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Characterization of ion fluxes and heat fluxes for PMI relevant conditions on Proto-MPEX* [1] CLYDE BEERS, GUINEVERE SHAW, THEODORE BIEWER, JUERGEN RAPP, None — Plasma characterization, in particular, particle flux and electron and ion temperature distributions nearest to an exposed target, are critical to quantifying Plasma Surface Interaction (PSI). In the Proto-Material Plasma Exposure eXperiment (Proto-MPEX), the ion fluxes and heat fluxes are derived from double Langmuir Probes (DLP) and Thomson Scattering in front of the target assuming Bohm conditions at the sheath entrance. Power fluxes derived from ne and Te measurements are compared to heat fluxes measured with IR thermography. The comparison will allow conclusions on the sheath heat transmission coefficient to be made experimentally. Different experimental conditions (low and high density plasmas (0.5 - 6 x 10^{19} m^{-3}) with different magnetic configuration are compared.

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None

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