

d180

INFO

Italian Extra Virgin Olive Oil d180, 2009 to 2011
spatial reference EPSG:3035 - European Lambert Azimuthal Equal Area - coords in m
time in years, resolution = 1 yr
data from CNR-IRET - Institute of Research on Terrestrial Ecosystems
article F.Chiocchini et al, Food Chemistry 202 (2016) 291–301
doi <https://doi.org/10.1016/j.foodchem.2016.01.146>

Timescape description

275 Source events
51282 Target events
Null target events count is 9773
Model parameters:
Algorithm: IDW, Neighborhood: all
Metric: EUCLID
Time to space conversion factor C=50000.0
Causal cone is straight with K=5.0
tip angle=2.75 rad, Omega=5.05 srads
cone coverage is 80% of half-plane
T from 2008.0 to 2015.5 in 7 sheets: Tk, k=0...6
X from 4147000.0 to 4894000.0 in 74 rows: Xi, i=0...73
Y from 1568000.0 to 2556000.0 in 99 cells: Yj, j=0...98
Target events voxel size (each):
dT=1.071 (time units) or 53571.43 (length units)
dX=10094.59, dY=9979.8, Area=100742014.74
Volume=5396893646893.65 (length^3 units)

SOURCE

275 source events found within
2009.0 < T < 2011.0
4148558.0 < X < 4893432.0
1568101.0 < Y < 2555790.0
18.68 < VAL < 27.87

Metric:EUCLID

c = 50000.0, k = 5.0

The causal cone is straight

Trend of VAL vs T:

OLS Regression Results

```
=====
Dep. Variable:                y      R-squared:                0.006
Model:                        OLS    Adj. R-squared:           0.003
Method:                        Least Squares    F-statistic:           1.709
Date:                          Fri, 20 Mar 2020    Prob (F-statistic):     0.192
Time:                          20:24:27    Log-Likelihood:        -489.65
No. Observations:              275    AIC:                   983.3
Df Residuals:                  273    BIC:                   990.5
Df Model:                      1
Covariance Type:               nonrobust
=====
              coef      std err          t      P>|t|      [0.025      0.975]
-----
const          -257.0139      214.201      -1.200      0.231     -678.709     164.681
x1              0.1393       0.107       1.307      0.192      -0.070      0.349
=====
Omnibus:                9.393    Durbin-Watson:           0.624
Prob(Omnibus):           0.009    Jarque-Bera (JB):        9.440
Skew:                   -0.406    Prob(JB):                0.00892
Kurtosis:                3.407    Cond. No.                4.96e+06
=====
```

Trend of VAL vs X:

OLS Regression Results

```

=====
Dep. Variable:          y      R-squared:          0.018
Model:                  OLS    Adj. R-squared:       0.015
Method:                 Least Squares  F-statistic:      5.144
Date:                   Fri, 20 Mar 2020  Prob (F-statistic): 0.0241
Time:                   20:24:27  Log-Likelihood:   -487.94
No. Observations:      275      AIC:              979.9
Df Residuals:          273      BIC:              987.1
Df Model:               1
Covariance Type:       nonrobust
=====

```

```

=====
              coef      std err          t      P>|t|      [0.025      0.975]
-----
const         19.1319         1.704      11.226      0.000      15.777      22.487
x1             8.519e-07      3.76e-07       2.268      0.024      1.12e-07      1.59e-06
=====
Omnibus:                 3.183    Durbin-Watson:          0.615
Prob(Omnibus):           0.204    Jarque-Bera (JB):        2.906
Skew:                    -0.244    Prob(JB):                0.234
Kurtosis:                 3.127    Cond. No.                8.96e+07
=====

```

Trend of VAL vs Y:

OLS Regression Results

```

=====
Dep. Variable:          y      R-squared:          0.410
Model:                  OLS    Adj. R-squared:       0.408
Method:                 Least Squares  F-statistic:      190.0
Date:                   Fri, 20 Mar 2020  Prob (F-statistic): 3.61e-33
Time:                   20:24:27  Log-Likelihood:   -417.87
No. Observations:      275      AIC:              839.7
Df Residuals:          273      BIC:              847.0
Df Model:               1
Covariance Type:       nonrobust
=====

```

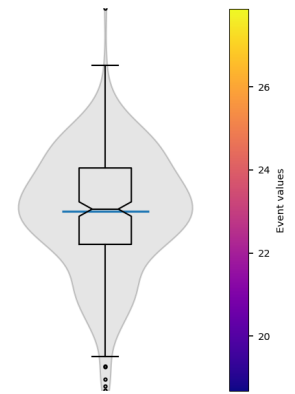
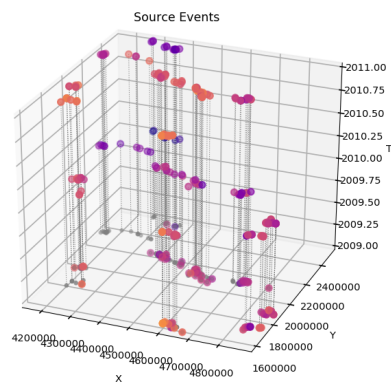
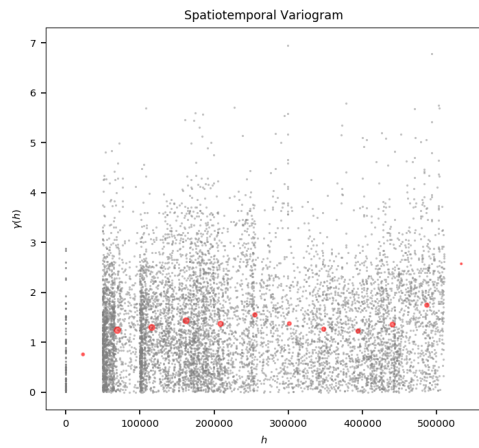
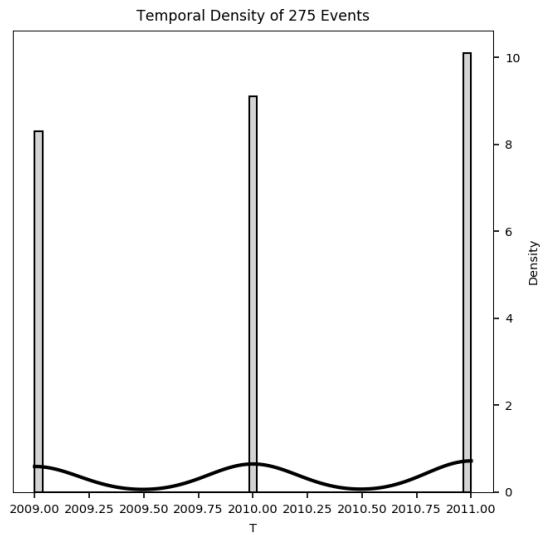
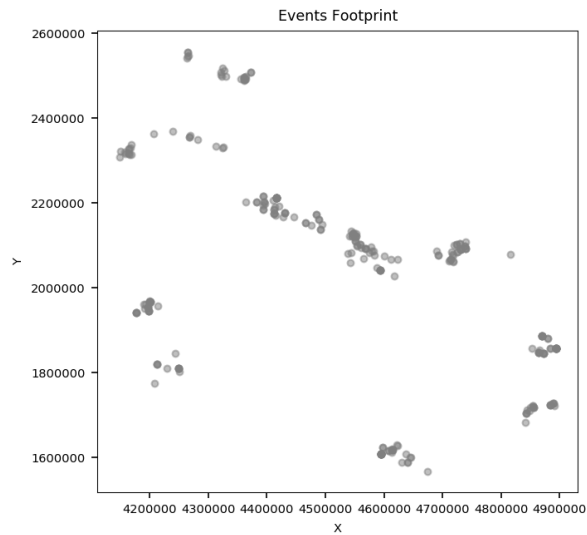
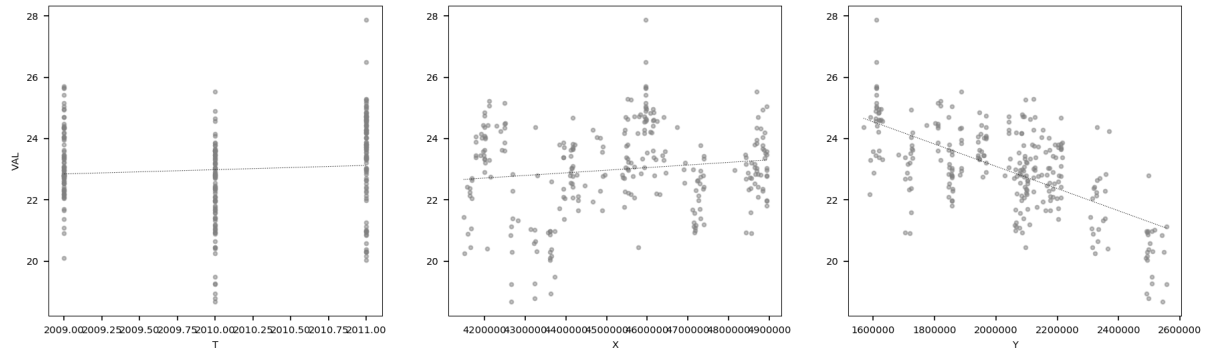
```

=====
              coef      std err          t      P>|t|      [0.025      0.975]
-----
const         30.3471         0.538     56.435      0.000      29.288      31.406
x1            -3.627e-06      2.63e-07    -13.784      0.000     -4.15e-06     -3.11e-06
=====
Omnibus:                 0.225    Durbin-Watson:          0.801
Prob(Omnibus):           0.894    Jarque-Bera (JB):        0.135
Skew:                    -0.053    Prob(JB):                0.935
Kurtosis:                 3.027    Cond. No.                1.64e+07
=====

```

Warnings:

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The condition number is large, 1.64e+07. This might indicate that there are strong multicollinearity or other numerical problems.



Variogram

h, γ

23175.914543813557,0.7547872340425537
 69527.74363144067,1.2388297172912524
 115879.57271906779,1.2942932330827064
 162231.4018066949,1.4292817679557996
 208583.230894322,1.3666918103448273
 254935.05998194913,1.546771523178807
 301286.8890695762,1.3720232558139538
 347638.71815720334,1.259830220713073
 393990.54724483046,1.222995169082124
 440342.3763324576,1.3537575757575748
 486694.2054200847,1.740939044481055
 533046.0345077118,2.5700000000000016