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c      driven van der Pol Oscillator
c
c       $x'' - e(1-x^2)x' + x = a \cos(\omega t)$ 
c
c      for undriven oscillator, set a = 0
c
c      or equivalently, the 3 simultaneous first order equations
c           $x' = y$ 
c           $z' = w$ 
c           $y' = a \cos(z) + e(1-x^2)y - x$ 
c
c      real a,e,w,x,y,z,x0,y0,z0,dt
c      character*40 ofile
c
c      write(*,98)
c      98  format(' Output file: ', $)
c          read(*,99) ofile
c      99  format(a40)
c          open(unit=10,file=ofile,status='unknown')
c
c      get parameters for equation
c
c      write(*,100)
c      100 format(' a, e, and w = ', $)
c          read(*,*) a, e, w
c
c      get starting position and velocity
c
c      write(*,101)
c      101 format(' x(0) and x''(0) = ', $)
c          read(*,*) x0,y0
c          z0=0.
c
c      choose time increment and max time
c          (try .01 and 50 to start)
c
c      write(*,102)
c      102 format(' dt, tmax = ', $)
c          read(*,*) dt,tmax
c
c      Main loop
c
c      t=0.
c      10  t=t+dt
c          write(10,*) x0,y0,z0
c          x=x0 + y0*dt
c          z=z0 + w*dt
c          y=y0 + (a*cos(z0) + e*(1.-x0*x0)*y0 - x0 ) * dt
c          x0=x
c          y0=y
c          z0=z
c          if(t.lt.tmax)goto 10
c
c      close(10)
c      stop ' '
c      end

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