

## Scan commands

command name	# of par.	parameters (units)	range	returns	description
wscan *	2	<b>Wavelength_Min,</b> <b>Wavelength_Max</b> (microns)	[Wave_limit_min, Wave_limit_max]	<b>Wavelength_Min,</b> <b>Wavelength_Max</b> or " <b>whole_scan</b> "	set minimum and maximum wavelengths for FP scan. Due to the optical configuration (multiple orders observed simultaneously), a large scan may end to be a whole scan.
whole *	0				set FP scan limits to whole window (350 or 450 microns)
chops	1	<b>Chops_per_Int</b> (count)	0<integer<32768	<b>Chops_per_Int</b>	set number of chop cycles per integration of FP
ramp	1	<b>Direction</b> (text)	"up" or "down"	<b>Direction</b>	set FP scan to a ramp (up or down)
triangle	1	<b>Number_of_Triangles</b> (count)	0<integer<32768	<b>Number_of_Triangles</b>	set FP scan to a triangle signal, repeated Number_of_Triangles times
still	1	<b>Number_of_Stills</b> (count)	0<integer<32768	<b>Number_of_Stills</b>	set FP to be still during Number_of_Stills integrations
header *	0			<b>header</b> (byte stream)	get a header containing all information about current FP scan. Also moves FP to start position
start *	0			<b>header</b> (byte stream)	get a header containing all information about current FP scan. Moves FP to start position. FP motion will start at a subsequent falling edge of the FPNEXT bit. FPM status bit is set to 1 when scan begins and will be reset to 0 a few tens of ms after the last command of the segment
abort	0				tells FP to stop immediately the scan in progress. FPM status bit reset to 0
status	0			" <b>ready</b> ", " <b>waiting for FPM</b> ", " <b>scanning</b> " + number of chop_cycles elapsed + last command sent to motor 1	get FP status
pscan	2	<b>Command_Min,</b> <b>Command_Max</b> (count)	integer, [Security_Min, Security_Max]	<b>Command_Min,</b> <b>Command_Max</b>	set minimum and maximum count for FP scan. Alternate way to wscan for setting FP scan
step	1	<b>Command_Step</b> (count)	integer, [1,4095]	<b>Command_Step</b>	set elementary increment for FP scan

## Configuration and calibration commands

<b>paral_offset *</b>	2	<b>Offset_Motor_2</b> <b>Offset_Motor_3</b> (count)	integer, [1,500]	<b>Offset_Motor_2</b> <b>Offset_Motor_3</b>	set offsets on motor 2 and motor 3 commands. Offset are applied for all points of the current parallelism table. Table is not changed
<b>paral_save_point *</b>	1	<b>Command_Value</b> (count)	integer, [Security_Min, Security_Max]	<b>Command_Value</b>	save current offset of motor 2 and motor 3 in the current parallelism table at point specified by Command_Value
<b>paral_interp *</b>	2	<b>Command_Value_1</b> <b>Command_Value_2</b> (count)	integer, [Security_Min, Security_Max]	<b>Command_Value_1</b> <b>Command_Value_2</b>	interpolate motor 2 and motor 3 values in the current parallelism table between points specified by Command_Value_1 and Command_Value_2
<b>paral_save_table *</b>	2	<b>File_Name</b> <b>Option</b> (text)	ascii "" or "/overwrite"	<b>File_Name</b> (including path)	save current parallelism table in file File_Name (the path is specified locally on the FP control computer and appended to File_Name). Option "/overwrite" is needed to write over an already existing file
<b>paral_load_table *</b>	2	<b>File_Name</b> <b>Option</b> (text)	"default" or ascii name "" or "/nosave"	<b>"Default"</b> or <b>File_Name</b> (including path)	load parallelism table from file File_Name (the path is specified locally on the FP control computer and appended to File_Name). If File_Name = "default", a table where commands on all 3 motors are the same (no offsets) is generated. Option "/nosave" is needed to load over a modified and unsaved table
<b>calib_set *</b>	2	<b>Param_Number</b> (index) <b>Param_Value</b> ( $\mu\text{m}/\text{count}^i$ or $\text{count}/\mu\text{m}^i$ )	integer, [0,9] real	<b>Param_Number</b> <b>Param_Value</b>	set parameter Param_Number of the wavelength calibration table to value Param_Value. $e(\mu\text{m})=p_0+p_1*c+p_2*c^2+p_3*c^3+p_4*c^4$ $c(\text{count})=p_5+p_6*e+p_7*e^2+p_8*e^3+p_9*e^4$
<b>calib_save *</b>	2	<b>File_Name</b> <b>Option</b> (text)	ascii "" or "/overwrite"	<b>File_Name</b> (including path)	save current wavelength calibration table in file File_Name (the path is specified locally on the FP control computer and appended to File_Name). Option "/overwrite" is needed to write over an already existing file
<b>calib_load *</b>	2	<b>File_Name</b> <b>Option</b> (text)	"default" or ascii name "" or "/nosave"	<b>"Default"</b> or <b>File_Name</b> (including path)	load wavelength calibration table from file File_Name (the path is specified locally on the FP control computer and appended to File_Name). If File_Name = "default", the table is reset to july 1998 run values. Option "/nosave" is needed to load over a modified and unsaved table
<b>config_save *</b>	0				save current configuration as default (FP_preferences file, in VI subfolder)
<b>config_load *</b>	0				load default configuration (FP_preferences file, in VI subfolder)
<b>config_reset *</b>	0				reset default configuration to "factory settings"

## Local only commands

<b>command name</b>	<b># of par.</b>	<b>parameters (units)</b>	<b>range</b>	<b>returns</b>	<b>description</b>
<b>SYNC int</b>	1	<b>Frequency</b> (Hz)		<b>Frequency</b>	set sync mode to internal for FP : motion is driven by an internal signal at the specified frequency
<b>SYNC ext</b>	1	<b>Delay</b> (ms)		<b>Delay</b>	in external sync mode (FP motion driven by FPNEXT bit), a delay can be introduced after the falling edge of FPNEXT before sending the command to the FP
<b>Security</b>	2	<b>Security_Min, Security_Max</b> (count)	integer, [0,4095]	<b>Security_Min, Security_Max</b>	set minimum and maximum commands that can be allowed for FP scan (software limits adjusted on hardware limits)
<b>Wave limit</b>	2	<b>Wave_limit_Min, Wave_limit_Max</b> (microns)		<b>Wave_limit_Min, Wave_limit_Max</b>	set minimum and maximum wavelengths that can be measured for the given hardware configuration
<b>Spacing</b>	1	<b>Min. current Sp.</b> (microns)		<b>Min. current Sp.</b>	set spacing between FP plates at the mechanical zero (defined where Joule dissipation in motors is minimum)
<b>P. Array</b>	1	<b>Action</b> (ascii)	"Default" or "File"	<b>P. Array Path, P. Array Filename</b>	load default parallelism table (1,1,1 to 4095,4095,4095) or load interactively an existing table. Set P. Array Path and P. Array Name to the new path and filename
<b>W. Array</b>	1	<b>Action</b> (ascii)	"Default" or "File"	<b>W. Array Path, W. Array Filename</b>	load default wavelength calibration table (july 1998 run) or load interactively an existing table. Set W. Array Path and W. Array Name to the new path and filename.
<b>Comment</b>	1	<b>Comment</b>	ascii text		set the ascii text in comment
<b>LOCAL</b>	0				returns FP_control to local mode
<b>QUIT</b>	0				exit FP_control VI

