Check ChiQ A B E **Katrina PV**

```
vweekKatPV = ReadList[
   "/Users/Levantina/Documents/FISICA/TESIPOP/Timeseries2/KatrinaPVTSweek.txt"]
   ;
```

```
logvweekKatPV  = ReadList[
   "/Users/Levantina/Documents/FISICA/TESIPOP/Timeseries2/KatrinaPVTSlogweek.
     txt"];
```

```
t0 = 50;
```

```
te = 64;
```

Chi Squared critical values

Qui prendiamo i valori critici per il test del chi quadro standard, abbiamo due tavole, una per i valori critici superiori ed una per i valori critici inferiori, scegliamo il livello di singificatività (nell'ordine per $\alpha/2$ che vale 0.1, 0.05, 0.025, 0.01, 0.001 - le colonne) ed il numero di gradi di libertà (le righe dalla 1 alla 80).

```
upperTail = Flatten[StringSplit[#] & /@
     Import["/Users/Levantina/Documents/FISICA/TESIPOP/ChiQ/upperTail.tsv"], 1];
```

```
lowerTail = Flatten[StringSplit[#] & /@
     Import["/Users/Levantina/Documents/FISICA/TESIPOP/ChiQ/lowerTail.tsv"], 1];
```

Print on file Model 1 and 2

```
chiQ1AllKat = Transpose[{Chi1KatLogB15, Chi1KatLogE15, Chi1KatLogA15}];
```

```
Export[
 "/Users/Levantina/Documents/FISICA/TESIPOP/KatrinaPVSV/chiQ1AllKatPV.txt",
 chiQ1AllKat]
```

```
/Users/Levantina/Documents/FISICA/TESIPOP/KatrinaPVSV/chiQ1AllKatPV.txt
```

```
chiQ2AllKat = Transpose[{Chi2KatLogB15, Chi2KatLog15, Chi2KatLogA15}];
```

```
Export[
 "/Users/Levantina/Documents/FISICA/TESIPOP/KatrinaPVSV/chiQ2AllKatPV.txt",
 chiQ2AllKat]
```

```
/Users/Levantina/Documents/FISICA/TESIPOP/KatrinaPVSV/chiQ2AllKatPV.txt
```

```
chiQ1AllKat = ReadList[
   "/Users/Levantina/Documents/FISICA/TESIPOP/KatrinaPVSV/chiQ1AllKatPV.txt"];
```

```
chiQ2AllKat = ReadList[
   "/Users/Levantina/Documents/FISICA/TESIPOP/KatrinaPVSV/chiQ2AllKatPV.txt"];
```

Rimuovo i NoData con {0,0} per aggiustare la corrispondenza degli indici

```
Length@Chi1KatLogB15
```

635

```
Length@logvweekKatPV
```

635

```
Length@Chi1KatLogA15
```

635

```
Length@Chi1KatLogE15
```

635

Selction in 4 groups

```
Tally[Chi1KatLogB15[[All, 2]]]
```

{{49, 624}, {0., 2}, {35, 1}, {33, 1}, {48, 2}, {19, 1}, {4, 2}, {40, 1}, {9, 1}}

```
Tally[Chi1KatLogA15[[All, 2]]]
```

{{40, 632}, {29, 1}, {6, 1}, {35, 1}}

```
Tally[Chi1KatLogE15[[All, 2]]]
```

{{15, 630}, {0., 1}, {6, 1}, {13, 1}, {4, 1}, {12, 1}}

```
SelectGroupChiQBEA[chiB_List, chiE_List, chiA_List] := Module[{chiBEA, acceptBEA, upcr
    TA, TB, TE, posA, posB, posE, posAB, chiAB,
    uA, lA, uB, lB, uE, lE},
TB = Tally[chiB[[All,2]]][[1,1]];
TA = Tally[chiA[[All,2]]][[1,1]];
TE = Tally[chiE[[All,2]]][[1,1]];
posB = Position[chiB,{__,TB}];
posA = Position[chiA,{__,TA}];
posE = Position[chiE,{__,TE}];
posAB = Intersection[posB,posA,posE];
uA = ToExpression[upperTail[[TA-2,4]]];
lA = ToExpression[lowerTail[[TA-2,4]]];
uB = ToExpression[upperTail[[TB-2,4]]];
lB = ToExpression[lowerTail[[TB-2,4]]];
uE = ToExpression[upperTail[[TE,4]]];
lE = ToExpression[lowerTail[[TE,4]]];

chiBEA = Transpose[{chiB,chiE,chiA}];
acceptBEA = DeleteCases[If[((#[[1,1]] > lB && #[[1,1]] < uB ) && (#[[3,1]] > lA && #[[
lowcrit = DeleteCases[If[((#[[1,1]] > lB && #[[1,1]] < uB ) && (#[[3,1]] > lA && #[[3,
upcrit = DeleteCases[If[((#[[1,1]] > lB && #[[1,1]] < uB ) && (#[[3,1]] > lA && #[[3,1
notAnalyzed = chiBEA[[Complement[Range[Length@chiB],Flatten@Union[(Flatten@Position[ch
    (Flatten@Position[chiBEA,#]&/@ lowcrit),
    (Flatten@Position[chiBEA,#]&/@ upcrit)]]]];

{{TB-2,TA-2,TE},
    Flatten@Position[chiBEA,#]&/@ acceptBEA,
    Flatten@Position[chiBEA,#]&/@ lowcrit,
    Flatten@Position[chiBEA,#]&/@ upcrit,
    Flatten@Position[chiBEA,#]&/@ notAnalyzed,
    posAB,
    chiBEA}
]

(* la colonna 4 in upperTail / lowerTail si riferisce al valore di sgnifiatività del t
in output abbiamo al primo termine i gradi di libertà di ChiQB e ChiQA e di ChiQE (eve
al secondo gli indici delle pagine accettabili (col maggior numero di gradi di libertà
al terzo gli indici delle lowercritic, al quarto gli indici delle pagine uppercritic,
ed al sesto abbiamo le triplette di TUTTI i chiQ. Gli indici si riferiscono alla seque
```

MODEL 1

```
Chi1KatLogB15 = chiQ1AllKat[[All, 1]];

Chi1KatLogE15 = chiQ1AllKat[[All, 2]];

Chi1KatLogA15 = chiQ1AllKat[[All, 3]];
```

```
ris1K = SelectGroupChiQBEA[Chi1KatLogB15, Chi1KatLogE15, Chi1KatLogA15 ];
```

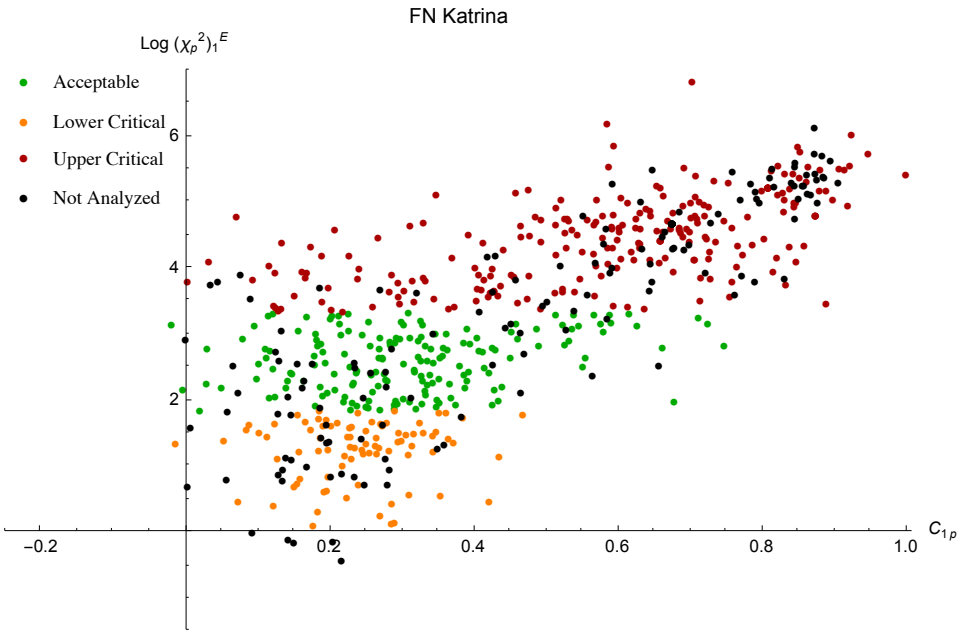
Scatter Plot 4 groups VS Correlation

INDICI:
2) accept
3) lower crit
4) upper crit
5) not nalyzed

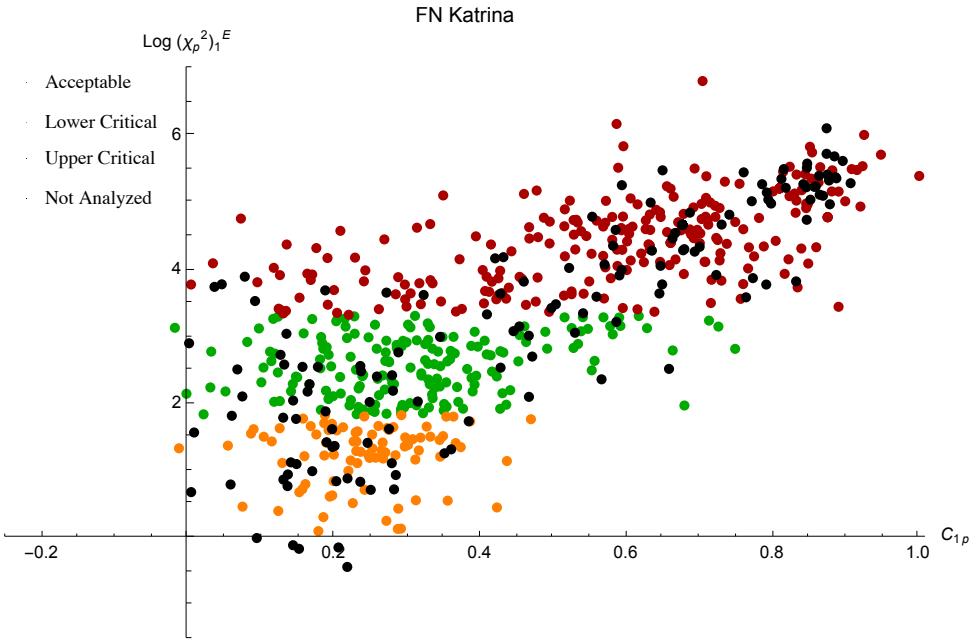
```
corrKPV = ReadList[
   "/Users/Levantina/Documents/FISICA/TESIPOP/KatrinaPVSV/corrKatPVNoZero.txt"]
   ;

firstG = Transpose[
   {corrKPV[[Flatten@ris1K[[2]]]], Log@ris1K[[7, Flatten@ris1K[[2]], 2, 1]]}];

secondG = Transpose[
   {corrKPV[[Flatten@ris1K[[3]]]], Log@ris1K[[7, Flatten@ris1K[[3]], 2, 1]]}];

thirdG = Transpose[
   {corrKPV[[Flatten@ris1K[[4]]]], Log@ris1K[[7, Flatten@ris1K[[4]], 2, 1]]}];

fourthG = Transpose[
   {corrKPV[[Flatten@ris1K[[5]]]], Log@ris1K[[7, Flatten@ris1K[[5]], 2, 1]]}];

Position[fourthG[[All, 1]], -0.2899784623016133]
```

```
{{73}}
```

```
ListPlot[{firstG, secondG, thirdG, Delete[fourthG, {73}]},
 PlotRange → {{-0.25, 1.01}, {-1.5, 7}},
 PlotStyle → {Darker@Green, Orange, Darker@Red, Black},
 PlotMarkers → {•, •, •, •, Small}, PlotLegends →
  Placed[{"Acceptable", "Lower Critical", "Upper Critical", "Not Analyzed"},
   {0.09, 0.87}], AxesLabel → {"C1p", "Log (χp2)1E"}, PlotLabel → "FN Katrina"]
```




```
ListPlot[{firstG, secondG, thirdG, Delete[fourthG, {73}]},
 PlotRange → {{-0.25, 1.01}, {-1.5, 7}},
 PlotStyle → {{PointSize[0.011], Darker@Green}, {PointSize[0.011], Orange},
   {PointSize[0.011], Darker@Red}, {PointSize[0.011], Black}}, PlotLegends →
  Placed[{"Acceptable", "Lower Critical", "Upper Critical", "Not Analyzed"},
   {0.09, 0.87}], AxesLabel → {"C1p", "Log (χp2)1E"}, PlotLabel → "FN Katrina"]
```

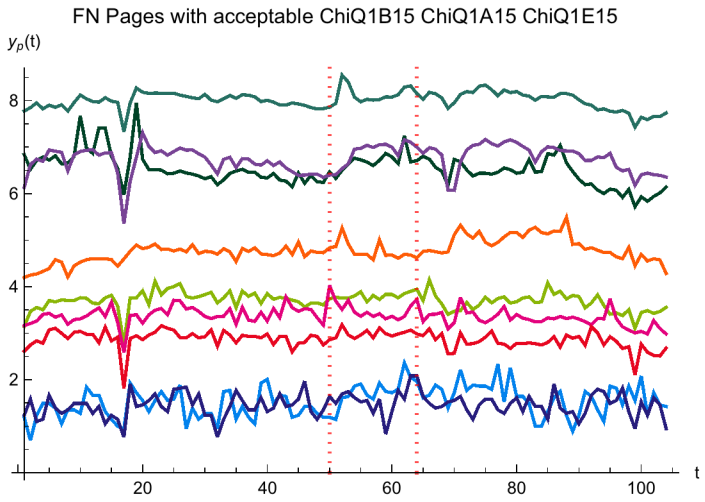


Histogram ChiQE solo per le pagine analizzate

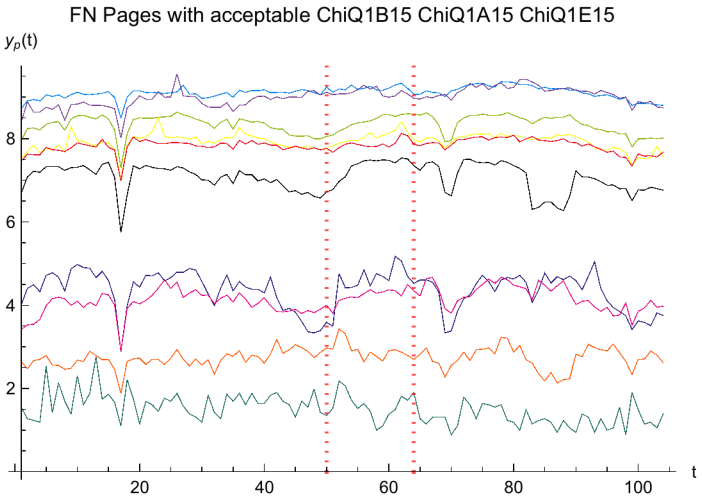
Plot tracce dei 3 gruppi

Accettabili

```
RGBColor[0.996078431372549`, 0.9882352941176471`, 0.03529411764705882`]
RGBColor[0.996078, 0.988235, 0.0352941]

Length@ColorData[3, "ColorList"]
10

opt = {Thickness[0.005], #} & /@ ColorData[3, "ColorList"]

Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[Flatten@ris1K[[2]], 10],
  AxesLabel → {"t", "y_p(t)"}, PlotRange → {All, {0, Max}}, PlotLabel →
   "FN Pages with acceptable ChiQ1B15 ChiQ1A15 ChiQ1E15", PlotStyle → opt1],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
  {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```

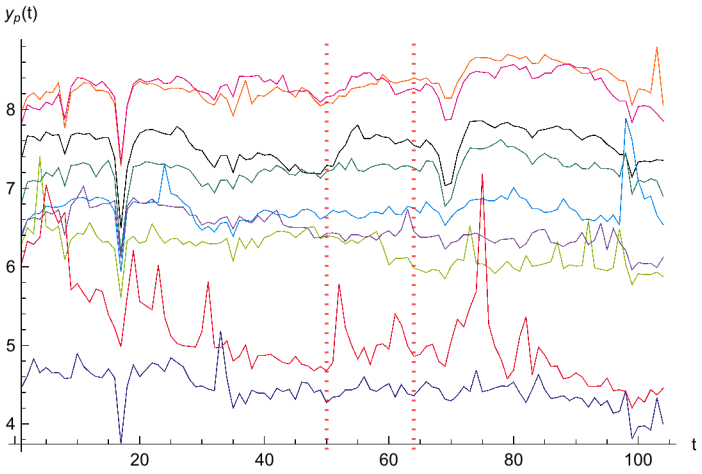


```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[Flatten@ris1K[[2]], 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
  PlotLabel → "FN Pages with acceptable ChiQ1B15 ChiQ1A15 ChiQ1E15",
  PlotStyle → ColorData[3, "ColorList"]],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
   {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```

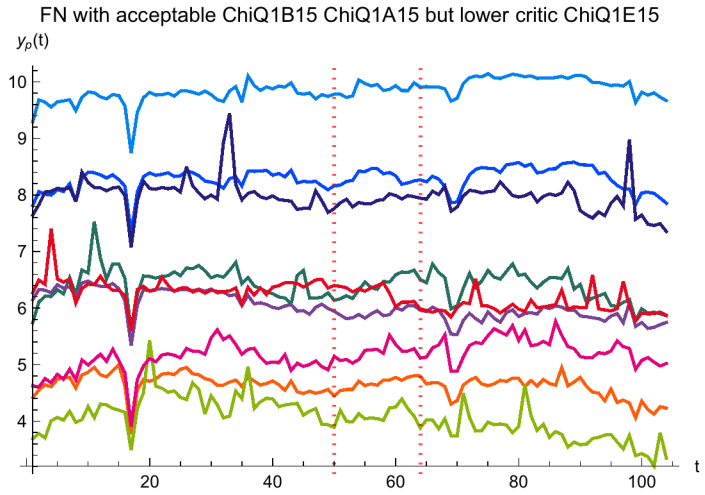


Lower crit

```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[Flatten@ris1K[[3]], 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
  PlotLabel → "FN with acceptable ChiQ1B15 ChiQ1A15 but lower critic ChiQ1E15",
  PlotStyle → ColorData[3, "ColorList"]],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
   {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```

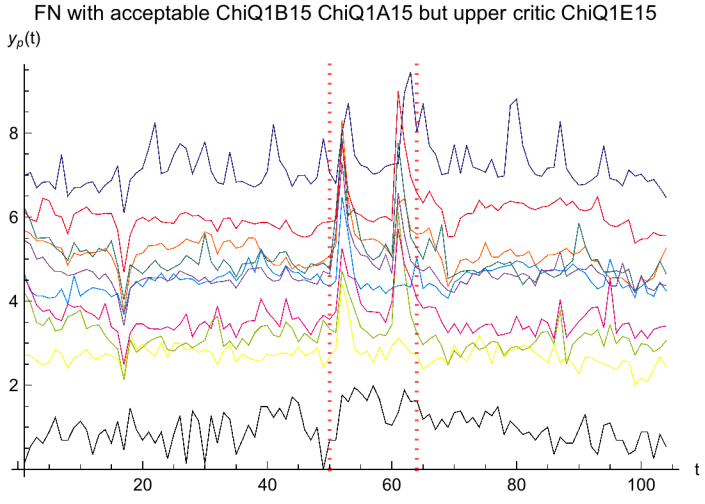


```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[Flatten@ris1K[[3]], 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
  PlotLabel → "FN with acceptable ChiQ1B15 ChiQ1A15 but lower critic ChiQ1E15",
  PlotStyle → opt1],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
   {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```

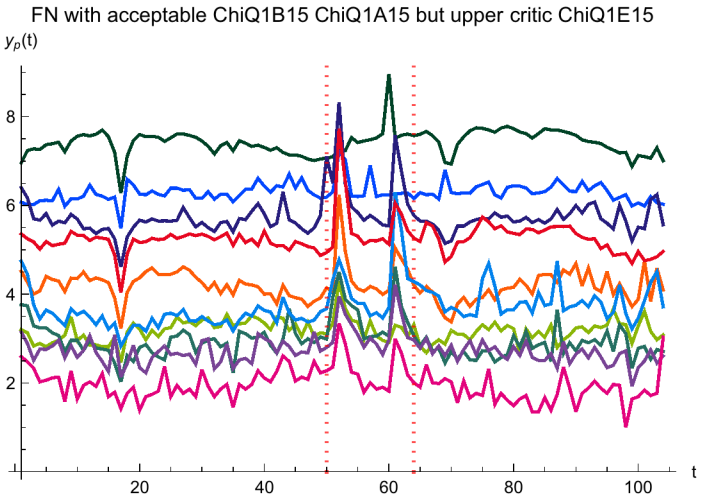


Upper crit

```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[Flatten@ris1K[[4]], 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
  PlotStyle → ColorData[3, "ColorList"], PlotLabel →
   "FN with acceptable ChiQ1B15 ChiQ1A15 but upper critic ChiQ1E15"],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
   {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```

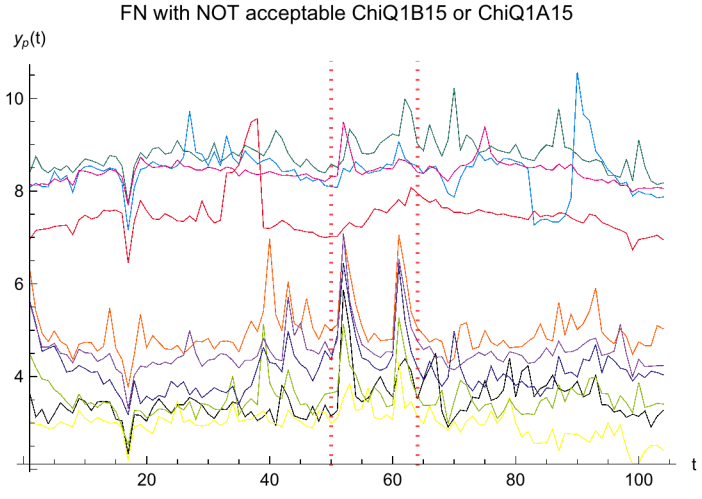


```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[Flatten@ris1K[[4]], 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
  PlotStyle → opt1, PlotLabel →
   "FN with acceptable ChiQ1B15 ChiQ1A15 but upper critic ChiQ1E15"],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
   {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```



Not Analyzed

```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[Flatten@ris1K[[5]], 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
  PlotStyle → ColorData[3, "ColorList"],
  PlotLabel → "FN with NOT acceptable ChiQ1B15 or ChiQ1A15"],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
   {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```



Correlation Thresholds

MODEL 2

```
Chi2KatLogB15 = chiQ2AllKat[[All, 1]];

Chi2KatLog15 = chiQ2AllKat[[All, 2]];

Chi2KatLogA15 = chiQ2AllKat[[All, 3]];

ris2K = SelectGroupChiQBEA[Chi2KatLogB15, Chi2KatLog15, Chi2KatLogA15];
```

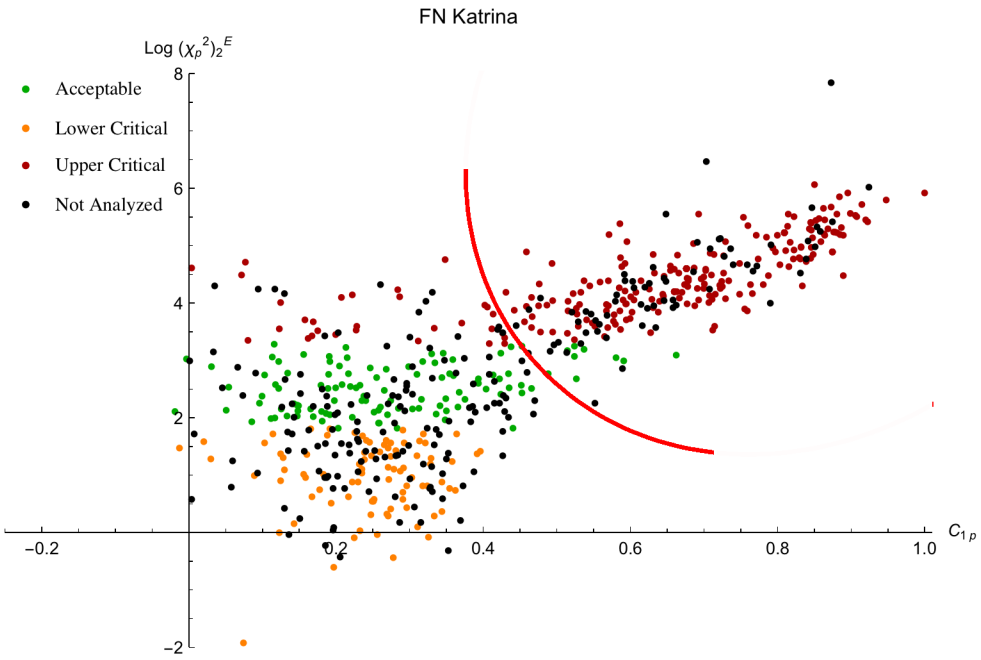
Scatter Plot 4 groups VS Correlation

INDICI:
2) accept
3) lower crit
4) upper crit
5) not nalyzed

```
corrKPV = ReadList[
   "/Users/Levantina/Documents/FISICA/TESIPOP/KatrinaPVSV/corrKatPVNoZero.txt"]
   ;

firstG2 = Transpose[
   {corrKPV[[Flatten@ris2K[[2]]]], Log@ris2K[[7, Flatten@ris2K[[2]], 2, 1]]}];

secondG2 = Transpose[
   {corrKPV[[Flatten@ris2K[[3]]]], Log@ris2K[[7, Flatten@ris2K[[3]], 2, 1]]}];

thirdG2 = Transpose[
   {corrKPV[[Flatten@ris2K[[4]]]], Log@ris2K[[7, Flatten@ris2K[[4]], 2, 1]]}];

fourthG2 = Transpose[
   {corrKPV[[Flatten@ris2K[[5]]]], Log@ris2K[[7, Flatten@ris2K[[5]], 2, 1]]}];

Position[fourthG2[[All, 1]], -0.2899784623016133]
```

```
{{146}}
```

```
ListPlot[{firstG2, secondG2, thirdG2, Delete[fourthG2, {146}]},
 PlotRange → {{-0.25, 1.01}, {-2, 8}},
 PlotStyle → {Darker@Green, Orange, Darker@Red, Black},
 PlotMarkers → {•, •, •, •, Small}, PlotLegends →
  Placed[{"Acceptable", "Lower Critical", "Upper Critical", "Not Analyzed"},
   {0.09, 0.87}], AxesLabel → {"C1 p", "Log (χp^2)2^E"}, PlotLabel → "FN Katrina"]
```



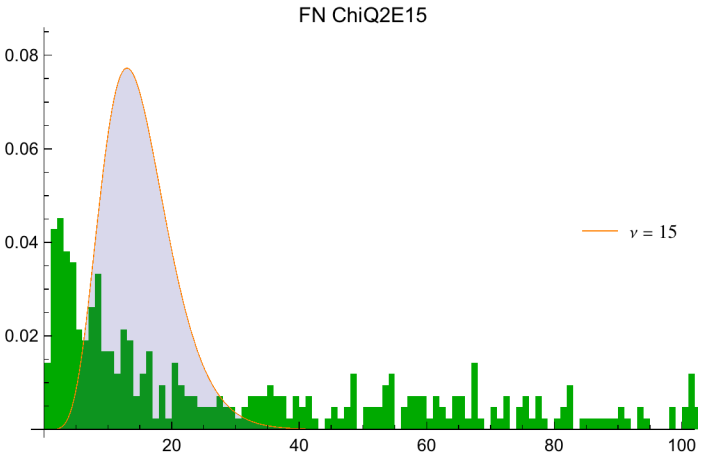
Histogram ChiQE solo per le pagine analizzate

```
analyzed2PV = Union[Flatten@ris2K[[2]], Flatten@ris2K[[3]], Flatten@ris2K[[4]]];
```

```
Length@analyzed2PV
```

```
420
```

```
Show[Histogram[Chi2KatLog15[[analyzed2PV, 1]], {1},
  "Probability", ChartStyle → Darker@Green], StandardChiQDistr[15],
 PlotLabel → "FN ChiQ2E15", PlotRange → {{0, 100}, {All, All}}]
```




```
Length@Select[Chi2KatLog15[[analyzed2PV, 1]], # > 100 &]
```

```
91
```

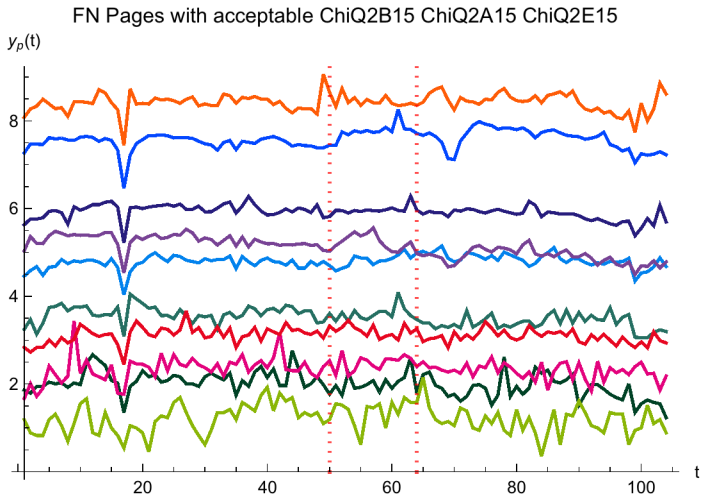
```
Sort@Select[Chi2KatLog15[[analyzed2PV, 1]], # > 100 &]
```

Plot tracce dei 3 gruppi

Accettabili

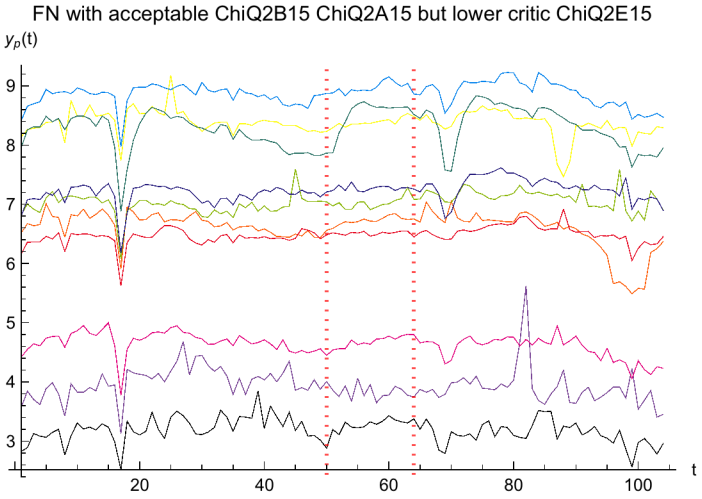
```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[Flatten@ris2K[[2]], 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
  PlotLabel → "FN Pages with acceptable ChiQ2B15 ChiQ2A15 ChiQ2E15",
  PlotStyle → ColorData[3, "ColorList"]],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
  {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```


```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[Flatten@ris2K[[2]], 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}}, PlotLabel →
   "FN Pages with acceptable ChiQ2B15 ChiQ2A15 ChiQ2E15", PlotStyle → opt1],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
  {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```

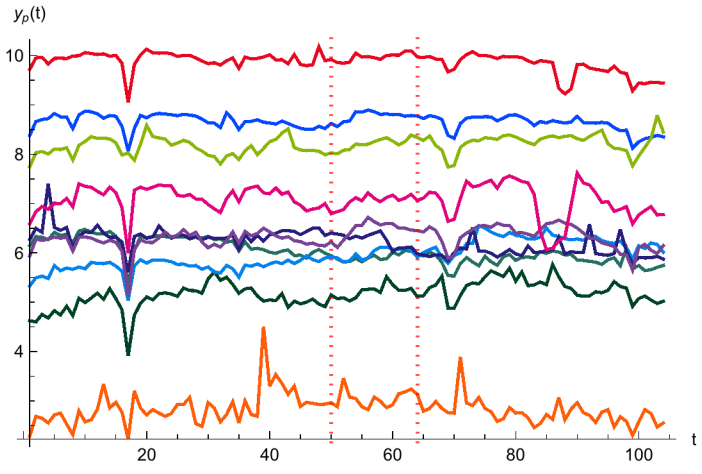


Lower crit

```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[Flatten@ris2K[[3]], 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
  PlotLabel → "FN with acceptable ChiQ2B15 ChiQ2A15 but lower critic ChiQ2E15",
  PlotStyle → ColorData[3, "ColorList"]],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
   {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```

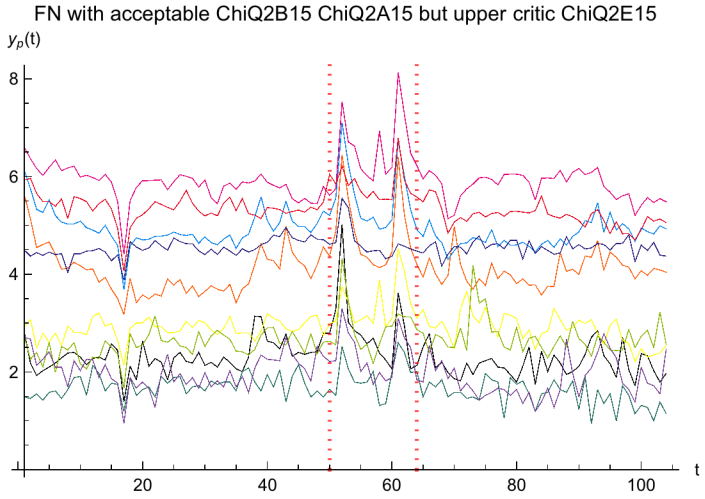



```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[Flatten@ris2K[[3]], 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
  PlotLabel → "FN with acceptable ChiQ2B15 ChiQ2A15 but lower critic ChiQ2E15",
  PlotStyle → opt1],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
   {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```

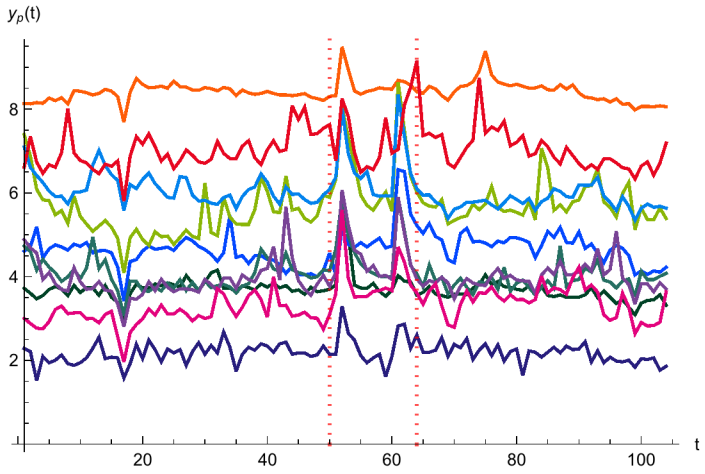


Upper crit

```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[Flatten@ris2K[[4]], 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
  PlotStyle → ColorData[3, "ColorList"], PlotLabel →
   "FN with acceptable ChiQ2B15 ChiQ2A15 but upper critic ChiQ2E15"],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
  {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```

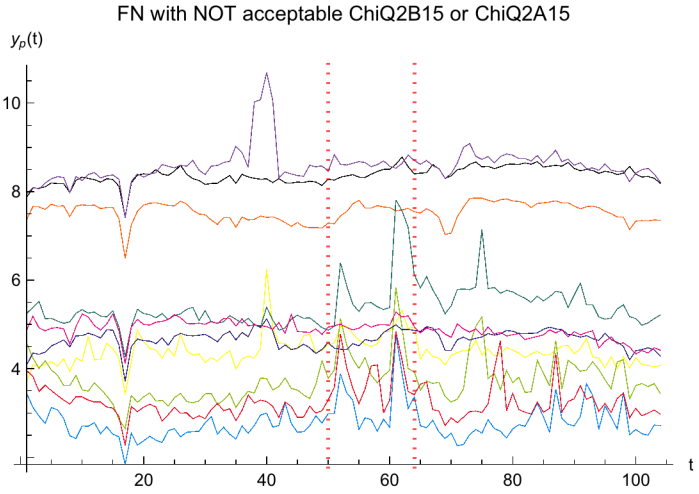



```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[Flatten@ris2K[[4]], 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
  PlotStyle → opt1, PlotLabel →
   "FN with acceptable ChiQ2B15 ChiQ2A15 but upper critic ChiQ2E15"],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
  {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```



Not Analyzed

```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[Flatten@ris2K[[5]], 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
  PlotStyle → ColorData[3, "ColorList"],
  PlotLabel → "FN with NOT acceptable ChiQ2B15 or ChiQ2A15"],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
   {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```



Correlation Thresholds

Not Analyzed 3 groups C_{ij}^{upper} = 0.6 (random-random)

Punti neri con C_ij >= 0.6

```
black2Cbig06 =
  Select[If[corrKPV[[#]] >= 0.6, #, No] & /@ Flatten@ris2K[[5]], NumberQ];
```

```
Length@black2Cbig06
```

42

Punti neri con C_ij < 0.6

```
black2Caccept06 =
  Select[If[corrKPV[[#]] < 0.6, #, No] & /@ Flatten@ris2K[[5]], NumberQ];
```

```
Length@black2Caccept06
```

172

Punti rossi con C_ij < 0.6

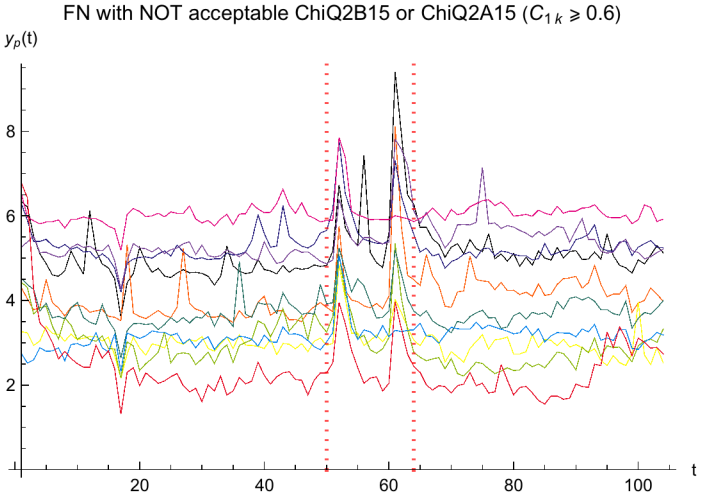
```
red2Caccept06 =
  Select[If[corrKPV[[#]] < 0.6, #, No] & /@ Flatten@ris2K[[4]], NumberQ];
```

```
Length@red2Caccept06
```

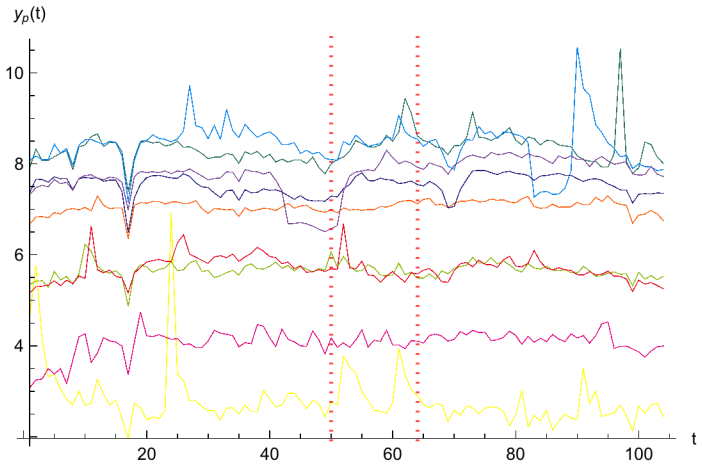
85

Grafici

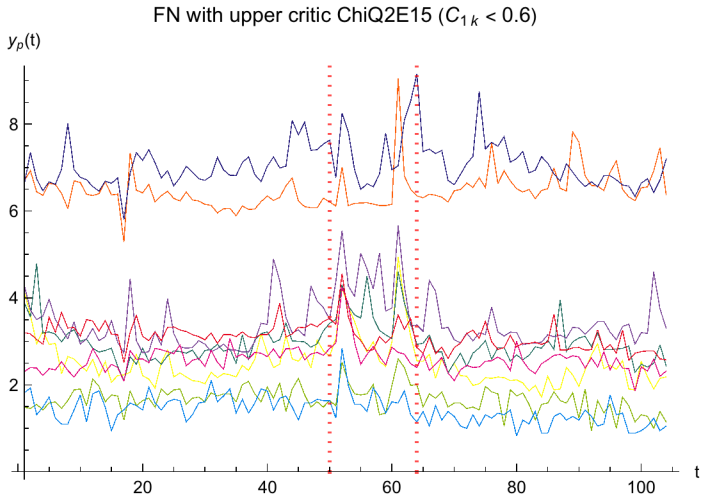
```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[black2Cbig06, 10],
   AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
   PlotStyle → ColorData[3, "ColorList"],
   PlotLabel → "FN with NOT acceptable ChiQ2B15 or ChiQ2A15 (C1k ⩾ 0.6)"],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
   {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```




```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[black2Caccept06, 10],
   AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
   PlotStyle → ColorData[3, "ColorList"],
   PlotLabel → "FN with NOT acceptable ChiQ2B15 or ChiQ2A15 (C1k < 0.6)"],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
   {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```



```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[red2Caccept06, 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
  PlotStyle → ColorData[3, "ColorList"],
  PlotLabel → "FN with upper critic ChiQ2E15 (C1k < 0.6)"],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
   {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```



Not Analyzed 3 groups C_{ij}^{upper} = 0.4 (compromise)

Punti neri con C_ij >= 0.4

```
black2Cbig04 =
  Select[If[corrKPV[[#]] >= 0.4, #, No] & /@ Flatten@ris2K[[5]], NumberQ];
```

```
Length@black2Cbig04
```

86

```
86 * 100 / 635.
```

13.5433

Punti neri con C_ij < 0.4

```
black2Caccept04 =
  Select[If[corrKPV[[#]] < 0.4, #, No] & /@ Flatten@ris2K[[5]], NumberQ];
```

```
Length@black2Caccept04
```

128

Punti rossi con C_ij < 0.4

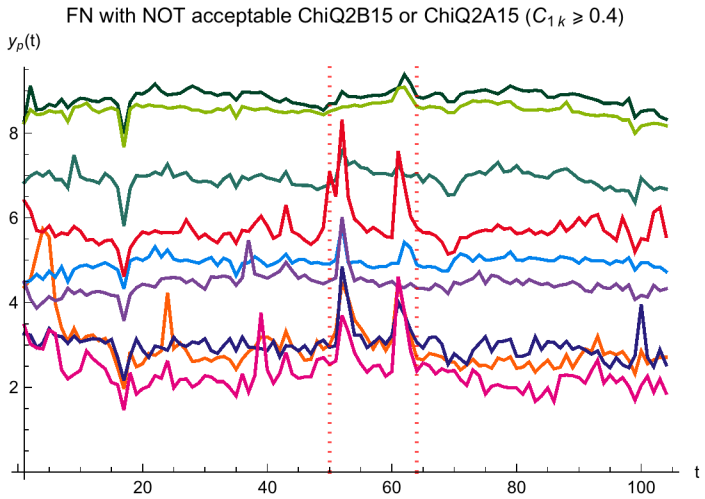
```
red2Caccept04 =
  Select[If[corrKPV[[#]] < 0.4, #, No] & /@ Flatten@ris2K[[4]], NumberQ];
```

```
Length@red2Caccept04
```

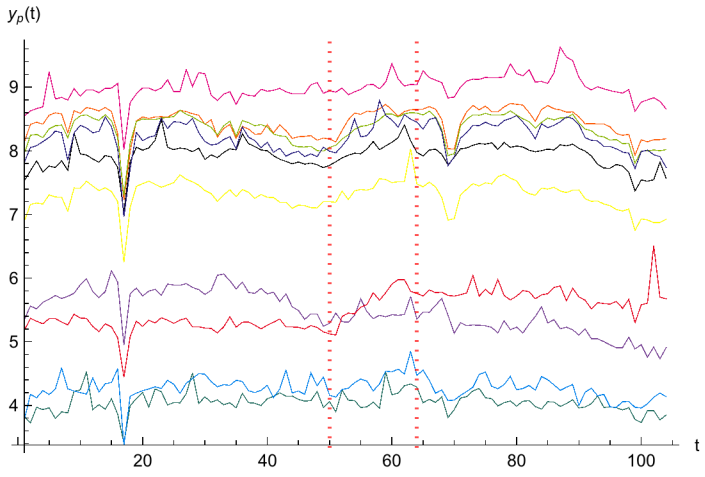
22

Grafici

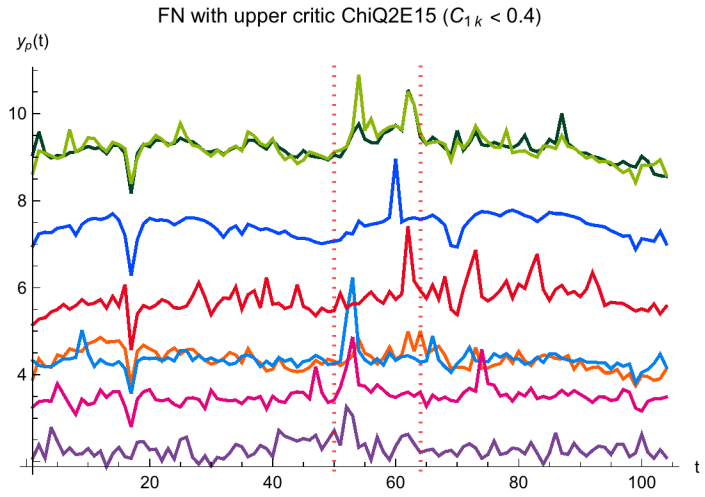
```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[black2Cbig04, 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}}, PlotStyle → opt1,
  PlotLabel → "FN with NOT acceptable ChiQ2B15 or ChiQ2A15 (C1k ⩾ 0.4)"],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
   {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```




```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[black2Caccept04, 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}},
  PlotStyle → ColorData[3, "ColorList"],
  PlotLabel → "FN with NOT acceptable ChiQ2B15 or ChiQ2A15 (C1k < 0.4)"],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
   {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```



```
Show[ListLinePlot[logvweekKatPV[[#]] & /@ RandomChoice[red2Caccept04, 10],
  AxesLabel → {"t", "yp(t)"}, PlotRange → {All, {0, Max}}, PlotStyle → opt1,
  PlotLabel → "FN with upper critic ChiQ2E15 (C1k < 0.4)"],
 ListLinePlot[{{{t0, 0}, {t0, 12}}, {{te, 0}, {te, 12}}}, PlotStyle →
  {{Opacity[0.7], Red, Dotted, Thick}, {Opacity[0.7], Red, Dotted, Thick}}]]
```



Intersection and Union Model 1 & 2 **PV**