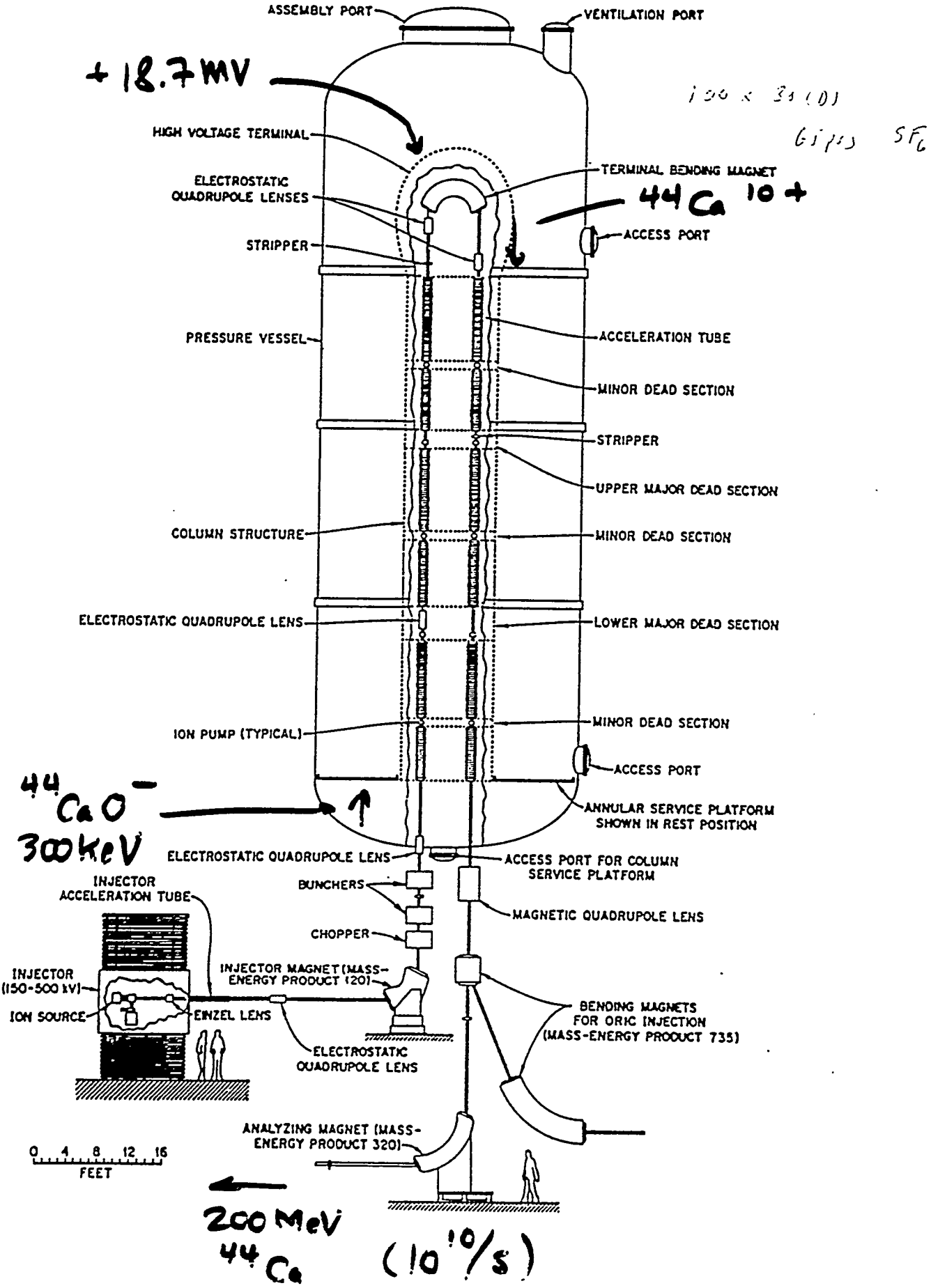
Table II.3. HHIRF Beams Provided for Scheduled Experiments

BEAM	MAXIMUM ENERGY (MeV)	MODE*	BEAM	MAXIMUM ENERGY (MeV)	MODE*
^{1}H	25	T	^{51}V	216	T
^{7}Li	128	T,C	^{52}Cr	230	T
^{9}Be	158	C	^{56}Fe	890	T,C
^{10}B	168	C	^{58}Ni	1010	T,C
^{11}B	169	T,C	^{60}Ni	228	T
^{12}C	300	T,C	^{63}Cu	189	T
^{13}C**	67	T	^{65}Cu	290	T
^{16}O	405	T,C	^{64}Ni**	290	T
^{17}O**	381	C	^{70}Ge	154	T
^{18}O**	356	T,C	^{74}Ge	306	T
^{19}F	190	T	^{76}Ge	305	T
^{23}Na	117	T	^{79}Br	1000	C
^{24}Mg	200	T,C	^{81}Br	604	C
^{25}Mg	132	T	^{74}Se	164	T
^{26}Mg**	200	T	^{76}Se	169	T
^{27}Al	196	T	^{78}Se	320	T
^{28}Si	333	T,C	^{80}Se	285	T
^{29}Si	150	T	^{82}Se	315	T
^{30}Si	264	T	^{90}Zr	500	T
^{31}P	136	T	^{93}Nb	276	T
^{32}S	725	T,C	^{107}Ag	374	T
^{34}S**	170	T	^{109}Ag	733	C
^{36}S**	165	T	^{116}Cd**	499	C
^{35}Cl	703	T,C	^{112}Sn**	570	C
^{37}Cl	187	T	^{116}Sn**	684	T,C
^{40}Ca	601	C	^{120}Sn	240	T
^{44}Ca**	205	T	^{148}Nd**	700	C
^{48}Ca**	200	T	^{150}Nd**	760	C
^{45}Sc	200	T	^{150}Sm**	701	C
^{46}Ti**	280	T	^{156}Gd**	885	C
^{48}Ti	581	T,C	^{197}Au	591	T
^{49}Ti**	235	T	^{208}Pb	982	C
^{50}Ti**	250	T	^{238}U	119	T

* T = Tandem alone; C = Coupled mode.
** Beam provided with separated isotope probe sample.

ORNL-DWG 87-7160

HHIRF TANDEM ACCELERATOR



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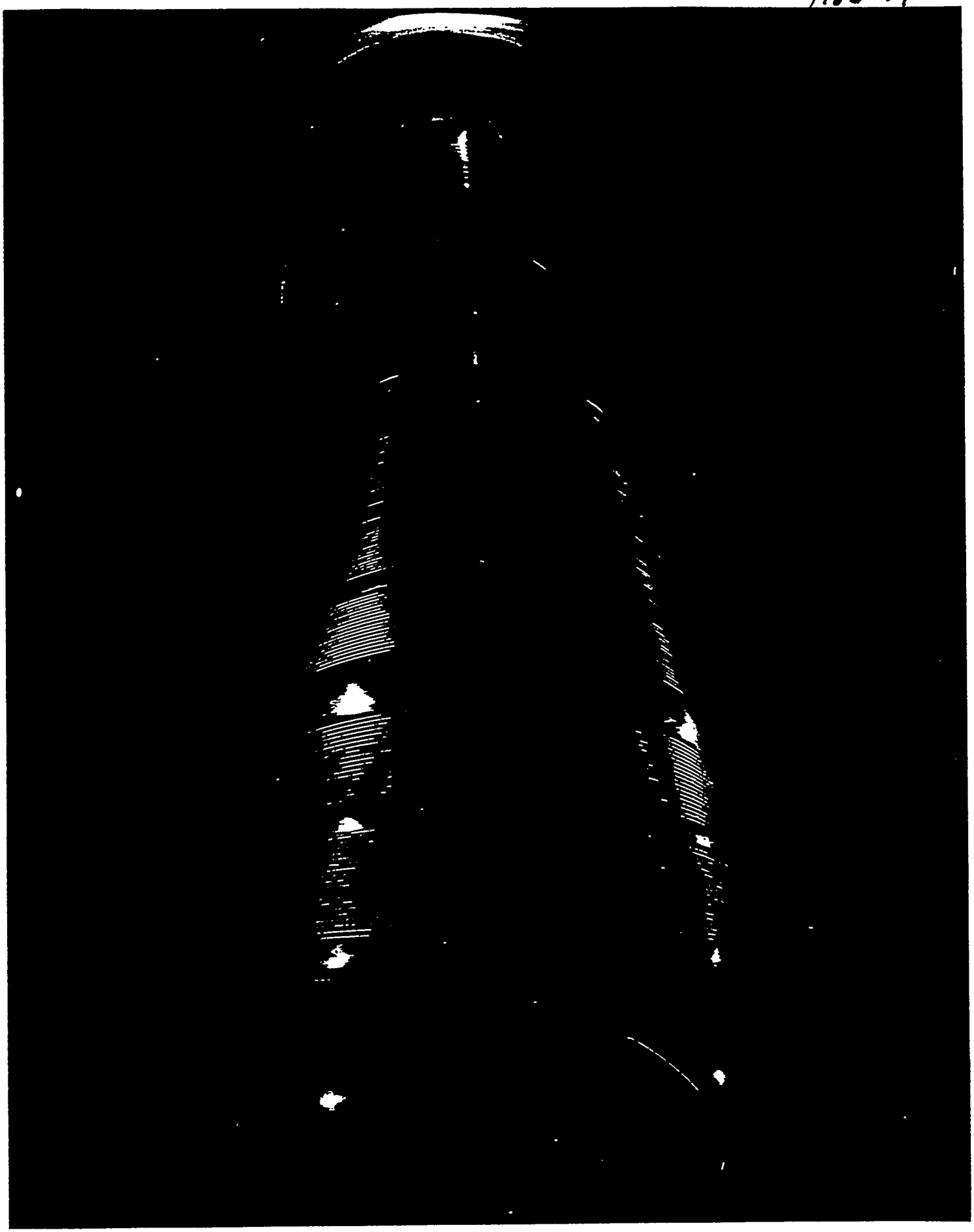

OPERATIONS

- SAFETY
  - LOW HAZARD FACILITY
  - RADIATION
  - SUFFOCATION

- EFFICIENCY
  - MINIMIZE UNNECESSARY DOWNTIME
  - PROVIDE REQUIRED BEAMS WITH REQUIRED INTENSITIES

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4 – SENIOR CORPORATE FELLOW
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6 – ON LOAN TO OFFICE OF LABORATORY COMPUTING
7 – ON ASSIGNMENT TO MANNE SIEGBAHN INSTITUTE, STOCKHOLM
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