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100 CLEAR SCREEN          ! Clear the alpha display
110 GINIT                ! Initialize various graphics parameters.
120 PLOTTER IS CRT,"INTERNAL" ! Use the internal screen
130 GRAPHICS ON          ! Turn on the graphics screen
140 X_gdu_max=100*MAX(1,RATIO) ! Determine how many GDUs wide the screen is
150 Y_gdu_max=100*MAX(1,1/RATIO) ! Determine how many GDUs high the screen is
160 LORG 6                ! Reference point: center of top of label
170 FOR I=-.3 TO .3 STEP .1 ! Offset of X from starting point
180   MOVE X_gdu_max/2+I,Y_gdu_max ! Move to about middle of top of screen
190   LABEL "VOLTAGE VARIANCE" ! Write title of plot
200 NEXT I                ! Next position for title
210 DEG                  ! Angular mode is degrees (used in LDIR)
220 LDIR 90              ! Specify vertical labels
230 CSIZE 3.5            ! Specify smaller characters
240 MOVE 0,Y_gdu_max/2   ! Move to center of left edge of screen
250 LABEL "Voltage"      ! Write Y-axis label
260 LORG 4                ! Reference point: center of bottom of label
270 LDIR 0               ! Horizontal labels again
280 MOVE X_gdu_max/2,.07*Y_gdu_max ! X: center of screen; Y: above key labels
290 LABEL "Time (seconds)" ! Write X-axis label
300 VIEWPORT .1*X_gdu_max,.98*X_gdu_max,.15*Y_gdu_max,.9*Y_gdu_max
                        ! Define subset of screen area
310 FRAME                ! Draw a box around defined subset
320 WINDOW 0,100,16,18  ! Anisotropic scaling: left/right/bottom/top
330 AXES 1,.05,0,16,10,5,3 ! Draw axes with appropriate ticks
340 CLIP OFF             ! So labels can be outside VIEWPORT limits
350 CSIZE 2.5,.5        ! Smaller chars for axis labelling
360 LORG 6                ! Ref. pt: Top center      | \
370 FOR I=0 TO 100 STEP 10 ! Every 10 units          | \
380   MOVE I,15.99         ! A smidgeon below X-axis | > Label X-axis
390   LABEL USING "#,K";I ! Compact; no CR/LF      | /
400 NEXT I                ! et sequens              | /
410 LORG 8                ! Ref. pt: Right center   | \
420 FOR I=16 TO 18 STEP .25 ! Every quarter           | \
430   MOVE -.5,I          ! Smidgeon left of Y-axis | > Label Y-axis
440   LABEL USING "#,DD.DD";I ! DD.DD; no CR/LF       | /
450 NEXT I                ! et sequens              | /
460 PENUP
470 FOR X=2 TO 100 STEP 2 ! Points to be plotted
480   PLOT X,RND+16.5     ! Plot a data point
485 WAIT .2
490 NEXT X
494 WAIT 3
495 GOTO 110
500 END

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VOLTAGE VARIANCE

