

Readme file for "Blob frequency in NSTX"  
v.9 7/11/21

Table 1: blob fractions from norm\_pdf\_9d0.pro

Table 2: "table 2 correlations.txt"

Fig. 1 – (a) made with norm\_pdf\_9d.pro, ishot=299, f1=0, f2=4000  
(b) made with norm\_pdf\_9h0.pro with f1=f2=1060  
(c) made with norm\_pdf\_9f0.pro with f1=f2=1060  
(d) with norm\_pdf\_9d0\_new.pro, ishot=299, f1=0, f2=4000

Fig. 2 - table "Fig. 2 radial profile ARK renorm.txt" made from norm\_pdf\_11a0.pro w/ishot=299  
C11 (GPI signal/100) vs. C9 (radius)  
C13 (std/mean) vs. C9 (radius)  
C14 ( $T \geq 3 \times 50$ ) vs. C9 (radius)

Fig. 3 – table "Fig. 3 – signals renorm ARK.txt" made from norm\_pdf\_9d.pro with ishot=15,222  
C12 (#138121 frames\_norm(isepmid+8,40,\*)) vs. C11  
C9 (#141324 frames\_norm(isepmid+8,40,\*)) vs. C8

Fig. 4 – table "Fig. 4 – new pdf renorm.txt" made from norm\_pdf\_9d00\_vary3.pro with  
ishot=15,222 and all  
C3 (pdf all norm) vs. C1 (T)  
C8 (pdf #141324) vs. C6 (T)  
C13 (pdf #138121) vs. C11 (T)

Fig. 5 – table "Fig. 5 – new T=2,3,4 renorm.txt" made from norm\_pdf\_9d00\_vary3.pro with  
i=1,300  
C6 (T=2) vs C5 (T=3)  
C7 (T=4) vs C5 (T=3)  
C14 (T=3) vs C5 (T=3)

Fig. 6 – table "Fig. 6 – new T=3 scaling renorm E=20.txt"  
(a) C9 (PNBI) vs. C15 ( $T \geq 3$ )  
(b) C7 (W) vs. C15 ( $T \geq 3$ )  
(c) C10 (tau) vs. C15 ( $T \geq 3$ )  
(d) C6 (Rsep) vs. C15 ( $T \geq 3$ )  
(e) C8 (n) vs. C15 ( $T \geq 3$ )  
(f) C5 (I) vs. C15 ( $T \geq 3$ )

Fig. 7 - table "Fig. 7 – renorm i,j map.txt" from cont\_test\_24a00\_new.pro with i=15 and i=222  
(a) C6 (j pixel) vs C5 (ipixel) for #1138121  
(b) C14 (j pixel) vs C14 (ipixel) for #141324

Fig. 8 - table "Fig. 8 – new # and area renorm.txt" from cont\_test\_24b00\_new.pro with T=3  
(a) C19 (new area) vs C17 (T>3 new renorm)  
(b) C18 (new # blob) vs C17 (new T>3 renorm)

Fig. 9 – table "Fig. 9 - TS for sample shots.txt" from blobts\_14.pro for i=15,222  
(a) C9 (density) vs C8 (radius) with error bars C10  
C3 (density) vs. C2 (radius) with error bars C4  
(b) C5 (temp) vs. C2 (radius) with error bars C6  
C11 (temp) vs C8(radius) with error bars C12

Fig. 10 – table "Fig. 10 – new n and T vs T>3 renorm.txt" made with blobts\_12.pro  
(a) C9 (density) vs C3 (T≥3)  
(b) C10 (temperature) vs C3 (T≥3)

Fig. 11 – table "Fig. 11 - 2d velocity vs radius renorm" from blobvel\_1600.pro with i=15,222  
a) C5(Vpol) vs C2(radius)  
C12 (Vpol) vs C9(radius)  
(b) C4(Vrad) vs C2(radius)  
C11(Vrad) vs C9(radius)

Fig. 12 – table "Fig.12 – new 2d blob velocity vs T>3 renorm.txt" with blobvel1600.pro with i=1,300  
(a) C11 (Vpol) vs C3 (blob fract)  
(b) C10 (Vrad) vs C3 (blob fract)

Fig. 13 – table "Fig. 13 – new V and grad V renorm .txt" made from blobvel\_1700.pro with i=1,300  
(a) C7 (gradvpolmin) vs C11 (T>3)  
C8 (gradvpolmax) vs C11 (T>3)  
(b) C9 (gradvradmin) vs C11 (T>3)  
C10(gradvradmax) vs C11 (T>3)

Fig. 14 – table "Fig. 14 – new ARK Eq. 1 vs fb.txt" from Table 2 correlations v.4  
C17 (Eq. 1) vs C3 (blob fraction)