

SARIMAX Results

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Dep. Variable:          9    No. Observations:         365
Model:          SARIMAX(1, 1, 1)x(1, 1, 1, 12)    Log Likelihood         -1966.352
Date:              Tue, 21 May 2024    AIC              3942.704
Time:              11:33:34    BIC              3962.022
Sample:              0    HQIC              3950.392
                             - 365

```

Covariance Type: opg

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=====
              coef    std err          z      P>|z|      [0.025    0.975]
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ar.L1          0.9988     17.158      0.058      0.954     -32.631     34.628
ma.L1         -0.9994     31.136     -0.032      0.974     -62.024     60.025
ar.S.L12       -0.2399      0.038     -6.288      0.000      -0.315     -0.165
ma.S.L12       -0.9999     21.348     -0.047      0.963     -42.841     40.841
sigma2        3650.0203    9.94e+04      0.037      0.971    -1.91e+05     1.98e+05
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```

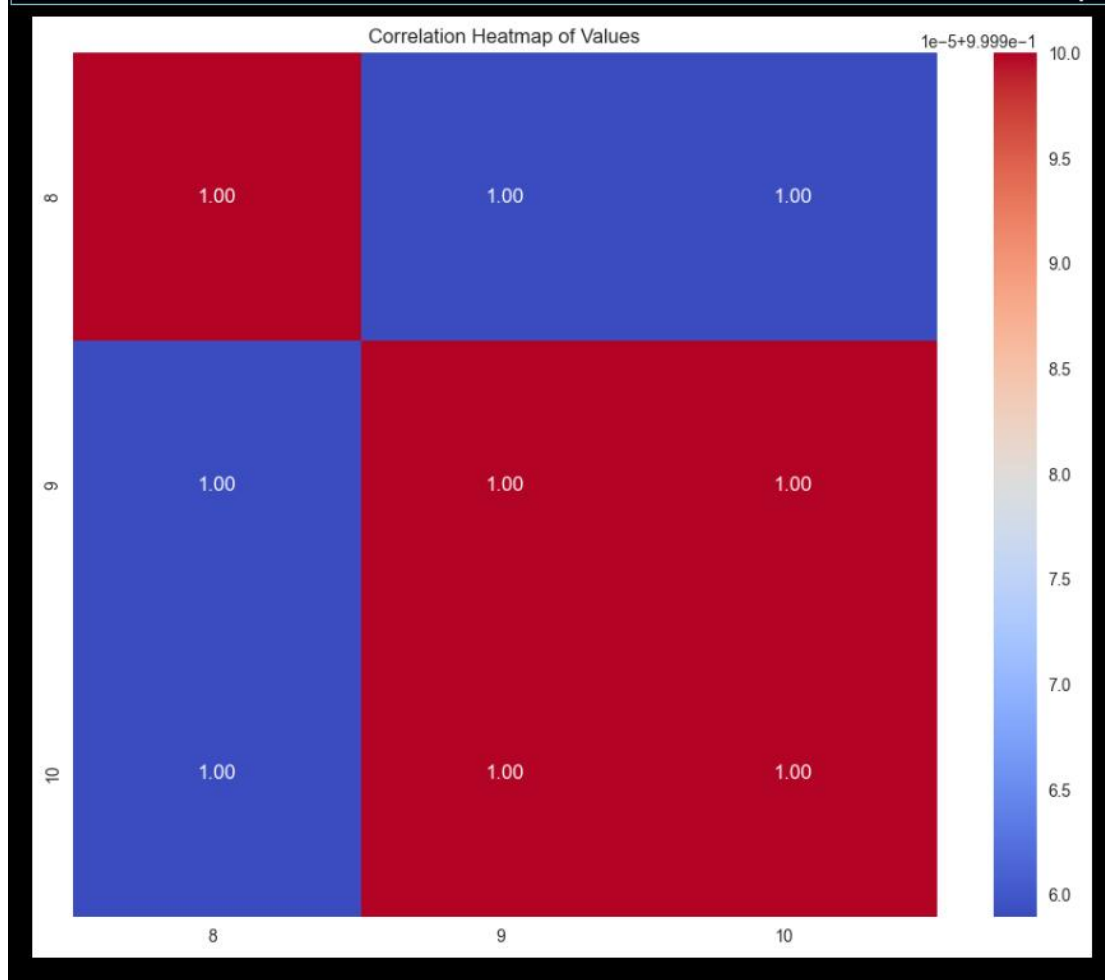
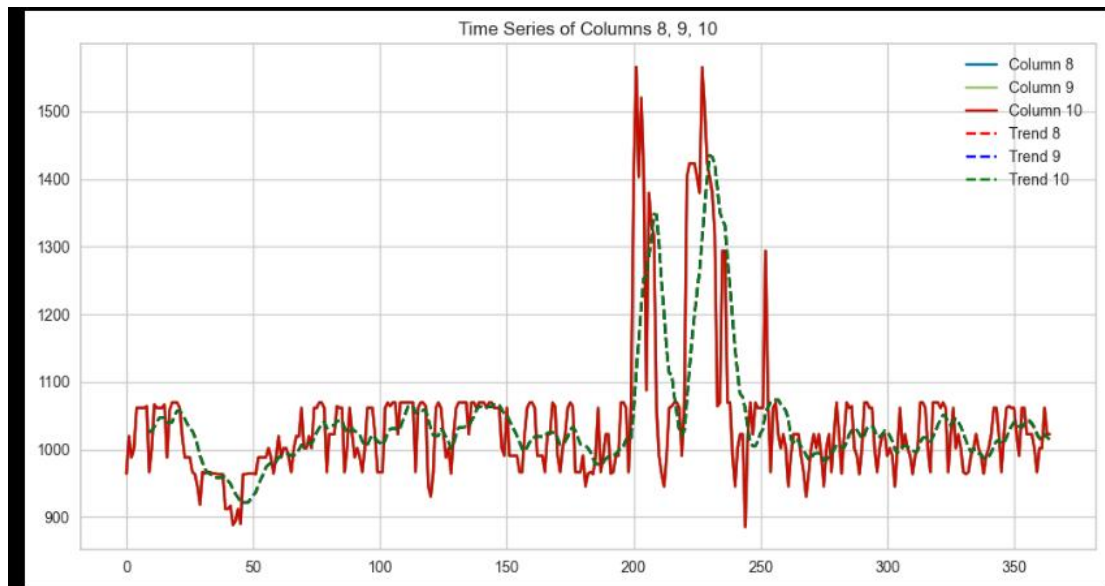
```

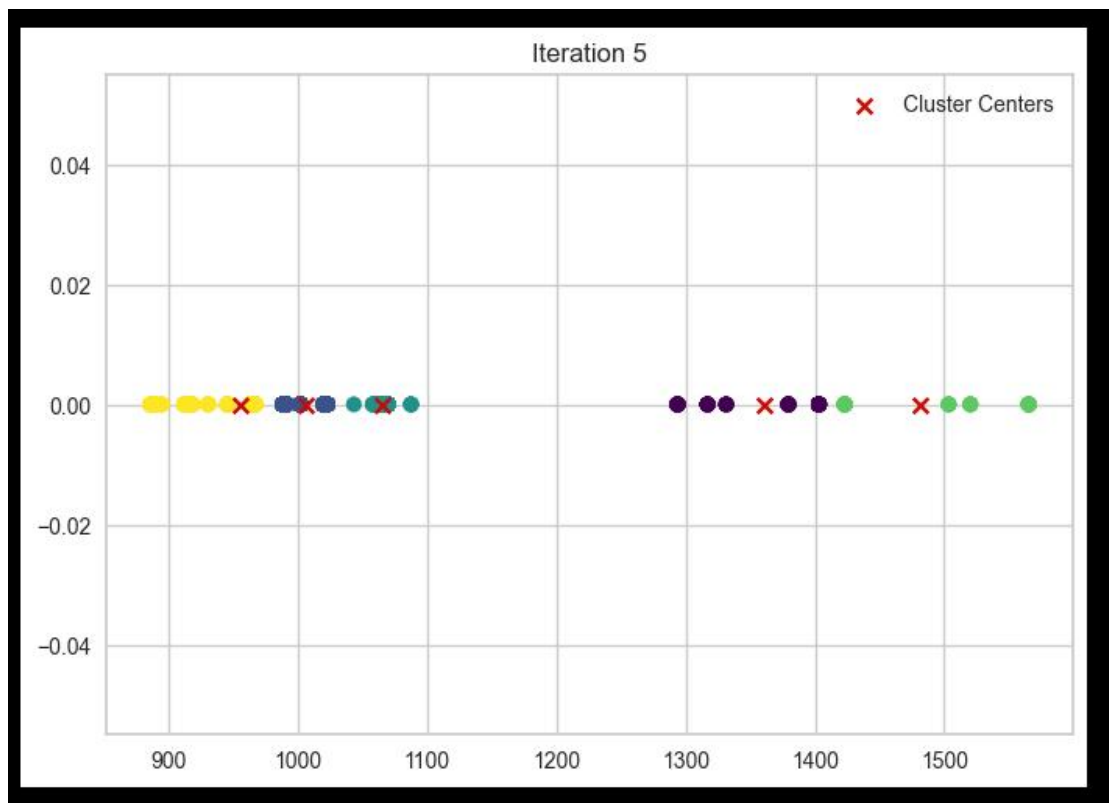
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Ljung-Box (L1) (Q):          1.27    Jarque-Bera (JB):          982.06
Prob(Q):                   0.26    Prob(JB):              0.00
Heteroskedasticity (H):      1.62    Skew:                  0.48
Prob(H) (two-sided):        0.01    Kurtosis:             11.13
=====

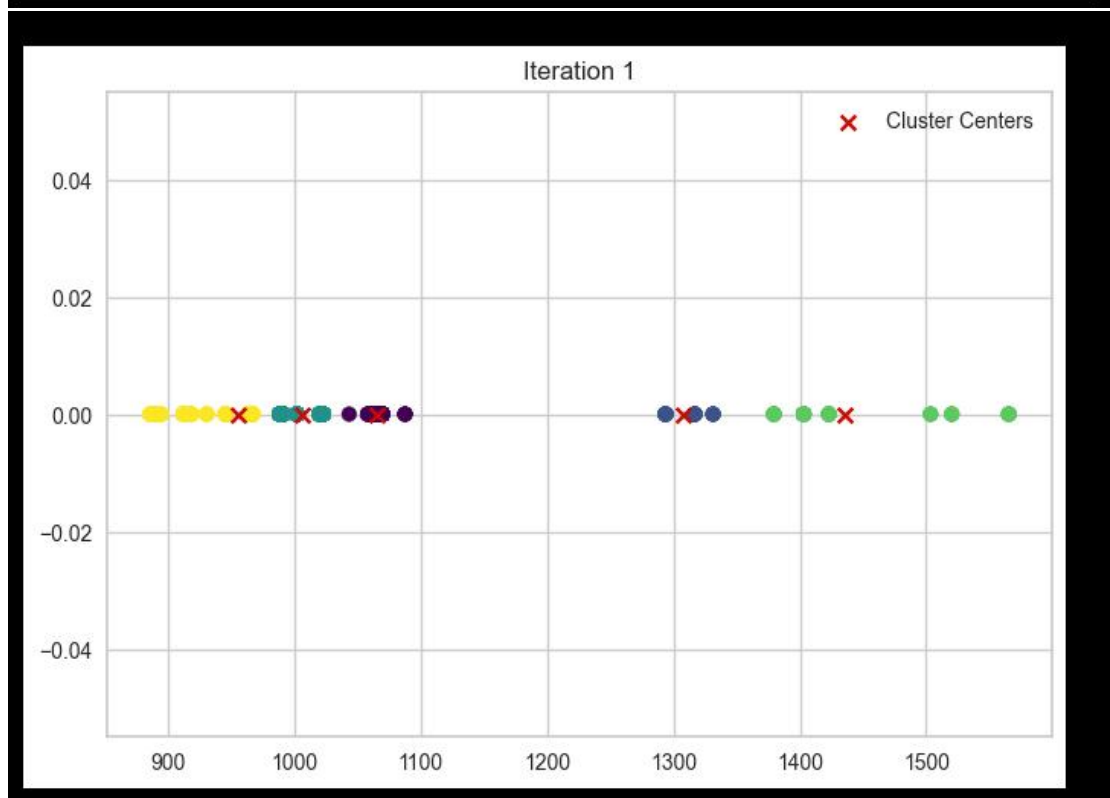
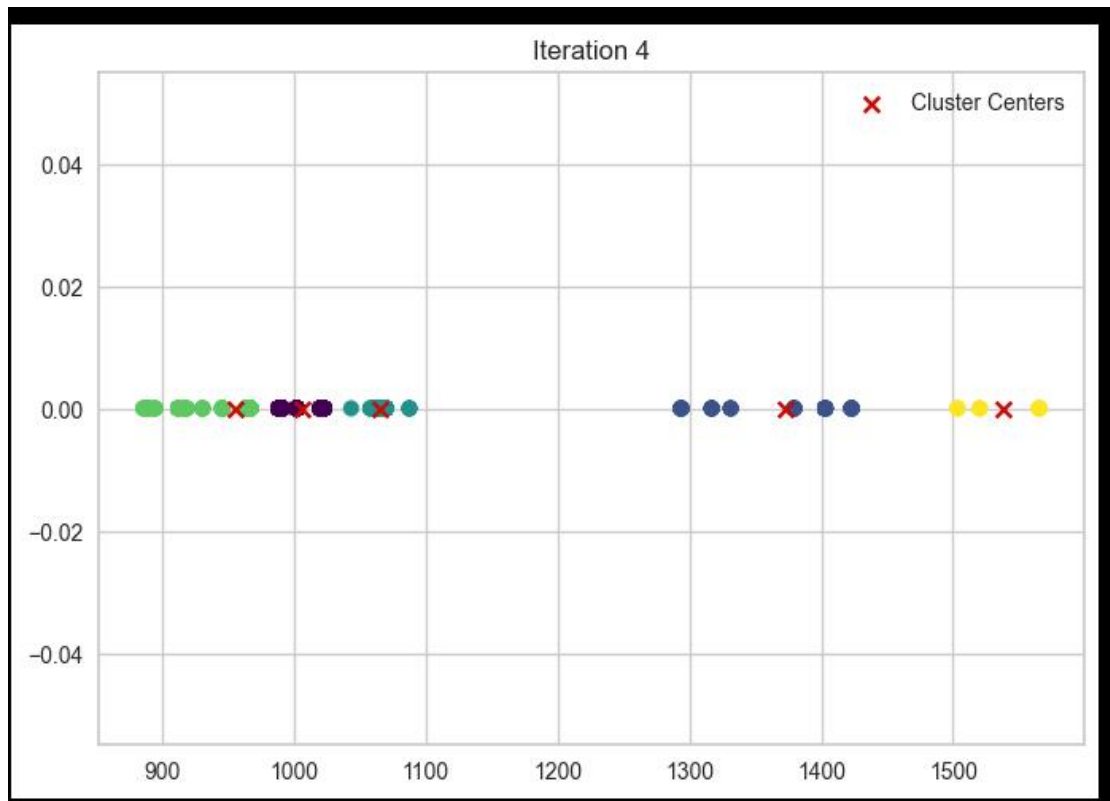
```

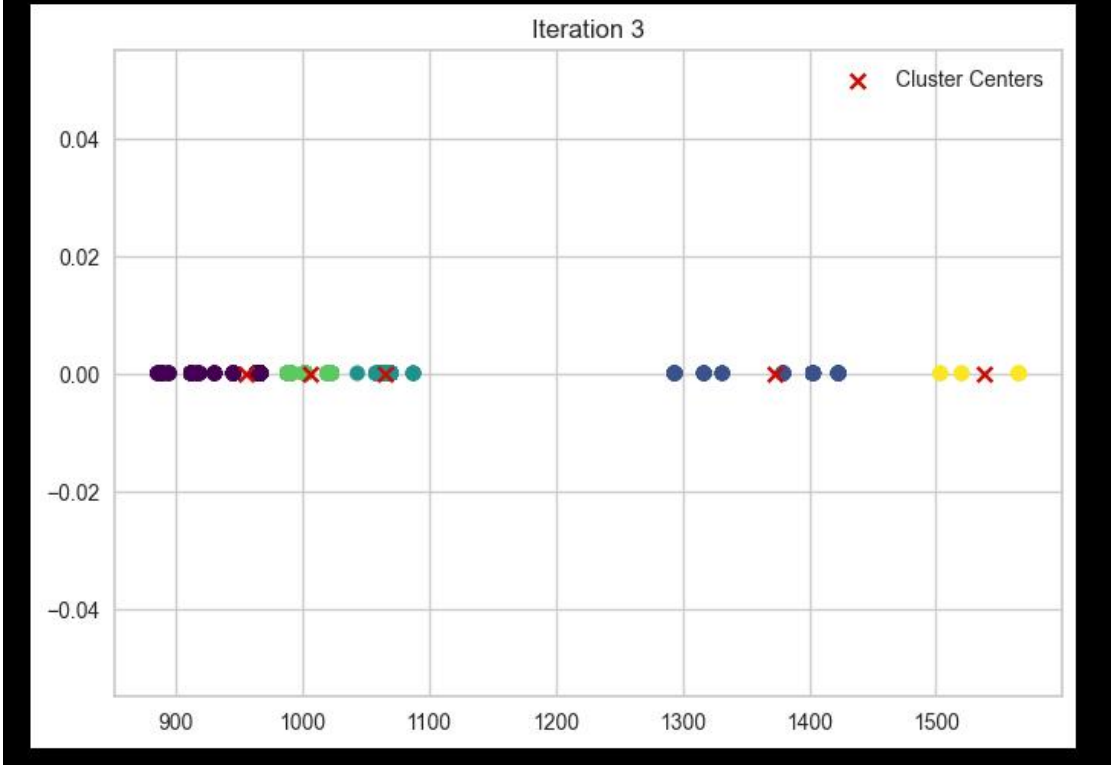
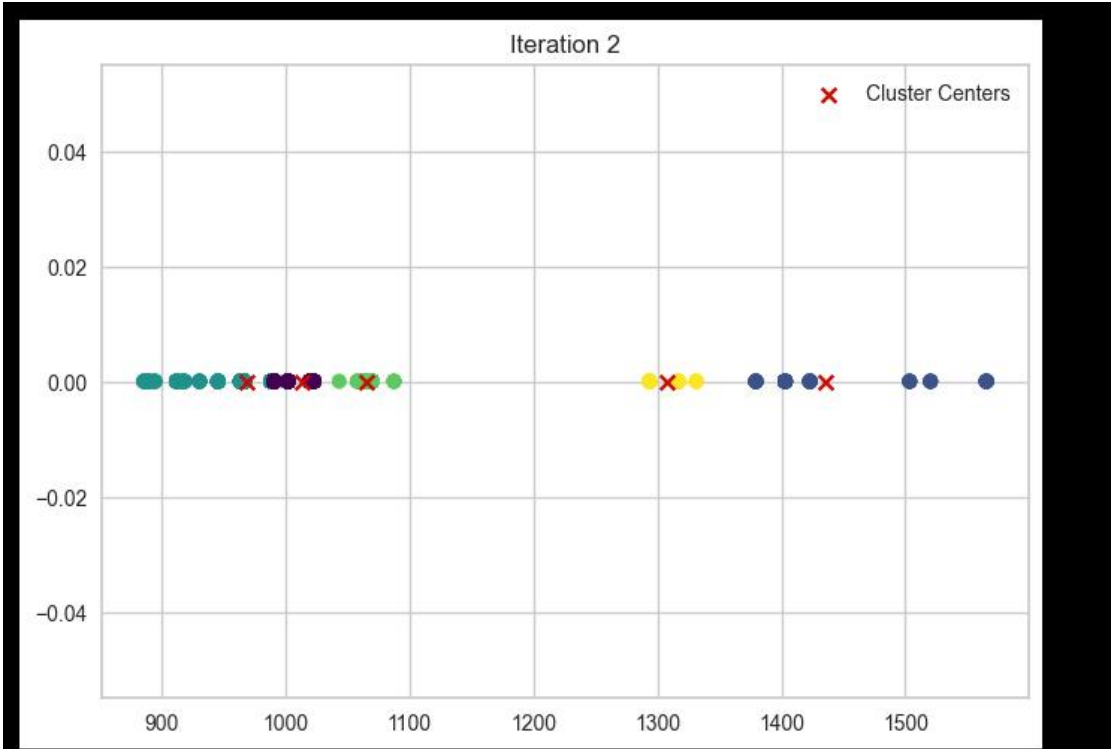
Warnings:

[1] Covariance matrix calculated using the outer product of gradients (complex-step).









Gaussian

```
Labels after 1 iterations: [2 2 2 ... 3 3 3]
Cluster centers after 1 iterations: [[1065.24930837]
[1375.12702059]
[ 973.76541942]
[1007.22069148]
[1540.60922708]]
Labels after 2 iterations: [3 3 3 ... 2 2 2]
Cluster centers after 2 iterations: [[1065.25015068]
[1424.09995849]
[1005.541487 ]
[ 973.5556383 ]
[1303.46969085]]
Labels after 3 iterations: [4 4 4 ... 0 0 0]
Cluster centers after 3 iterations: [[1005.54431627]
[1388.83641979]
[1065.24564229]
[ 925.44088738]
[ 965.58833358]]
Labels after 4 iterations: [0 0 0 ... 0 0 0]
Cluster centers after 4 iterations: [[ 992.20252567]
[1304.39636158]
[1065.25564319]
[1425.64011749]
[ 919.25695622]]
Labels after 5 iterations: [4 4 4 ... 0 0 0]
...
[1540.61495319 1540.61495319 1540.61495319]
[1375.13180034 1375.13180034 1375.13180034]
[ 976.73333333 976.73333333 976.7       ]
[1043.3       1061.5       1061.5       ]]
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Output is truncated. View as a [scrollable element](#) or open in a [text editor](#). Adjust cell output [settings...](#)