EX/P6-26: Disruption Event Characterization and Forecasting (DECAF) advances toward disruption prediction

DECAF automated MHD events

n = 1 2 3

126962

DECAF MHD warning level
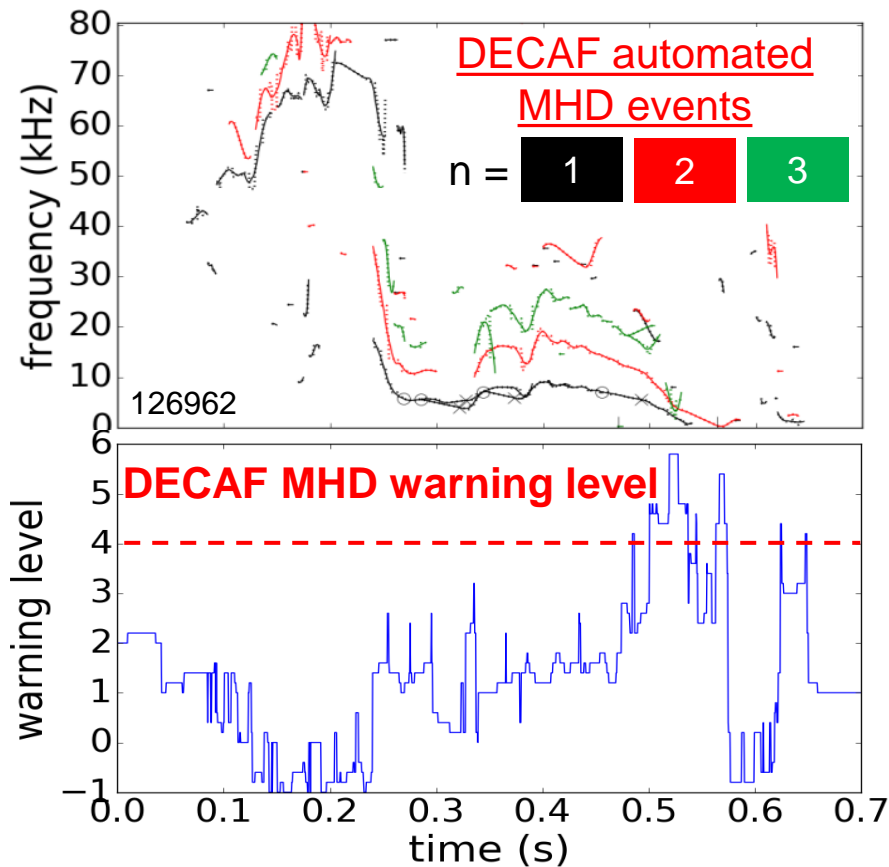
S.A. Sabbagh, J.W. Berkery, Y.S. Park, *et al.*

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KSTAR

NSTX-U

MAST-U

❑ Automated identification of physical events providing disruption warning

❑ Early forecasting with time for disruption avoidance

❑ Multi-tokamak analysis of large databases begun

MHD warnings			**H-L back-transition**			**Off-normal plasma**	

Automated Disruption Event Chain

MHD-n1	BIF-n1	LTM-n1	PRP	IPR	WPC	DIS	VDE
(0.490s)	(+.005s)	(+.045s)	(+.068s)	(+.073s)	(+.073s)	(+.077s)	(+.080s)