JLS 6-22-82
cy. to M P Tanaka
10-24-83

DOE/ER-0046/8
Vol. 1

Damage Analysis and Fundamental Studies

Quarterly Progress Report
Oct-Dec 1981

February 1982

U.S. Department of Energy
Assistant Secretary for Energy Technology
Office of Fusion Energy
Washington, DC 20545

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Critical Assessment of Dual-Ion and Charged Particle Research in the Fusion Materials Program A-3

This report focuses on the status of "interpretational tools" needed to apply charged-particle results to the correlation of neutron data obtained from different irradiation environments. The near-term

impact of charged particle data is expected to be indirect, as in developing models, guiding data interpretation, planning neutron irradiation experiments, and choosing among alternate interim engineering correlation positions. In the long term, however, the impact is likely to become more direct, because of the world-wide interest in developing applications of the interactions of ion beams with solids. The immediate need for fusion material studies is a two-fold commitment: 1) to sustain charged-particle research and 2) to resolve the interpretational problems that are limiting applications of the results.