

Radiation effects facility

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In this reporting period, the Radiation Effects Facility (REF) was used for 2,373 hours, which is a ~5% decrease over the 2,498 hours used in the 2006-2007 reporting period. ~350 scheduled hours were lost during unscheduled maintenance in February - March 2008. Users of the facility (and hours used) over the past year were: Boeing Satellite Systems (378), SEAKR (259), Xilinx Corporation (218.25), NASA JPL (197.75), Aeroflex (177.25), NAVSEA (174), NASA GSFC (306.25), Sandia National Laboratory (87), Air Force Research Laboratory (77.5), International Rectifier (63), Northrop Grumman (59), Ball Aerospace (56.5), PVAMU (40), General Dynamics (35), Radiation Assured Devices (35), BAE Systems (32), Lockheed Martin (28), Intel Corporation (23.25), Honeywell (21.25), Maxwell Technologies (19.5), Intersil (16), SOREQ NRC (16), Medtronics (14.5), ST Micro (11.5), VPT Incorporated (11), NASA JSC (8) and Harris Corporation (8). New users included SOREQ NRC, Medtronics, ST Micro and VPT Incorporated.

Table I compares the facility usage by commercial and government customers. The ratio from this reporting year (62% to 38%) is similar to the trend seen in previous reporting periods and commercial hours still dominate. Commercial hours decreased by 8% and government hours increased by 1% over hours from 2006-2007. Much of the testing conducted at the facility continues to be for defense systems by both government and commercial agencies. It is expected that the facility will continue to be as active in future years.

Table I. Radiation Effects Facility usage by commercial and government customers for this and previous reporting years.

Reporting Year	Total Hours	Commercial Hours (%)	Government Hours (%)
2007-2008	2,373	1,482 (62%)	891 (38%)
2006-2007	2,498	1,608 (64%)	890 (36%)
2005-2006	2,314	1,314 (57%)	1,000 (43%)
2004-2005	2,012	1,421 (71%)	591 (29%)
2003-2004	1,474	785 (53%)	689 (47%)
2002-2003	1,851	1,242 (67%)	609 (33%)
2001-2002	1,327	757 (57%)	570 (43%)
2000-2001	1,500	941 (63%)	559 (37%)
1999-2000	548	418 (76%)	131 (24%)
1998-1999	389	171 (44%)	218 (56%)
1997-1998	434	210 (48%)	224 (52%)
1996-1997	560	276 (49%)	284 (51%)
1995-1996	141	58 (41%)	83 (59%)

Table II lists the beams used this year and the number of times each was requested. In total, 550 beams were run this year which is identical to the previous year. 15 and 25 MeV/u Kr and Xe were most utilized as well as 15 MeV/u Au. A new beam of 40A MeV ^{14}N was added to SEELine users list.

Table II. Beams used and the number of times requested for this reporting year and previous years. 550 beams were run this year.

Particle Type	A MeV	Requests 2000-01	Requests 2001-02	Requests 2002-03	Requests 2003-04	Requests 2004-05	Requests 2005-06	Requests 2006-07	Requests 2007-08
^{20}Ne	15	1	13	19	15	23	36	39	37
^{40}Ar	“	4	24	43	46	51	56	60	57
^{63}Cu	“	N/A	N/A	5	14	22	23	25	24
^{84}Kr	“	6	26	55	47	49	75	81	77
^{109}Ag	“	N/A	N/A	6	18	15	26	28	28
^{129}Xe	“	5	18	43	51	50	78	84	84
^{141}Pr	“	N/A	N/A	2	2	1	4	4	4
^{165}Ho	“	3	11	17	7	8	22	24	24
^{181}Ta	“	4	5	4	3	5	3	3	3
^{197}Au	“	12	9	23	34	34	46	50	49
^{22}Ne	25	27	13	19	6	15	21	23	20
^{40}Ar	“	31	20	32	16	25	31	33	35
^{84}Kr	“	32	20	35	26	33	40	43	45
^{129}Xe	“	25	18	24	15	25	34	37	40
H-D	40	1	8	10	4	7	4	4	5
^{14}N	“	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3
^{20}Ne	“	5	3	5	6	11	2	2	3
^{40}Ar	“	12	8	10	7	13	7	8	9
^{78}Kr	“	13	9	6	5	10	3	3	3
Total		192	207	360	324	399	511	552	550