HFIR Irradiation Experiments – F. W. Wiffen, Oak Ridge National Laboratory

The current status of Fusion Materials Program irradiation experiments in the HFIR reactor is tabulated.

Table - Summary of Recent, Current and Planned Fusion Materials Program Experiments in the High Flux Isotope Reactor (HFIR)

Experiment Designation	Primary Materials	Specimen Types*	Irradiation Temperature (°C)	Max Exposure (dpa)	Number of Reactor Cycles	Irradiation Period (month/year)
Beryllium reflector (RB) irradiation positions						
RB-15J	F82H	T, F, FT	300, 400	6	10	6/08 – 12/09
Target zone capsules						
JP-25	F82H	T, FT	300, 500	20	10	2/99 - 1/10
JP-26	F82H	T, FT	300,400,500	9	50	
JP-27	F82H	T, FT	300, 400	21	13	12/03 - 1/08
JP-28	F82H	T, FT	300,400,500	80-?	50	1/05 – 6/13
JP-29	F82H	T, FT	300,400,500	80	50	1/05 - 6/13
Target zone rabbit capsules						
F8A-1	F82H	T, FT	300	50	28	2/09 – 6/13
F8A-2	“	“	“	“	“	“
F8B-1	“	“	“	“	“	“
F8B-2	“	“	“	“	“	“
Target zone rabbit capsules						
JCR-1	SiC/SiC	Bend bars	800	30	15	10/04 – 1/09
JCR-2	“	“	“	“	“	“
JCR-3	“	“	“	“	“	“
JCR-4	“	“	“	“	“	“
JCR-5	“	“	“	>50	>25	10/04 - ??
JCR-6	“	“	“	“	“	“
JCR-7	“	“	“	“	“	“
JCR-8	“	“	“	“	“	“
JCR-9	“	“	500	30	15	10/04 – 1/09
JCR-10	“	“	“	“	“	“
JCR-11	“	“	“	“	“	“
JCR-12	“	“	“	“	“	“

*T = Tensile, F = Fatigue, FT = Fracture Toughness. Most experiments also contain TEM disks and other specimens and monitors occupying a small portion of the available volume.