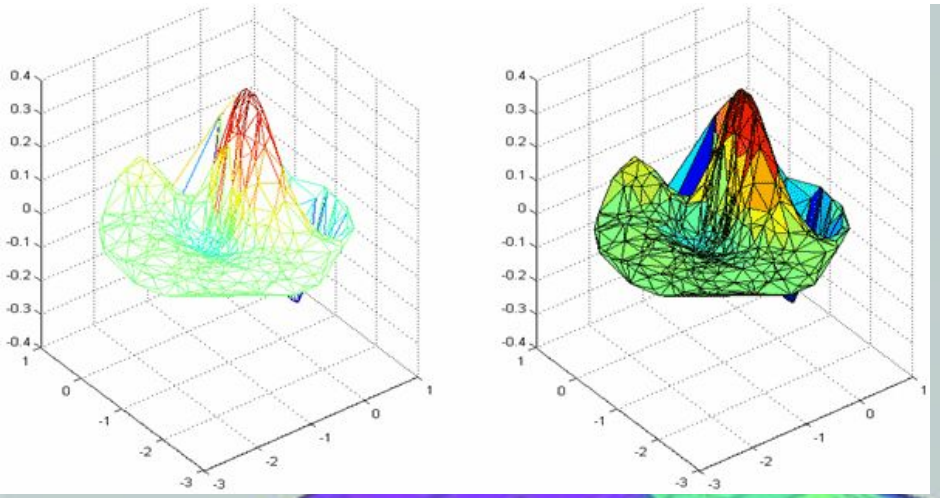
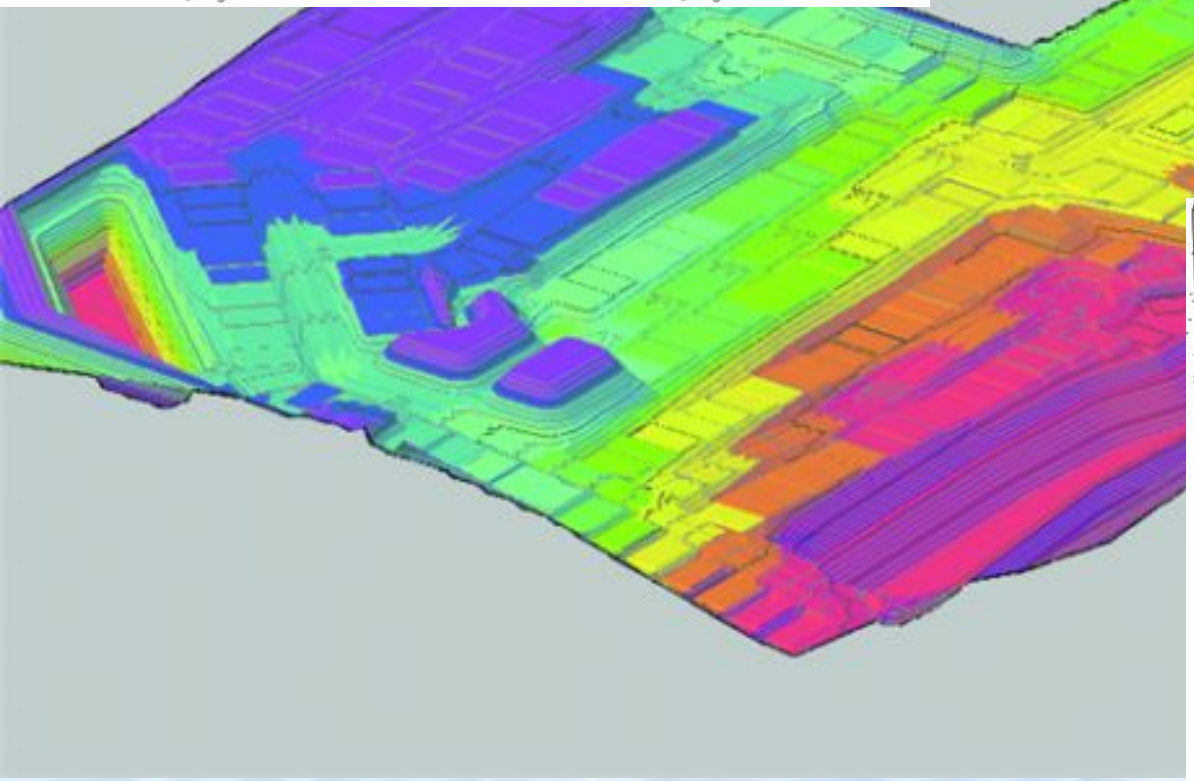
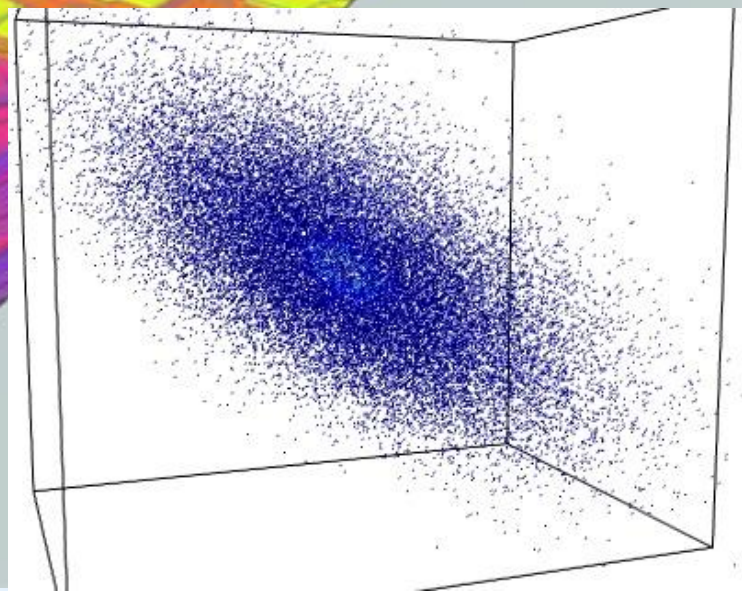
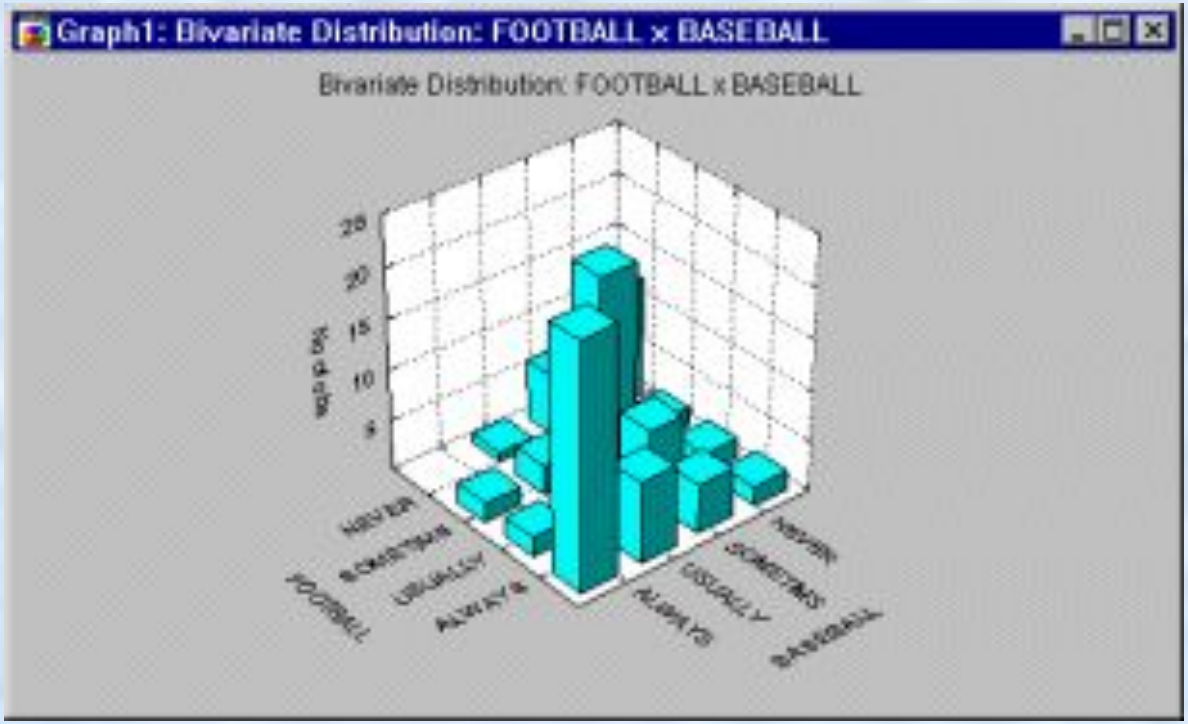
Трехмерный анализ данных

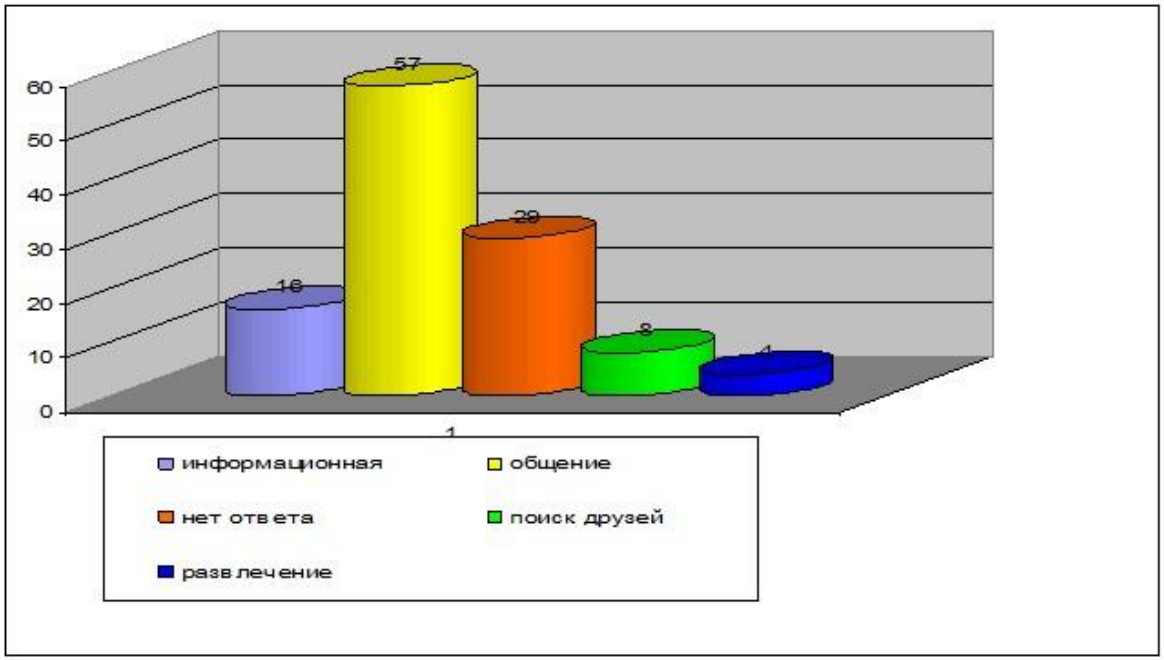








Столбчатая диаграмма



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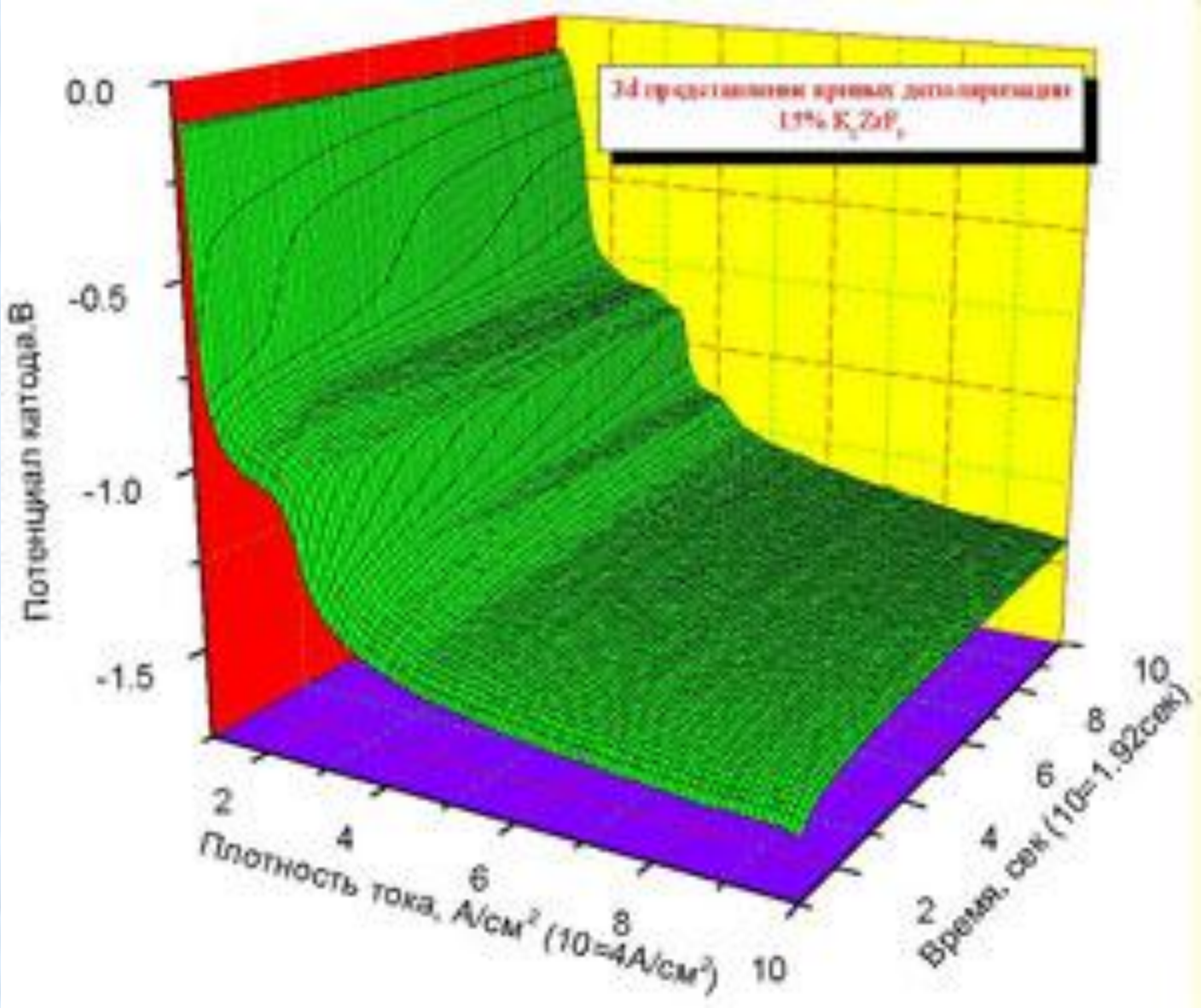
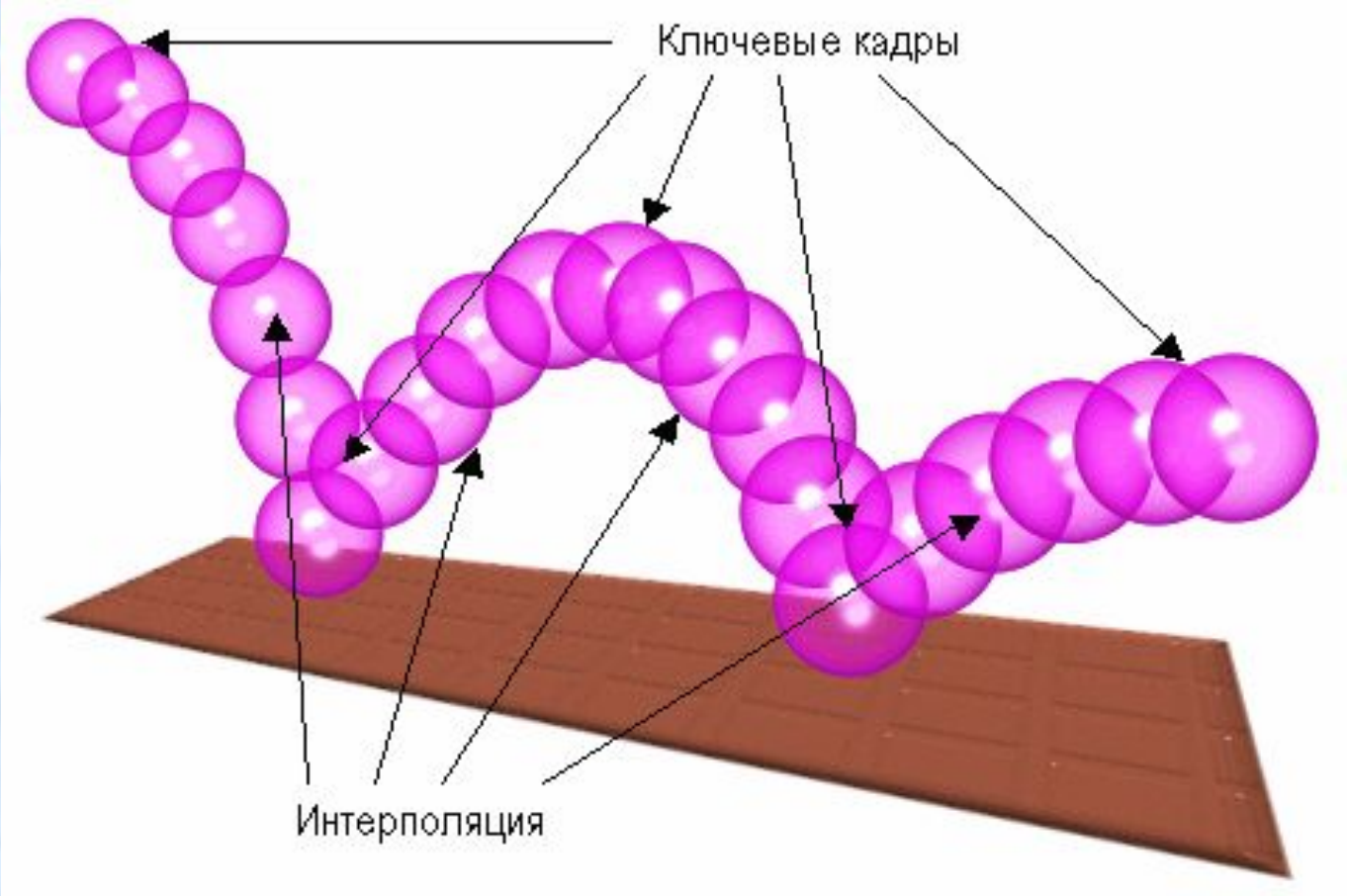
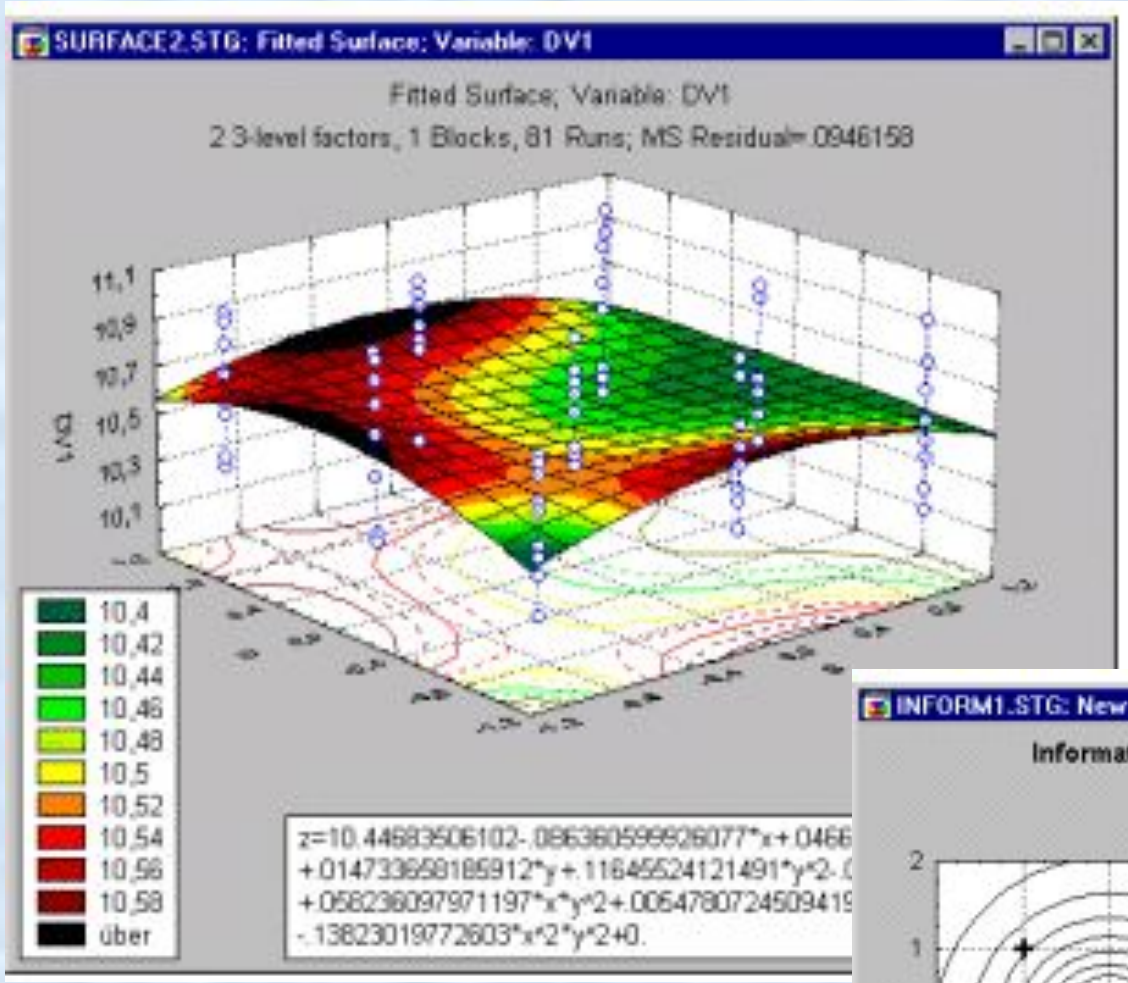


Линейный график





Дискретная карта линий уровня

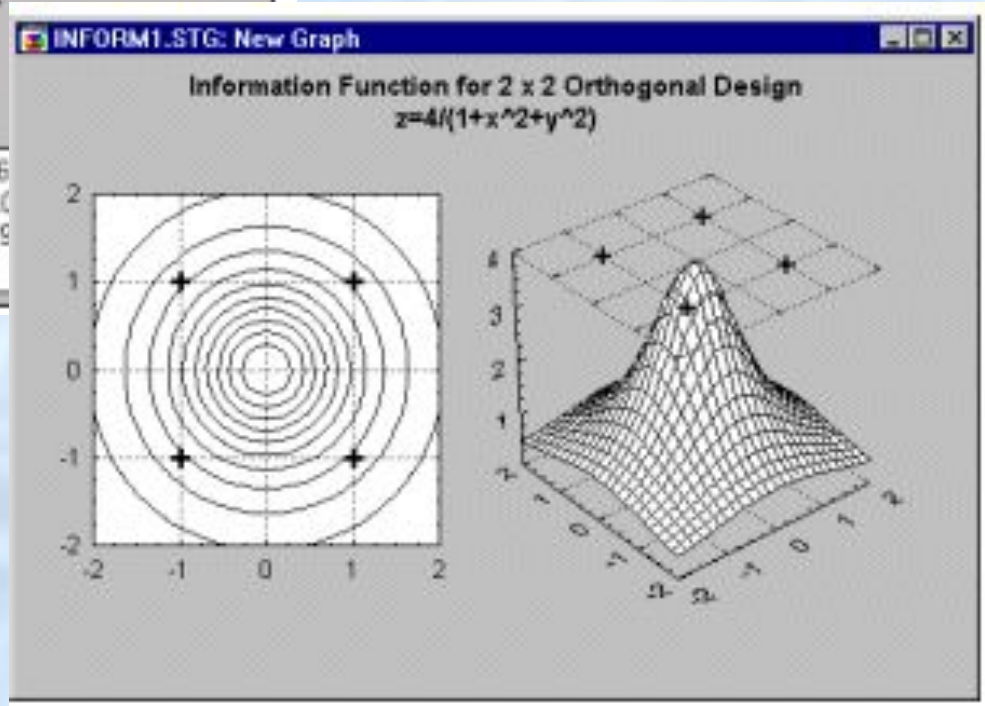
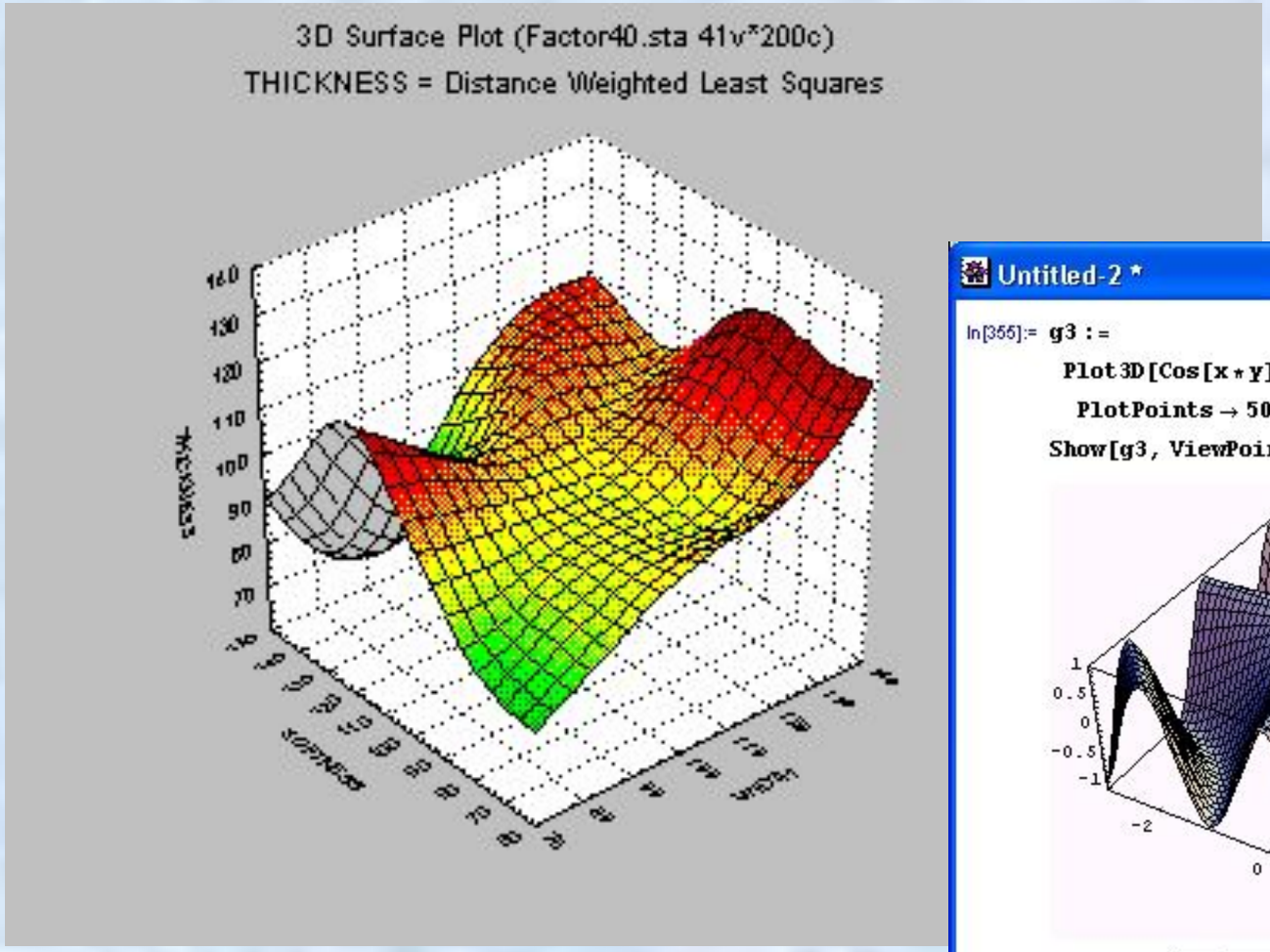
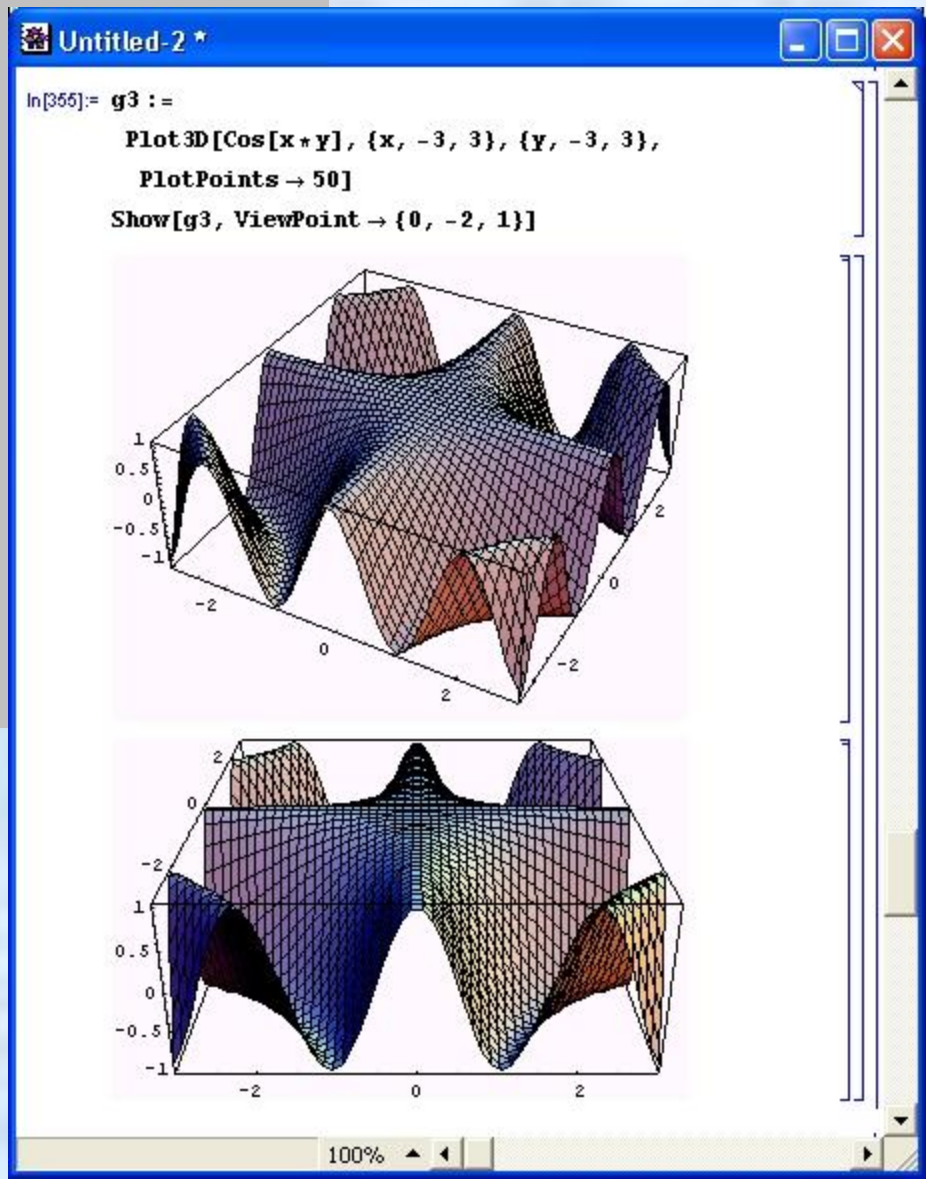
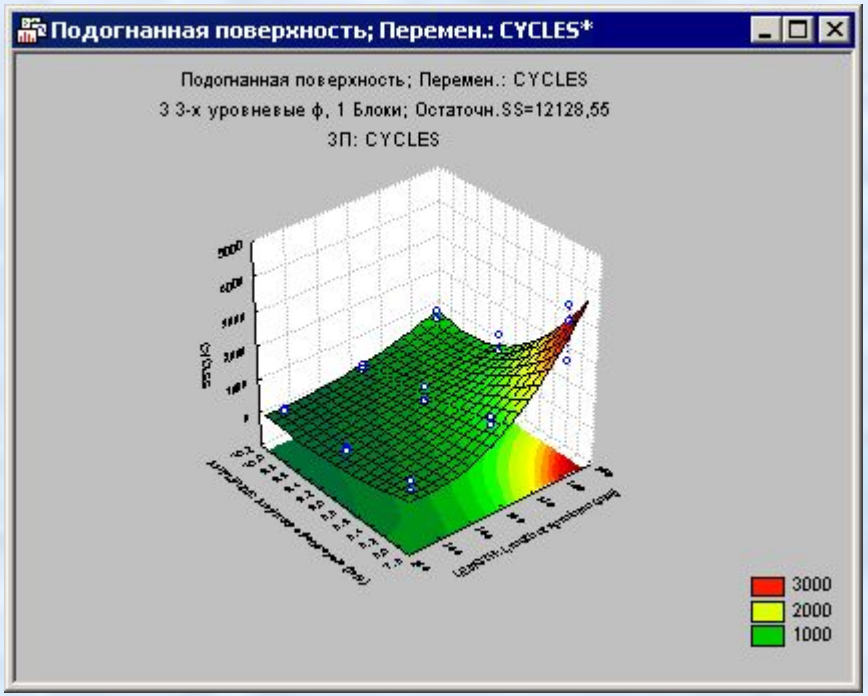


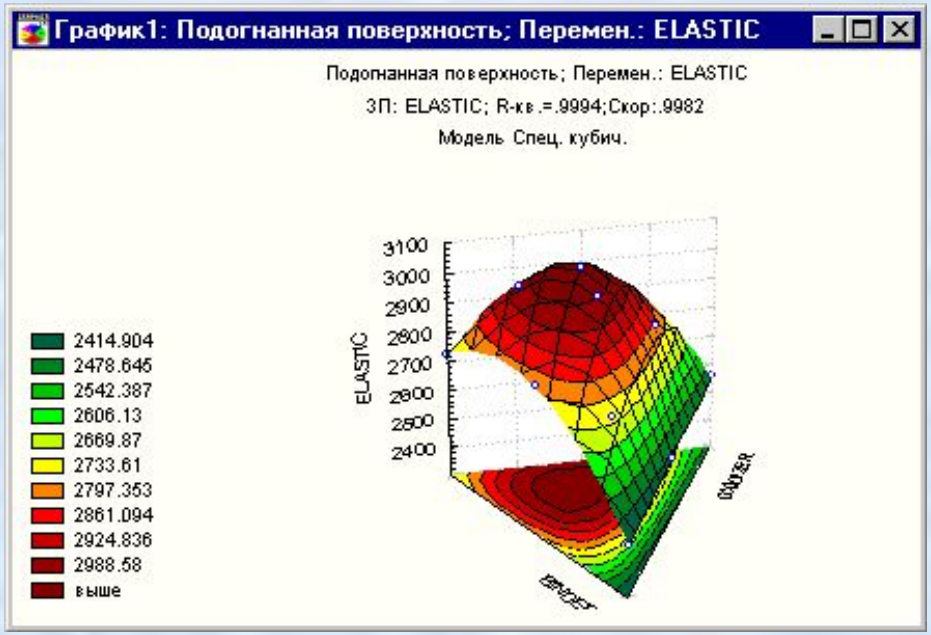
График поверхности



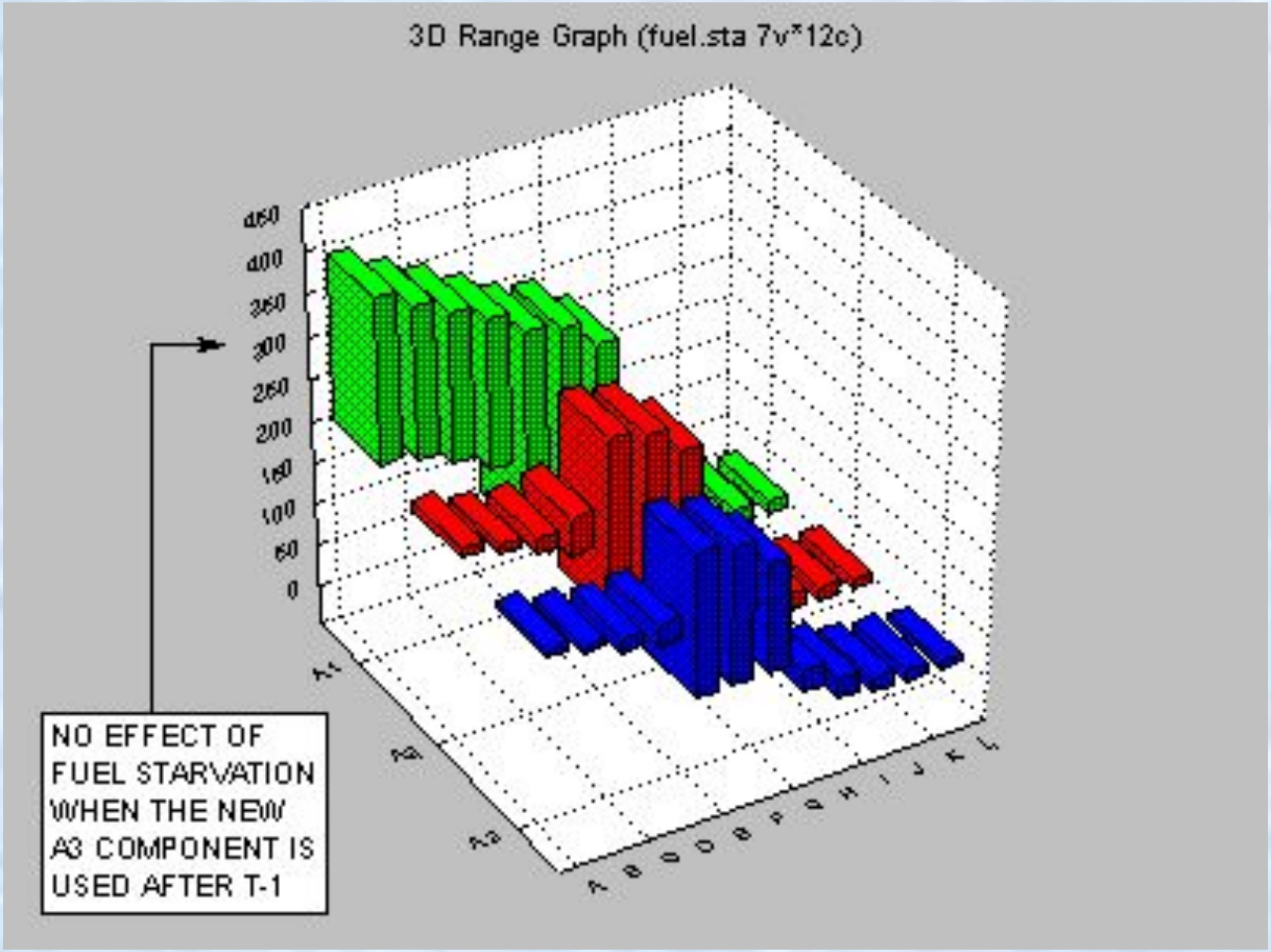


Карта линий уровня

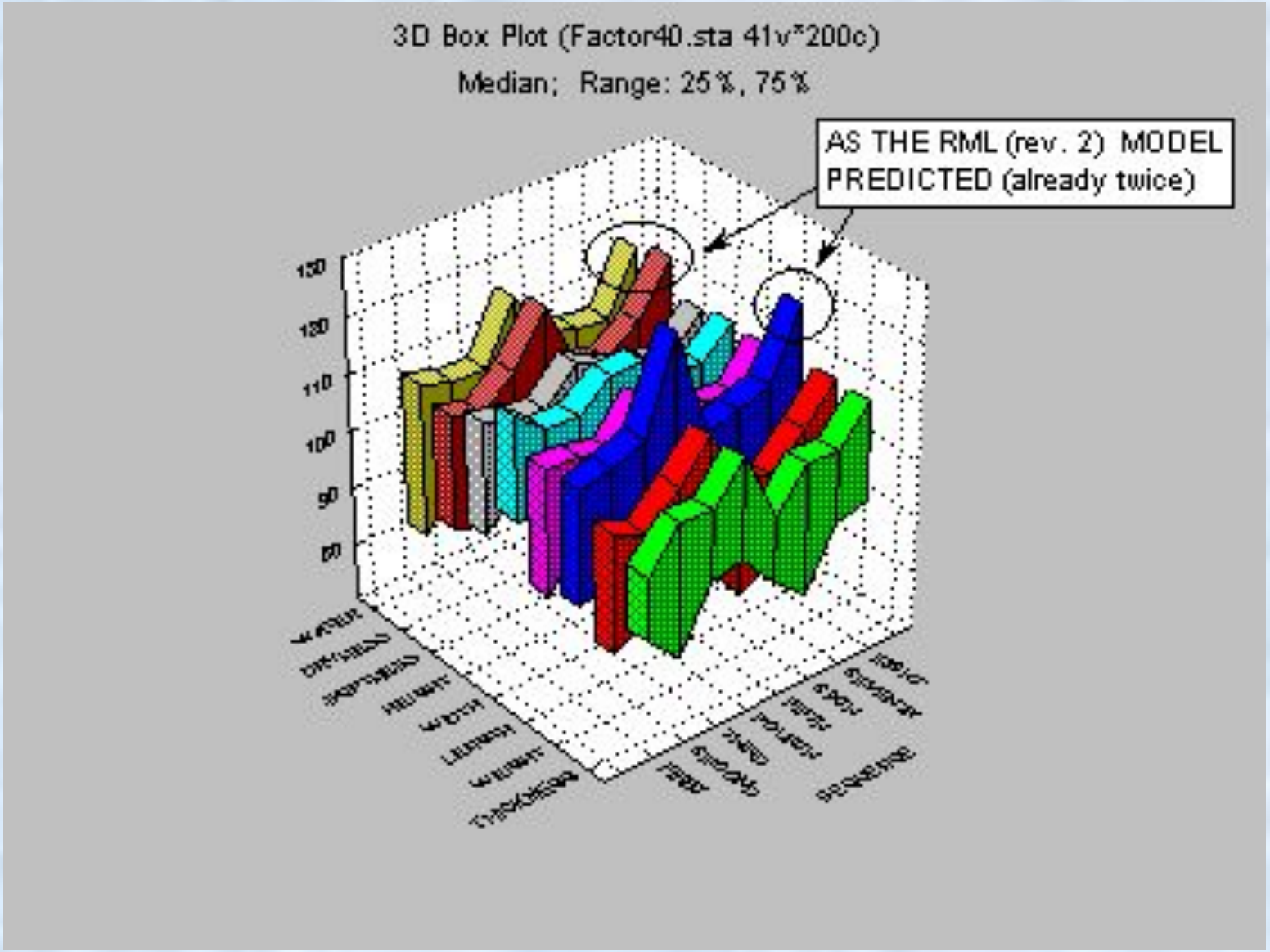




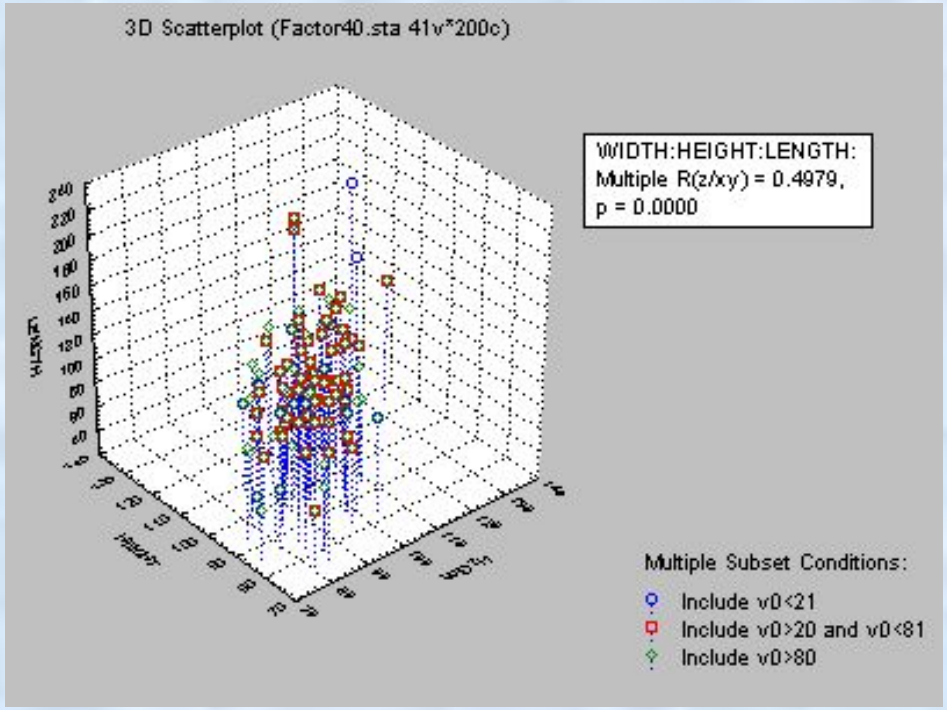
3M диаграммы диапазонов

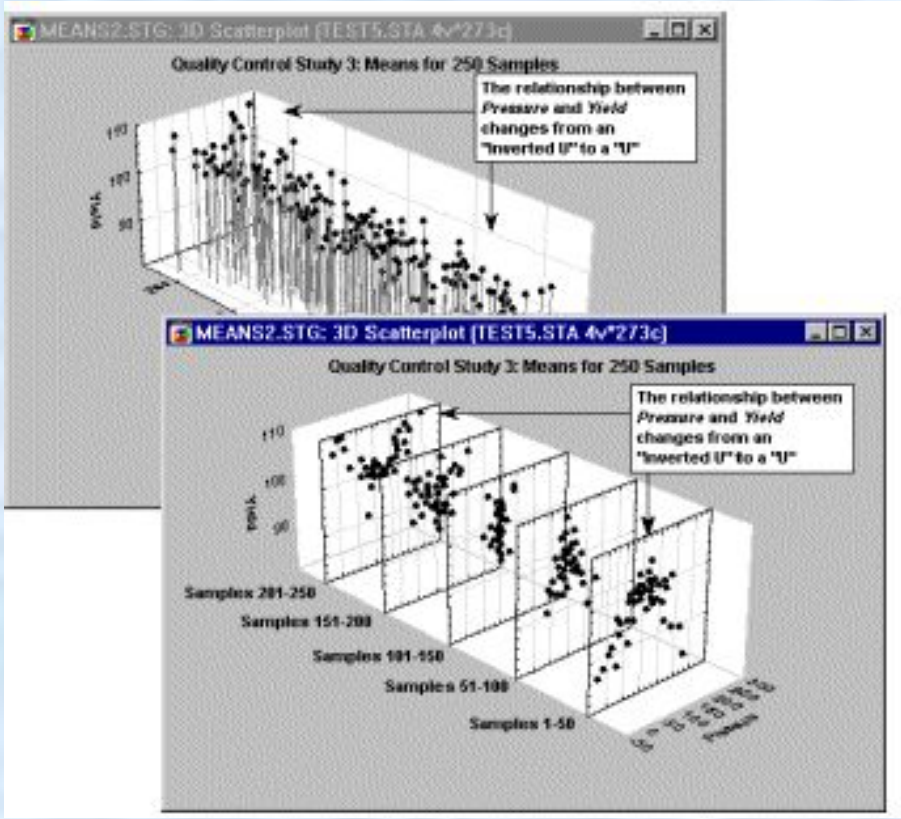


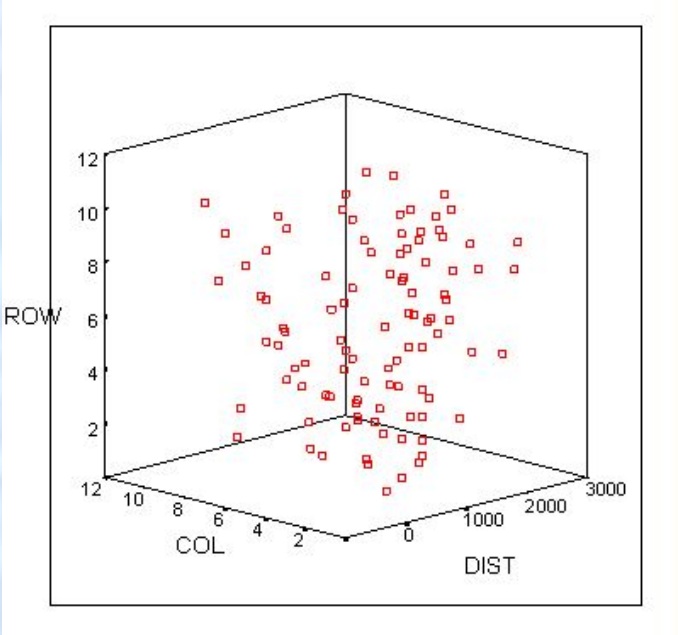
3М диаграммы размаха



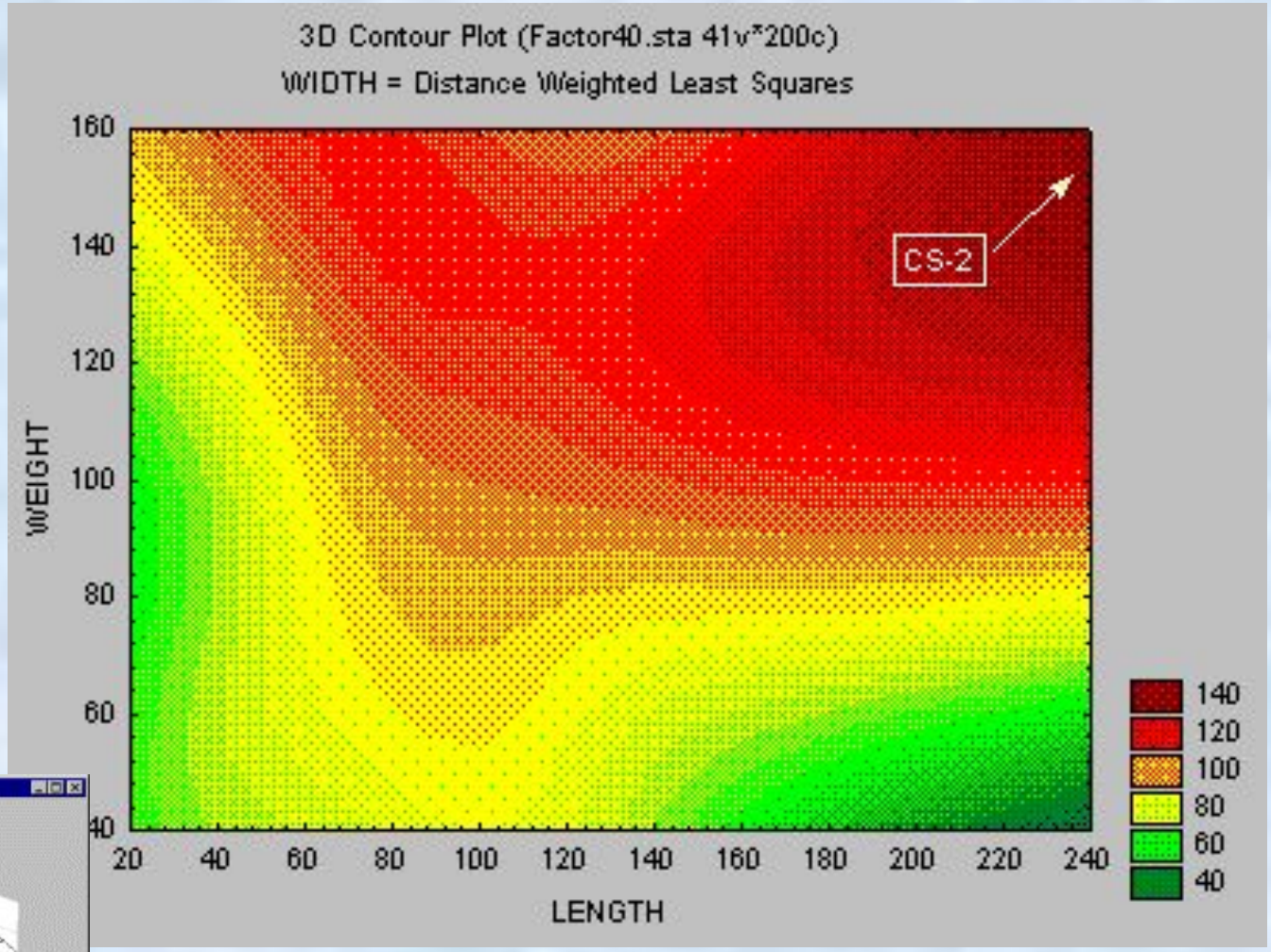
Трехмерные диаграммы рассеяния

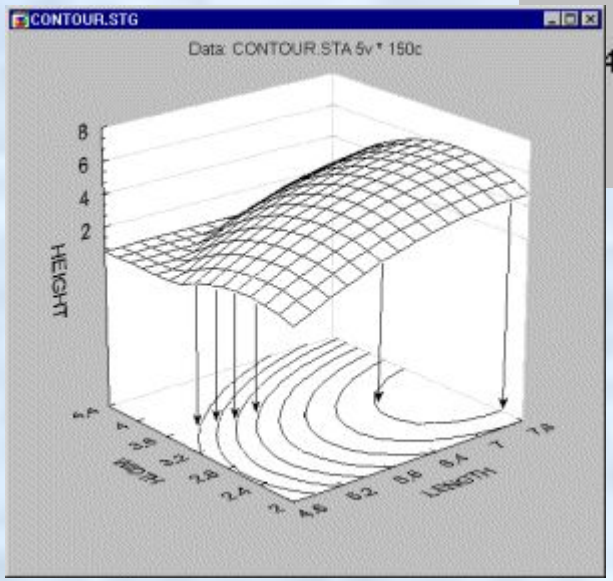


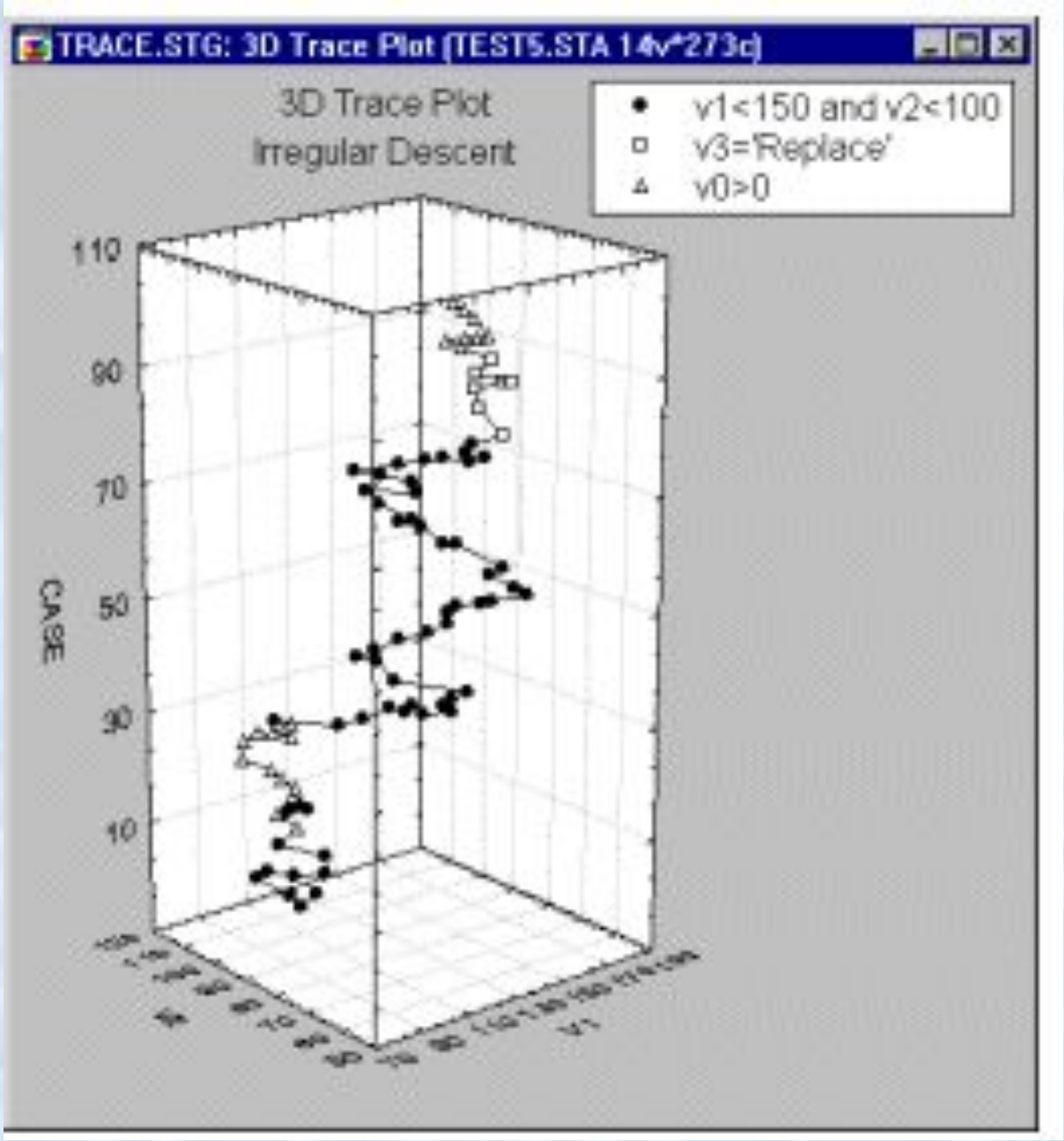




Карты линий уровня

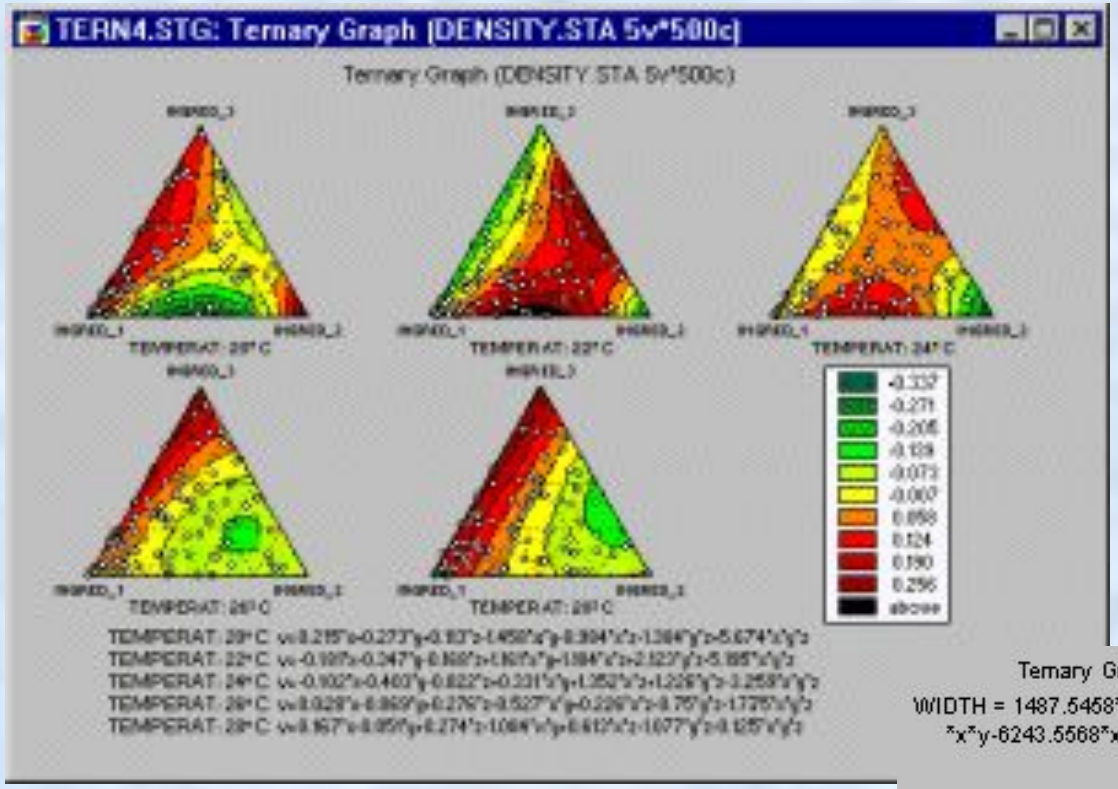


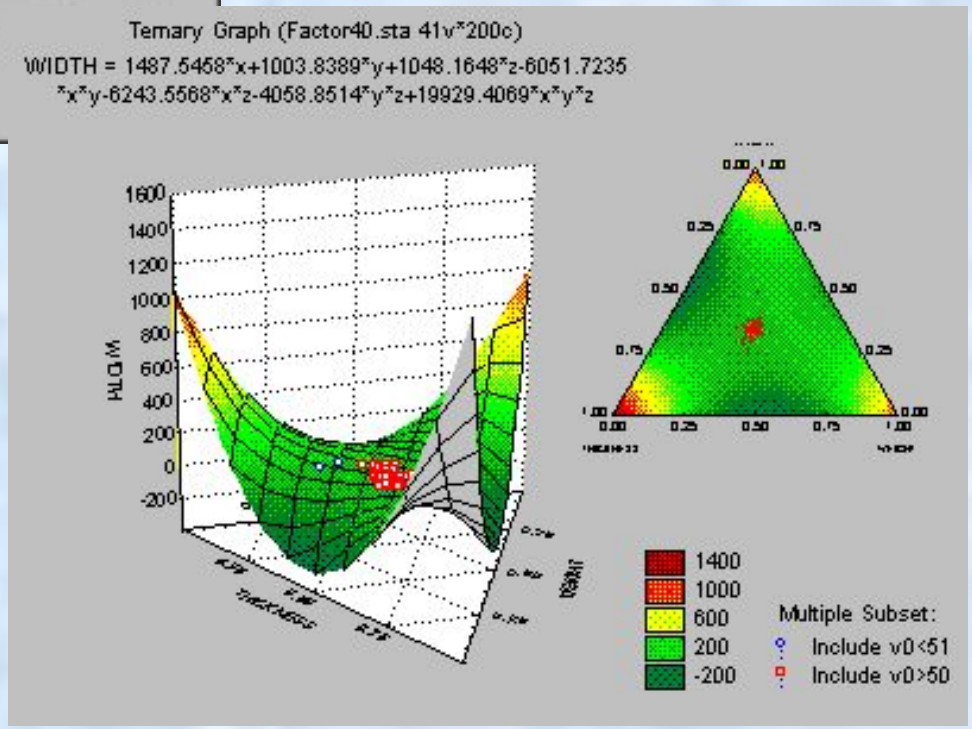




Трассировочные графики

Тернарные графики





Подгонка

Простейшая модель первого порядка:

$V=a + b1*X + b2*Y+b3*Z$ с ограничением $X+Y+Z=1$, может быть построена с помощью умножения коэффициента a на $1=X+Y+Z$:

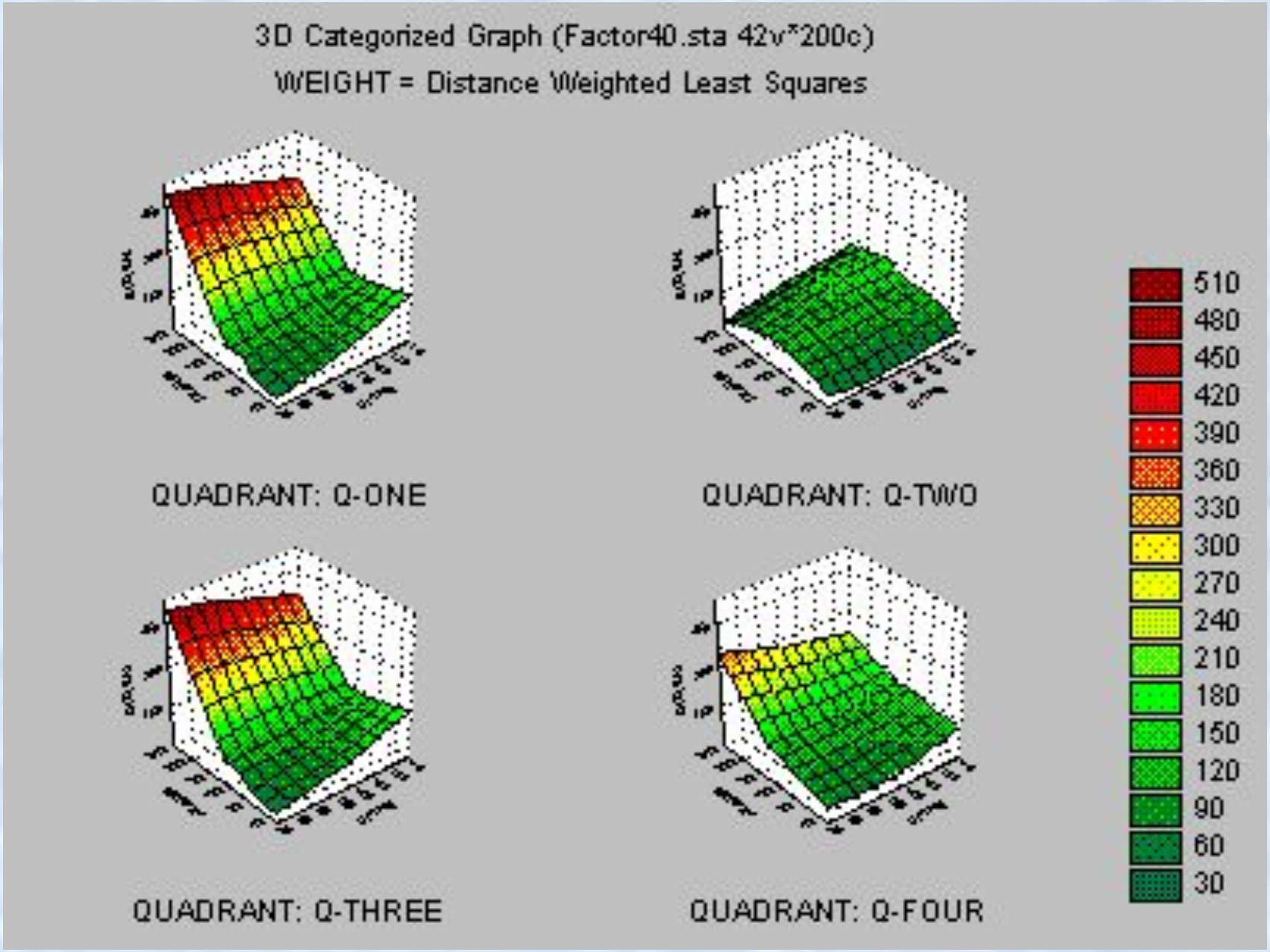
$V=a*X + a*Y+a*Z + b1*X + b2*Y+b3*Z$

Это выражение можно упростить: $V = (a+b1)*X + (a+b2)*Y+(a+b3)*Z$ или записать таким образом: $V=b1'*X + b2'*Y+b3'*Z$

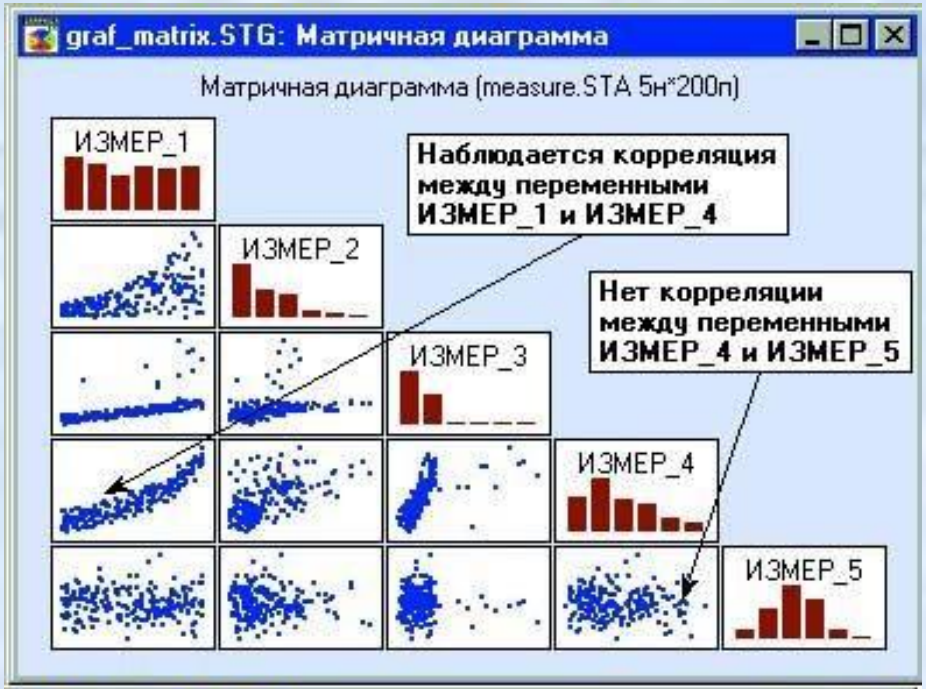
Ниже перечислены доступные в STATISTICA функции полиномиальной регрессии:

- *Линейное сглаживание* (полином первой степени):
  $V=b1*X + b2*Y + b3*Z$
- *Квадратичное сглаживание* (полином второй степени):
  $V= b1*X + b2*Y + b3*Z + b12*X*Y + b13*X*Z + b23*Y*Z$
- *Полное кубическое сглаживание:*
  $V= b1*X + b2*Y + b3*Z + b12*X*Y + b13*X*Z + b23*Y*Z + b12*X*Y*(X-Y) + b13*X*Z*(X-Z) + b23*Y*Z*(Y-Z) + b123*X*Y*Z$
- *Специальное кубическое сглаживание:*
  $V= b1*X + b2*Y + b3*Z + b12*X*Y + b13*X*Z + b23*Y*Z +b123*X*Y*Z$

Трехмерные категоризованные графики



Матричные графики



Подгонка функции к данным

Линейная подгонка

$Y = a + bX$

Логарифмическая подгонка

$y = q*[\log_n x]+b$

Экспоненциальная подгонка

$y = b*\exp(q*x)$

Полиномиальная подгонка

$y = b_0 + b_1*x + b_2*x^2 + b_3*x^3+...+ b_n*x^n$, где n — степень полинома ($1<n<6$).