

Abstract Submitted  
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**Effect of High Recycling Step-Wise Migration on ITER Co-deposition**<sup>1</sup> JIM STRACHAN, Plasma Physics Lab, Princeton University — In the modeling of the JET <sup>13</sup>C migration experiments [1], step wise migration of the <sup>13</sup>C along the outer target was postulated to explain the lack of <sup>13</sup>C deposits on the outer target. The consequence was deposits were created by neutral carbon transport into the Private Flux Region. Some of that deposit can be eroded by neutral deuterium emission from the inner and outer strike points. Also important is the effect of the  $\underline{\mathbf{ExB}}$  force on migration from the outer strike point to the inner strike point since the  $\underline{\mathbf{ExB}}$  force can be high in the Private Flux Region. In this paper, these effects will be estimated for the ITER divertor. In particular the step wise migration of tungsten from the W/C intersection on the divertor should cause higher C erosion. The carbon itself will also undergo the stepwise migration causing the eroded carbon to preferentially migrate to the Private Flux Region as neutrals and to suffer further erosion by neutral hydrogenic bombardment.

[1] J.D.Strachan, *et al*, EPS Conference on Plasma Physics (Warsaw, 2007) paper P1.030

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