Name:_____

Answer Sheet for CLEA Lab

Radio Astronomy of Pulsars

1. RA _____ Dec _____

2. Best Gain Setting _____

3. T_1 _____

   T_2 _____

   Period _____

4. T_0 _____

   T_{10} _____ (note this is the 11^{th} pulse)

   Period _____ SHOW YOUR WORK!

Frequency	Time of First Pulse	Time of Last Pulse	Number of Periods	Period of Pulsar
400 MHz				
600 MHz				
800 MHz				
1000 MHz				
1200 MHz				
1400 MHz				

5. What is the relationship between frequency and period?

6. The pulsar signal is stronger at _____ frequencies. (Higher or Lower?)
   The best frequency to tune my receiver would be _____ MHz.

7. Why is that frequency the best for observing this pulsar?

Name:_____

Pulsar Name	Frequency (MHz)	Starting Pulse Time (s)	Last Pulse Time (s)	Number of Periods	Period	Relative Strength
2154+40						
0740-28						
0531+21 (Crab Nebula Pulsar)						

8. Please list the pulsars in order from YOUNGEST to OLDEST.

_____, _____, _____, _____
Youngest Oldest

9. What can you say about arrival times of pulses at higher frequencies?

10. Please describe the physical reason for this relationship:

Pulsar 0628-28

11. T_{400} _____

T_{600} _____

T_{800} _____

f_1	f_2	$T_2 - T_1$	$(1/f_2)^2-(1/f_1)^2$	D (pc)
600	400			
800	400			
800	600			

Name:_____

Pulsar 2154+40

11. T_{400} _____

T_{600} _____

T_{800} _____

f_1	f_2	T_2- T_1	$(1/ f_2)^2$-$(1/ f_1)^2$	D (pc)

SHOW YOUR WORK FOR THE TABLES ABOVE HERE AND/OR ON THE BACK OF THIS PAGE.

BE SURE TO CLEARLY STATE THE VALUE YOU ARE SOLVING FOR