gnuplot FAQ

3NJ8=q$O! **"gnuplot** %P!<%8%g%s4 $H%P!<%8%g%s5 $NN>J}$rBP>]H7$F$$^$9!#
3NFAQ $N%P!<%8%g%s$O$Revision: 1.58 $,$Date: 2017/06/04 04:55:40 $ $G$9!#

L\<!

0 %a%?$J<ALd **3**

0.1 3N%I%-%e%a%s%H$O%I$3$G<j$KF~lil^9+ . . . 3

0.2 3N%I%-%e%a%s%H$K4X$9$k%3%a%s%H$O%I3KAwlPNI$$G9+ . . . 3

1 0lHIE*$J<ALd **3**

1.1 **gnuplot** HO2?G9$+ . . . 3

1.2 $=$l$O%I$3$+$iMh$F!"$=7FJ<**gnuplot** $H8F$PlF$$kNG9+ . . . 3

1.3 **gnuplot** $O2?$rDs6!7F$/$l$^$9$+ . . . 4

1.4 **gnuplot** $O%9%/%j%W%H$KE,7F$$^9+ . . . 4

1.5 **gnuplot** $O;d$N%3%s%T%e!<%?$GF0$+$9$3$H,$G$-$^9+ . . . 4

1.6 %i%$%;%s%9$K$D$$F . . . 5

1.7 **gnuplot** $OFSF $dGNU %W%m%8%'%/%H$H2?$+4X78$,$"$kNG9+ . . . 5

1.8 99Jk>pJs$O%I$3$G<j$KF~j^9+ . . . 5

2 %$%s%9%H!<%k **5**

2.1 **gnuplot** $N:G?7%P!<%8%g%s$O . . . 5

2.2 **gnuplot** $O%I$3$G<j$KF~lil^9+ . . . 5

2.3 **gnuplot** $N:G?7$N3+H/HG$O%I$3$G<j$KF~lil^9+ . . . 5

2.4 **gnuplot** $O;d$N%7%9%F%'GO%I$&%3%s%Q%$%k9l$PNI$$G9+ . . . 6

2.5 %I%-%e%a%s%H$O%I$3G9$+!"$=7F$=$lrI$&<j$KF~lil^9+ . . . 6

2.6 F0:n9k%5%s%W%k . . . 6

2.7 I&7?$i **gnuplot** $r=$@5!"$^$?$O%Q%C%A$rEvFil^9+ . . . 6

2.8 IN%*%W%7%g%s$, **gnuplot** $K%3%s%Q%$%k5l$F$$$k$+$rCNkK$O . . . 7

3 F0:n**(Working with it)** **7**

3.1 %X%k%W$O%I$&dC$F<j$KF~lil^9+ . . . 7

3.2 I&dC$?$i%0%i%U$r%W%j%s%H%"%&%H$G$-$^9+ . . . 7

3.3 I&dC$?$i%0%i%U$r%o!<%W%m%=%U%H$K<h$j9~$a$^$9$+ . . . 8

3.4 I&dC$?$i **gnuplot** $N%0%i%U$rJT=8$d8e=hM}$G$-$^9+ . . . 8

3.5 I&dC$?$i5-9fNBg-5d@~$NB@$5JI$rJQ99$G$-$^9+ . . . 9

3.6 %0%i%U$r%"%K%a!<%?%g%s2=$G$-$^9+ . . . 9

3.7 I&dC$?$i1"4X?t$N%0%i%U$,=q1^9+ . . . 9

3.8 2 DN6J@~4V$NNN0h$rEIjDV9KO . . . 9

3.9 pm3d Kh$k%G!<%?%U!%$%k$Nsplot $G2?$bI=<(5l$^$;$s . . . 10

3.10 3<!85%G!<%?$N2<!85<M1F$rIA2h9kKO . . . 10

3.11 pm3d ?'CO?^/6JLL>e$K dots/points $N;6I[?^$r=EMkKO 10
3.12 %i%Y%kD-$NEy9b@~$rIA2h9kKO 10
3.13 pm3d Kh$k?'$D$-$NB?LLBNIA2h$O 10
3.14 ?'CO?^$r%b%N%/%m$N%W%j%s%?GbAcsH0u;z9kh&$J%Q%l%C%H$O 11

4 M_$7$$5!G=**(Wanted features)** **11**
4.1 **gnuplot** 4.6, 5.0 Ey$G?7$7$/$JC?3H$O 11
4.2 **gnuplot** $O2hA|%U%)!<%^%C%HMQ$N%I%i%$%P$r%5%]!<%H7F$$$^9+ 11
4.3 **gnuplot** $O1#@~=hM}$G$-$^9+ 11
4.4 **gnuplot** $CK@%0%i%U/%R%9%H%0%i%YH"7?%0%i%U$,=q$1$^$9$+ 12
4.5 **gnuplot** $O1_%0%i%U$,=q1^9+!";MH>4|%0%i%UOI$&$G9+ 12
4.6 0lDN%Z!<%8$KJ#?t$N%0%i%U$,=q$1$^$9$+ 12
4.7 **gnuplot** $O0l$D$N%0%i%U$GJ#?t$Ny<4$r;H$($^9+ 12
4.8 0lDN%U%!%$%k$Kgnuplot $N%3%^%s%I$H%G!<%?$NN>J}$r=q1^9+ 12
4.9 %i%Y%k$K>e/2<IU$-$NJ8;z$r;H$($^9+ 12
4.10 %.%j%7%cJ8;z$dB>$NFCJL$J5-9f$r;H$&$K$O 13
4.11 I&7?$i%"%/%;%s%HIU$-$NJ8;z$r=PNOG-$^$9$+ 13
4.12 =D$H2#$N<4$r1:1 KG$-$^9+ 13
4.13 0[Jk%5%$:$N%F%-%9%H$r0l$D$N%0%i%U$G=PNOG-$^$9$+ 13
4.14 I&7?$i%G!<%?E@$r%9%-%C%WG-$^$9$+ 13
4.15 I&7?$in E@Kh$K%G!<%?$r07($^9+ 14
4.16 I&7?$i1tD>@~$r=q1^9+ 14
4.17 I&7?$i%G!<%?%U%!%$%k$rIA2h$G$-$^9+ 14
4.18 I&7?$i multiplot $NIA2h$r replot G-$^$9$+ 14

5 $=$NB> **14**
5.1 %P%0$r8+$D1?NG9,I&7?$iNI$$$G9+ 14
5.2 ;d$N%W%m%0%i%'$G**gnuplot** $N%k!<%A%s$rMxMQG-$^$9$+ 15
5.3 I&DI2C$d3HD%$,J5lF$$$^9+!"$=$lOI$&<j$KF~lil^9+ 15
5.4 @QJ,$dFFT $dIIR %U%#%k%?$JI,M_$7$$N%G9, ... 15
5.5 "heavy-duty" %G!<%?$r**gnuplot** $G;H$($^$9$+!"$^$?$O**gnuplot** KJQokbNO$J$$$G9+ 15
5.6 ;d$NBPOC7?%?!<%_%J%k$G%[%C%H%-!<$r;H$&KO 15
5.7 **gnuplot** $rB>$N%7%9%F%'$K0\?"!"$^$?$O%Q%C%A$r:n$j$^$7$?!#$I$&$7$?$i$$$$G9+ . . 16
5.8 **gnuplot** $N<!4|%P!<%8g%s$N3+H/KD$$FCNj?$$NG9$,$I$&$7$?$i$$$$G9+ . . . 16
5.9 FAQ $K4^$^lkh&JL2r7h$N<ALd$O 16

6 $&$^$/07$&KO**(Making life easier)** **16**
6.1 I&7?$i2 DN4X?t$r=E$JiJ$$h$&$K=q1^9+ 16
6.2 I&7?$iIA2hA0$K%G!<%?$U%#%k%?$r$+$1il$^$9$+ 16
6.3 I&7?$i8=:_$N@_j$rJ]B8/:FMxMQ$G$-$^9+ 16
6.4 I&7?$i splot $G6J@~(3J;R$G$J$$)$r=q$1$^$9$+ 17
6.5 I&7?$i x-y J?LL>e$GB>$N4X?t$K@)8B5l$F$$$k f(x,y) $N%0%i%U$r=q1^9+ 17
6.6 I&7?$i%W%m%0%i%'$+$i**gnuplot** $r8F$S=P$;$^9+ 17
6.7 Planck Dj?t(h $K2#@~)$,I,MWJH$-$OI&7?$i$$$$G9+ 17
6.8 B@M[Nh$&$J?t3X5-9f(4]$KE@)$,I,MWJH$-$OI&7?$i$$$$G9+ 18
6.9 6-3&$N0lCV$rCzEY$"$k>l=j$K9g$o$;$F%0%i%U$r:n$kKO 18

7 6&DL$NLdBj **18**
7.1 =u1F! ;d$N%U%)%s%H$,;H$($J$$ 18
7.2 VMS >e$G **gnuplot** $,IA2h%&%#%s%I%&$r3+$-$^$;$s$,!"$J$<$G9+ 19
7.3 J< **gnuplot** OHFb>.$5$$?t;z$N%G!<%?$rL5;k9kNG9+ 19
7.4 %7%'%k$d%9%/%j%W%H$+$i **gnuplot** $r<B9T$7Fb7k2L$N%0%i%U$O%9%/%j!<%s>e$G0l=V=P$k $@$1G=N"$H=P$F$-$^$;$s 19
7.5 =q$$$?<0(1/3 JI) $,0UL#$N$J$$7k2L$r=PNO$7F7$^$$$^$9 19
7.6 ;d$N=PNO$,IT40A4$G$9 20
7.7 %Q%$%W$G **gnuplot** $r8F$S=P7?$j **gnuplot** %9%/%j%W%H$r;HCF%0%i%U$,=q$1$^$;$s . . . 20

8 5"B0 **20**

0 %a%?$J<ALd

0.1 3N%I%-%e%a%s%HOI3G<j$KF~$lil$^$9$+

3N%I%-%e%a%s%H$N:G?7HG$O http://www.gnuplot.info/faq/ $N Web >e$K$"$j$^$9!#

0.2 3N%I%-%e%a%s%H$K4X$9$k%3%a%s%H$OI3KAwl$PNI$$$G9+

%3%a%s%H!"Ds0FEy$O3+H/<T8~$1%a!<%j%s%0%j%9%H mailto://gnuplot-beta@lists.sourceforge.net KAwCF/$@$5$$!#

1 0lHIE*$J<ALd

1.1 gnuplot HO2?G9$+

gnuplot $O%3%^%s%I6nF07?$NIA2h%W%m%0%i%'$G$9!#4X?t$NIA2h!"$*hS%G!<%?E@$NIA2h$r!"2<!85!"3<!85$NN>J}$G!"$=$7$FB?$/$N0[$J$k%9%?%$%k!"B?$/$N0[Jk=PNO7A<0$G9T$&3H$,$G$-$^$9!#$^$?!"**gnuplot** $O<+F0E*$K%0%i%U$r@8@.$9$k%9%/%j%W%H8@8l$H7F$b;HMQ$9k3H,G-$^$9!#3l$O<g$K2J3XE*$J%G!<%?$r2hLLI=<(9kbNH7$F@_7W$5lF$$$^$9!#**gnuplot** $NCx:n8"$OJ]8n5l$F$$$^9,!"<+M3$KG[I[$G$-!"Be6b$rJ'$&I,MW$O$"$j$^$;$s!#

1.2 $=$lOI3+iMhF!"$=$7FJ$< **gnuplot** $H8F$PlF$$$kNG9+

gnuplot $N:n<T$O Thomas Williams, Colin Kelley, Russell Lang, Dave Kotz, John Campbell, Gershon Elber, Alexander Woo!"$=$7$FB?$/$N6(NO<T$G$9!#

0J2<$O Thomas Williams Khj^$9:

;d$OHyJ,J}Dx<0$N9V5A$r!"$=7F Colin $OEE<'5$3X$N9V5A$r<hCF$$$F!"2?MHb$=$liK4X9k?t3X$,;k3P2=$G$-$lPJ$"$H9M$($F$$$^7?!#;dC#O"$k EE (Engineering Electronics) VLSI 8&$N%7%9%F%'4IM}<T$H7FF/$$$F$$$F!"$=$7$F!"%0%i%U%#%C%/C<Kv$H%3!<%G%#%s%0$r9T$J$&;~4V$,$"$j$^$7$?!#$=$NEj9F$O2f!9$N4|BT0J>e$KNI$/<u$1F~li$l!"$=7F!"IT40A4G7$?$,!"%U%!%$%k%G!<%?$K4X9k$$$/D+$N%5%]!<%H$K2f!9$r6n$jN)F^7?!#

GNUplot $H$$$&>R2pOIsJbN$b@5$7$/$O$"$j$^$;$s!#$3$N%W%m%0%i%'$NK\Ev$NL>A0$O "**gnuplot**" $G$9!#$:$$$VsH "**Gnuplot**" $H=q$+lF$$$kNr8+kG7g$&$,!"$=$l$O2f!9$NBgH>$,!"8GM-L>;l$d%?%$%H%k$G$"$CFb!"J8>O$r>.J8;z$G3+;O9k3H$K7y0-$r;}CF$$$k$+$i$G$9!#**gnuplot** $O GNU %W%m%8%'%/%H$d FSF HO!"6Ko:$+$N0UL#$r=|$1$P>/$7$b4X78

$"$j$^$;$s!#2f!9$N%=%U%H%&%'%"$O40A4$KFHN)$K%G%6%$%s5l$?$bNG!"$=$7$F"**gnuplot** "
$H$$$&L>A0$O<B$CBE6(KhkbNG$9!#;d$O"llamaplot" $H8F$S$?$+C?$7!"Colin $O"nplot"
$H8F$S$?$+C?NG$9!#$=7F!"2f!9$O"newplot" $,$$$$$@m&$H$$$&3H$G9g0U$7$^$7$?
$,!"$7$+$7$=$NH-$=$NL>A0$r;}$D!"@dBPE*K*$>$^$7$$Pascal $N%W%m%0%i%'$r7W;;5!2J3X
ItG?$^$K;HCF$$k3HrCNj$^$7$?!#$=lG;d$O"**gnuplot** "$,$$$$4$m9g$o$;$KJk$H
7F!"8e$GColin b=lKF10U7?NG$9!#

1.3 gnuplot $O2?$rDs6!7F$/$l$^$9$+

- 2<!85GN4X?t$d&G!<%?$N!"E@!"@^$l@~!"8m:9I=<(!"EI$jDY7??^7A!"%i%Y%kJ8;zNs!"%Y%/%H%kJI$NBt;3$N0[JkMWAGrAH_9go;$?IA2h
- 6K:BI8<4!"BP?t<4!"hj0lHL$NHs@~7A<4$N3djEvF$dG^2pJQ?t:BI8
- 29EYJ,I[!"%S!<%9%&%)!<%'%0%i%U!"%P%$%*%j%s%0%i%U!"%R%9%H%0%i%'JI$N%G!<%?I=8=
- 3<!85GN%G!<%?$N!"E@!"@^$l@~!"6JLL$N!"$?$/$5sN%9%?%$%k(Ey9b@~IA2h!"LV$+$1)$KhkIA2h
- @0?t!"<B?t!"J#AG?tGNBe?t1i;;
- Marquardt-Levenberg :GE,K!$rMQ$$$?%G!<%?6nF07?$N6J@~2s5"
- B?$/$N%*%Z%l!<%F%#%s%0%7%9%F%'!"B?$/$N%0%i%U%#%C%/%U%!%$%k7A<0=PNO!"$=7FB?$/$N=PNOAuCV$N%5%]!<%H
- 9-HC0OKo$?$k%*%s%i%$%s%X%k%W
- %i%Y%k!"%?%$%H%k!"<4!"%G!<%?E@$X$NTEX %i%$%/$J=q<0$Khk8+=P$7IU$1
- BPOC7?F~NO7A<0$N%(%G%#%C%H5!G=$H%R%9%H%j(MzNr)5!G=$N%5%]!<%H

1.4 gnuplot $O%9%/%j%W%H$KE,7F$$^9+

$($(!#gnuplot $OBPOC7?<B9TCf$KDI2C%3%^%s%I$r4^$'%U%!%$%k$rFI$_9~$'3H$,$G$-$^$9$7!"4{$KB8:_$9$k%U%!%$%k$dI8=F~NO$+$i%N%3%^%s%INs$r%Q%$%W;r;H$C$F%P%C%A%b!<%I$G$=$l$r=hM}$9k3HbG-$^$9!#gnuplot $O!"Octave $N%h$&$J9b?e=$'$J?t3X%Q%C%1!<%8$NGX8e$G<B9T$9$k%0%i%U%#%C%/%I%i%$%PH7$F;H$olF$$^$9$7!"cgi %9%/%j%W%H$G%i%C%W$9k3HGMF0W$KWeb 5/F07?$NIA2h@8@.%D!<%kH7$F;H$&3HbG$-$^$9!#gnuplot $O!"$J8_$N"$kL?Na *if else continue break while for* $rMQ$$$?J8L.6nF07?!"%G!<%?6nF07?$N=hM}@)8f!"$*hS7+jJV7$r%5%]!<%H$7$F$$^$9!#

1.5 gnuplot $O;d$N%3%s%T%e!<%?$GF0$+$9$3H,G-$^$9$+

gnuplot $O!"MS Windows, linux, unix, OSX JI$NB?$/$N%W%i%C%H[!<%'>e$G!"9-$/MxMQ$G$-$^$9!#8=:_$N%=!<%9$3!<%I$O!"VMS, Ultrix, OS/2, MS-DOS JI$N8E$$%7%9%F%'$N%5%]!<%H$bJ];}7F$$^9,!"16 bit %W%i%C%H[!<%'$O%b%&%5%]!<%H$7$F$$^$;$s!#

gnuplot $N%=!<%9$O!"$=$lJj$KI8=E*(ANSI/ISO C, POSIX Ey) $J4D6-$+$iB?>/30$l$?$bNN>eGb%3%s%Q%kkG$-$kG7g&!#

1.6 %i%$%;%s%9$K$D$$F

gnuplot $O%\%i%s%F%#%"$N=8CDKhCF:nil$?$bNG$9!#H'$i$O**gnuplot** !"$*hS$=$N;HMQ$N5v2D!"IT5v2D$K4X9kK!E*$JU8=q$r:n@.G-$^$;$s!#$^$?2?$NJ]>Zb"j^$;$s!#<+J,<+?H$N@UG$$G;HMQ7F$/$@$5$$!#

1.7 gnuplot $OFSF $dGNU %W%m%8%'%/%H$H2?$+4X78$,$"$kNG9+

gnuplot $OFSF $,:n$C$?$N$GbFSF $,%a%s%F%J%s%9$7$F$$kNGb$"$j$^$;$s!#0l;~4|FSF $+$iG[I[5l$F$$?3Hb"j^$9,!"$7$+$78=:_O3lO@5$7$/$"$j$^$;$s!#**gnuplot** $O!"GNU General Public License (GPL) $KA4$/J]8n5l$F$$^$;$s!#

gnuplot $O!"L5=~$G$"$k$H8@$&0UL#$G%U%j!<%&%'%"$G$9!#gnuplot r"J?,K>$'h&$K;HMQ$7!"2~JQ9k3$H,G-$^$9,!"2~JQ7?bN$rG[I[9k3$HKD$$FO"$k<o$N@)8B,D-$^$9!#*Copyright* $H$$&%U%!%$%k$Nmodification (2~JQ) $Hredistribution (:FG[I[) $N9'L\$rFIsG$=$l$r>5G'$7F/$@$5$$!#

1.8 99Jk>pJsOI3G<j$KF~$j$^$9$+

gnuplot Web %Z!<%8http://www.gnuplot.info $r8+$F$/$@$5$$!#

1Q8l0J30$NB>$N8@8lGNJ8=q$dF~Lg=q$b$"$j$^$9!#:G?7$N%j%9%H$K$D$$F$O!'http://gnuplot.sourceforge.net/help.html $N"Localized learning pages about gnuplot" $N@a$r$4Mw$/$@$5$$!#

2 %$%s%9%H!<%k

2.1 gnuplot $N:G?7%P!<%8%g%s$O

gnuplot $N:G?7$N@5<0%j%j!<%9HG$O!"2015 G/1 7n%j%j!<%9$N5.0 $G$9!#99?7%P!<%8%g%s(%Q%C%A%l%Y%k 1, 2, ...) $O!"$@$$$?$$$6 %v7nKh$K%j%j!<%9$5l^$9!#**gnuplot** $N3+H/HG$O!"8=:_$O5.1 HJCF$$$^$9!#%P!<%8%g%s5.2 $N:G=i$NHG$O2017 G/Cf=\$K%j%j!<%9$5$l$kM=Dj$G$9!#

2.2 gnuplot OI3G<j$KF~$lil$^$9$+

;OaK:G$bE,@Z$J>l=j$Ohttp://www.gnuplot.info $G$9!#$3$3$+$i!"Nc$($P SourceForge >e$N3+H/%W%m%8%'%/%H%5%$%Hhttp://sourceforge.net/projects/gnuplot JI$N!"?'!9$J%5%$%H$N>l=j$r8+$D1ilkG7g&!#

%=!<%9G[I[J*("gnuplot-5.0.5.tar.gz" $^$?$OF1MM$NL>A0) $O8x<0$NG[I[%5%$%Hhttp://sourceforge.net/projects/gnuplot K"j^$9!#

2.3 gnuplot $N:G?7$N3+H/HGOI3G<j$KF~$lil$^$9$+

gnuplot $N3+H/HG$O!"cvs %=!<%9D%j!<$N7A$G!"%*%s%i%$%s$GD>@\http://sourceforge.net/projects/gnuplot/ $N"CVS" %;%/%7%g%s$+$i;2>H$G$-$^$9!#$=3K4^$^$l$F$$k%I%-%e%a%s%H$K=>$C$F!"Nc$($P!"0J2<$Nh&$&J3%^%s%INs$KhC$F:G?7$N%=!<%9r$9Y$F%@%&%s%m!<%I9k3HbG-$^$9!#

```
cvs -d:pserver:anonymous@gnuplot.cvs.sourceforge.net:/cvsroot/gnuplot login
cvs -z3 -d:pserver:anonymous@gnuplot.cvs.sourceforge.net:/cvsroot/gnuplot co -P gnuplot
```

$^$?$O(bash GO)

```
export CVSROOT=:pserver:anonymous@gnuplot.cvs.sourceforge.net:/cvsroot/gnuplot
cvs login
cvs -z3 checkout gnuplot
```

%Q%9%o!<%I$rJ9$+l?$i <return> rBGA$^$9!#

$=$N8e!"gnuplot $N%3%s%Q%$%k$NCJ3,$N*./configure* $NA0$K!"*./prepare* $r<B9T$7$F:G?7$Nconfigure MQ$N%U%!%$%k$r:n@.$9kI,MW,$"$j$^$9!#

8x<0$Ngnuplot $N3+H/HG$N;CDjE*$J%P%$%J%j%j!<%9O$"$j$^;$sNG!"<+J,<+?H$G%3%s%Q%$%k9kI,MW$,$"j^$9!#$7$+$7!"OS/2, Windows, Macintosh JI$N$$/D+$N%W%i%C%H%U%)!<%'MQ$NHs8x<0$J%P%$%J%jHGOI3+$K8+$D$+$k$+$bCNl^$;$s!#

=EMW$JCm0U:3+H/HG$KBP9k<ALd$OI,$:mailto://gnuplot-beta@lists.sourceforge.net KAwCF/$@$5$$!#

2.4 gnuplot $O;d$N%7%9%F%'GOI&%3%s%Q%$%k$9lPNI$$$G9+

B>$N%=%U%H$N%$%s%9%H!<%k$HF1MM$G$9!#%j%j!<%9N!<%H$H*README*, *INSTALL* $N%U%!%$%krFIsG/$@$5$$!#

- Unix GO!"*./configure* (C10l%f!<%6$N%$%s%9%H!<%kJi$P *./configure --prefix=$HOME/usr*) $r;H$$!"*make* $r<B9T$7!":G8e$K*make install* H7$^$9!#
- Windows GO!"makefile $O*config/mingw*, *config/msvc*, *config/watcom*, *config/cygwin* FbK"j^$9!#makefile $N@hF,$K=q$+$l$F$$$k%*%W%7%g%s$r=$@5$7!"$=$Nmakefile $,CV$+lF$$$kNHF1$8%G%#%l%/%H%jFb$GE,Ev$J*make* %D!<%k$r<B9T7F$/$@$5$$!#D I2C@bL@$b!"makefile $K=q$+lF$$$^$9!#
- B>$N%W%i%C%H%U%)!<%'$G$O!"E,@Z$Jmakefile (Nc$ ($POS/2 Ji*makefile.os2*) $r*config/* %G%#%l%/%H%j$+$i*src/* $K%3%T!<$7$F!"makefile $N%X%C%@$K"$k%*%W%7%g%s$rI,MWJi9?7$7$F!"*src* $K%G%#%l%/%H%j$r0\F0$7$F!"*make* $r<B9T$7F/$@$5$$!#

2.5 %I%-%e%a%s%HOI3G9+!"$=$7F=lrI&<j$KF~$lil$^$9$+

%I%-%e%a%s%HO9YF%=!<%9G[I[J*$K4^$^lF$$$^$9!#8D!9$N%;%/%7%g%s$O!"gnuplot $N:n6HCf$K*help%-!<%o!<%IrBGD3H$G8+$k3H$,$G$-$^$9!#%5%V%G%#%l%/%H%j docs $Htutorial NCfr8+F/$@$5$$!#$=$3KO!"PDF $dHTML HG$N%f!<%6%^%K%e%"%k$r@8@.$9$k%U%!%$%k$,$"j^$9!#http://gnuplot.sourceforge.net/documentation.html $K!"$=$N%3%T!<$,CV$$$F$"$j$^$9!#

2.6 F0:n9k%5%s%W%k

%=!<%9G[I[J*KCF0:n9k%5%s%W%k$N%G%#%l%/%H%j$,4^$^$l$F$$$^$9!#$3li%5%s%W%k!"$*$hS=$N7k2L$NIA2h%0%i%U$Ohttp://gnuplot.sourceforge.net/demo/ Gb8+k3H,G-$^$9!#

2.7 I&7?$i **gnuplot** $r=$@5!"$^$?$O%Q%C%A$rEvFil^9+

3N$?$aKO **gnuplot** $r%3%s%Q%$%k$7D>$9I,MW$,$"j^$9!#

MM!9$J?M!9$,:nC?=$@5$O!"=PNO%I%i%$%P$Nh&$J%U%!%$%krCV-4$($k3H$G9T$J$&$+!"$^$?%Q%C%AEvFG9T$J$$$^$9!#%U%!%$%kNCV-4$($N>l9g!"$=$lMQ$NREADME %U%!%$%k!"$^$?O$=$N%U%!%$%k$N:G=i$N9T$K2?$+>pJs$,$"$k$+$bCNl^$;$s!#

%Q%C%ArEvF$k>l9g$O!"*patch* %f!<%F%#%j%F%#%I,I,MW$G!"$b7+$7?$i*automake*, *autoconf* $H$$&&D!<%kbI,MW+b7l^$;$s!#%Q%C%ArE,MQ9$k>l9g$NE57?E*Jd$jJ}$O

```
patch -p0 <newfunctionality.diff $G$9!#
```

4s9F5l$?%Q%C%A$NCV$->l=j$Ognuplot $Nsourceforge %5%$%Hhttp://sourceforge.net/p/gnuplot/patches/ $N"Patches" %;%/%7%g%s$K"j^$9!#

2.8 IN%*%W%7%g%s$, gnuplot $K%3%s%Q%$%k5l$F$$$k$+$rCNkK$O

%3%s%Q%$%k:Q$_$N **gnuplot** $,M?$(il$F$$$k>l9g!"show %3%^%s%I$G!"$=l,%3%s%Q%$%k$5l?H-$K;HMQ$5l?%3%s%U%#%0%l!<%7%g%s%H%S%k%I%*%W%7%g%s$N0lMw$rI=<(G-$^$9!#

```
gnuplot> show version long
```

3 F0:n(Working with it)

3.1 %X%k%WOI$&$dCF<j$KF~$lil$^$9$+

3N%I%-%e%a%s%H$rF I$sG/$@$5$$!#

=i4|%W%m%s%W%H$Ghelp %3%^%s%I$r<B9T7F$/$@$5$$!#$=$N8e%-!<%o!<%I$r?$ICF$$$CF/$@$5$$!#

```
plot $dset $+$i;O$a$k$N$,$$$$G$7$g$&!#
```

b7!";}CF$$$kJi^%K%e"%k$rF I$sG/$@$5$$

demo %5%V%G%#%l%/%H%j$r8+$F$/$@$5$$!#%R%s%H$rM?$(F/lkG7g&!#

%7%9%F%'4IM}<T!"$^$?$O **gnuplot** $r@_Dj$7$?F1N=$K?RMF$/$@$5$$!#

$=$l$iA4$F$K<:GT$7$?i!"**gnuplot** $N:G?7HG$K99?7$9$k!"$"$k$$O99?7$9$kh&%7%9%F%'4IM}<T$K05NO$r+1F$/$@$5$$!#$=$7F<ALd$r%K%e!<%9%0%k!<%W news://comp.graphics.apps.gnuplot $KEj=q$9k+!"$^$?O%a!<%j%s%0%j%9%H mailto://gnuplot-info@lists.sourceforge.net $K%a!<%k$rAwCF$/$@$5$$!#$=$N%a!<%j%s%0%j%9%H$,JL$K<u1F7^$&0 5E]E*$JNL spam rHr1k?$a!"Ej9F$NA0K=$N%a!<%j%s%0%j%9%H$K;22C(subscribe) 7J1l$P$$$1$^$;$s!#;22C$NJ}K!$O!"gnuplot $N%^%K%e"%kK\J8$K$"$j$^$9!#%a!<%krAwk:]$O!"%P!<%8g%sHV9f$H%*%Z%l!<%F%#%s%0%7%9F%'$rJ;5-$9k3HrK:lJ$$$G$/$@$5$$!#$=$N%a!<%j%s%0%j%9%H$r9XF I$7$?$$$JiP!"URL http://lists.sourceforge.net/lists/listinfo/gnuplot-info $r;2>H$7F/$@$5$$!#7+$7%K%e!<%9%0%k!<%W news://comp.graphics.apps.gnuplot $,D>@\F I$akJiP!"$=$&7J$$G$/$@$5$$!#<ALdr=$N%K%e!<%9%0%k!<%W$KEj9F9l$P!"$=lO%a!<%kGNJV;v$r@A5a$9$k!"$"$k$$$OMWLs$rEj9F$9$kNI$$7A<0$H8+$J5l$^$9!#

3.2 I&dC$?$i0%i%U$r%W%j%s%H%"%&%H$G$-$^9+

@8@.5l$k=PNO$N<dN'$O set terminal %3%^%s%I$GDj5A7^$9!#Nc$($P

```
set terminal postscript
```

$O%0%i%U$rPostScript 7A<0$G=PNO$7$^$9!#=PNO$O set output %3%^%s%I$G%j%@%$%l%/%H$G$-$^$9!#

0J2<NNcO!"$^$:sin(x) $N%0%i%U$r%9%/%j!<%s>e$KIA2h$7!"F1$8%0%i%U$rPostScript =PNO%U%!%$%k$H7F:FIA2h7^$9!#

```
gnuplot> plot sin(x)
gnuplot> set terminal postscript
Terminal type set to 'postscript'
Options are 'landscape monochrome "Courier" 14'
gnuplot> set output "sin.ps"
gnuplot> replot
gnuplot> unset output              # =PNO@h$r%G%U%)%k%H$KLa$9
gnuplot> unset terminal            # =PNO7A<0$r%G%U%)%k%H$KLa$9
gnuplot> system("print sin.ps")    # PS %U%!%$%k$r%W%j%s%H"%&%H (4D6-0MB8)
gnuplot>
```

%W%i%C%H%U%)!<%'$K0MB8$7$J$$=PNO7A<0$NI|5"$O!"%3%^%s%I *set term push/pop* KhCF0J2<Nh$&$K9TJ($^$9!#

```
gnuplot> set terminal postscript eps color lw 15 "Helvetica" 20
gnuplot> set out 'a.eps'
gnuplot> replot
gnuplot> set term pop
```

set term pop %3%^%s%I$O!"$=$NA0$KBP1~9k *set term push* $r<B9T$7$F$$J$>l9g$O!"5/F0;~$N=PNO7A<0I|5"$7$^$9!#*unset terminal* $r<B9T$7$?>l9g$bF1$8$G$9!#

BPOC7?=PNO7A<0NCfKO=$N%D!<%k%P!<>e$K%W%j%s%?%"%$%3%s$rDs6!9kbNb"j^$9(*win, wxt, qt* Ey)!#$=lO!"B>$N=PNO7A<0$r;HMQ9kNGOJ$/!"%7%9%F%`$KMQ0U$5$l$F$$$k0lHIE*$J%7%9%F%`%D!<%k$r;H$!"8=:_$N%0%i%U$r0u:~$9k+!"$^$?$C%U%!%$%k$KJ]B8$7$^$9!#9JcA!"0u:~$a%K%e!<$G"save to png" $rA*Br$7$FF@$ilk%U%!%$%k$O!"*set term png; replot;* KhCFF@il$k%U%!%$%kHO0c$&$bNKJj$^$9!#

3.3 I&dC$?$i%0%i%U$r%o!<%W%m%=%U%H$K<h$j9~$a$^$9$+

4pK\E*$K!"%0%i%U$r$=$N%o!<%W%m%=%U%H$,M}2r$G$-$k7A<0$N%U%!%$%k$KJ]B8$9lP(`set term $H set output $r;H$$^$9!#>e$r8+$F$/$@$5$$)$=$N%o!<%W%m%=%U%H$GFI$_9~$`3H$,$G$-$k$G7$g$&!#8e$G@5$7$%5%$:$KJQ49bG$-$k$H$$&E@$G%Y%/%H%k7A<0$N%U%)!<%^%C%H(PostScript, emf, svg, pdf, TEX, LATEX JI)$NJ}$,$$$$G7g&!#

:Y$+$$3HO=$N%o!<%W%m%=%U%H$K0MB8$7$^$9!#`set term H7$F;HMQG-$k%U%!%$%k$N%j%9%H$r8+F/$@$5$$!#

B?$/$N%o!<%W%m%=%U%H$OEncapsulated PostScript (*.eps) $N%0%i%U$r<h$j9~$a$^$9!#**gnuplot** GO!"`set terminal postscript eps $^$?$O`set terminal epscairo $r;H$&3H$Geps =PNO$rA*BrG-$^$9!#**gnuplot** $O!"=PNO$9$kEPS %U%!%$%k$K%W%l%S%e!<MQ$N%S%C%H%^%C%W2hA|rKda9~$_$^$;$sNG!"%o!<%W%m%=%U%HNCfK$O!"$=lKBP1~5;k?aK<+J,<+?H$G%W%l%S%e!<2hA|$rDI2C7J$$H$$1J>l9gb"k+b7l^$;$s!#$=$NL\E*N?aK$O!"GSView %S%e!<%o(OS/2, Windows, X11 MQ$,$"j^$9)!"$"$k$$$OD+$NUnix >e$Nps %D!<%k$,;H$($^$9!#

OpenOffice.org Ey$NWindows $N%*%U%#%9%"%W%j1!<%7%g%s$K$O!"EMF 7A<0$N%Y%/%H%k2hA|$r=hM}$G$-$kbN$,$"j^$9!#$=Nh$&J2hA|%U%!%$%k$Oemf =PNO7A<0$G$b:n$l$^$9$7!"windows =PNO7A<0$N%0%i%U&%#%s%I%&$N%D!<%k%P!<%+$i'Save as EMF...' $rA*Br$9k3HG$b:n$l$^$9!#

OpenOffice.org $OSVG 7A<0$b!"AutoCAD $Ndxf 7A<0$bFI$_$3$`$3H,G-$^$9!#

gnuplot $r;H$CF TEX $dLATEX J8=q$K<h$j9~$`$?$a$N%r:n$kJ}K!$O2?DL$j$b$"$j$^$9!#<h$j9~$`*.tex %U%!%$%k$NCGJR$rD>@\@8@.$9$k=PNO7A<0$b$"$j$^$9$7!"\includegraphics %3%^%s%I$r;H$C$F<h$j9~$`$?aN*.eps, *.pdf, *.png =PNO$r@8@.$9kbNb$"$j$^$9!#epslatex $Hcairolatex =PNO7A<0$O!"2hA|%U%!%$%k(*.eps $+*.pdf)$H$=$l$r;2H$9$k*.tex J8=q%U%!%$%k$NN>J}$r@8@.7^$9!#tikz =PNO7A<0$O!"%F%-%9%H%H%0%i%U$r@8@.$7!"$=$N=PNO$rpdflatex $G=hM}$9lPPDF %U%!%$%k,:n@.$G$-$^$9!#

BgDq$N%o!<%W%m%=%U%H$O%S%C%H%^%C%W2hA|(png, pbm Ey)$r<h$j9~$`$?aN%3H,G-$^$9$,!"$3$NJ}K!$OC;=j$O!"$=$N%0%i%U$,gnuplot KhCF@8@.5l$?2H$-$N%5%$:KhCF$=$N2rA|EY$,@)8B$5lF7^$&$3HG$9!#0lHL$K!"J8=q$,:G=*E*$K%W%j%s%H"%&%H5l$k2rA|EY$hjb$=$N2rA|EY$O+$JjDc/Jj$^$9!#

3.4 I&dC$?$i**gnuplot** $N%0%i%U$rJT=8$d8e=hM}$G$-$^9+

3l$O"$J$?$,;H&=PNO7A<0$K0MB8$7$^$9!#

- **svg** =PNO7A<0(scalable vector graphics)$N=PNO$O**Inkscape** (http://www.inkscape.org), **Skencil** (http://www.skencil.org), **Dia** (http://projects.gnome.org/dia/), Nh$&&$Jsvg %(%G%#%?$G9$J$kJT=8$b9T$J($^$9$7!"**OpenOffice.org** (OO.o Draw %W%j%_%F%#%VXNJQ49KhCF)NCfK<h$j9~$`$?$a$N%3$H$,$G$-$^$9!#

- PostScript $dPDF =PNO$O!"Adobe Illustrator $dAcrobat Nh$&$J%D!<%k$GD>@\JT=8G-$^$9$7!"**pstoedit** %Q%C%1!<%8$GB>$N?'!9$JJT=82DG=$J%Y%/%H%k7A<0$KJQ49$9k3Hb2DG=$G$9!#pstoedit $O http://www.pstoedit.net $K"$j$^$9!#

- DXF =PNO7A<0$O AutoCAD $N=q<0$G!"B>$N$$/D+$N%"%W%j%1!<%7%g%s$G$bJT=8$G$-$^$9!#
- %S%C%H%^%C%W7A<0$N2hA|(png, jpeg, pbm Ey) $O ImageMagick $d Gimp NMMJ%D!<%k$GJT=8$9k3H,G-$^$9!#0lHL$K!"%Y%/%H%k%0%i%U%#%C%/7A<0$N8e=hM}$r9TJ&KO%Y%/%H%k%0%i%U%#%C%/%W%m%0%i%`(%I%m!<7O%D!<%k)$r!"%T%/%;%k2hA|$K$O%T%/%;%k2hA|7O$N%W%m%0%i%`(%Z%$%s%H7O%D!<%k)$r;H$&I,MW$,$"$j$^$9!#

3.5 I&dC$?$i5-9fNBg-5d@~$NB@$5JI$rJQ99$G$-$^9+

gnuplot $O!"Nc$($P?'$dB@5dE@$N7A$JIN!"@~$dE@$N?'!9$JB0@-$r@_Dj9k$?$a$NMM!9$J%3%^%s%I$rDs6!$7$F$$$^$9!#%3%^%s%Itest $O!"8=:_A*Br$5lF$$k=PNO7A<0MQ$N!"MxMQ2DG=$JDj5A:Q$_$N?'!"%5%$:!"7A$JINAH9g$;$r<($9%F%9%H%Z!<%8$r=PNO7^$9!#%3%^%s%I *set linetype* $r;H$&3HG3lrJQ99$7$?$j!"$"i?JHrDI2CDj5AG-$^$9!#

3.6 %0%i%U$r%"%K%a!<%7%g%s2=$G$-$^9+

gnuplot =PNO7A<0$GD>@\%"%K%a!<%7%g%s%U!%$k$r=PNO$G$-$kNOJ2<Nb$N(gif) $@$1$G$9:

```
set terminal gif animate {delay <time>} {loop <N>} {optimize}
```

%G%bNCfNhttp://gnuplot.sourceforge.net/demo/animate.html $b;2>H$7F/$@$5$$!#

3.7 I&dC$?$i1"4X?t$N%0%i%U$,=q1^9+

gnuplot GO1"4X?t$N%0%i%U$d6J@~$OD>@\$OIA2hG-$^$;$s!#$7$+$7!"<!A1$N:v$O"j^$9!#

```
gnuplot> # Nc: <!$N9T$rE,Ev$JDj5A$KCV$-4X$($F$/$@$5$$!#
gnuplot> f(x,y) = y - x**2 / tan(y)
gnuplot> set contour base
gnuplot> set cntrparam levels discrete 0.0
gnuplot> unset surface
gnuplot> set table $TEMP
gnuplot> splot f(x,y)
gnuplot> unset table
gnuplot> plot $TEMP w l
```

$=$N;E3]1O!"6JLLz=f(x,y) $N1K\$NEy9b@~z=0 rIA-!"$=$NEy9b@~$N%G!<%?$r0l;~%U%!%$%k$d%G!<%?%V%m%C%/$K;!<%V$9k3HK$"$j$^$9!#

3.8 2 DN6J@~4V$NNN0h$rEIjDV9KO

2 DNM?$($il?6J@~$N4V$rEIjDV9IA2h$O!"5?;w%U%!%$%k'+' $H *filledcurves closed* $r;H$($P4JC1$KG-$^$9!#0J2<NNcO!"2 DN6J@~f(x) $Hg(x) KBP9$k%G%b$G$9:

```
f(x)=cos(x)
g(x)=sin(x)
xmax=pi/4
set xrange [0:xmax]
plot '+' using 1:(f($1)):(g($1)) with filledcurves
```

Cm0U7Fbi$$$?$$NG9$,!"><e$NNc$N%9%/%j%W%H$O2 DN6J@~$N4V$NNN0hrEIjDV9bNG$"$C$F!"$IAi$,B>J}$N>eG"k+$r9MN8$O7^$;$s!#b7!"g(x)<f(x) $+!"$^$?$O(x)<g(x) $rK~$?$9NN0h$N$_$rEIjDY7$?$$J$i!"*filledcurves* $N8e$m$K *above* $+ *below* $N%-!<%o!<%I$rDI2C7F$/$@$5$$!#

textithelp filledcurves, *help special-filenames*, *help ternary* $K4X$9$k%I%-%e%a%s%H$r;2>H7F$/$@$5$$!# *demos* %G%#%l%/%H%jFb$N *fillbetween.dem* $b;2>H$7F/$@$5$$!#

3.9 pm3d Kh$k%G!<%?%U%!%$%k$Nsplot $G2?$bI=<(5l$^$;$s

```
set pm3d; splot 'a.dat' $H$d$C$F$b!"%+%i!<%\%C%/%9$OI=<($5$l$k$b$N$N%0%i%U$OI=<($5$l$J$$
```

H7$?$i!"b7$+$7$?$i2DNDJ$,$C$F$$$k@~(8IN)@~)$rJ,N%$9$k6u9T$,$J$$$NGO?6u9T$rF~$l$J$5
$$!3l$,2?$r0UL#9kN+$K6=L#$,$"$kJi!"gnuplot $Ndemo %G%#%l%/%H%j$K$"$k demo/glass.dat
$ddemo/triangle.dat JI$N%U%!%$%kr8C/$j8+F/$@$5$$!#
0J2<$Nawk %9%/%j%W%H(Nc$($Paddblanks.awk $H8F$V3HK7$^$9)$OM-MQ$G!"%G!<%?%U%!%$%k$K!"
Bh1NsL\$N?t$,JQ9$7$?$H$-$K6u9T$rD12C$7F/l^$9!#

```
/^[[:blank:]]*#/ {next} # %3%a%s%H9T (# $G;O$^$k9T) $OL5;k
NF < 3 {next} # 3 NsL$K~$7$+$J$$9T$bL5;k
$1 != prev {printf "\n"; prev=$1} # 6u9T$r=PNO
{print} # $=$N9T<+BN$r=PNO
```

3lKh$j!"%G!<%?%U%!%$%k$r%3%^%s%Iawk -f addblanks.awk <a.dat KhCFA0=hM}9k$+!"
unix 8_4 9$N%W%i%C%H%U%)!<%`e$G%G!<%?%U%!%$%k$r

```
gnuplot> splot "<awk -f addblanks.awk a.dat" $N$h$&$KIA2h$9$k$+!"$N$I$A$i$+$r9T$C
```

F/$@$5$$!#

3.10 3<!85%G!<%?$N2<!85<M1F$rIA2h9kKO

set view map $r;HMQ$7F/$@$5$$!#2<!85$N%+%i!<2hA|$NIA2hMQKO!"IA2h%9%?%$%kwith image $d
with rgbimage JI$hMQ0U$5lF$$$^$9!#

3.11 pm3d ?'CO?^/6JLL>e$Kdots/points $N;6I[?^$r=EMkKO

pm3d %9%?%$%k$Nexplicit %9%$%C%A(implicit $b;2>H$N3H)$r;H$CF/$@$5$$:

```
gnuplot> set pm3d explicit
gnuplot> splot x with pm3d, x*y with points
```

3.12 %i%Y%kD-$NEy9b@~$rIA2h9kKO

8D!9$NEy9b@~$K%i%Y%krD1?%0%i%U$O!"**gnuplot** %P!<%8%g%s4GO$"$k<o$NN"5;$HM>J,$J=hM}<j=g
$,I,MW$G$9!#0J2<$r;2>H7F$/$@$5$$:http://gnuplot.sourceforge.net/scripts/index.html#tricks-here
%P!<%8%g%s5GO!"$=$N<j=gOHFb4JC1$G$9!#Ey9b@~$r"1 2sL\$O"with lines" $G!"2 2sL\$O"with
labels" $G2 2sIA2h$9k@1G$9!#L\N)$D%i%Y%k$r:n@.$7$?$$>19g$O!"0J2<$Nh&&K9kH$$$$G7g$&!#

```
set style textbox opaque noborder
set contours
splot 'DATA' with line, 'DATA' with labels boxed
```

3.13 pm3d Kh$k?'$D$-$NB?LIBNIA2h$O

3<!85J*BNNLLK?'rD1FIA2h9kKO!"%U%!%$%k$r0J2<Nh$&&$J7A<0$G:n@.$9lP2DG=$G$9!#

```
# ;03Q7A 1
x0 y0 z0 <c0>
x1 y1 z1 <c1>

x2 y2 z2 <c2>
x2 y2 z2 <c2>
```

```
# ;03Q7A 2
x y z
...
```

1 9T$N6u9T$H2 9T$N6u9T$N0LCV$KCm0U$7F/$@$5$$!#<*c*> $O%*%W%7%g%s$N?';XDj$G$9!#
3l$r0J2<$Nh&K7$FIA2h$7$^$9(IAi+$Nsplot $G):

```
set pm3d
set style data pm3d
splot 'facets.dat'
splot 'facets_with_color.dat' using 1:2:3:4
```

6JLL$N@~$O!"*set style data pm3d* $+!"*splot ... with pm3d* $GL58z$KG-k3HKCm0U7F$/$@$5$$!#
>eNNcG$O!"pm3d $O;03Q7A$r$=$l$>$lFHN)$J6JLL$H7FIA2h7^$9!#$=li$O!"%G!<%?%U%!%$%kCf$KB>$NbN$,8+$D$+$C$?$H$-$K$=$N8e$G0l$D$N6JLL$KIA$+$l$^$9!#=EJkItJ,$O2<!85<M1F$G$O=E$JCFIA2h5lF7$^$$$^$9

gnuplot $O3<!85%b%G%j%s%0%W%m%0%i%'GOJ/!"1#@~=hM}%k!<%A%s$OE@!"@~$KOE,MQ5l^9,!"LLKOE,MQ5l$^$;$s!#LL$N=8$^$jH7FN%G!<%?$N=hM}$J7K$O!"1F$K1#lkLL$r:n$k3HOG$-$^$;$s!#'hidden3d' %"%k%4%j%:%'$O!"F~NO%G!<%?$r2DNJ}K!$G;H$C$F<B9T$5lF$$$^$9:0l$D$O!"6JLL$r9=@.9k;03Q7A(3J;RE@$N;M3Q7A$+$i:n$ilk)$N=8$^jr%;%C%H!"%C%W9k3H!"b&0lDOC<$N=8$^jG$9!#$=7F$=$N9YFNC<KBP7$F!"$I$NItJ,$,B>NLLN8emK1#lJ$$N$+$r%A%'%C/$7!"$=7F$=$lirIA2h7F$$^$9!#

7k2LH7$F!"gnuplot $O6JLL$d3<!85$NJ*BN$r2>A[8=<BH7FOIA2h7^$;$s!#3l$O*set pm3d map* KBP7FOAcsHF/$-$^9,!"K\Ev$N3<!85$K7?$$$J$i!"B?LIBN%G!<%?$rVRML %U%!%$%k$KJQ49$9$k%=%U%H$r=q$/J}$,$$$$+b7l^$;$s!#

3.14 ?'CO?^$r%b%N%/%m$N%W%j%s%?GbAcsH0u;z9kh&$J%Q%l%C%H$O

set palette cubehelix $r;n$7F/$@$5$$!#

4 M_$7$$5!G=(Wanted features)

4.1 gnuplot 4.6, 5.0 Ey$G?7$7$/$JC?3H$O

$3$3$K"$2kK$OB?$9$.$^$9!#%=!<%9G[I[J*$K4^$^$l$k%U%!%$%k*NEWS*!"$"$k$$$Ognuplot $N%X%k%W%I%-%e%a%s%H$N"New features" $N%;%/%7%g%s$r;2>H7F$/$@$5$$!#

4.2 gnuplot $O2hA|%U%)!<%^%C%HMQ$N%I%i%$%P$r5]!<%H7F$$$^9+

%$%s%9%H!<%k:Q$Ngnuplot $,;HMQ$G$-$k%0%i%U%#C%/%I%i%$%P$N0lMw$r8+$kKO!"set term $H%?%$%W7F$/$@$5$$!#
DL>o$NG[I[J*$K$O4^$^lF$$$F$b!"%G%U%)%k%H$G$O;H($J$$h$&$KJC$F$$$k%0%i%U%#C%/%I%i%$%P$b"j^$9!#$=li$,;H$$?ll$P!"gnuplot/src/term.h $r=$@5$7$F%3%s%Q%$%k$7D>$9I,MW$,$"$j$^$9!#

4.3 gnuplot $O1#@~=hM}$G$-$^9+

$($(!#

4.4 gnuplot $CK@%0%i%U/%R%9%H%0%i% Y/H"7?%0%i%U$,=q$1$^$9$+

gnuplot $O!"$"i+8aI=7A<0K5l?%G!<%?$rI=< ($9k?aN!"5^6^$J2#JB$S7?(clustered) $H@Q$_>e$27?(stacked) $N%R%9%H%0%i%^%9%?%$%k$r%5%]!<%H$7$F$$$^$9!#$^$?!"@8$N%G!<%?$r>l=jKh$KN_@Q9k$?$a$N$$/D+$N%*%W%7%g%s$bDs6!7F$$$F!"$=$l$r@Z$jBX$($FK@%0%i%UH7$FI=< ($5$;$k3H$b2DG=$G$9!#%^%K%e%"%k$N*bins* $H*smooth frequency* $NItJ,$r;2>H7F$/$@$5$$!#

4.5 gnuplot $O1_%0%i%U$,=q1^9+!";MH>4|%0%i%UOI$&$G9+

1_%0%i%U$Ognuplot GOAgCHLIE]G9$,!"0J2<$r8+F/$@$5$$!#http://gnuplot.sourceforge.net/demo/circles.html $^$?$O!"0J2<$r;2>H7F$/$@$5$$!#http://gnuplot-tricks.blogspot.com/2009/08/pie-charts-entirely-in-gnuplot.html

%G%bNCfK$OC1=c$J%,%s%H%A%c!<%HNNc,$"$j$^$9!#

4.6 0lDN%Z!<%8$KJ#?t$N%0%i%U$,=q$1$^$9$+

$O$$!#`set multiplot` H7F/@$5$$!#

4.7 gnuplot $O0l$D$N%0%i%U$GJ#?t$Ny<4$r;H$($^9+

$O$$!#2<!85%0%i%UGOJL!"9$Kx<4$r2<(x1) $H>e(x2) $K;}$D3H$,$G$-$^$9$7!"JL!"9$Ky<4$r:8(y1) $Hl&(y2) $K;}$D3H$,$G$-$^$9!#%P!<%8%g%s5 GO!"*with parallelaxes* $H$$$&IA2h%b!<%I$Gy<4$r5i$KDI2C$9k3HbG-$^$9!#

4.8 0lDN%U%!%$%k$Kgnuplot $N%3%^%s%I$H%G!<%?$NN>J}$r=q1^9+

%P!<%8%g%s5 GO!"V%R%"%I%-%e%a%s%H!"W7A<0GNL>A0IU$-%G!<%?%V%m%C%/$r%5%]!<%H7F$$$^$9:

```
gnuplot> $DATABLOCK << EOD
cats 4 2
dogs 1 4
EOD
gnuplot> plot $DATABLOCK using 2:3:1 with labels
```

L>A0IU$-%G!<%?%V%m%C%/$O0lEYDj5A9l$P!"$=lr2?EYGb;H$&$3H,G-$^$9!#

%G!<%?$O!"plot %3%^%s%I>e$G5?;w%U%!%$%k;XDjplot "-" $r9T$C$F%$%s%i%$%s7A<0$GM?$($k3HbG$-$^$9!#$3$N>l9g$O!"%G!<%?$OC0lEY$7$+;H$($^$;$s!#

```
gnuplot> plot "-"
1 1
2 4
3 9
e
```

4.9 %i%Y%k$K>e/2<IU$-$NJ8;z$r;H$($^9+

B?$/$N=PNO7A<0(=PNO%G%P%$%9rA*Br$9k?aN gnuplot GNL>>N)$G!"V3HD%J8;z=hM}!"W%b!<%I("enhanced text" %b!<%I)$,%5%]!<%H$5lF$$$F!"3l$G>eIU$-2<IU$-$NJ8;z!"$*$h$S<PBN(italic)!"B@;z(boldface) d=$NB>$N=qBN!"%U%)%s%H%5%$:$r;XDjG-$^$9!#

4.10 %.%j%7%cJ8;z$dB>$NFCJL$J5-9f$r;H$&$K$O

8E$$$d$jJ}$H7F!"FCJL$J%U%)%s%H!"Nc$($P Adobe $N"Symbol" %U%)%s%H$K@ZjBX(k?aK3HD%J8;z=hM}%b!<%I(enhanced text %b!<%I) $r;HMQ$9$kJ}K!$,$"$j$^$9!#$=$l$O!"$"J?$,=PNO$7$?$$J8;z$KDL>o$N ASCII J8;z$r3d$jEvFF$$$^$9!#$3lO!"8=:_Gb PostScript =PNOKOI,MWG7g&!#7+$7!"$h$j4JC1$JJ}K!$O!"UTF-8 %(%s%3!<%G%#%s%0$rA*Br$7!"FC<lJ8;z$rB>$NJ8;zNs$HF1MM$K$=$N$^$^F~NO9k3H$G$9!#3NJ}K!GO!"%U%)%s%H$NJQ99$OI,MWJ/!"$^$?CJK J8;z=89g$r4^$`9YFN Unicode %3!<%I%]%$%s%H$X$N%"%/%;%9$,2DG=KJj^$9!#$7$+$7 **gnuplot** KhCF:nil$?%U%!%$%k$r<B:]$K0u:~!"I=<(9kKO!"$"$J$?$N%3%s%T%e!<%?!"$"$k$$$O=PNO%G%P%$%9$KE,@Z$J%U%)%s%H$,%$%s%9%H!<%k$5lF$$$kI,MW$,$"j^$9!#**gnuplot** <+?H$K$O%U%)%s%H$O4^$^$l$F$$$^$;$s!#

$$$/D+$N LaTeX 7O=PNO7A<0(*latex, epslatex, tikz, context, cairolatex*) $O!"@8@.$7$?J8;zNs$r LaTeX KEO7$^$9!#3N>l9g$O!""\\alpha_{3}"$d'\alpha_{3}'Nh$&$JDL>o$N LaTeX Iw$N5-=R$,MxMQ$G$-$^$9!#

4.11 I&7?$i%"%/%;%s%HIU$-$NJ8;z$r=PNOG-$^$9$+

ü (u %&%`%i%&%H; u $N>e$KE@2 DN%"%/%;%s%H) $dn̂ Nh$&$JJ8;z$r%i%Y%k$K4^akKO!"E,@Z$J%(%s%3!<%I%*%W%7%g%s$r@_Dj$7!"8bit J8;z%3!<%I$r;HMQ7J1l$P$$$1$^$;$s!#Nc$($P<!$Nh&K7$^$9!#

```
gnuplot> set encoding iso_8859_1
gnuplot> set title "M\374nchner Bierverbrauch \374ber die Jahre"
gnuplot> plot "bier.dat" u 1:2
```

3lKh$j!"E,@Z$J *set encoding* Kh$j!"%A%'%38l!"J)8l!"%O%s%,%j!<8l!"O*8lJI$N%i%Y%k$rBG$A=P$9$3$H$,$G$-$^$9!#$7$+$7!"2<oN`$N%(%s%3!<%I(Nc$($P@>%i%F%s%(%s%3!<%I$HEl%i%F%s%(%s%3!<%I) $r0l$D$N%U%!%$%k$K:.$<k3HOG-$^$;$s!#

hj0lHIE*$J2r7hK!$O!">e$K=R$Y$?$h$&$K UTF-8 %(%s%3!<%G%#%s%0$r;H$&3H$G$9!#$=$lKhjG0U$N%"%/%;%s%HIU$-J8;z$K Unicode %3!<%I%]%$%s%H$G%"%/%;%9$G$-$kh&KJj^$9!#

4.12 =D$H2#$N<4$r **1:1** KG$-$^9+

set size square $+set view equal xy H7F_F/$@$5$$!#

4.13 0[Jk%5%$%:$N%F%-%9%H$r0l$D$N%0%i%U$G=PNOG-$^$9$+

$?$$$F$$$N=PNO7A<0GO!"%G%U%)%k%H%U%)%s%H$NL>A0$H%5%$%:$r;XDjG-$^$9!#V3HD%J8;z=hM}!W%b!<%I("enhanced text") GO!"%U%)%s%H!"$*$h$SJ8;z%5%$%:$d%\!<%k%I!"%$%?%j%C%/$N=qBN$r0lDN%0%i%UFb$GJQ99$G$-$^$9!#

4.14 I&7?$i%G!<%?E@$r%9%-%C%WG-$^$9$+

0J2<Nh$&$K%G!<%?CMH7$F? $r;XDj$9lPG-$^$9!#

```
1 2
2 3
3 ?
4 5
```

set missing $b;2>H$7F/$@$5$$!#%G!<%?%U%!%$%k$N%3%a%s%HJ8;z$r;XDj$9kK$O!"*set datafile commentschars* $r;2>H$7F/$@$5$$!#

4.15 I&7?$in E@Kh$K%G!<%?$r07$($^$9$+

3l$O!"Nc$($Pplot 'a.dat' every 2 Nh$&$K!"plot %3%^%s%I$K?'!9$J%*%W%7%g%s$r;XDj$9k3HGG-$^$9!#9YFNE@rDLk@~$r0z$-!"7+$7E@$N5-9f$On E@Kh$K=q$-$?$>$l9g$O!"
plot 'a.dat' with linespoints pointinterval n H7F_F/$@$5$$!#

4.16 I&7?$i1tD>@~$r=q1^9+

>u67Khj^9,!"<g$JJ}K!$OOJ2<NDIj$G$9:

- set arrow .... nohead 3N>l9g!"Lp$N@53N$J3+;OE@$H=*N;E@$NOICV$r7W;;$7F*$/I,MW$,$"$j$^$9!#
- %G!<%?E@$r:n$C$F(%$%s%i%$%s$G$N;XDj$b2D)$=$l$rIA2h

4.17 I&7?$i%G!<%?%U%!%$%k$rIA2h$G$-$^9+

4JC1$G$9!#%3%^%s%Iplot 'a.dat' GG$-$^$9!#3<!85IA2h$N>l9g$Osplot 'a.dat' $G$9!#$?$@$7!"2$DNDJ,CF$$k@~(8IN)@~)$rJ,N%$9kN$K6u9T$r=PNO9kNrK:lJ$$G$/$@$5$$!#5b$J$$H!"%G!<%?$,3J;R>u(grid)$G$J$$H$$&(%i!<$,=P$k$+$bCNl^$;$s!#<ALd3.9 $b;2>H$7F/$@$5$$!#%G!<%?$,3J;R>u$GJ>l9g$O!"set dgrid3d {?'$s$J%*%W%7%g%s} $r;HMQ$7F/$@$5$$!#

4.18 I&7?$imultiplot $NIA2h$rreplot G-$^$9$+

D>@\$OG-$^$;$s: gnuplot $Oreplot %3%^%s%I$O%5%]!<%H7F$^$9$,!"remultiplot %3%^%s%I$O$"$j$^$;$s!#$hCF!"%9%/%j%W%H%U%!%$%kFb$Kset multiplot $+$iunset multiplot $^$GN9YF$N%3%^%s%INs$r=q$/I,MW$,$"$j$^$9!#$=$N%9%/%j%W%H$r gnuplot $Kload 7Fdl$P!"I,MW$J2s?t$@$1!"0[Jk=PNO7A<0!"0[Jk=PNO%U%!%$%k$Kreplot G-$^$9!#

5 $=$NB>

5.1 %P%0$r8+$D1?NG9,I&7?$iNI$$$G9+

:G=i$K!"$=l,K\Ev$K%P%0$JN+!"$=$lHb$"$k set–command $GK]$9$3$H$,$G$-$kFCD'JN$+$r8+6KaF$/$@$5$$!#

<!$K!"$"J?$,;H$C$F$$k **gnuplot** $,8E$$HGGO$J$$+3N$+$aF/$@$5$$!#b7$=$&Ji!"hj?7$7$$HGGO$=$N?7$7$%P%0$O<h$j=|$+$l$F$$k2DG=@-$,$"j^$9!#

CVS 3+H/HG$O!"8=:_$N%j%j!<9HG0J8e$KJs9p$5l?%P%0$N=$@5$r4{$K;}CF$$k2DG=@-$,$"j^$9!#%l%]!<%H$rAw$kA0$K!"<ALd$N%P%0$,4{$K=$@5$5$l$F$$J$$+%A%'%C%/7F$_$F$/$@$5$$!#

3lir%A%'%C%/7?8eGJ$*$=l,%P%0G"kH3N?.7?Ji!"http://sourceforge.net/p/gnuplot/bugs $Nbug-tracker $GJs9p$7F/$@$5$$!#$=$N:]!"**gnuplot** $N%P!<%8%g%s(%Q%C%A%l%Y%k$b4^$`)$H$=$l$,F0$$$F$$k%*%Z%l!<%F%#%s%0%7%9%F%`$b=q$$F$/$@$5$$!#FCK=$N%(%i!<:F8=$9$k4JC1$J%9%/%j%W%H$rDs6!$7Fbi(kH$HBg$$$K=u$+$j$^$9!#

souceforge $Ntracker $O!"%P%0$N%l%]!<%H!"$*$h$S8e$N%j%j!<%9$KH?1G$9k?aN%P%0$N=$@5$N<}=8$N$?$aNbNG$9!#%K%e!<%9%0%k!<%W news://comp.graphics.apps.gnuplot $O **gnuplot** $K4X$9$kLdBj$KBP9k2sHr:v$r8+$D1k!"$"$k$$O$=$l$r<B:]$K2r7h9k<j=u1N$?a$NbN$G$9!#

5.2 ; d$N%W%m%0%i% `$G**gnuplot** $N%k! <%A%s$rMxMQG-$^$9$+

%Q%$%W$r%5%]! <%H7F$$k%7%9%F% `$G$O! "B>$N%W%m%0%i% `$+$i%Q%$%W7EM3$G**gnuplot** $K%3%^%s%I$rEO$9$3H,G-$^$9! #Octave (http://www.octave.org) Nh$&$K! "gnuplot $r%0%i%U%#%C%/%(%s%8%s$H7F; HMQ7F$$kB?$/$N%"%W%j%1! <%7%g%s$,$3$NJ}K!$r; HMQ7F$$^$9! #$3lO! "form %Y! <%9$N Web %Z! <%8$+$i **gnuplot** $r5/F0$9$k cgi %9%/%j%W%H$G$bMxMQ$G$-$^$9! #

John Campbell (mailto://jdc@nauvax.ucc.nau.edu) $O! "$+JjA0$NHG(3.5) $N**gnuplot** $r2~NI$7$F! "C %W%m%0%i% `$+$i8F$S=P$;$k C $N%5%V%k! <%A%s%i%$%V%i%j$K: n$j>e$2$^$7$?! #gnuplot $O$=$N8e7 `E*$KJQ2=7^7?$,! "8=: _$NHG$K4p$E$/F1MM$N%i%$%V%i%j$r: n@.9kh&$J7W2h$O2f! 9OCNj$^$;$s! #

5.3 I&DI2C$d3HD%$,J5lF$$^9+! "$=$lOI$&<j$KF~lil^9+

3HD%$d%Q%C%A$O! "gnuplot $N3+H/%5%$%Hhttp://sourceforge.net/p/gnuplot/patches/ $N"Patches" %Z! <%8$K$"$j$^$9! #0lHIE*$K! "8=: _$N3+H/HG$O! ": G=*8x<0%j%j! <%9HG$N gnuplot KO$^$@F~CF$$J$5!G=$bF~CF$$^$9! #

5.4 @QJ,$d**FFT** $d**IIR** %U%#%k%?$JI,M_$7$$NG9$,

gnuplot $O: #$^Gb! "$=$7$F8=: _$bIA2h%W%m%0%i% `$G$"$j! "%G! <%?=hM}$d?t<0=hM}%W%m%0%i% `GO$"$j$^$;$s! #$hCF$=$Nh&J3HOG-$^$;$s! #@QJ,$N4pK\E*$J<BAu$K$D$$$F$Odemo $N"bivariat.dem" $r8+$F$/$@$5$$! #7+$7! "**gnuplot** %P! <%8%g%s 5 $O! "F0E*30It6&M-%*%V%8%'%/%H$N4X?t$N8F$S=P$7! "$$$ofk! V%W%i%0%$%s! W$r%5%]! <%H7F$$^$9! #$hCF! "C $"$k$$$OB>$N8@l$KhkJ#; ($J4X?t$r! "7hail?8F$S=P$7MM<0$K=>$C$F=q$1$P! "**gnuplot** $,%$%s%]! <%HG-$k%W%i%0%$%sHJkh$&%3%s%Q%$%k9k3H$,$G$-$^$9! #

5.5 "heavy-duty" %G! <%?$r**gnuplot** $G; H$ ($^$9$+! "$^$?$O**gnuplot** KJQokbNO$J$$$G9+

gnuplot $=$l<+?H$O! "$7sI$$?tCM7W; ;KO$"$^$j8~$$$F$$^$;$s! #7+$7! "$+JjBg$-$J%G! <%?=89g$N=hM}$O2DG=$G$9! #

Martin-D. Lacasse $,=q$$?! "BPOC7?$NB?L\E*6J@~2s5 "%W%m%0%i% `*fudgit* $r; n$7F_F/$@$5$$! #3l$O! "%0%i%U=PNOMQ$KFbIt$G**gnuplot** $r; H$$^$9! #

NCSA (National Center for Supercomputing Applications) $N STG (Software Tools Group) KhCF3+H/5l$?%"%W%j%1! <%7%g%s$b$"$j$^$9: http://ncsa.uiuc.edu ! #

pgperl $r; n$7Fb$$$$G7g$&! #$3lOPerl 5 KhCF PGPLOT %W%m%C%H%Q%C%1! <%8$rE}9g$7$?$bNG$9! #$3lK4X9k>pJs$Ohttp://www.ast.cam.ac.uk/AAO/local/www/kgb/pgperl $G8+$D$+$j$^$9$7! "%=! <%9$Oftp.ast.cam.ac.uk $N/pub/kgb/pgperl/ ! "$^$?$Olinux.nrao.edu $N/pub/packages/pgperl/ K"j^$9! #

B>$NJ}K!$H7F Octave $,$"j^$9! #README $r0zMQ$7$^$9: Octave $O9b?e= `8@8l$G! "<g$K?tCM7W; ;MQ$G$9! #Octave $O GPL %i%$%;%s%9%K=>$$! "86B'E*$K%U%j! <$J Matlab %/%m! <%s$G$9! #@~7A$dHs@~7A$NLdB;j$r?tCME*$K2r$/$N$KJXMx$J%3%^%s%I%i%$%s%$%s%?! <%U%'! <%9rHw(F$$^$9! #Octave $N: G?7HG$O>o$Khttp://www.octave.org K"j^$9! #$H3m$G! "octave $O**gnuplot** $rIA2h%(%s%8%s$H7F; H$$^9N$G! "**gnuplot** $KDI2C$9$k%G! <%?=hM}%W%m%0%i% `$r<j$KF~$lk3HKJj$^$9! #

: G8e$K! "*matlab* NBeojH7F! "%*! <%W%s%=! <%9$N *scilab* (http://www.scilab.org) b"j^$9! #

5.6 ; d$NBPOC7?%?! <%_%J%k$G%[%C%H%-! <$r; H$&KO

$[$HsI$NBPOC7?=PNO7A<0$G$O! ": FIA2h! "3EMWAG$NIA2h$N%H%0%k! "<4$N%9%1! <%k$NJQ9$JIr9T$&$?aK! "$"$i+8a@_Dj5l$?! "$*hS%f! <%6Dj5A2DG=$J%[%C%H%-! <$NN>J}$r%5%]! <%H$7$F$$^$9! #8=: _

M-8z$Jgnuplot $NIA2h%&%$%s%I%&>e$G*h* rBGD$H!"%[%C%H%-!<$N0lMw$,I=<($5l^$9!#$5iJ$k>pJsKD$$$F$O!"*help mouse* $H*help bind* $r;2>H$7F/$@$5$$!#

5.7 gnuplot $rB>$N%7%9%F%'$K0\?"!"$^$?$O%C%A$r:n$j$^$7$?!#$I$&$7$?$i$$$$G9+

Ej9Fhjb'7m!"http://sourceforge.net/p/gnuplot/patches/ $N'Patches' %;%/%7%g%s$rDL7F%3%a%s%H9k$+%Q%C%A$r99?7$9$kJ}$,$>$^$7$$G$9!#mailto://gnuplot-beta@lists.sourceforge.net $O!"$h$j3hH/$J5DO@$N?$a$NO@E@$rAwCFD:1kH"j,$?$$G$9!#

5.8 gnuplot $N<!4|%P!<%8%g%s$N3+H/KD$$FCNj?$$NG9$,$I$&$7$?$i$$$$G9+

gnuplot $N%Y!<%?%F%9%H%a!<%j%s%0%j%9%H$KF~$CF/$@$5$$!#%a!<%kK\J8(%a!<%k%?%$%H%k$GOJ$/)$Ksubscribe gnuplot-beta $H=q$$F%a!<%k$rmailto://Majordomo@lists.sourceforge.net KAwCF/$@$5$$!#

5.9 FAQ $K4^$^lkh&JL2r7h$N<ALd$O

$=$N<ALd$r(2sEz$H0l=o$K)mailto://gnuplot-beta@lists.sourceforge.net XAwCF/$@$5$$!#

6 $&$^$/07$&KO(Making life easier)

6.1 I&7?$i2 DN4X?t$r=E$JiJ$$h$&$K=q1^9+

3l$O!"0JA0$OJ#;(G7$?$,!"%P!<%8%g%s5 GO3l$O4JC1$G$9!#IA2h$9$k3F4X?t$ND>A0KI,MWJH0O0CrCV-$^$9!#Nc$($P!"<B83%G!<%?$H!"NN0h$N2 DN0[JkItJ,$r%+%P!<$9$k0[$J$k2 DN0[Jk4X?t%b%G%kf1, f2 $rIA2h$9kK$Q:

```
gnuplot> set autoscale x  # x $NH00C$r%G!<%?$+$i<hF@
gnuplot> plot "data", [-100:0] f1(x), [0:100] f2(x)
```

6.2 I&7?$iIA2hA0$K%G!<%?$U%#%k%?$r$+$1il$^$9$+

$=$N%7%9%F%'$,!"Unix Nh$&$Kpopen() 4X?t$r%5%]!<%H7F$$kJi!"B>$N%W%m%;%9$N=PNC$r;H$C$F<B9T$9$k3$H$,2DG=$G$9!#Nc$($P!"<!$Nh&$Jawk $NC;$$%W%m0%i%'$,;H$($^$9:

```
gnuplot> plot "< awk ' { print $1, $3/$2 } ' file.in"
```

plot %3%^%s%IOHFb6/NC$G!"%G!<%?%U%!%$%kKBP9$k"$k<o$NBe?t=hM}$b2DG=$G$9!#*help plot* $r;2>H$7F/$@$5$$!#

>e$N%U%#%k%?$O!"Unix d=$N8_49OS!"OS/2 GOLdBjJ/F0:n7^$9!#Windows GO!"3l$C%G%U%)%k%HGO *gnuplot* %P!<%8%g%s5 N_$,%5%]!<%H$!"$=$NA0$N%P!<%8%g%s$G$O!"JL$N%W%m0%i%'*wgnuplot_pipes* $,I,MW$KJj$^$9!#

6.3 I&7?i8=:_$N@_Dj$rJ]B8/:FMxMQG-$^$9$+

$=$lKO*save* $Hload $N%3%^%s%I$r;HCF$/$@$5$$!#>\:Y$O*help save* $H*help load* $r;2>H$7F/$@$5$$!#

set term push $H*set term pop* $r;H$($P!"%U%!%$%k%7%9%F%'$r?($k3HJ/=l>$l8=:_$N=PNC7A<0$NJ]B8$H=$N8e$NI|5"$,G$-$^$9!#

6.4 I&7?$i splot $G6J@~(3J;R$G$J$$) $r=q$1$^$9$+

splot XNF~NO%G!<%?$,!"3F9T$,F1$8%G!<%?E@?t(DL>o$O6u9T$GJ,N%$5lF$$$k) $r;}$Dh&$KB7$C$F$$$l$P!"splot $O%G%U%)%k%H$GO=$N%G!<%?$r6JLL$r5-=R$9kbNH7F07$$$^$9!#$=$&$GJ/8D!9$N6J@~$rIA2h7?1l$P!"*unset surface*, *set surface explicit*, *plot ... nosurface* JIrAH_9go;F_F/$@$5$$!#

6.5 I&7?$i x-y J?LL>e$GB>$N4X?t$K@)8B5l$F$$$k f(x,y) $N%0%i%U$r=q1^9+

0J2<$O0l$D$NJ}K!$G$9:

```
gnuplot> f(x,y) = x**2 + y **2
gnuplot> x(u) = 3*u
gnuplot> yu(x) = x**2
gnuplot> yl(x) = -x**2
gnuplot> set parametric
gnuplot> set cont
gnuplot> splot [0:1] [0:1] u,yl(x(u))+(yu(x(u)) - yl(x(u)))*v,\
> f(x(u), (yu(x(u)) - yl(x(u)))*v)
```

6.6 I&7?$i%W%m%0%i%`$+$i gnuplot $r8F$S=P$;$^9+

unix 8_49%7%9%F%`>e$J$i$P!"gnuplot $X$N%3%^%s%I$rI8=`F~NO(stdin) $+$i%Q%$%W$GEO$;$^$9!#gnuplot $+$i$Nprint %3%^%s%I$O!"L>A0D-%Q%$%W$GFI$_=P$9$3$H$,$G$-$^$9!#Windows GO!"GUI %W%m%0%i%`$GI8=`F~NO(stdin) $,;H$($J$$$?$a!"%3%s%=!<%kHG$N*gnuplot* (?d>)) $+!"%F%-%9%H%3%s%=!<%k$,DI2C5l$?GUI HG$N*wgnuplot_pipes* $N$$$:l+$r;H$&I,MW$,$"j^$9!#8E$$*pgnuplot* $H$$$&%X%k%Q!<%W%m%0%i%`b^$@G[IU%C%1!<%8$K4^$^$l$F$$$^$9!#

6.7 Planck Dj?t(h $K2#@~) $,I,MW$JH-OI$&$7$?$i$$$$$G9+

:G$b<+A3$JJ}K!$O!"UTF-8 %U%)%s%H$r;H$$!"J8;z$\hbar$ (Unicode %3!<%I%]%$%s%H#x210F) $rD>@\F~NO$9k3HG$9!#

7+$7!"$3lOPostScript GO$&$^$/$$$-$^$;sN$G!"Nc$($P<!$Nh&$J<!A1$N:v$rMQ$$$kI,MW$,$"j^$9: @{/=56 -} {/=24 h} $^$?$O{/=8 @{/Symbol=24 -} _{/=14 h}} 8e<TGO24pt (%]%$%s%H) $N"-" (/Symbol %U%)%s%H$NCf$ND9$$%O%$%U%s) $,%9%Z!<%9$J7G;Hol$^$9!#14pt $N"h" $O8pt $N%9%Z!<%9("_" $NA0$K$"$k%9%Z!<%9) $@$1$:$i5lFCV+l^9,!"$=$l$O2<IU$-J8;zH7$F=q$+lkNG>.$5$$J8;zKJj^$9!#$7$+$7$=$liODL>o2f!9$,;HMQ$9$k%W%i%s%/Dj?t$N5-9fHO0cCF$$$F!"2#@~$O<P@~$GOJ$/?eJ?@~$KJj$^$9!#%"%/%;%s%H5-9fJI$b;H$CF_$^$7$?$,(iso-latin-1 %(%s%3!<%G%#%s%0$NJ8;z264 JI)!"$=NBg-5H0LCV$r@5$7$/9kJ}K!$r8+$D1k3HOG$-$^$;$sG7$?!#b&0lDNJ}K!$O{/=14 @^{/Symbol=10 -}{/=14 h}} H9k3HG$9!#

AMS-LaTeX $NPostScript %U%)%s%H(http://www.ams.org/tex/amsfonts.html K"$j!"$=7FB?$/$NLaTeX G[I[Kb4^$^$l$F$$$^$9) $r;H$($P!"$HFb4JC1$K>.$5$$ Planck Dj?t$r%;%C%H$9k3H,G-$^$9$,!"gnuplot (help fontpath $r;2>H) $H!"PostScript %$%s%?!<%W%j%?(DL>o Ghostscript) $,%U%!%$%k msbm10.pfb($^$?$O msbm10.pfa)$,I3K"k+rCNkI,MW$,$"j^$9!#"h" $K79<P$N$D$$$?2#K@$r=E$M$? \hslash $r@8@.$9kK$O {/MSBM10 \175} $r;H$CF/$@$5$$!#DL>o$N \hbar(?eJ?$N2#K@) $O8 ?J?t$N176 $G$9!#$?$@$7!"?eJ?$N2#K@$O%$%?%j%C%/BNH7F7$+B8:_$7$J$$$3HKCm0U7F$/$@$5$$!#

6.8 B@M[Nh$&$J?t3X5-9f(4]$KE@) $,I,MW$JH-OI$&$7$?$i$$$$G9+

Planck Dj?t$HF1MM!":G$b<+A3$JJ}K!$OUTF-8 %U%)%s%H$r;H$$!"U8;z⊙ (Unicode %3!<%I%]%$%s%H#2299; "circled dot operator") $rD>@\F~NO$9k3HG$9!#Hs>o$Kh/;w$?%0%j%U$,%3!<%I%]%$%s%H#x2609 Kb$"j^$9!#3l$O"sun" $G!"$h$j$$$$+b7l^$;$s$,!"$=lr;}$D%U%)%s%H$OB?$/$O$"$j$^$;$s!#

6.9 6-3&$NOlCV$rCzEY$"$k>l=j$K9g$o$;$F%0%i%U$r:n$kKO

>e!"2<!":8!"1&$N6-3&OlCV$r!"%Z!<%8Fb$NOlCV$H7F>.?tC10L$G;XDj$7F/$@$5$$:

```
set lmargin at screen 0.05
set bmargin at screen 0.05
set rmargin at screen 0.95
set tmargin at screen 0.95
```

7 6&DL$NLdBj

7.1 =u1F!;d$N%U%)%s%H$,;H$($J$$

gnuplot $O!"$=$l<+?H$G$O%U%)%s%H=hM}$r9T$$^$;$sNG!"$=$l$OI,A3E*$K8D!9$N%G%P%$%9$r%5%]!<%H$9$k%i%$%V%i%j$KG$$;k3HKJj$^$9!#;DG0J,i3lO!"%U%)%s%H$N8!=P$K*$$F$O!"0[$J$k=PNO7A<0$K$O0[$J$k@bL@$,I,MW$@$H$$&3H$r0UL#$7$^$9NG!"$3$3GO!"4JC1$J%R%s%H$r$$/D+>e2F$*$-$^$9!#>\$7$$>pJsKD$$F$O!"$"J?$,LdBj$K7F$$k=PNO7A<0MQ$Ngnuplot $N%I%-%e%a%s%H$r;2>H7F$/$@$5$$!#

png/jpeg/gif 3liN=PNO7A<0$O!"libgd $H$$&%5%]!<%H%i%V%i%j$r;HMQ$7!"3l$O4D6-JQ?tGDFONTPATH $GM?$(il$k%G%#%l%/%H%jFb$K%U%)%s%H$rC5$7$^$9!#$=$Nh&$Klibgd $N%U%)%s%H%Q%9$r@_Dj9k$H!":#EY$Ognuplot $N%G%U%)%k%H%U%)%s%H$r@_Dj7?$$+b7l^$;$s!#Nc:

```
setenv GNUPLOT_DEFAULT_GDFONT verdana
```

post PostScript %U%)%s%HL>$O!"$=$NJ8=q$,0u:~5lk^$G;2>H$5l^$;$s$+$i!"$"$J$?$N%U%)%s%H$,M-8z$G$"$k$+$r gnuplot OCNj$^$;$s!#$hCF!"Is$J%U%)%s%HL>$G$b;XDj$9k3H,G-$^$9!#7+$7!"gnuplot $N=PNO$K%U%)%s%HrKda9~$`$3HO2DG=$G$9!#$=$lKD$$F$O!"gnuplot $NFbIt%3%^%s%I“help set term post fontfile” $GF@$ilk;X<($r;2>H$7F/$@$5$$!#

svg %U%)%s%H=hM}$O!"%S%e!<%o0MB8$G$9!#

x11 x11 =PNO7A<0$O!"DI>o$Nx11 %U%)%s%H%5!<%P5!9=$r;HMQ$7$^$9$,!">/$7$@$1%H%j%C%-!<$JE@$,$"$j!"%^%k%A%P%$%H%U%)%s%H$r;HMQ9k$?$aKO!"L@<(E*$K0J2<$Nh&$K;XDj$9kI,MW,$"$j$^$9:

```
set term x11 font "mbfont:sazanami mincho,vera,20"
```

win %D!<%k%P!<$N"Options" $N%W%k%@%&%s%a%K%e!<$+$i"Choose font..." $rA*Br$7$^$9!#

wxt, qt Linux %7%9%F%`$G$O!"$3$l$i$N=PNO7A<0$O%7%9%F%`$Nfontconfig %f!<%F%#%j%F%#$,Ds6!$9$k%U%)%s%H$r;HMQ7^$9!#

7.2 VMS >e$G**gnuplot** $,IA2h%&%#%s%I%&$r3+$-$^$;$s$,!"$J$<$G9+

VMS >eGO$$/D+$N5-9f$r:niJ1l$P$$1$^$;$s:

```
$ gnuplot_x11 :== $disk:[directory]gnuplot_x11
$ gnuplot :== $disk:[directory]gnuplot.exe
$ def/job GNUPLOT$HELP disk:[directory]gnuplot.hlb
```

$=$7$F**gnuplot** $r%3%^%s%I%i%$%s$+$i5/F0$7!"set term x11 H7F/$@$5$$!#

Unix >eGO!"x11 $Hqt =PNO7A<0$O!"J,N%5l$?%X%k%Q!<%W%m%0%i%`*gnuplot_x11*, *gnuplot_qt* $N%$%s%9%H!<%k$,I,MW$G$9!#$3li$ODI>o$O*/usr/libexec/gnuplot/5.0/* $H$$&%G%#%l%/%H%j$K%$%s%9%H!<%k5l!"**gnuplot** O=$N>l=j$rC5$9$3HrCNCF$$^$9!#$7$+$7!"$=$l0J30$N>l=j$K%$%s%9%H!<%k$7$?;j!"$=li$r8+$D1k:]$KLdBj$,5/$-$k>l9g$O!"4D6-JQ?tGNUPLOT_DRIVER_DIR $r@_Dj$7F_F/$@$5$$!#

7.3 J<**gnuplot** OHFb>.$5$$?t;z$N%G!<%?$rL5;k9kNG9+

gnuplot $O!"$"$kL\E*$N$?$a1e-08 hj>.$5$$?t$r0 H7$F07$$^$9!#$hCFHF$b>.$5$$?t$N=8$^jrIA2h7h$&$H9kH=li$O0 H7$FIA2h$5lF7^$$^$9!#BP?t<4$GIA2h9k>l9g$O!"$bCHRI$$3HK$=$liOL\@9j+iO$:$lF7$^$$^$9!#$^$?!"A4$F$N?t$,"0" G"$k>l9g!"HOOO$O6uG"kH$_$J5l$^$9(LuCm **gnuplot** 3.6 0JA0$N;EMM):

```
gnuplot> plot 'test1'
Warning: empty y range [4.047e-19:3e-11], adjusting to [-1:1]
gnuplot> set yrange [4e-19:3e-11]
gnuplot> plot 'test1'
              ^
y range is less than `zero`
```

$=$NBP:v$O**gnuplot** $N"zero" $N35G0$rJQ99$9$k3H$G$9!#

```
gnuplot> set zero 1e-20
```

hj>\$7$$>pJsKD$$F$Ohelp set zero $r;2>H$7F/$@$5$$!#

7.4 %7%'%k$d%9%/%j%W%H$+$i**gnuplot** $r<B9T$7Fb7k2L$N%0%i%U$O%9%/%j!<%s>e$G0l=V=P$k$@$1G=$N"$H=PF-$^$;$s

1. %U%!%$%kFb$Nplot %3%^%s%I$N8e!"$^$?$O%U%!%$%k$N:G8e$Kpause -1 $rF~$l$kJ}K!$,$"$j$^$9!#
2. %9%/%j%W%H$N=*N;;~$KBPOC7?ItJ,$K$$$kh&K9kK$Ognuplot filename.gp -(:G8e$N%Q%i%a!<%?$O%^%$%J%9) $r;HMQ$7$^$9!#
3. **gnuplot** $r*gnuplot -persist* $H<B9T$9$kJ}K!$,$"$j$^$9!#
4. Windows >eJi!"-persist $+/noend NIAiGb7k9=$G$9!#
5. %3%^%s%I*set terminal* $N0lItJ,$H7F%*%W%7%g%s*persist* $rM?$(Fb7k9=$G$9!#

7.5 =q$$?<0(**1/3** JI) $,0UL#$N$J$$7k2L$r=PNO$7F7$^$$^$9

gnuplot $O@0?t$N<0$N>l9g!"<B?tli;;$GOJ$/@0?tli;;$r9T$J$$^$9!#Nc($P<0 1/3 $O0 $HI>2A$5l^$9!#$b$7<B?t$NCM$,M_$7$$JiP!"$=$N?t$N8e$K%I%C%H"." rD1F$/$@$5$$!#Nc:

```
gnuplot> print 1/3
                0
gnuplot> print 1./3.
                0.333333
```

@0?t$N<0$r3Nh&K7$FI>2A$9kd$jJ}$OC $dFortran Gb9TJolF$$^$9!#

7.6 ;d$N=PNO$,IT40A4$G$9

set output KhCF=PNO$r%/%m!<%:$7$F!"$?$^$C$F$$k=PNOrEG-=P5;kI,MW,$"$k$+$bCNl^$;$s!#=PNO7A<0KhCF$O!"0l$D$N=PNO%U%!%$%k$KJ#?t$N%Z!<%8$,4^$^lF$$^$9(postscript, pdf, latex, svg, ...)!#3liN=PNO%b!<%IGO!"gnuplot O"J?$,IA2h$NDI2C$,$G$-$kh&$K3FIA2h8e$K%U%!%$%k$r%*!<%W%s7?$^$^K7$F$$^$9!#$hCF$"$J$?$,L@<(E*K=lr%/%m!<%:9k(set output $^$?$O unset output) $+!"0[$J$k=PNO7A<0$rA*Br9k(set term) $+!"$^$?$O gnuplot $r=*N;$9k^GO!"$=$N%U%!%$%k$O40A4GOJ/!"30It$N%"%W%j1!<%7%g%s$G$O;HMQ$G$-$kh&KOJC$F$$^$;$s!#C10l'%Z!<%8'N_$r;}$D=PNO7A<0(png, emf, ...) GO3Nh&$JLdBj$KG:$^$5lk3HOJ$$$G7g$&!#

7.7 %Q%$%W$Ggnuplot $r8F$S=P7?$jgnuplot %9%/%j%W%H$r;HCF%0%i%U$,=q$1$^$;$s

<!Nh$&$JC;$$Perl %9%/%j%W%H$r;H$C$Fgnuplot $r8F$S=P$;$^$9:

```
#!/usr/local/bin/perl -w
open (GP, "|/usr/local/bin/gnuplot -persist") or die "no gnuplot";
# force buffer to flush after each write
use FileHandle;
GP->autoflush(1);
print GP,"set term x11;plot '/tmp/data.dat' with lines\n";
close GP
```

gnuplot $O=*N;;~$K$=$NIA2h%&%#%s%I%&rJD8$^$9!#close GP %3%^%s%I$,<B9T$5lk$H!"IA2h%&%$%s%I%&$rL\$K9kA0G5$($bJD8ilF7^$$$^$9!#

$=$lKBP9$kBP=h$O3 D"j^$9:1 $DL\$O!"gnuplot Fb$Gpause -1 %3%^%s%I$r!"%Q%$%W$rJD8kA0$K;HMQ$9k3$H!"2 $DL\$O!"**gnuplot** $HIA2h%&%#%s%I%&$,ITMWKJC?H-KN$_%Q%$%WrJD8kh$&$K9k3H!"3 $DL\$O%3%^%s%I%i%$%s%*%W%7%g%s-persist $r;H$&3H$G$9!#3N%*%W%7%g%s$OX-Window System $KIA2h%&%#%s%I%&$r3+$$?$^^;D$7$^$9!#

8 5"B0

gnuplot 3.7 $N<g$J4sM?<T$O(%"%k%U%!%Y%C%H=g$G)!"Hans-Bernhard Broeker, John Campbell, Robert Cunningham, David Denholm, Gershon Elber, Roger Fearick, Carsten Grammes, Lucas Hart, Lars Hecking, Thomas Koenig, David Kotz, Ed Kubaitis, Russell Lang, Alexander Lehmann, Alexander Mai, Carsten Steger, Tom Tkacik, Jos Van der Woude, James R. Van Zandt, Alex Woo $G$9!#5i$Kversion 4.0 XN=EMW$J4sM?<T$H7F!"include Ethan Merritt, Petr Mikulík, Johannes Zellner $,$$^$9!#version 4.2, 4.4, 4.6, 5.0 $N%j%j!<%9$OEthan Merritt $,<h$j$^$Ha^7?!#

3N%j%9%H$ORussell Lang, John Campbell, David Kotz, Rob Cunningham, Daniel Lewart, Alex Woo $N4sM?$rJohn Fletcher $,:G=i$K$^$Ha?bN$G$9!#$=$7$F!"Alex Woo $NAp0F$Khj!"Alex Woo, John Campbell, Russell Lang, David Kotz iN=$@5$HDI2C!"Daniel Lewart Kh$kB?$/$N=$@5$, Thomas Koenig Khj^HaD>5l$^$7$?!#$=7F!"**gnuplot** 3.7 MQ$K:F$S Lars Hecking, Hans-Bernhard Broecker $*$hS=$NB>$N?M!9Kh$k=$@5$, Alexander Mai $HJuergen v.Hagen Khj^HaD>5l$^$7$?!#**gnuplot** %P!<%8%g%s 4 MQ$N=$@5$O!"Petr Mikulík $HEthan Merritt Kh$j9TJol^7?!#**gnuplot** %P!<%8%g%s 5 MQ$N=$@5$O!"Ethan Merritt Kh$j9TJol^7?!#

(LuCm F|K\8lLu$OShigeharu TAKENO (mailto://shige@iee.niit.ac.jp) Kh$j9T$Jol$^$7$?!#)