

Polarimeter Time Units

Ticks	Freq.	Period	CLK*	Description
Synchronous to RHIC/AGS clocks				
	4.7 M	220 ns	30	= AGS bucket (12 buckets in 2.6 us AGS revolution) = AGS RF frequency = Source for AGS clock mult. = RHIC bunch period in 60-bunch mode = WFD waveform and bunch period if 120Bunch=0
	9.3 M	110 ns	15	= RHIC bunch period in 120-bunch mode = WFD bunch period if 120Bunch=1
	28 M	35 ns	5	= RHIC bucket (360 buckets in 12.8 us RHIC revolution) = RHIC RF frequency = V124 CLK, unit for V124Delay and V124ChanX (Width, Offset, Period) parameters = Source for RHIC clock multipliers
	70 M	14 ns	2	= WFD Xilinx processing frequency (6 pt in parallel) = Unit for BZDelay
	140 M	7 ns	1	= WFD ADC digitization frequency (3 pt in parallel) = Clock distributed to WFD (blue – WFD waveform if 120Bunch=1)
90 points (30 groups of R,G,B)	420 M	2.4 ns	1/3	= WFD point frequency = Unit for WinBegin and WinEnd = WFD time unit for time at maximum
180 units/full scale	840 M	1.2 ns	1/6	= WFD time unit for CFD time
Asynchronous to RHIC/AGS clocks				
		1 ns		= Unit for TshiftLow , TshiftHigh , ETCutW , WFDTUnit
		0.5 ns		= Unit for V124ChanX (Delay) parameter

* Period in 140 MHz WDF CLK

** 'Frequency' and 'Period' values are approximate, based on RHIC bucket frequency exactly equal to 28 MHz. For AGS, these values correspond to 24 GeV flattop.