

P4.2015 Proton-boron-11 fusion revisited

Thursday, 11 July 2019 14:00 (2 hours)

See the full abstract here:

<http://ocs.ciemat.es/EPS2019ABS/pdf/P4.2015.pdf>

We revisit the proton-boron-11 (p-B11) nuclear fusion for igniting and sustaining an idealized fusion reactor. The large radiation loss due to electron bremsstrahlung introduces a formidable challenge against harvesting net power in thermalized p-B11 plasmas. However, the recent measurement of the p-B11 cross section provides a new hope. We show that ignition and scientific breakeven can be achieved with the new data. We also discuss the conditions and parameters required for a p-B11 fusion reactor.

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