

# Gyroradius scaling of helium transport

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(Received )

The scaling of the transport rate of helium ash with normalized gyroradius has been measured for the first time, utilizing ELMing H-mode plasmas on the DIII-D tokamak. The helium diffusivity is found to scale in a gyro-Bohm-like manner, similar to the thermal diffusivity. Even though the extrapolation in normalized gyroradius from DIII-D to a reactor-grade device is large, sensitivity studies indicate that helium ash dilution in such a device will be primarily dependent on the helium exhaust efficiency at the plasma edge - not core transport rates.

PACS No.