

**Texas A&M cyclotron radiation effects facility**  
**April 1, 2012 – March 31, 2013**

H. L. Clark, J. Brinkley, L. Chen, G. Chubarian, V. Horvat, B. Hyman, B. Roeder  
and G. Tabacaru

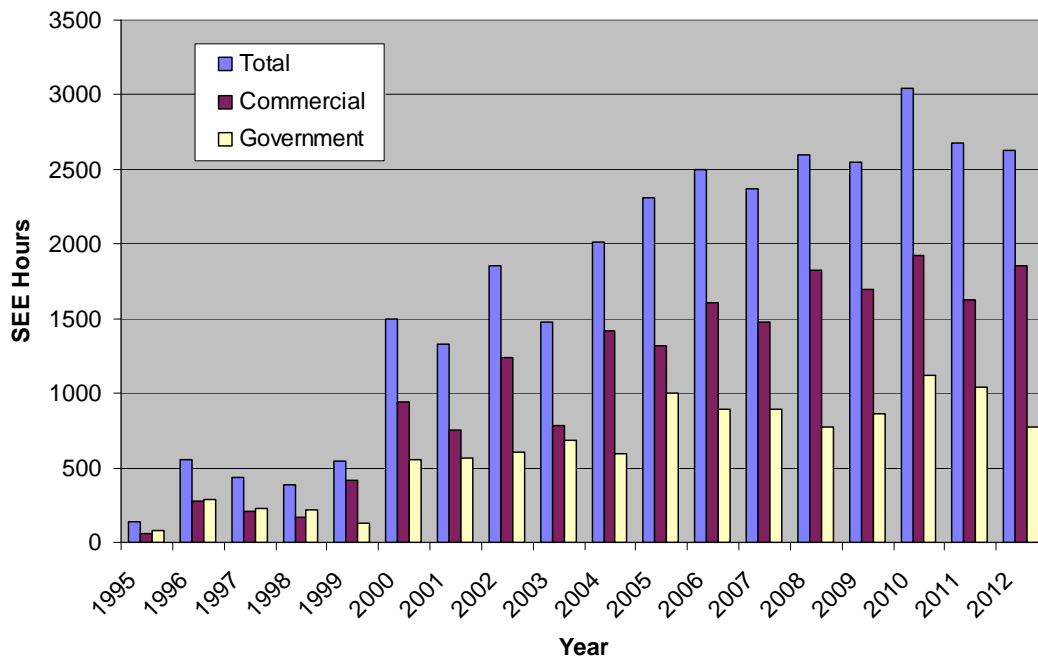
The activity of the Radiation Effects Facility (REF) decreased slightly over the previous reporting year. In this reporting period, the facility was used for 2,626 hours, which is a ~2% decrease over the 2,673 hours used in the 2011-2012 reporting period, however this year was the third highest usage year ever. Nearly 1,500 hours were lost in year 2012 to unscheduled maintenance. Users of the facility (and hours used) over the past year were: SEAKR (217.5), Intersil (213), Sandia National Lab (200), NAVSEA (147), Honeywell (144), NASA GSFC (131.5), Boeing Satellite Systems (111), HIREX-France (111), Aeroflex (102), BAE Systems (92), NASA JPL (90.5), Defense Threat Reduction Agency (87.5), International Rectifier (70.5), Thales Alenia Space Agency-France (59), NASA JSC (56), Northrop Grumman (55.5), General Dynamics (48), TRAD-France (48), VPT Inc (44.5), Xilinx Corp (44.5), EADS/IDA-France/Germany (44), Microsemi Corp (43), Maxwell Technologies (41.5), Texas Instruments (40), ATMEL-France (30), Sun Tronics (29.5), University of Michigan (29), Air Force (28), Bionetics (24), JD Instruments (24), Radiation Assured Devices (24), Woosong University-Korea (24), SEMICOA (18), Ball Aerospace (16), JAXA-Japan (16), Johns Hopkins (16), L-3 Communications (16), MSEI (16), DRS Sensors (14), Microsat-Canada (12), University of Maryland (12), Data Device Corp (11.5), Fuji Electric-Japan (8), Lockheed Martin (8) and Peregrine Semiconductor (8). New users

**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 (%)
2012-2013	2,626	1,856 (71%)	770 (29%)
2011-2012	2,673	1,630 (61%)	1,043 (39%)
2010-2011	3,042	1,922 (63%)	1,121 (37%)
2009-2010	2,551	1,692 (66%)	859 (34%)
2008-2009	2,600	1,828 (70%)	772 (30%)
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%)

included ATMEL, Bionetics, EADS/IDA, Woosong University, JAXA, MSEI, DRS Sensors, Microsat, University of Maryland and Fuji Electric.

Table I compares the facility usage by commercial and government customers. The ratio from this reporting year (71% to 29%) is similar to the trend seen in previous reporting periods and commercial hours still dominate (see Fig 1). Commercial hours increased by 14% and government hours decreased by 26% over hours from 2011-2012. 15 and 25 MeV/u Kr and Xe were most utilized as well as 15 MeV/u Au. No new beams were added to SEELine users list. 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. Almost 20% (352 hours) of the commercial hours were from foreign agencies from Canada, France, Germany, Japan and Korea. This is nearly a 300% increase from last year.



**FIG. 1.** Radiation Effects Facility usage by commercial and government customers for this and previous reporting years. The ratio from this reporting year (71% to 29%) is similar to the trends seen in previous reporting periods where commercial hours still dominate. Almost 20% (352 hours) of the commercial hours were from foreign agencies from Canada, France, Germany, Japan and Korea. This is nearly a 300% increase from last year.