

## FTP and SNP Data in SDA

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The following table lists FTP's and SNP's, their meanings, and the Cases in which they are recorded. (PTS refers to the Pbar TransferShot SDA.)

Meaning/Comments	length	rate	Name	Type	Case
Starts at reverse proton tuneup	1 hour	1 Hz	T:IBEAM	FTP	Proton Injection Porch
Starts at \$4D	2.0 sec	1024 Hz	I :BLMON	SNP	Accelerate Protons in MI
Starts at \$4D	2.8 sec	50 Hz	I:IBEAMM	SNP	Accelerate Protons in MI
Starts at \$4D	2.8 sec	50 Hz	I:PIING	FTP	Accelerate Protons in MI
Starts at \$4D	2.8 sec	100 Hz	I:RFSUM	SNP	Accelerate Protons in MI
Starts at \$4D	2.8 sec	720 Hz	I:RPOS	FTP	Accelerate Protons in MI
Starts at \$4D + 1.59 sec	.12 sec	1 KHz	I:H28SUM	SNP	Coalesce Protons
Starts at \$4D + 1.59 sec	.12 sec	1 KHz	I:106SUM	SNP	Coalesce Protons
Starts at \$4D + 1.59 sec	.12 sec	1 KHz	I:BLM53	SNP	Coalesce Protons
Starts at \$4D + 1.59 sec	.12 sec	1 KHz	I:PEAKDF	SNP	Coalesce Protons
Starts at \$4D + 1.59 sec	.12 sec	1 KHz	I:RFSUML	SNP	Coalesce Protons
Starts 200 msec before injection	.4 sec	100 Hz	T:LMF0DT	SNP	Inject Protons
Starts @ \$93 + 2 sec (during tuneup)	3 sec	50 Hz	A:IBEAMB	SNP	Set Up (PTS)
Starts @ \$93 + 2 sec (during tuneup)	3 sec	20 Hz	D:TOR910	SNP	Set Up (PTS)
Starts when helix is opened	5.5 sec	5 Hz	C:B1SHM	SNP	Pbar Injection Porch
Starts when helix is opened	5.5 sec	5 Hz	C:B1SHP	SNP	Pbar Injection Porch
Starts when helix is opened	5.5 sec	5 Hz	C:C1SVM	SNP	Pbar Injection Porch
Starts when helix is opened	5.5 sec	5 Hz	C:C1SVP	SNP	Pbar Injection Porch
Starts when helix is opened	12 sec	10 Hz	C:FBIPNG	FTP	Pbar Injection Porch
Starts when helix is opened	5.5 sec	20 Hz	T:B0LMA1	SNP	Pbar Injection Porch
Starts when helix is opened	12 sec	10 Hz	T:IBEAM	FTP	Pbar Injection Porch
Starts @ \$91	3 sec	5 Hz	A:DPHAML	SNP	Unstack Pbars (PTS)
Starts @ \$91	3 sec	5 Hz	A:DPHAMP	SNP	Unstack Pbars (PTS)
Starts @ \$91	3 sec	5 Hz	A:DPVAML	SNP	Unstack Pbars (PTS)
Starts @ \$91	3 sec	5 Hz	A:DPVAMP	SNP	Unstack Pbars (PTS)
Starts @ \$91	24 sec	10 Hz	A:IBEAMB	SNP	Unstack Pbars (PTS)
Starts @ \$91	24 sec	100 Hz	A:R1FANB	FTP	Unstack Pbars (PTS)
Starts @ \$91 + 22 sec	1.2 sec	100 Hz	A:R1FANB	SNP	Unstack Pbars (PTS)
Starts @ \$91 + 22 sec	1.2 sec	100 Hz	A:R1HLAR	SNP	Unstack Pbars (PTS)
Starts @ \$91	24 sec	15 Hz	A:R4HLFB	FTP	Unstack Pbars (PTS)
Starts @ \$91	24 sec	15 Hz	A:R4HLPH	FTP	Unstack Pbars (PTS)
Starts @ \$91	24 sec	5 Hz	A:R4MIPE	FTP	Unstack Pbars (PTS)
Starts @ \$91 + 22 sec	1.2 sec	20 Hz	A:R4MIPE	SNP	Unstack Pbars (PTS)
Starts @ \$91	24 sec	15 Hz	A:R4DDS1	FTP	Unstack Pbars (PTS)
Starts @ \$9A	3 sec	20 Hz	D:TOR910	SNP	Transfer Pbars from Accum to MI (PTS)
Starts @ \$9A + 1 sec	8 sec	50 Hz	I:ANGSUM	FTP	Transfer Pbars from Accum to MI (PTS)
Starts @ \$9A + 1 sec	8 sec	200 Hz	I:BLMON	SNP	Transfer Pbars from Accum to MI (PTS)
Starts @ \$9A + 1.56 sec	.4 sec	720 Hz	I:DEMODOQ	FTP	Transfer Pbars from Accum to MI (PTS)
Starts @ \$9A + 1 sec	8 sec	50 Hz	I:IBEAMS	SNP	Transfer Pbars from

					Accum to MI (PTS)
Starts @ \$9A + 1 sec	8 sec	200 Hz	I:LARPOS	SNP	Transfer Pbars from Accum to MI (PTS)
Starts @ \$9A + 1 sec	8 sec	50 Hz	I:MIBEND	SNP	Transfer Pbars from Accum to MI (PTS)
Starts @ \$9A + 1.56 sec	.2 sec	1 KHz	I:PEAKDF	SNP	Transfer Pbars from Accum to MI (PTS)
Starts @ \$9A + 1.56 sec	.2 sec	1 KHz	I:PHIS	SNP	Transfer Pbars from Accum to MI (PTS)
Starts @ \$9A + 1 sec	8 sec	50 Hz	I:RFSUM	SNP	Transfer Pbars from Accum to MI (PTS)
Starts @ \$9A + 1 sec	8 sec	50 Hz	I:RFSUML	SNP	Transfer Pbars from Accum to MI (PTS)
Starts @ \$9A + 1 sec	8 sec	50 Hz	I:RPOS	FTP	Transfer Pbars from Accum to MI (PTS)
Starts @ \$9A	3 sec	20 Hz	D:TORF1S	SNP	Transfer Pbars from Accum to MI (PTS)
Starts @ \$9A	3 sec	20 Hz	M:TOR105	SNP	Transfer Pbars from Accum to MI (PTS)
Starts @ \$9A + 4.2 sec	1.8 sec	1 KHz	I:DEMODOQ	SNP	Accelerate Pbars in MI (PTS)
Starts @ \$9A + 4.2 sec	1.8 sec	1 KHz	I:RPOS	SNP	Accelerate Pbars in MI (PTS)
BLMON during coalescing	.30 sec	1 KHz	I:BLM53	SNP	Inject Pbars
2.5 MHz voltage during coalescing data is not getting through to PlotViewer; SDA shows no errors	.30 sec	1 KHz	I:H28SUM	SNP	Inject Pbars
106 MHz voltage during coalescing	.30 sec	1 KHz	I:106SUM	SNP	Inject Pbars
53 MHz voltage during coalescing	.30 sec	1 KHz	I:RFSUML	SNP	Inject Pbars
Peak detector during coalescing	.30 sec	1 KHz	I:PEAKDF	SNP	Inject Pbars
Starts 200 msec before injection	.4 sec	100 Hz	T:LME49	SNP	Inject Pbars
Starts 4.1 sec before ramp	90 sec	5 Hz	C:B1SHM	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	5 Hz	C:B1SHP	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	5 Hz	C:FBIANG	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	5 Hz	C:FBIPNG	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	10 Hz	C:LOSTP	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	10 Hz	C:LOSTPB	SNP	Acceleration
Starts 4.1 sec before ramp	12 sec	10 Hz	C:SDB2	SNP	Acceleration
Starts 4.1 sec before ramp	12 sec	10 Hz	C:SFB2	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	10 Hz	T:B0LMA1	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	5 Hz	T:ERING	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	10 Hz	T:HB11F	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	5 Hz	T:IBEAM	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	5 Hz	T:IPROG	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	10 Hz	T:LEXCHU	FTP	Acceleration
Starts 4.1 sec before ramp	90 sec	10 Hz	T:LMA11	FTP	Acceleration
Starts 4.1 sec before ramp	90 sec	10 Hz	T:LMB38	FTP	Acceleration
Starts 4.1 sec before ramp	90 sec	10 Hz	T:LMF32	FTP	Acceleration
Starts 4.1 sec before ramp	90 sec	10 Hz	T:LMF44	FTP	Acceleration
Starts 4.1 sec before ramp	90 sec	15 Hz	T:QDI	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	15 Hz	T:QFI	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	15 Hz	T:RFSUM	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	15 Hz	T:RFSUMA	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	20 Hz	T:SDI	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	20 Hz	T:SFI	SNP	Acceleration

Starts 4.1 sec before ramp	90 sec	10 Hz	T:VPA11	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	10 Hz	T:VPB49	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	10 Hz	T:VPC11	SNP	Acceleration
Starts 4.1 sec before ramp	90 sec	10 Hz	T:VPF49	SNP	Acceleration
Starts at start of squeeze	120 sec	1 Hz	C:B0ALOS	SNP	Squeeze
Starts at start of squeeze	120 sec	1 Hz	C:B0PLOS	SNP	Squeeze
Starts at start of squeeze	120 sec	5 Hz	C:B1SHM	SNP	Squeeze
Starts at start of squeeze	120 sec	5 Hz	C:B1SHP	SNP	Squeeze
Starts at start of squeeze	120 sec	5 Hz	C:D0BLDB	FTP	Squeeze
Starts at start of squeeze	120 sec	5 Hz	C:D0BLD0	FTP	Squeeze
Starts at start of squeeze	120 sec	5 Hz	C:D0BLUT	FTP	Squeeze
Starts at start of squeeze	120 sec	5 Hz	C:FBIANG	FTP	Squeeze
Starts at start of squeeze	120 sec	5 Hz	C:FBIPNG	FTP	Squeeze
Starts at start of squeeze	120 sec	5 Hz	C:LBSEQ	SNP	Squeeze
Starts at start of squeeze	120 sec	10 Hz	C:LOSTP	SNP	Squeeze
Starts at start of squeeze	120 sec	10 Hz	C:LOSTPB	SNP	Squeeze
Starts at start of squeeze	120 sec	5 Hz	C:S1E2A	SNP	Squeeze
Starts at start of squeeze	120 sec	5 Hz	C:S4C2A	SNP	Squeeze
Starts at start of squeeze	120 sec	10 Hz	C:HPA11	SNP	Squeeze
Starts at start of squeeze	120 sec	10 Hz	C:HPF17	SNP	Squeeze
Starts at start of squeeze	120 sec	10 Hz	C:HPF49	SNP	Squeeze
Starts at start of squeeze	120 sec	5 Hz	T:IBEAM	SNP	Squeeze
Starts at start of squeeze	120 sec	10 Hz	T:LEXCHU	FTP	Squeeze
Starts at start of squeeze	120 sec	10 Hz	T:LMA11	FTP	Squeeze
Starts at start of squeeze	120 sec	10 Hz	T:LMB1SD	SNP	Squeeze
Starts at start of squeeze	120 sec	5 Hz	T:QDI	SNP	Squeeze
Starts at start of squeeze	120 sec	5 Hz	T:QFI	SNP	Squeeze
Starts at start of squeeze	120 sec	5 Hz	T:SDI	SNP	Squeeze
Starts at start of squeeze	120 sec	5 Hz	T:SFI	SNP	Squeeze
Starts at \$C6	12 sec	5 Hz	C:A1SVM	SNP	Initiate Collisions
Starts at \$C6	12 sec	5 Hz	C:A1SVP	SNP	Initiate Collisions
Starts at \$C6	12 sec	5 Hz	C:A4SHM	SNP	Initiate Collisions
Starts at \$C6	12 sec	5 Hz	C:A4SHP	SNP	Initiate Collisions
Starts at \$C6	12 sec	1 Hz	C:B0ALOS	SNP	Initiate Collisions
Starts at \$C6	12 sec	1 Hz	C:B0PLOS	SNP	Initiate Collisions
Starts at \$C6	12 sec	5 Hz	C:B0SHM	SNP	Initiate Collisions
Starts at \$C6	12 sec	5 Hz	C:B0SHP	SNP	Initiate Collisions
Starts at \$C6	12 sec	5 Hz	C:B0SVM	SNP	Initiate Collisions
Starts at \$C6	12 sec	5 Hz	C:B0SVP	SNP	Initiate Collisions
Starts at \$C6	12 sec	5 Hz	C:B1SHM	SNP	Initiate Collisions
Starts at \$C6	12 sec	5 Hz	C:B1SHP	SNP	Initiate Collisions
Starts at \$C6	12 sec	1 Hz	C:D0FZTL	SNP	Initiate Collisions
Starts at \$C6	12 sec	5 Hz	C:FBIANG	SNP	Initiate Collisions
Starts at \$C6	12 sec	5 Hz	C:FBIPNG	SNP	Initiate Collisions
Starts at \$C6	12 sec	10 Hz	T:HPA11	SNP	Initiate Collisions
Starts at \$C6	12 sec	10 Hz	T:HPF17	SNP	Initiate Collisions
Starts at \$C6	12 sec	10 Hz	T:HPF49	SNP	Initiate Collisions
Starts at \$C6	12 sec	5 Hz	T:IBEAM	SNP	Initiate Collisions
Starts when scraping begins	10 min	1 Hz	T:D49V	SNP	Remove Halo
Starts when scraping begins	10 min	1 Hz	T:LE033	FTP	Remove Halo