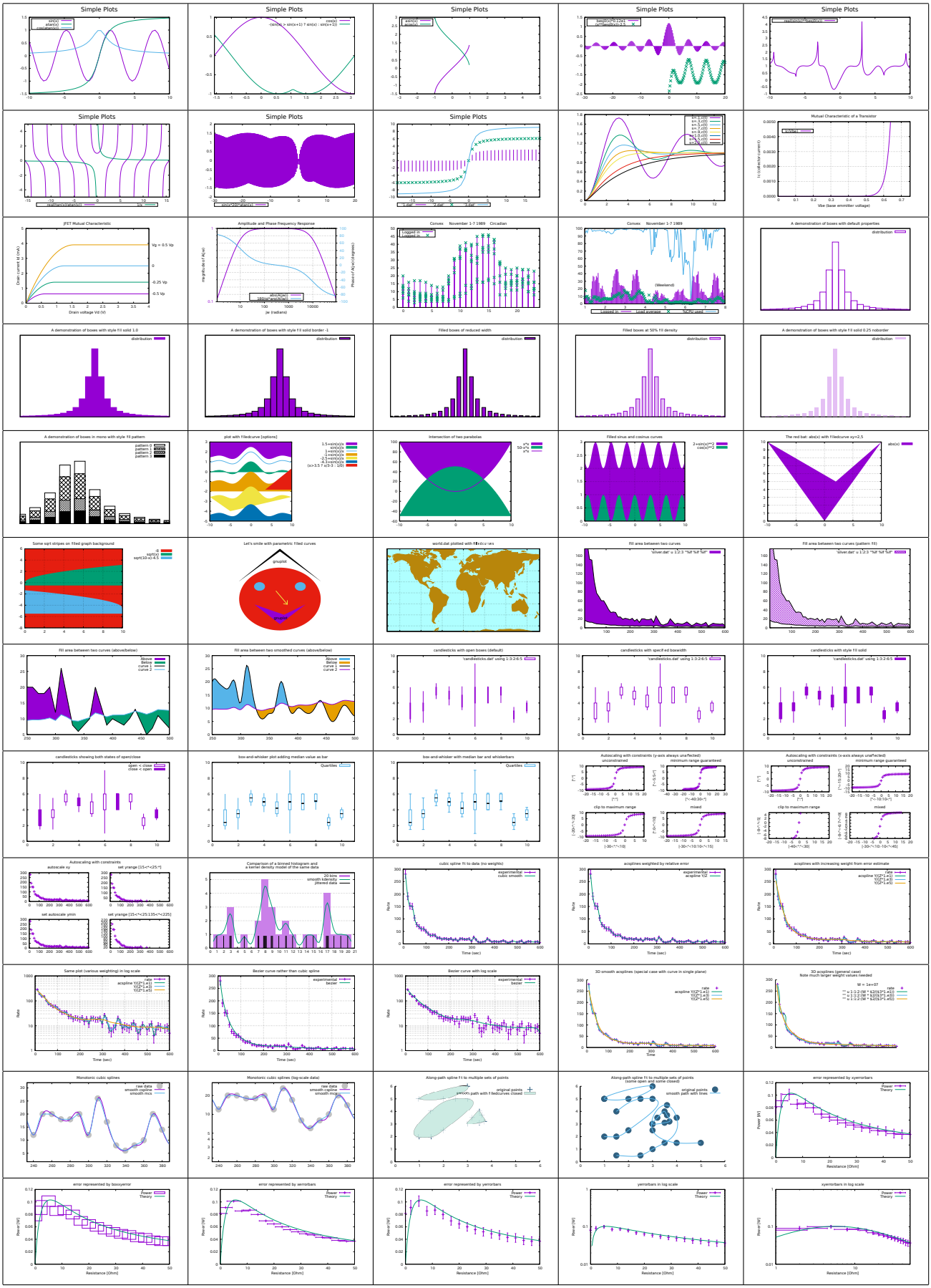
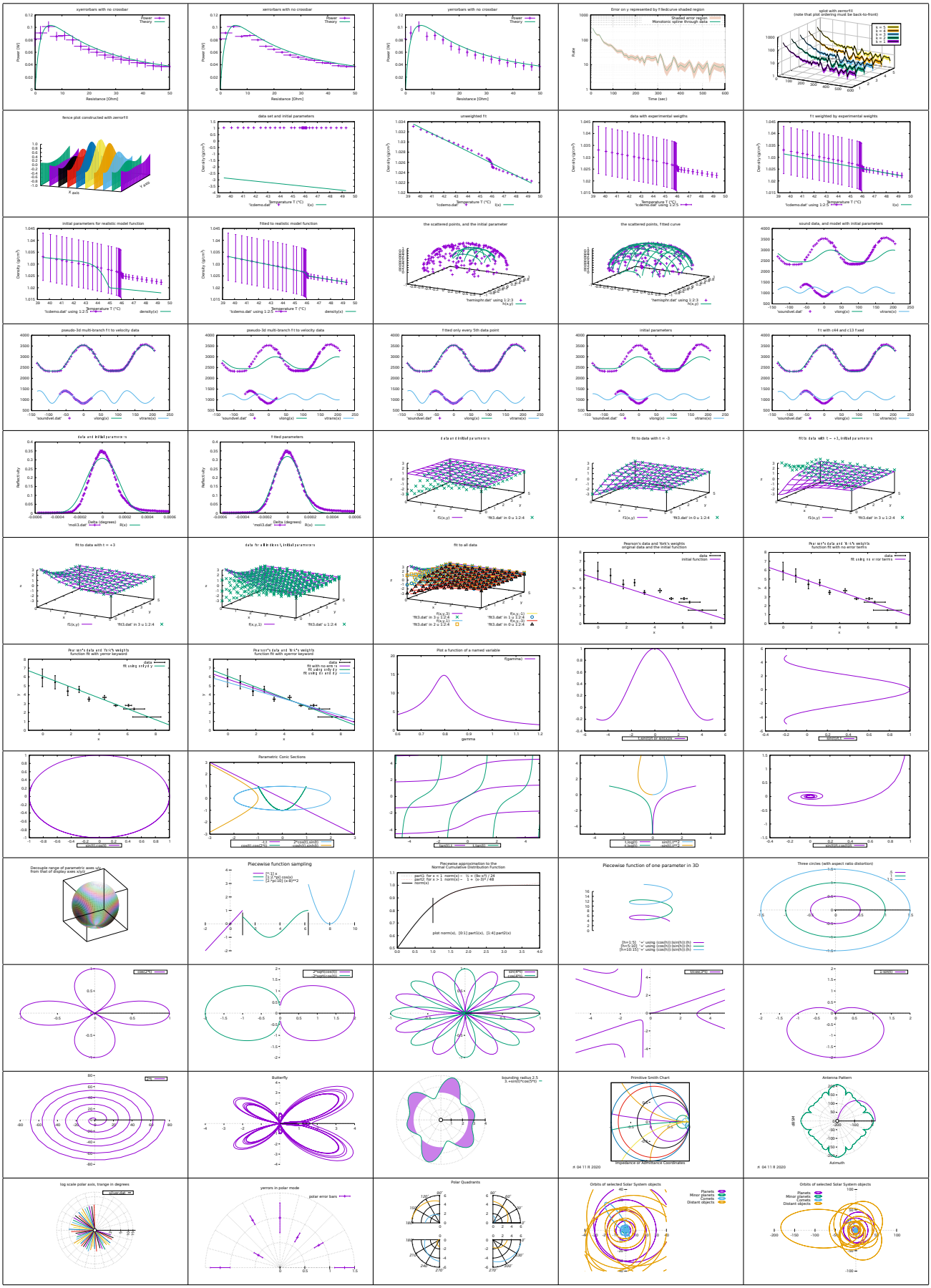
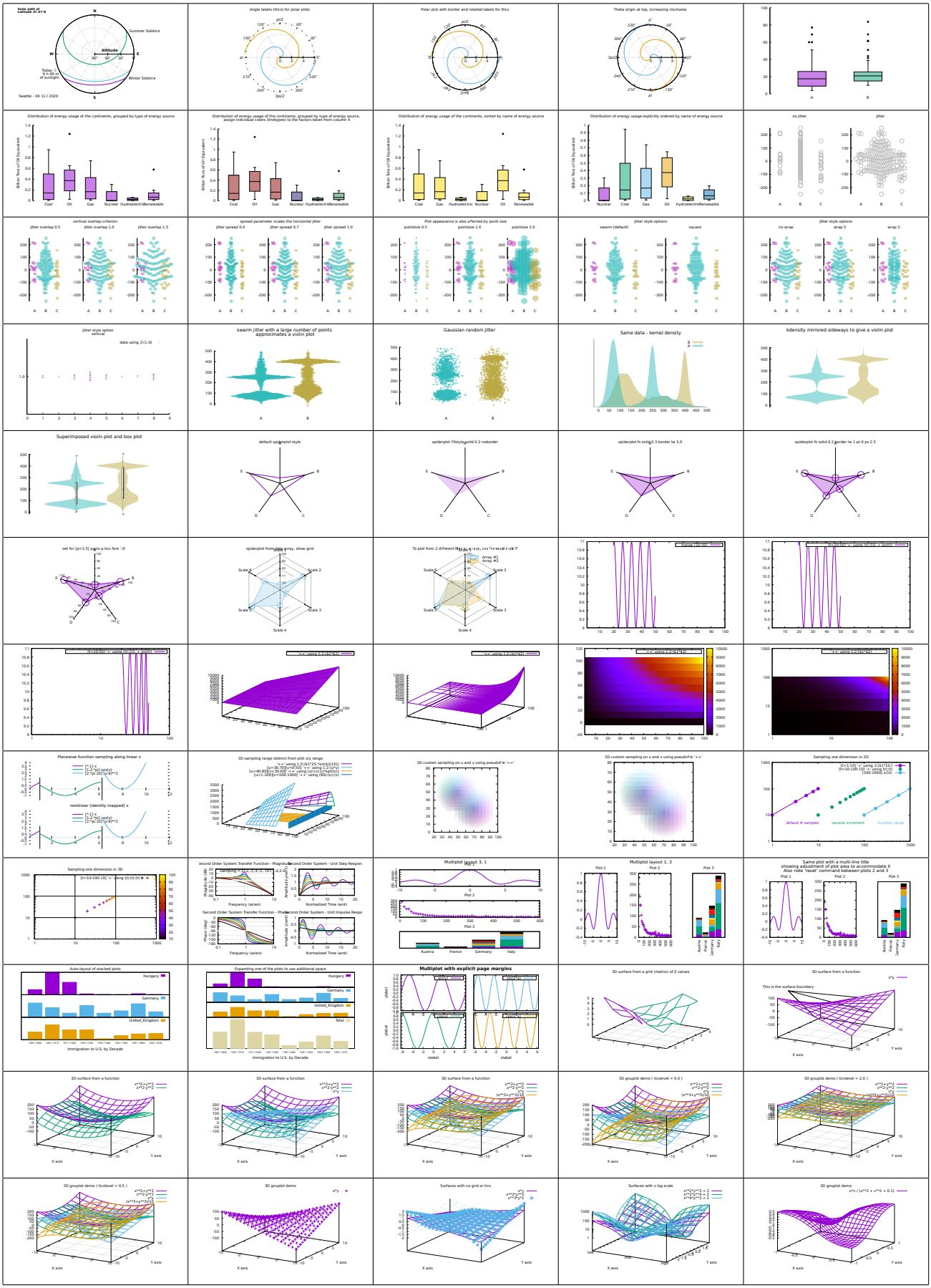
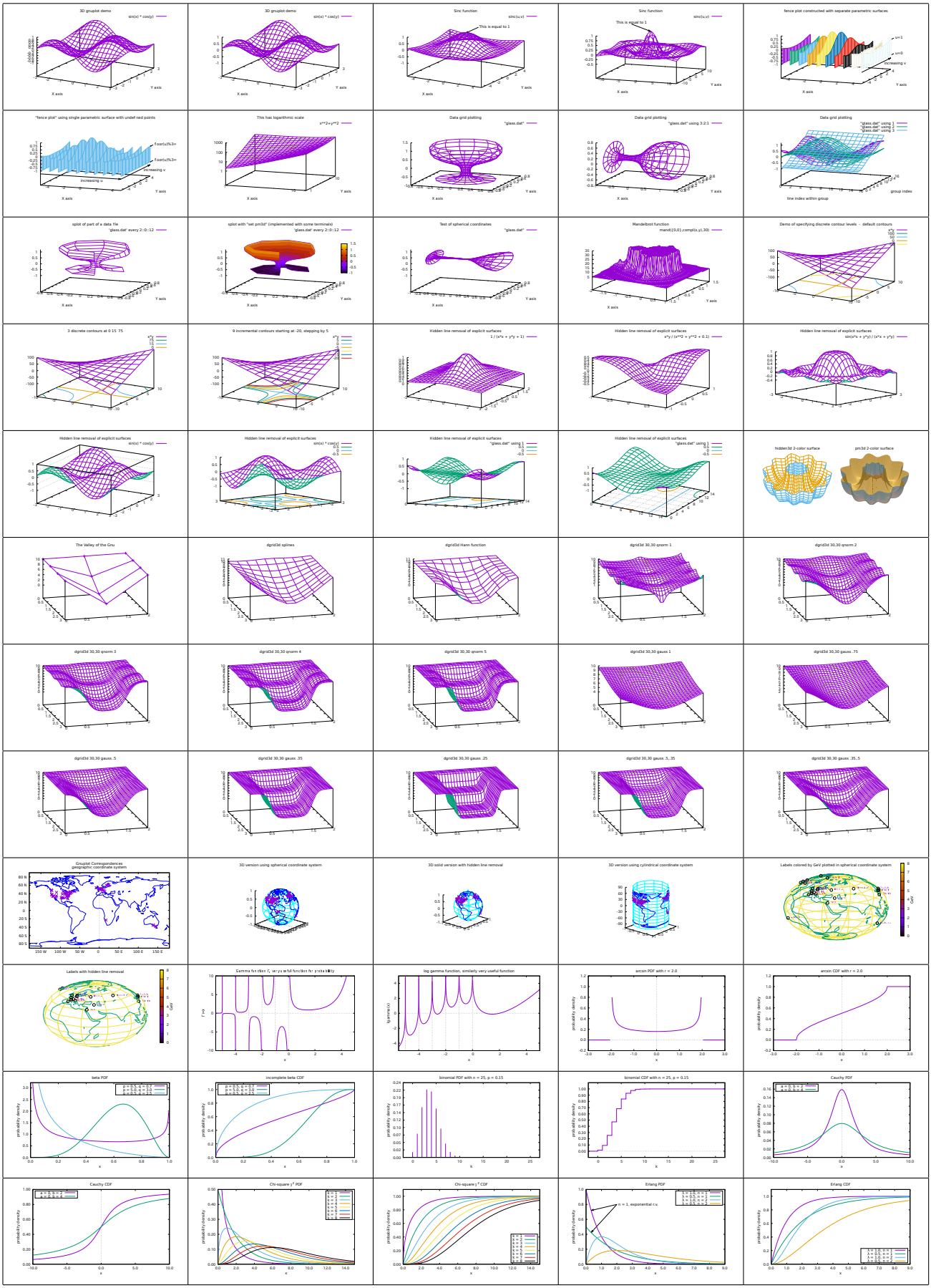
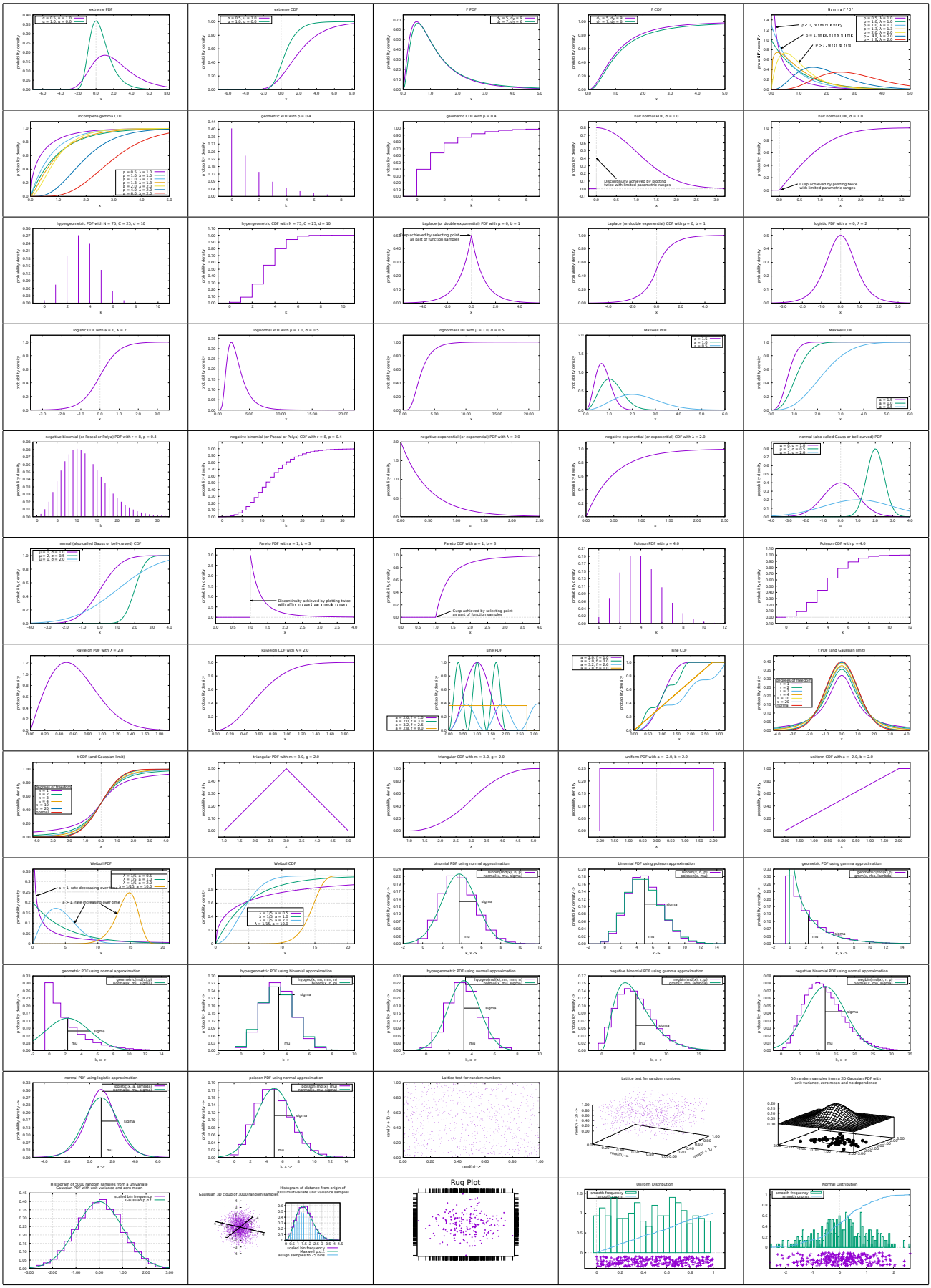
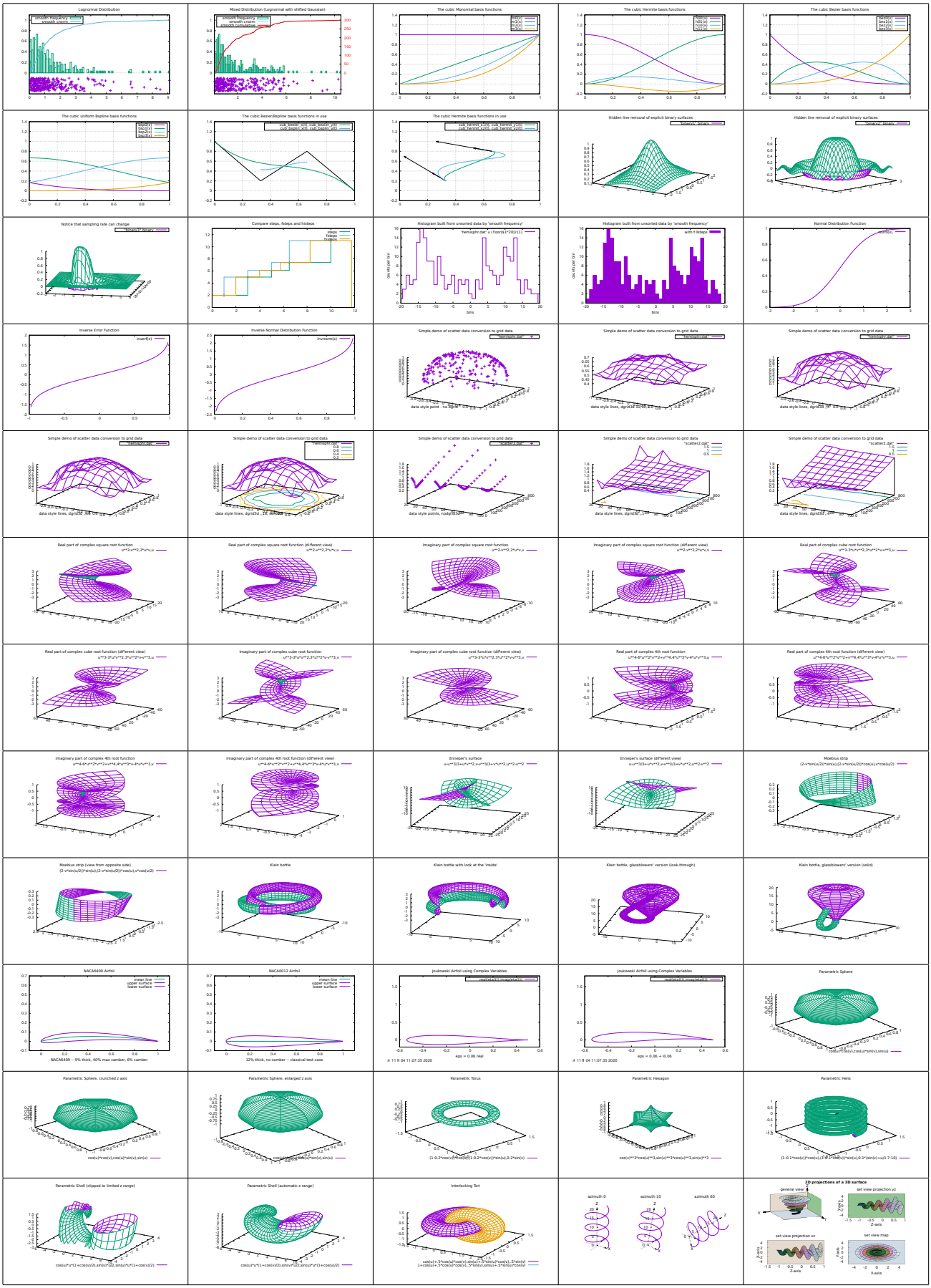

Simple Plots
Simple Plots
Simple Plots
Simple Plots
Simple Plots
Simple Plots
Simple Plots
Simple Plots
Mutual Characteristic of a Transistor
JFET Mutual Characteristic
Amplitude and Phase Frequency Response
Convex November 1-7 1989 Circadian
Convex November 1-7 1989
A demonstration of boxes with default properties
A demonstration of boxes with style fill solid 1.0
A demonstration of boxes with style fill solid border -1
Filled boxes of reduced width
Filled boxes at 50% fill density
A demonstration of boxes with style fill solid 0.25 noborder
A demonstration of boxes in mono with style fill pattern
plot with filledcurve [options]
Intersection of two parabolas
Filled sinus and cosinus curves
The red bat: abs(x) with filledcurve x=y=2.5
Some sqrt stripes on filled graph background
Let's smile with parametric filled curves
world.dat plotted with filledcurves
Fill area between two curves
Fill area between two curves (pattern fill)
Fill area between two curves (above/below)
Fill area between two smoothed curves (above/below)
candlesticks with open boxes (default)
candlesticks with specif ed boxwidth
candlesticks with style fill solid
candlesticks showing both states of open/close
box-and-whisker plot adding median value as bar
box-and-whisker with median bar and whiskerbars
Autoscaling with constraints (x-axis always unaffected)
Autoscaling with constraints (x-axis always unaffected)
Autoscaling with constraints
Comparison of a binned histogram and
cubic spline fit to data (no weights)
acsplines weighted by relative error
acsplines with increasing weight from error estimate
Same plot (various weighting) in log scale
Bezier curve rather than cubic spline
Bezier curve with log scale
3D smooth acsplines (special case with curve in single plane)
3D acsplines (general case)
Monotonic cubic splines
Monotonic cubic splines (log-scale data)
Along-path spline fit to multiple sets of points
Along-path spline fit to multiple sets of points
error represented by xyerrorbars
error represented by boxyerror
error represented by xerrorbars
error represented by yerrorbars
yerrorbars in log scale
xyerrorbars in log scale

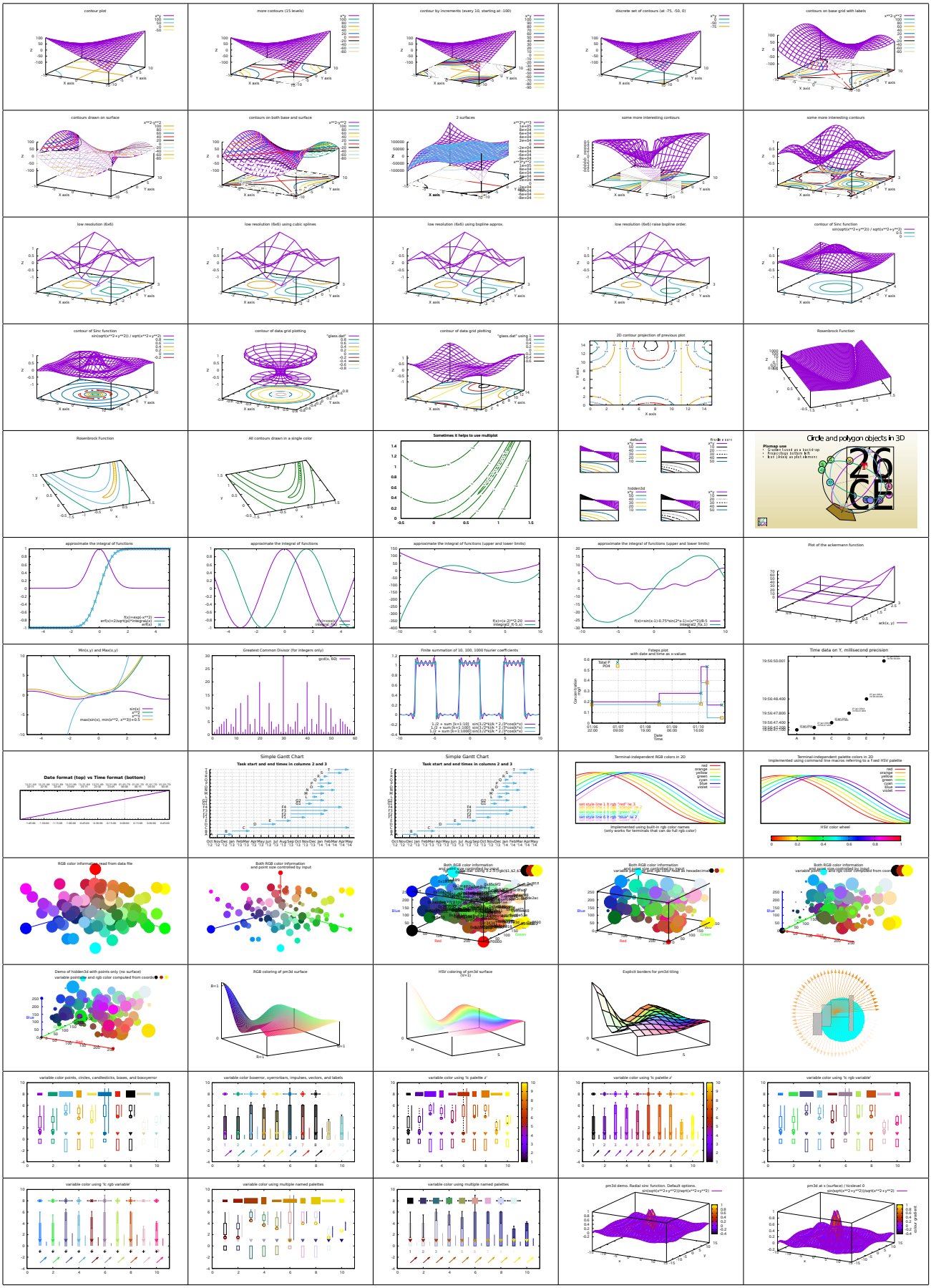

xyerrorbars with no crossbar
xerrorbars with no crossbar
yerrorbars with no crossbar
Error on y represented by 9 filledcurve shaded region
splot with zerrorfill
fence plot constructed with zerrorfill
data set and initial parameters
unweighted fit
data with experimental weights
fit weighted by experimental weights
initial parameters for realistic model function
fitted to realistic model function
the scattered points, and the initial parameter
the scattered points, fitted curve
sound data, and model with initial parameters
pseudo-3d multi-branch fit to velocity data
pseudo-3d multi-branch fit to velocity data
f fitted only every 5th data point
initial parameters
fit with c44 and c13 fixed
data and initial parameters
f fitted parameters
data and initial parameters
fit to data with t = -3
fit to data with t = +3
fit to data with t = +3, initial parameters
fit to data with t = +3
data for all three t, initial parameters
fit to all data
Pearson's data and York's weights
original data and the initial function
Pearson's data and York's weights
function fit with no error terms
Pearson's data and York's weights
function fit with yerror keyword
Pearson's data and York's weights
function fit with yerror keyword
Plot a function of a named variable
Parametric Conic Sections
Decouple range of parametric axes u/v
from that of display axes x/y/z
Piecewise function sampling
Piecewise approximation to the
Normal Cumulative Distribution Function
Piecewise function of one parameter in 3D
Three circles (with aspect ratio distortion)
Butterfly
Inounding radius 2.5
3.+sin(3*cos(5*t))
Primitive Smith Chart
Impedance or Admittance coordinates
Antenna Pattern
Azimuth
log scale polar axis, trange in degrees
yerrors in polar mode
polar error bars
Polar Quadrants
Orbits of selected Solar System objects
Planets
Minor planets
Comets
Distant objects
Orbits of selected Solar System objects
Planets
Minor planets
Comets
Distant objects

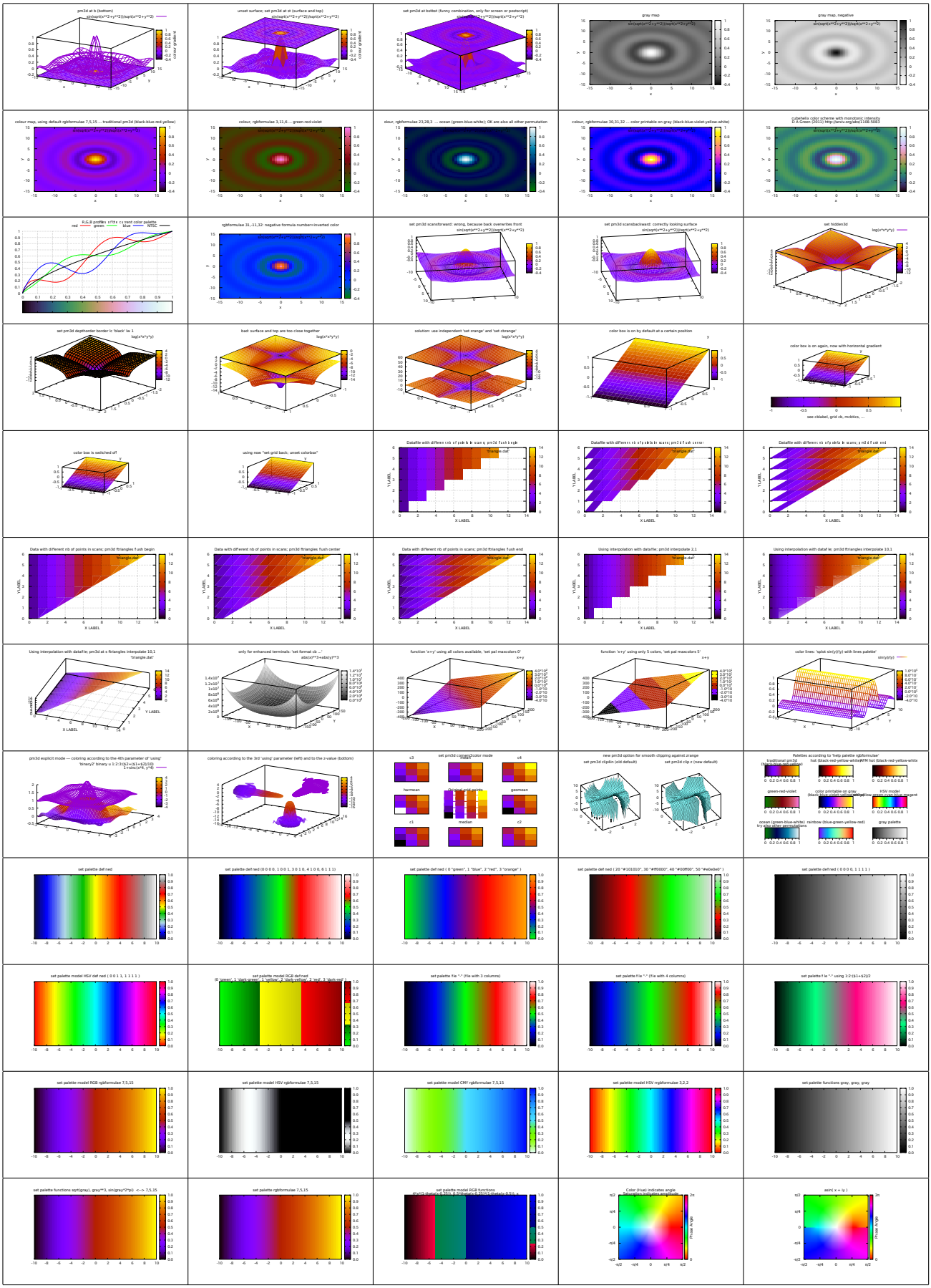

Solar path at Latitude 47.63 N
Summer Solstice
Winter Solstice
Today - 9 h 46 m of sunlight
Seattle - 04 11 (2020
Angle labels (tics) for polar plots
Polar plot with border and rotated labels for tics
Theta origin at top, increasing clockwise
Distribution of energy usage of the continents, grouped by type of energy source
Distribution of energy usage of the continents, grouped by type of energy source, assign individual colors (linetypes) to the factors taken from column 4
Distribution of energy usage of the continents, sorted by name of energy source
Distribution of energy usage explicitly ordered by name of energy source
no jitter
jitter
vertical overlap criterion
jitter overlap 0.5
jitter overlap 1.0
jitter overlap 1.5
spread parameter scales the horizontal jitter
jitter spread 0.4
jitter spread 0.7
jitter spread 1.0
Plot appearance is also affected by point size
pointsize 0.5
pointsize 1.0
pointsize 2.0
jitter style options
swarm (default)
square
jitter style options
no wrap
wrap 5
wrap 3
jitter style option
vertical
swarm jitter with a large number of points approximates a violin plot
Gaussian random jitter
Same data - kernel density
kdensity mirrored sideways to give a violin plot
Superimposed violin plot and box plot
default spiderplot style
spiderplot fillstyle solid 0.2 noborder
spiderplot fs solid 0.3 border lw 3.0
spiderplot fs solid 0.3 border lw 1 pt 6 ps 2.5
set for [p=1:5] paxis p tics font ',9'
spiderplot from data array, show grid
To plot from 2 different files, s'r'y, s'r'y and s'r'y
Piecewise function sampling along linear x
nonlinear (identity mapped) x
3D sampling range distinct from plot x|y range
3D custom sampling on u and v using pseudo file "++"
2D custom sampling on u and v using pseudo file "++"
Sampling one dimension in 2D
default # samples
sample increment
function range
Sampling one dimension in 3D
Second Order System Transfer Function - Magnitude
Second Order System - Unit Step Respon
Second Order System Transfer Function - Phase
Second Order System - Unit Impulse Respo
damping = 0.2
Multiplot layout 3, 1
Multiplot layout 1, 3
Same plot with a multi-line title showing adjustment of plot area to accommodate it
Also note 'reset' command between plots 2 and 3
Auto-layout of stacked plots
Expanding one of the plots to use additional space
Multiplot with explicit page margins
3D surface from a grid (matrix) of Z values
3D surface from a function
This is the surface boundary
Hungary
Germany
United_Kingdom
Total
Austria
France
Italy
Immigration to U.S. by Decade
xlabel
ylabel
X axis
Y axis
3D surface from a function
3D gnuplot demo (ticslevel = 0.0)
3D gnuplot demo (ticslevel = 2.0)
3D gnuplot demo (ticslevel = 0.5)
3D gnuplot demo
Surfaces with no grid or tics
Surfaces with z log scale
3D gnuplot demo

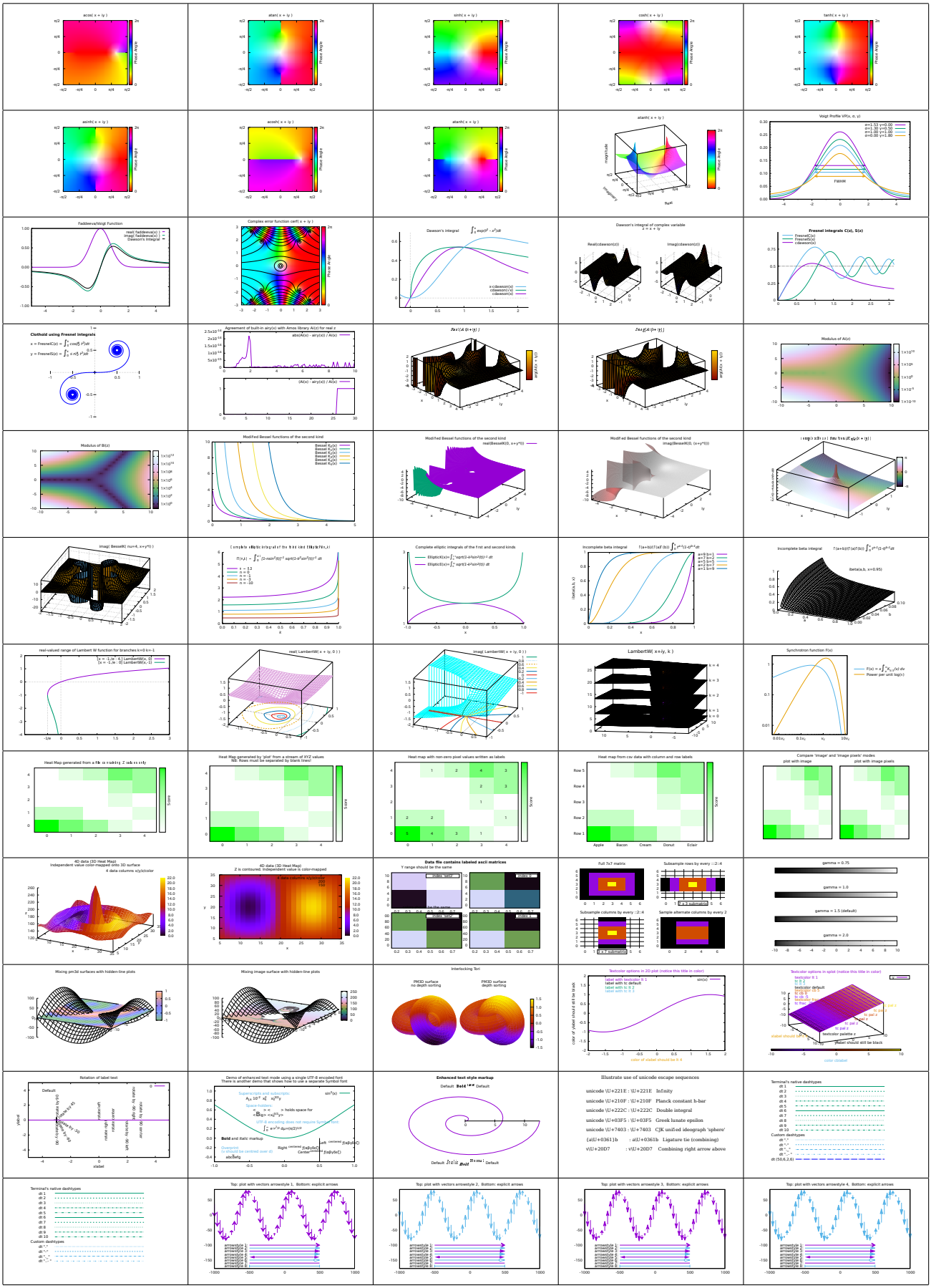

3D gnuplot demo
sin(x) * cos(y)
X axis
Y axis
3D gnuplot demo
sin(x) * cos(y)
X axis
Y axis
Sinc function
sinc(u,v)
This is equal to 1
X axis
Y axis
Sinc function
sinc(u,v)
This is equal to 1
X axis
Y axis
fence plot constructed with separate parametric surfaces
u=1
u=0
increasing v
X axis
Y axis
"fence plot" using single parametric surface with undef ned points
f=cos(u)%3=
f=cos(u)%3=
increasing v
increasing u
X axis
Y axis
This has logarithmic scale
x**2+y**2
X axis
Y axis
Data grid plotting
"glass.dat"
X axis
Y axis
Data grid plotting
"glass.dat" using 3:2:1
X axis
Y axis
Data grid plotting
"glass.dat" using 1
"glass.dat" using 2
"glass.dat" using 3
line index within group
group index
splot of part of a data file
'glass.dat' every 2::0::12
X axis
Y axis
splot with "set pm3d" (implemented with some terminals)
'glass.dat' every 2::0::12
X axis
Y axis
Test of spherical coordinates
"glass.dat"
X axis
Y axis
Mandelbrot function
mand(0,0).compl(x,y),30)
X axis
Y axis
Demo of specifying discrete contour levels - default contours
x*y
100
50
0
-50
-100
3 discrete contours at 0 15 .75
x*y
100
50
0
-50
-100
9 incremental contours starting at -20, stepping by 5
x*y
100
50
0
-50
-100
Hidden line removal of explicit surfaces
1 / (x*x + y*y + 1)
Hidden line removal of explicit surfaces
x*y / (x**2 + y**2 + 0.1)
Hidden line removal of explicit surfaces
sin(x*x + y*y) / (x*x + y*y)
Hidden line removal of explicit surfaces
sin(x) * cos(y)
Hidden line removal of explicit surfaces
sin(x) * cos(y)
Hidden line removal of explicit surfaces
"glass.dat" using 1
Hidden line removal of explicit surfaces
"glass.dat" using 1
hidden3d 2-color surface
pm3d 2-color surface
The Valley of the Gnu
dgrid3d splines
dgrid3d Hann function
dgrid3d 30,30 qnorm 1
dgrid3d 30,30 qnorm 2
dgrid3d 30,30 qnorm 3
dgrid3d 30,30 qnorm 4
dgrid3d 30,30 qnorm 5
dgrid3d 30,30 gauss 1
dgrid3d 30,30 gauss .75
dgrid3d 30,30 gauss .5
dgrid3d 30,30 gauss .35
dgrid3d 30,30 gauss .25
dgrid3d 30,30 gauss .5,.35
dgrid3d 30,30 gauss .35,.5
Gnuplot Correspondences
geographic coordinate system
80 N
60 N
40 N
20 N
0
20 S
40 S
60 S
80 S
150 W
100 W
50 W
0
50 E
100 E
150 E
3D version using spherical coordinate system
3D solid version with hidden line removal
3D version using cylindrical coordinate system
Labels colored by GeV plotted in spherical coordinate system
Labels with hidden line removal
Gamma function, very useful function for probability
log gamma function, similarly very useful function
arcsin PDF with r = 2.0
arcsin CDF with r = 2.0
beta PDF
incomplete beta CDF
binomial PDF with n = 25, p = 0.15
binomial CDF with n = 25, p = 0.15
Cauchy PDF
Cauchy CDF
Chi-square χ^2 PDF
Chi-square χ^2 CDF
Erlang PDF
n = 1, exponential r.v.
Erlang CDF

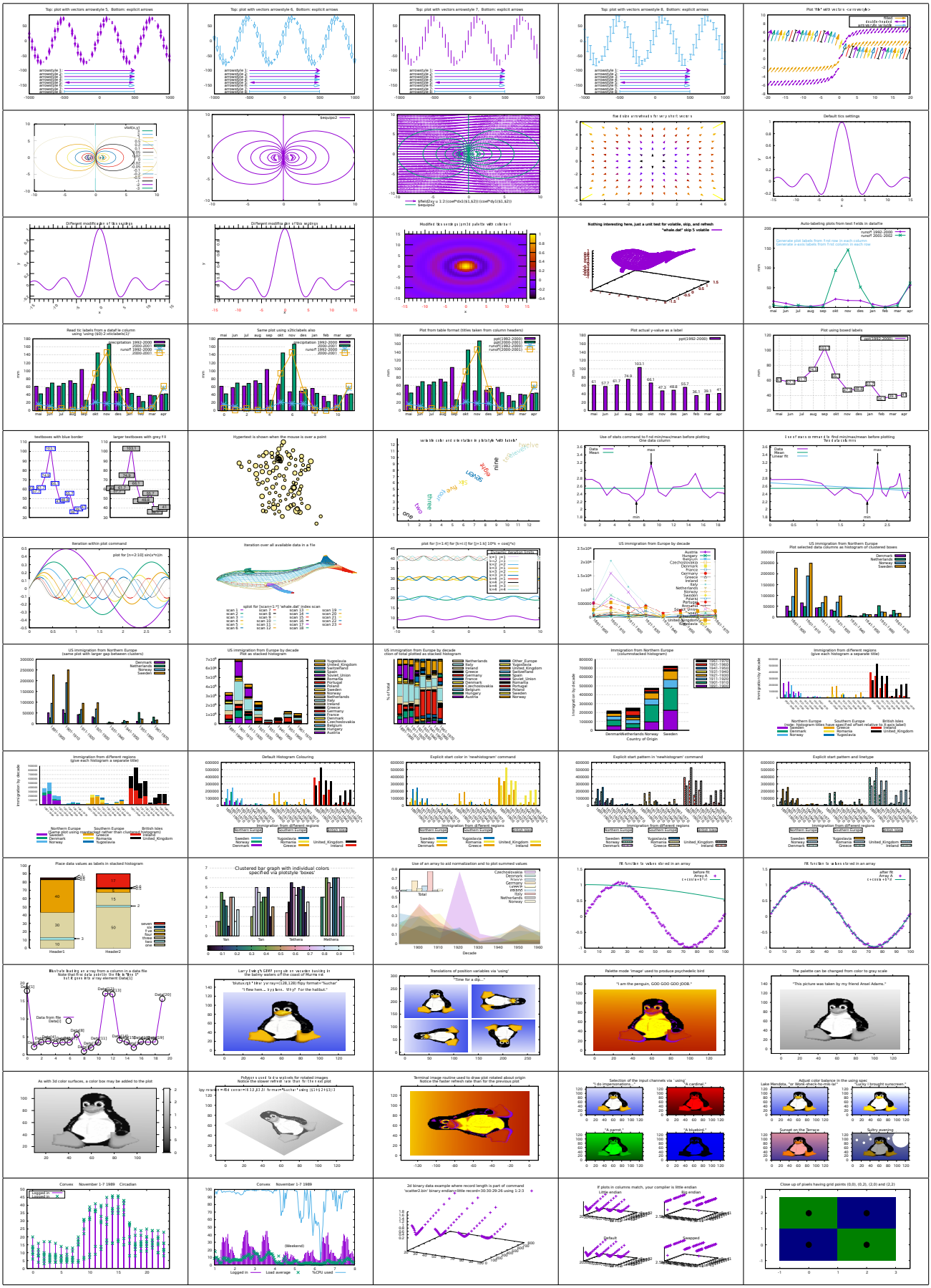

extreme PDF
extreme CDF
F PDF
F CDF
Gamma F PDF
incomplete gamma CDF
geometric PDF with p = 0.4
geometric CDF with p = 0.4
half normal PDF, σ = 1.0
half normal CDF, σ = 1.0
hypergeometric PDF with N = 75, C = 25, d = 10
hypergeometric CDF with N = 75, C = 25, d = 10
Laplace (or double exponential) PDF with μ = 0, b = 1
Laplace (or double exponential) CDF with μ = 0, b = 1
logistic PDF with a = 0, λ = 2
logistic CDF with a = 0, λ = 2
lognormal PDF with μ = 1.0, σ = 0.5
lognormal CDF with μ = 1.0, σ = 0.5
Maxwell PDF
Maxwell CDF
negative binomial (or Pascal or Polya) PDF with r = 8, p = 0.4
negative binomial (or Pascal or Polya) CDF with r = 8, p = 0.4
negative exponential (or exponential) PDF with λ = 2.0
negative exponential (or exponential) CDF with λ = 2.0
normal (also called Gauss or bell-curved) PDF
normal (also called Gauss or bell-curved) CDF
Pareto PDF with a = 1, b = 3
Pareto CDF with a = 1, b = 3
Poisson PDF with μ = 4.0
Poisson CDF with μ = 4.0
Rayleigh PDF with λ = 2.0
Rayleigh CDF with λ = 2.0
sine PDF
sine CDF
t PDF (and Gaussian limit)
t CDF (and Gaussian limit)
triangular PDF with m = 3.0, g = 2.0
triangular CDF with m = 3.0, g = 2.0
uniform PDF with a = -2.0, b = 2.0
uniform CDF with a = -2.0, b = 2.0
Weibull PDF
Weibull CDF
binomial PDF using normal approximation
binomial PDF using poisson approximation
geometric PDF using gamma approximation
geometric PDF using normal approximation
hypergeometric PDF using binomial approximation
hypergeometric PDF using normal approximation
negative binomial PDF using gamma approximation
negative binomial PDF using normal approximation
normal PDF using logistic approximation
poisson PDF using normal approximation
Lattice test for random numbers
Lattice test for random numbers
50 random samples from a 2D Gaussian PDF with unit variance, zero mean and no dependence
Histogram of 5000 random samples from a univariate Gaussian PDF with unit variance and zero mean
Gaussian 3D cloud of 3000 random samples
Histogram of distance from origin of 3000 multivariate unit variance samples
Rug Plot
Uniform Distribution
Normal Distribution

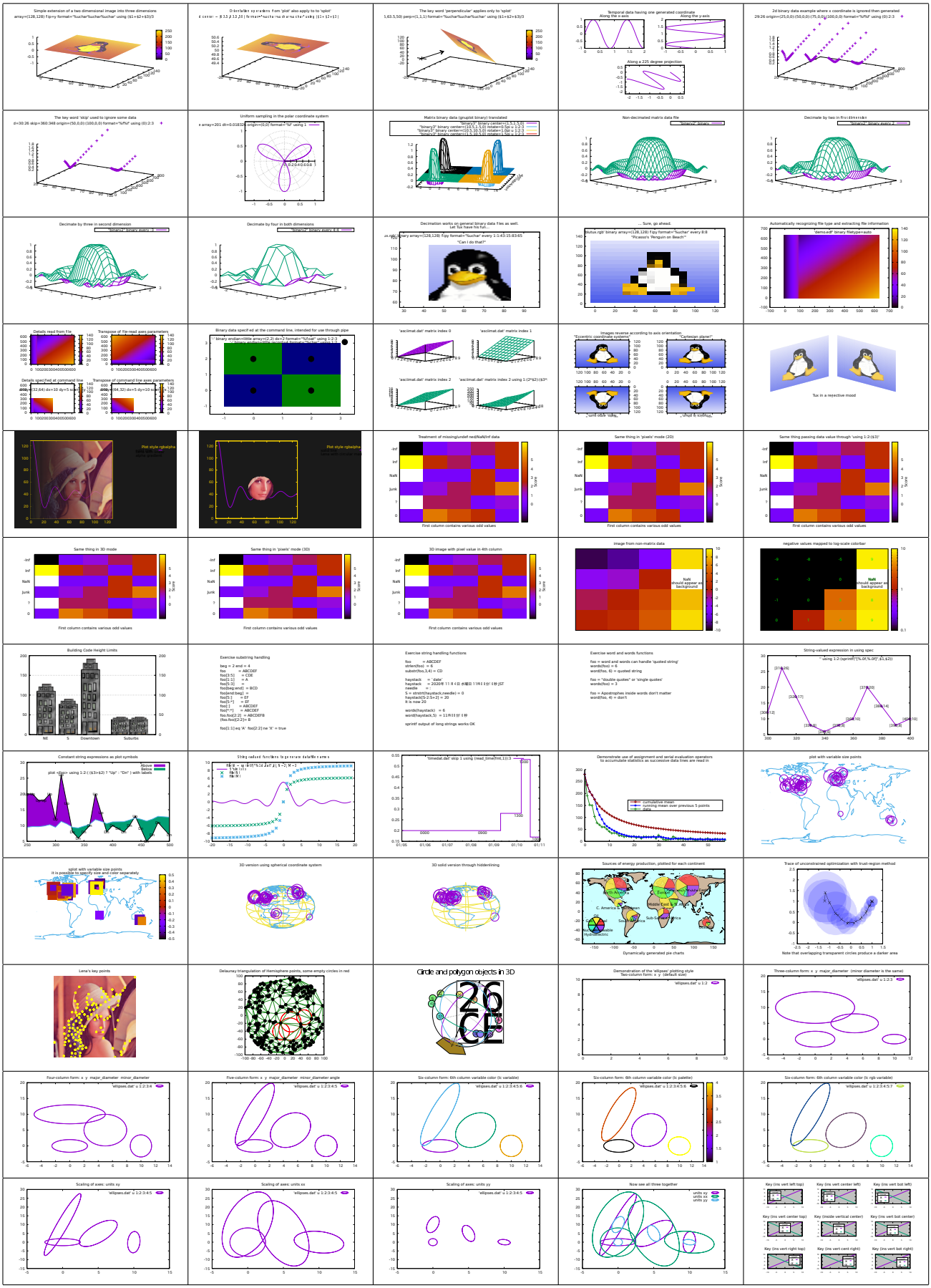

Lognormal Distribution
Mixed Distribution (Lognormal with shifted Gaussian)
The cubic Monomial basis functions
The cubic Hermite basis functions
The cubic Bezier basis functions
The cubic uniform Bspline basis functions
The cubic Bezier/Bspline basis functions in use
The cubic Hermite basis functions in use
Hidden line removal of explicit binary surfaces
Notice that sampling rate can change
Compare steps, fsteps and histeps
Histogram built from unsorted data by 'smooth frequency'
Histogram built from unsorted data by 'smooth frequency'
Normal Distribution Function
Inverse Error Function
Inverse Normal Distribution Function
Simple demo of scatter data conversion to grid data
Real part of complex square root function
Real part of complex square root function (different view)
Imaginary part of complex square root function
Imaginary part of complex square root function (different view)
Real part of complex cube root function
Real part of complex cube root function (different view)
Imaginary part of complex cube root function
Imaginary part of complex cube root function (different view)
Real part of complex 4th root function
Real part of complex 4th root function (different view)
Imaginary part of complex 4th root function
Imaginary part of complex 4th root function (different view)
Enneper's surface
Enneper's surface (different view)
Moebius strip
Moebius strip (view from opposite side)
Klein bottle
Klein bottle with look at the 'inside'
Klein bottle, glassblowers' version (look-through)
Klein bottle, glassblowers' version (solid)
NACA6409 Airfoil
NACA0012 Airfoil
Joukowski Airfoil using Complex Variables
Joukowski Airfoil using Complex Variables
Parametric Sphere
Parametric Sphere, crunched z axis
Parametric Sphere, enlarged z axis
Parametric Torus
Parametric Hexagon
Parametric Helix
Parametric Shell (clipped to limited z range)
Parametric Shell (automatic z range)
Interlocking Tori
2D projections of a 3D surface

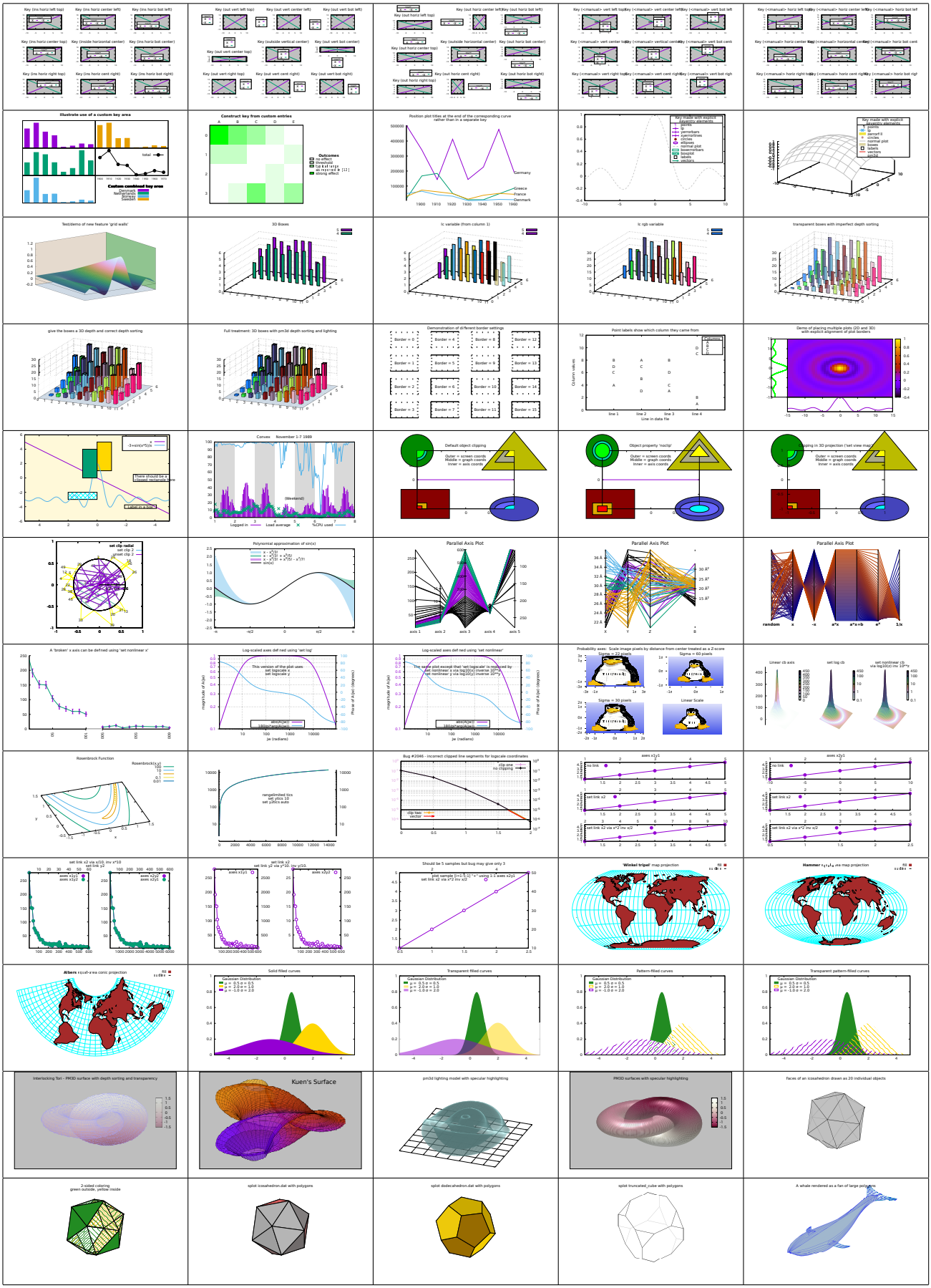

contour plot
more contours (15 levels)
contour by increments (every 10, starting at -100)
discrete set of contours (at -75, -50, 0)
contours on base grid with labels
contours drawn on surface
contours on both base and surface
2 surfaces
some more interesting contours
some more interesting contours
low resolution (6x6)
low resolution (6x6) using cubic splines
low resolution (6x6) using bspline approx.
low resolution (6x6) raise bspline order.
contour of Sinc function
contour of Sinc function
contour of data grid plotting
contour of data grid plotting
2D contour projection of previous plot
Rosenbrock Function
Rosenbrock Function
All contours drawn in a single color
Sometimes it helps to use multiplot
Circle and polygon objects in 3D
approximate the integral of functions
approximate the integral of functions
approximate the integral of functions (upper and lower limits)
approximate the integral of functions (upper and lower limits)
Plot of the ackermann function
Min(x,y) and Max(x,y)
Greatest Common Divisor (for integers only)
Finite summation of 10, 100, 1000 fourier coefficients
Fsteps plot
with date and time as x-values
Time data on Y, millisecond precision
Date format (top) vs Time format (bottom)
Simple Gantt Chart
Task start and end times in columns 2 and 3
Simple Gantt Chart
Task start and end times in columns 2 and 3
Terminal-independent RGB colors in 2D
Terminal-independent palette colors in 2D
RGB color information read from data file
Both RGB color information
and point size controlled by input
Both RGB color information
Both RGB color information
Demo of hidden3d with points only (no surface)
RGB coloring of pm3d surface
HSV coloring of pm3d surface
Explicit borders for pm3d tiling
variable color points, circles, candlesticks, boxes, and boxxyerror
variable color boxerror, xyerrorbars, impulses, vectors, and labels
variable color using 'fc palette z'
variable color using 'fc palette z'
variable color using 'fc rgb variable'
variable color using 'fc rgb variable'
variable color using multiple named palettes
variable color using multiple named palettes
pm3d demo. Radial sinc function. Default options.
pm3d at s (surface) / tics level 0

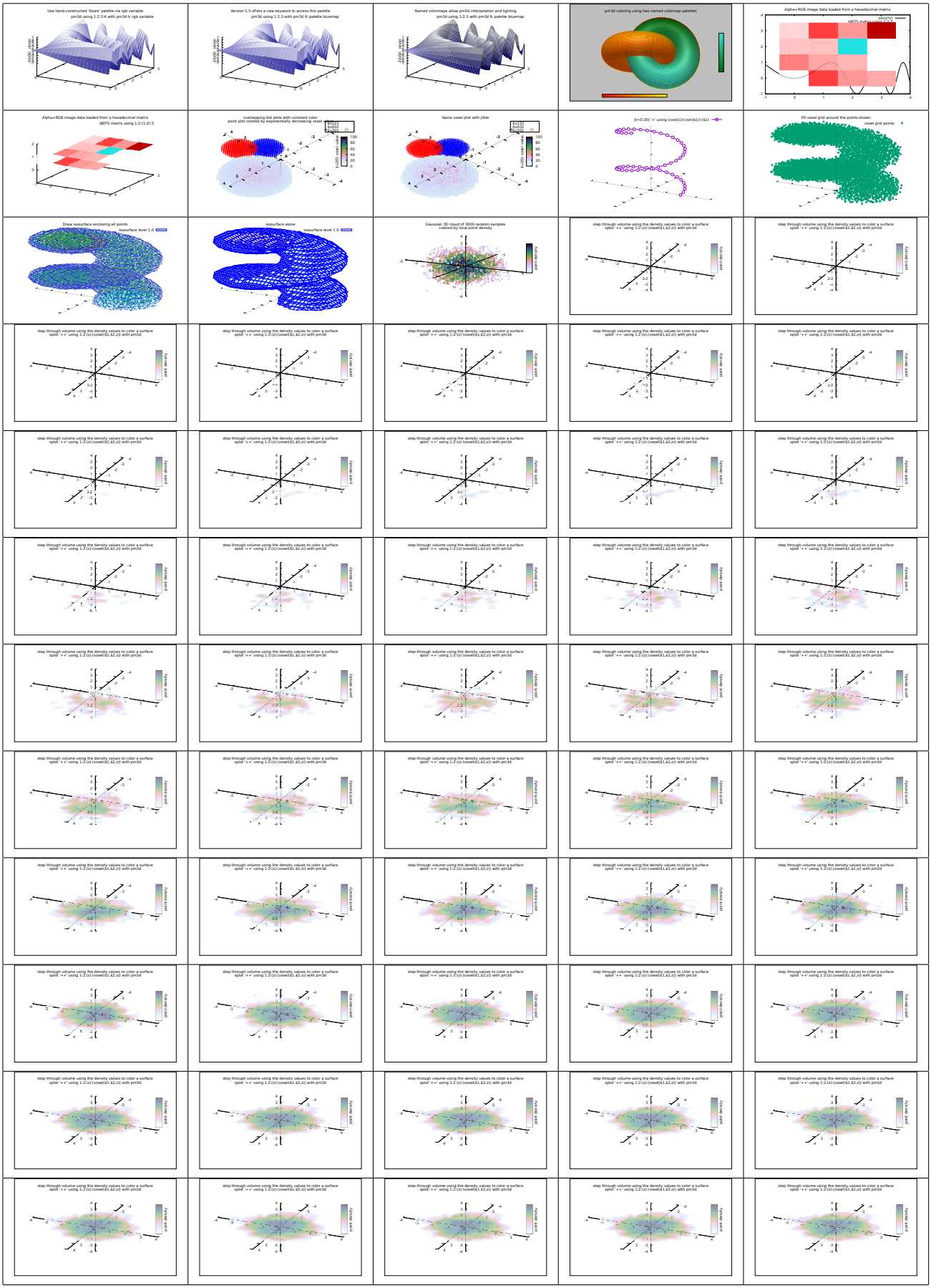

pm3d at b (bottom)
unset surface; set pm3d at st (surface and top)
set pm3d at bottst (funny combination, only for screen or postscript)
gray map
gray map, negative
colour map, using default rgbformulae 7,5,15 ... traditional pm3d (black-blue-red-yellow)
colour, rgbformulae 3,11,6 ... green-red-violet
olour, rgbformulae 23,28,3 ... ocean (green-blue-white); OK are also all other permutation
colour, rgbformulae 30,31,32 ... color printable on gray (black-blue-violet-yellow-white)
cubehelix color scheme with monotonic intensity
D A Green (2011) http://arxiv.org/abs/1108.5083
R,G,B profiles of the current color palette.
rgbformulae 31,-11,32: negative formula number=inverted color
set pm3d scansforward: wrong, because back overwrites front
set pm3d scansbackward: correctly looking surface
set hidden3d
set pm3d depthorder border lc 'black' lw 1
bad: surface and top are too close together
solution: use independent 'set zrange' and 'set cbrange'
color box is on by default at a certain position
color box is on again, now with horizontal gradient
see cblabel, grid cb, mcbtics, ...
color box is switched off
using now "set grid back; unset colorbox"
Datafile with different nb of points in scans; pm3d flush begin
Datafile with different nb of points in scans; pm3d flush center
Datafile with different nb of points in scans; pm3d flush end
Using interpolation with datafile; pm3d interpolate 2,1
Using interpolation with datafile; pm3d flriangles interpolate 10,1
'triangle.dat'
X LABEL
Y LABEL
only for enhanced terminals: 'set format cb ...'
function 'x+y' using all colors available, 'set pal maxcolors 0'
function 'x+y' using only 5 colors, 'set pal maxcolors 5'
color lines: 'splot sin(y)/y) with lines palette'
pm3d explicit mode — coloring according to the 4th parameter of 'using'
coloring according to the 3rd 'using' parameter (left) and to the z-value (bottom)
set pm3d corners2color mode
new pm3d option for smooth clipping against zrange
Palettes according to 'help palette rgbformulae'
traditional pm3d
hot (black-red-yellow-white)
green-red-violet
color printable on gray
HSV model
ocean (green-blue-white)
rainbow (blue-green-yellow-red)
gray palette
set palette def ned
set palette def ned (0 "green", 1 "blue", 2 "red", 3 "orange")
set palette def ned (20 "#101010", 30 "#ff0000", 40 "#00ff00", 50 "#e0e0e0")
set palette def ned (0 0 0 0, 1 1 1 1)
set palette model HSV def ned (0 0 1 1, 1 1 1 1)
set palette model RGB def ned
set palette file '-' (file with 3 columns)
set palette file '-' (file with 4 columns)
set palette file '-' using 1:2:(($1+$2)/2
set palette model RGB rgbformulae 7,5,15
set palette model HSV rgbformulae 7,5,15
set palette model CMY rgbformulae 7,5,15
set palette model HSV rgbformulae 3,2,2
set palette functions gray, gray, gray
set palette functions sqrt(gray), gray**3, sin(gray*2*pi) <-> 7,5,15
set palette rgbformulae 7,5,15
set palette model RGB functions
Color (Hue) indicates angle
asin(x + iy)










Use hand-constructed 'blues' palette via rgb variable
pm3d using 1:2:3:4 with pm3d lc rgb variable
Version 5.5 offers a new keyword to access this palette
pm3d using 1:2:3 with pm3d fc palette bluemap
Named colormaps allow pm3d interpolation and lighting
pm3d using 1:2:3 with pm3d fc palette bluemap
pm3d coloring using two named colormap palettes
Alpha+RGB image data loaded from a hexadecimal matrix
Alpha+RGB image data loaded from a hexadecimal matrix
$BITS matrix using 1:2:(1.0):3
overlapping dot plots with constant color
point plot colored by exponentially decreasing voxel density
Same voxel plot with jitter
[t=0:20] 'e' using (cos($1)):(sin($1)):($1)
Fill voxel grid around the points shown
voxel grid points
Draw isosurface enclosing all points
isosurface level 1.0
isosurface alone
isosurface level 1.0
Gaussian 3D cloud of 3000 random samples
colored by local point density
step through volume using the density values to color a surface
splot '++' using 1:2:(z):(voxel($1,$2,z)) with pm3d
point density


step through volume using the density values to color a surface
splot '++' using 1:2:(z):(voxel($1,$2,z)) with pm3d
point density

orthogonal slices through volume
using the density values to color the surfaces
point density