General Program Flow

1. Read in px, and ps from a file?
2. Is it necessary to provide day, month, year, or are these mainly necessary for file output naming?

VIS/IR spectrum questions

1. px0 = ?
2. Do values like pxqs, pxmin,pxmax, psmin,psmax, differ by time/dataset?
3. Adjspot = ?

UV spectrum questions

1. **psuvfactor** = conversion from bolometric to UV sunspot blocking. How is it derived? Is it ps320 in papers? Is it UARS solstice regression derived? Citation?
2. Is it the bolometric sunspot contrast from Allen, 1981 at 320 nm, (i.e. the area dependence of sunspot contrast as a function of wavelength) divided by 0.3235 (the spectrally integrated bolometric sunspot contrast)? ~ = 0.43/.3235 ~ 1.318. It is the bolometric sunspot contrast normalized to UV levels.
3. **csecft** = conversion from MgSEC scale to FT scale. What are MgSEC and FT? What is the physical variable being converted? Sunspot area? Why necessary? Citation?
4. Where do model coefficients for calculating UV spectrum come from? How are they derived? Which paper? linear regression to data?
5. Items in save file and definitions
   1. wl = wavelength (115.5 to 425.5 nm; 311 in total)
   2. inst = 1 ?
   3. instrument = ‘SOLSTICE’
   4. ver = version
   5. sdlim = 3 ?
   6. weight = 1 ?
   7. cuvfpxps = ? [array of 311; first and last 4-5 values are ‘0’?]
   8. cuvfpxpsd = ? [array of 311; first and last 4-5 values are ‘0’?]
   9. scontrast = ? [array of 311; spans linear between -0.55 to 0.42]
   10. uvfregress = ? [array of 10, 311; what is first dimension?
   11. **uvfregressd** =? [array of 10, 311; what is first dimension? How/why different than value above?
       1. ; 0= a0
       2. ; 1= coef for px
       3. ; 2= coef for UVps
       4. ; 3= standard dev for pxindex coef
       5. ; 4= standard dev for ps coef
       6. ; 5= ftest
       7. ; 6= correlation coeff for pxindex
       8. ; 7= correlation coeff for UVps
       9. ; 8= multiple regression correlation coeff
       10. ; 9= chisq
           1. 0 = coefficient ‘a’, 1 = coefficient ‘b’, 2=coefficient ‘c’.
   12. **refuvf** = ? [array of 311]
   13. **refps** = ? (scalar of 312.514) ? how/why different than psmin, ps0, psqs, etc.
   14. **refpx** = ? (scalar of 0.269633) ? how/why different than pxmin?
   15. quvf = ? [array of 311]
   16. qps = ? (scalar = 67.4446)
   17. qpx = ? (scalar = 0.264408)
   18. coefres = ? [array of 2, 311; what is first dimension?]
   19. coefresd = ? [array of 2, 311; what is first dimension?]
6. What is difference between FT and MgSEC scale, and what are the implications?