

Overview

Legacy TCS only allows remote telescope communication and control through a serial port on the main TCS computer. In order to allow network communication and control of the telescope we have built software called Telcom to convert tcp/ip sockets to serial communication. To make sure this software is up and running on the BOK telescope you can check the website <http://bokpop.as.arizona.edu> and look for the table marked telemetry. This webpage queries the telcom server about once a second.

Request syntax

Legacy TCS makes 14 pieces of information available. The syntax for getting these values from telcom is

<TELESCOPE ID> TCS <REF NUM> REQUEST <KEYWORD> For Example: *BOK TCS 123 REQUEST RA*

The telcom server will return: <BOK> TCS <REF NUM> <RETURN VALUE> For Example: *BOK TCS 123 214412.79*

Description	Key Word	return syntax
Motion Status	MOT	0=No motion 1=RA Motion 2=Dec Motion 3=RA and Dec Motion
Right Ascension	RA	[hhmmss.ss]
Declination	DEC	[+/-ddmmss.ss]
Hour Angle	HA	[+/-hh:mm:ss.ss]
Secant z (Air Mass)	SECZ	
Error state	ERROR	[E] (a number or letter representing serial error state)
Epoch	EQ	D[YYYY.YYY]
Julian Date	JD	[DDDDDDDD.D]
Universal Time	UT	[hh:mm:ss.s]
IIS position	IIS	[DDD.D] angle in degrees
Local Sidereal Time	ST	[hh:mm:ss.ss]
Elevation Angle	EL	[DD.D]
Azimuth Angle	AZ	[DDD.D]
Dome positoin	DOME	[DDD.D] this position is relative to the telescope azimuth. To get absolute dome position add this angle to the telescope azimuth.
WOBBLE	WOBBLE	???

//ALL// keyword

If you want to get multiple pieces of data from the telcom server you can use the ALL keyword. This will give a string containing all the telemetry data described above which will have to be parsed. string is shown below.

Return Values	MOT	RA	DEC	HA	ST	EL	AZ	SECZ	ERROR	Blank	EQ	JD	WOBBLE	DOME	UT	IIS	Carriage Return
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Positon in String after REF NUM	0	4 to 12	14 to 22	25 to 33	35 to 42	44 to 48	50 to 55	57 to	63 to 70	72 to 75	76 to 83	85 to 93	94 to 98	99 to 100			
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BOK TCS 123 0 221941.92 +314308.8 -00:00:00 22:20:19 90.0 +7.6 1.00 D2000.000 2456698.3 1
-78.6 20:27:19.1 0.0

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