# fire-color: Rbeast

identifying post-fire color changes in lakes of the western U.S.

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#### 1 Filter out some data

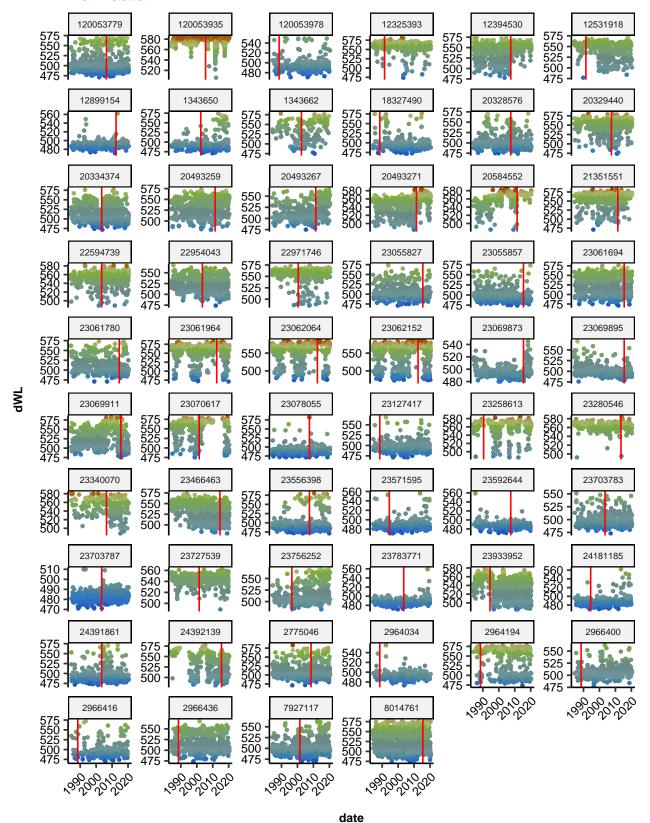
Some decisions I made:

- Set each burn year date to July 1st
- Exclude and dWL <470~&>583
- Include at least 5 years of pre- and post-fire color data

We are then go from 71 lakes to 58 lakes.

#### 1.0.1 Preview all sites

#### Raw data



### 2 Rbeast demo

Before we build the model pipeline, I want to demonstrate what sort of output we can get from the models

#### 2.1 Build the model

```
FALSE On the first run, check the CPU instruction set ...
FALSE
FALSE 7
FALSE CPU Vendor:
FALSE
          AMD=No
FALSE
          Intel=Yes
FALSE
FALSE OS Features:
FALSE
          OS AVX=No
FALSE
          OS AVX512=No
FALSE
FALSE Hardware Features:
FALSE
          MMX=Yes
FALSE
          x64=Yes
FALSE
          ABM=No
FALSE
          RDRAND=No
FALSE
          RDSEED=No
FALSE
          BMI1=No
FALSE
          BMI2=No
FALSE
          ADX=No
FALSE
          MPX=No
FALSE
          PREFETCHW=No
FALSE
          PREFETCHWT1=No
FALSE
          RDPID=No
FALSE
          GFNI=No
FALSE
          VAES=No
FALSE
FALSE SIMD: 128-bit
FALSE
          SSE=Yes
FALSE
          SSE2=Yes
FALSE
          SSE3=Yes
FALSE
          SSSE3=Yes
FALSE
          SSE4a=No
FALSE
          SSE4.1=Yes
FALSE
          SSE4.2=Yes
FALSE
          AES-NI=Yes
FALSE
          SHA=No
FALSE
FALSE SIMD: 256-bit
FALSE
          AVX=No
FALSE
          XOP=No
FALSE
          FMA3=No
FALSE
          FMA4=No
FALSE
          AVX2=No
FALSE
FALSE SIMD: 512-bit
FALSE
          AVX512-F=No
FALSE
          AVX512-CD=No
```

```
FALSE
         AVX512-PF=No
        AVX512-ER=No
FALSE
FALSE
        AVX512-VL=No
FALSE
         AVX512-BW=No
FALSE
         AVX512-DQ=No
FALSE
        AVX512-IFMA=No
FALSE
        AVX512-VBMI=No
FALSE
         AVX512-VPOPCNTDQ=No
FALSE
         AVX512-4FMAPS=No
FALSE
        AVX512-4VNNIW=No
FALSE
         AVX512-VBMI2=No
FALSE
         AVX512-VPCLMUL=No
FALSE
         AVX512-VNNI=No
FALSE
         AVX512-BITALG=No
FALSE
         AVX512-BF16=No
FALSE
FALSE Summary
FALSE
        Safe to use AVX:
FALSE
         Safe to use AVX512: No
FALSE
FALSE Cache ID 0:
FALSE - Level: 1
FALSE - Type: Data Cache
FALSE - Sets: 256
FALSE - System Coherency Line Size: 64 bytes
FALSE - Physical Line partitions: 1
FALSE - Ways of associativity: 8
FALSE - Total Size: 131072 bytes (128 kb)
FALSE - Is fully associative: false
FALSE - Is Self Initializing: true
FALSE
FALSE Cache ID 1:
FALSE - Level: 1
FALSE - Type: Instruction Cache
FALSE - Sets: 256
FALSE - System Coherency Line Size: 64 bytes
FALSE - Physical Line partitions: 1
FALSE - Ways of associativity: 8
FALSE - Total Size: 131072 bytes (128 kb)
FALSE - Is fully associative: false
FALSE - Is Self Initializing: true
FALSE
FALSE Cache ID 2:
FALSE - Level: 2
FALSE - Type: Unified Cache
FALSE - Sets: 8192
FALSE - System Coherency Line Size: 64 bytes
FALSE - Physical Line partitions: 1
FALSE - Ways of associativity: 16
FALSE - Total Size: 8388608 bytes (8192 kb)
FALSE - Is fully associative: false
FALSE - Is Self Initializing: true
FALSE
FALSE CPU checking result: No AVX2/AVX512 is supported and the default library is used ...
```

```
FALSE
FALSE
FALSE #-----#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE
       metadata=list()
FALSE
        metadata$isRegularOrdered=FALSE
FALSE
        metadata$season='harmonic'
FALSE
        metadata$period=1.000000
FALSE
        metadata$startTime=1984.25000
FALSE
        metadata$deltaTime=0.08333
FALSE
        metadata$whichDimIsTime=1
FALSE
        metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
        metadata$detrend=FALSE
FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
        prior$trendMaxKnotNum=10
FALSE
        prior$trendMinSepDist=6
FALSE
        prior$K MAX=132
FALSE
        prior$precValue=1.500000
FALSE
        prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE.
      mcmc=list()
FALSE
        mcmc$seed=0
FALSE
        mcmc$samples=8000
FALSE
        mcmc$thinningFactor=5
FALSE
        mcmc$burnin=200
FALSE
        mcmc$chainNumber=3
        mcmc$maxMoveStepSize=12
FALSE
FALSE
        mcmc$trendResamplingOrderProb=0.1000
FALSE
        mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #..... End of displaying mcmc ......
FALSE
FALSE #..... Start of displaying 'extra' ......
```

```
FALSE
        extra=list()
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE.
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
FALSE
        extra$numThreadsPerCPU=2
FALSE
        extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE
        metadata=list()
FALSE
        metadata$isRegularOrdered=FALSE
FALSE
        metadata$season='harmonic'
FALSE
       metadata$period=1.000000
        metadata$startTime=1984.33337
FALSE
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE
        metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
```

```
FALSE
       prior$trendMaxKnotNum=10
FALSE
       prior$trendMinSepDist=6
FALSE
       prior$K MAX=132
       prior$precValue=1.500000
FALSE
FALSE
       prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE #.....Start of displaying 'mcmc' ......
FALSE
       mcmc=list()
       mcmc$seed=0
FALSE
FALSE
       mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
       mcmc$burnin=200
FALSE
FALSE
       mcmc$chainNumber=3
FALSE
       mcmc$maxMoveStepSize=12
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' ......
FALSE extra=list()
FALSE
       extra$dumpInputData=TRUE
FALSE
       extra$whichOutputDimIsTime=1
FALSE
       extra$computeCredible=TRUE
FALSE
       extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
       extra$computeTrendOrder=TRUE
FALSE
       extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
FALSE
       extra$printOptions=TRUE
FALSE
       extra$consoleWidth=80
FALSE
        extra$numThreadsPerCPU=2
FALSE
       extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE metadata$isRegularOrdered=FALSE
```

metadata\$season='harmonic'

FALSE

```
FALSE
         metadata$period=1.000000
FALSE.
         metadata$startTime=1984.41675
         metadata$deltaTime=0.08333
FALSE
FALSE
         metadata$whichDimIsTime=1
FALSE
         metadata$missingValue=NaN
FALSE
         metadata$maxMissingRate=0.7500
FALSE
         metadata$deseasonalize=FALSE
FALSE
         metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
         prior=list()
FALSE
         prior$modelPriorType=1
FALSE
         prior$seasonMinOrder=1
FALSE
         prior$seasonMaxOrder=5
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
FALSE
         prior$trendMaxOrder=1
FALSE
         prior$trendMinKnotNum=0
FALSE
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE
         prior$K MAX=132
FALSE.
         prior$precValue=1.500000
FALSE
         prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
         mcmc=list()
FALSE
         mcmc$seed=0
FALSE
         mcmc$samples=8000
         mcmc$thinningFactor=5
FALSE
FALSE
         mcmc$burnin=200
         mcmc$chainNumber=3
FALSE
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
FALSE
         mcmc$seasonResamplingOrderProb=0.1700
FALSE
         mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' ......
FALSE
         extra=list()
FALSE
         extra$dumpInputData=TRUE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE
         extra$computeSeasonOrder=TRUE
FALSE
         extra$computeTrendOrder=TRUE
FALSE
         extra$computeSeasonChngpt=TRUE
FALSE
         extra$computeTrendChngpt=TRUE
FALSE
         extra$computeSeasonAmp=TRUE
FALSE
         extra$computeTrendSlope=TRUE
FALSE
         extra$tallyPosNegSeasonJump=FALSE
```

```
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
       extra$tallyIncDecTrendJump=TRUE
       extra$printProgressBar=TRUE
FALSE
       extra$printOptions=TRUE
FALSE
FALSE
       extra$consoleWidth=80
FALSE
     extra$numThreadsPerCPU=2
FALSE
       extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
FALSE #
          OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE
       metadata$isRegularOrdered=FALSE
FALSE metadata$season='harmonic'
FALSE metadata$period=1.000000
FALSE metadata$startTime=1984.33337
FALSE
       metadata$deltaTime=0.08333
FALSE
     metadata$whichDimIsTime=1
FALSE metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
FALSE
       metadata$deseasonalize=FALSE
       metadata$detrend=FALSE
FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
       prior=list()
FALSE
       prior$modelPriorType=1
FALSE
       prior$seasonMinOrder=1
FALSE
       prior$seasonMaxOrder=5
FALSE
       prior$seasonMinKnotNum=0
FALSE
       prior$seasonMaxKnotNum=10
FALSE
       prior$seasonMinSepDist=6
FALSE
       prior$trendMinOrder=0
FALSE
       prior$trendMaxOrder=1
FALSE
       prior$trendMinKnotNum=0
FALSE
       prior$trendMaxKnotNum=10
FALSE
       prior$trendMinSepDist=6
FALSE
       prior$K_MAX=132
       prior$precValue=1.500000
FALSE
       prior$precPriorType='uniform'
FALSE
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
     mcmc=list()
FALSE
     mcmc$seed=0
FALSE mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
```

```
FALSE
       mcmc$burnin=200
FALSE
       mcmc$chainNumber=3
       mcmc$maxMoveStepSize=12
FALSE
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
       mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
       extra=list()
FALSE
       extra$dumpInputData=TRUE
FALSE
       extra$whichOutputDimIsTime=1
FALSE
       extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
       extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
       extra$computeSeasonChngpt=TRUE
FALSE
       extra$computeTrendChngpt=TRUE
FALSE
       extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
       extra$tallyPosNegSeasonJump=FALSE
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
FALSE
       extra$printOptions=TRUE
FALSE
       extra$consoleWidth=80
FALSE
       extra$numThreadsPerCPU=2
       extra$numParThreads=0
FALSE
FALSE #..... End of displaying extra .....
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE
       metadata$startTime=1984.25000
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
FALSE
       metadata$deseasonalize=FALSE
       metadata$detrend=FALSE
FALSE
FALSE #.....End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
       prior=list()
```

```
FALSE
        prior$modelPriorType=1
FALSE.
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
        prior$trendMaxKnotNum=10
FALSE
        prior$trendMinSepDist=6
FALSE
        prior$K_MAX=132
        prior$precValue=1.500000
FALSE
        prior$precPriorType='uniform'
FALSE
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
        mcmc=list()
FALSE
        mcmc$seed=0
        mcmc$samples=8000
FALSE
        mcmc$thinningFactor=5
FALSE
FALSE
        mcmc$burnin=200
FALSE
        mcmc$chainNumber=3
FALSE
        mcmc$maxMoveStepSize=12
        mcmc$trendResamplingOrderProb=0.1000
FALSE
FALSE
        mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
        extra=list()
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
        extra$numThreadsPerCPU=2
FALSE
FALSE
        extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
```

```
OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE
        metadata$isRegularOrdered=FALSE
FALSE
        metadata$season='harmonic'
        metadata$period=1.000000
FALSE
FALSE
        metadata$startTime=1984.25000
FALSE
        metadata$deltaTime=0.08333
FALSE
        metadata$whichDimIsTime=1
FALSE
        metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE
        metadata$detrend=FALSE
FALSE #......End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' .....
FALSE
      prior=list()
FALSE
        prior$modelPriorType=1
FALSE
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
        prior$seasonMaxKnotNum=10
FALSE
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
        prior$trendMaxKnotNum=10
FALSE
        prior$trendMinSepDist=6
FALSE
        prior$K_MAX=132
FALSE
        prior$precValue=1.500000
FALSE
        prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
       mcmc=list()
FALSE
      mcmc$seed=0
FALSE mcmc$samples=8000
        mcmc$thinningFactor=5
FALSE
FALSE
        mcmc$burnin=200
FALSE
        mcmc$chainNumber=3
FALSE
        mcmc$maxMoveStepSize=12
FALSE
        mcmc$trendResamplingOrderProb=0.1000
FALSE
        mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE extra=list()
FALSE
        extra$dumpInputData=TRUE
        extra$whichOutputDimIsTime=1
FALSE
```

```
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE.
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
FALSE
        extra$numThreadsPerCPU=2
FALSE
        extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE \Progress: 0.0% done[>***********************************||Progress: 4.2%
FALSE
FALSE #-----#
            OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE #.....Start of displaying 'MetaData' .....
FALSE
        metadata=list()
FALSE
        metadata$isRegularOrdered=FALSE
FALSE
        metadata$season='harmonic'
FALSE
        metadata$period=1.000000
FALSE
        metadata$startTime=1984.50000
        metadata$deltaTime=0.08333
FALSE
FALSE
        metadata$whichDimIsTime=1
FALSE
        metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE.
        metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' .....
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
        prior$trendMaxKnotNum=10
FALSE
        prior$trendMinSepDist=6
FALSE
        prior$K MAX=132
```

```
FALSE
       prior$precValue=1.500000
     prior$precPriorType='uniform'
FALSE
FALSE #..... End of displaying pripr ......
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE mcmc=list()
FALSE mcmc$seed=0
FALSE mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
       mcmc$burnin=200
FALSE
FALSE
       mcmc$chainNumber=3
FALSE
       mcmc$maxMoveStepSize=12
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
       mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
     extra=list()
       extra$dumpInputData=TRUE
FALSE
FALSE
       extra$whichOutputDimIsTime=1
FALSE
       extra$computeCredible=TRUE
FALSE
       extra$fastCIComputation=TRUE
FALSE
       extra$computeSeasonOrder=TRUE
FALSE
       extra$computeTrendOrder=TRUE
FALSE
       extra$computeSeasonChngpt=TRUE
FALSE
       extra$computeTrendChngpt=TRUE
FALSE
       extra$computeSeasonAmp=TRUE
FALSE
       extra$computeTrendSlope=TRUE
FALSE
       extra$tallyPosNegSeasonJump=FALSE
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
       extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
FALSE
       extra$printOptions=TRUE
       extra$consoleWidth=80
FALSE
FALSE
       extra$numThreadsPerCPU=2
FALSE
       extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
FALSE #
          OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE
      metadata=list()
       metadata$isRegularOrdered=FALSE
FALSE
FALSE
       metadata$season='harmonic'
FALSE metadata$period=1.000000
FALSE metadata$startTime=1984.41675
       metadata$deltaTime=0.08333
FALSE
```

```
FALSE
         metadata$whichDimIsTime=1
FALSE
         metadata$missingValue=NaN
         metadata$maxMissingRate=0.7500
FALSE
FALSE
         metadata$deseasonalize=FALSE
FALSE
         metadata$detrend=FALSE
FALSE #..... End of displaying MetaData .....
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
         prior=list()
FALSE
         prior$modelPriorType=1
FALSE
         prior$seasonMinOrder=1
FALSE
         prior$seasonMaxOrder=5
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
FALSE
         prior$trendMaxOrder=1
FALSE
         prior$trendMinKnotNum=0
FALSE
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE.
         prior$K_MAX=132
FALSE
         prior$precValue=1.500000
FALSE
         prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
         mcmc=list()
FALSE
         mcmc$seed=0
FALSE
         mcmc$samples=8000
FALSE
         mcmc$thinningFactor=5
FALSE
         mcmc$burnin=200
FALSE
         mcmc$chainNumber=3
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
         mcmc$seasonResamplingOrderProb=0.1700
FALSE
FALSE
         mcmc$credIntervalAlphaLevel=0.950
FALSE #..... End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
         extra=list()
         extra$dumpInputData=TRUE
FALSE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE
         extra$computeSeasonOrder=TRUE
FALSE
         extra$computeTrendOrder=TRUE
FALSE
         extra$computeSeasonChngpt=TRUE
FALSE
         extra$computeTrendChngpt=TRUE
FALSE
         extra$computeSeasonAmp=TRUE
FALSE
         extra$computeTrendSlope=TRUE
FALSE
         extra$tallyPosNegSeasonJump=FALSE
FALSE
         extra$tallyPosNegTrendJump=TRUE
FALSE
         extra$tallyIncDecTrendJump=TRUE
FALSE
         extra$printProgressBar=TRUE
```

```
FALSE
        extra$printOptions=TRUE
FALSE
       extra$consoleWidth=80
       extra$numThreadsPerCPU=2
FALSE
       extra$numParThreads=0
FALSE
FALSE #.....End of displaying extra .....
FALSE
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE
       metadata=list()
FALSE
       metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE
       metadata$startTime=1984.50000
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
FALSE
       metadata$deseasonalize=FALSE
FALSE
       metadata$detrend=FALSE
FALSE #......End of displaying MetaData ......
FALSE
FALSE #..... Start of displaying 'prior' ......
FALSE
       prior=list()
FALSE
       prior$modelPriorType=1
FALSE
       prior$seasonMinOrder=1
FALSE
       prior$seasonMaxOrder=5
FALSE
       prior$seasonMinKnotNum=0
FALSE
       prior$seasonMaxKnotNum=10
FALSE
       prior$seasonMinSepDist=6
FALSE
       prior$trendMinOrder=0
FALSE.
       prior$trendMaxOrder=1
FALSE
       prior$trendMinKnotNum=0
FALSE
       prior$trendMaxKnotNum=10
FALSE
       prior$trendMinSepDist=6
FALSE
       prior$K_MAX=132
FALSE
       prior$precValue=1.500000
FALSE
       prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
       mcmc=list()
FALSE
       mcmc$seed=0
       mcmc$samples=8000
FALSE
FALSE
       mcmc$thinningFactor=5
FALSE
       mcmc$burnin=200
FALSE
       mcmc$chainNumber=3
       mcmc$maxMoveStepSize=12
FALSE
```

```
FALSE
        mcmc$trendResamplingOrderProb=0.1000
FALSE.
        mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE extra=list()
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE.
        extra$consoleWidth=80
FALSE
        extra$numThreadsPerCPU=2
        extra$numParThreads=0
FALSE
FALSE #.....End of displaying extra .....
FALSE
4.2%
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE metadata$isRegularOrdered=FALSE
FALSE
        metadata$season='harmonic'
FALSE metadata$period=1.000000
FALSE metadata$startTime=1984.41675
FALSE
        metadata$deltaTime=0.08333
FALSE
        metadata$whichDimIsTime=1
FALSE
        metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE
        metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
```

```
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
        prior$seasonMinSepDist=6
FALSE
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
        prior$trendMaxKnotNum=10
FALSE.
        prior$trendMinSepDist=6
FALSE
        prior$K_MAX=132
        prior$precValue=1.500000
FALSE
FALSE
        prior$precPriorType='uniform'
FALSE #..... End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
        mcmc=list()
FALSE
        mcmc$seed=0
FALSE
        mcmc$samples=8000
FALSE
        mcmc$thinningFactor=5
       mcmc$burnin=200
FALSE
FALSE
        mcmc$chainNumber=3
FALSE
        mcmc$maxMoveStepSize=12
FALSE
        mcmc$trendResamplingOrderProb=0.1000
FALSE
        mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #..... End of displaying mcmc ......
FALSE #.....Start of displaying 'extra' .....
FALSE
        extra=list()
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE.
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
FALSE
        extra$numThreadsPerCPU=2
FALSE
        extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #----#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
```

```
FALSE
FALSE #.....Start of displaying 'MetaData' ......
FALSE metadata=list()
FALSE
        metadata$isRegularOrdered=FALSE
FALSE metadata$season='harmonic'
FALSE
        metadata$period=1.000000
FALSE
         metadata$startTime=1984.16675
FALSE
         metadata$deltaTime=0.08333
         metadata$whichDimIsTime=1
FALSE
FALSE
        metadata$missingValue=NaN
FALSE
         metadata$maxMissingRate=0.7500
         metadata$deseasonalize=FALSE
FALSE
FALSE
         metadata$detrend=FALSE
FALSE #......End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' .....
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
         prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
        prior$trendMaxOrder=1
FALSE
FALSE
         prior$trendMinKnotNum=0
FALSE
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE
         prior$K_MAX=132
         prior$precValue=1.500000
FALSE
FALSE
         prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE mcmc=list()
FALSE mcmc$seed=0
FALSE mcmc$samples=8000
FALSE
         mcmc$thinningFactor=5
        mcmc$burnin=200
FALSE
FALSE
        mcmc$chainNumber=3
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
FALSE
         mcmc$seasonResamplingOrderProb=0.1700
         mcmc$credIntervalAlphaLevel=0.950
FALSE
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
        extra=list()
         extra$dumpInputData=TRUE
FALSE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE
         extra$computeSeasonOrder=TRUE
```

```
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
        extra$computeTrendChngpt=TRUE
FALSE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
        extra$printOptions=TRUE
FALSE
FALSE
        extra$consoleWidth=80
        extra$numThreadsPerCPU=2
FALSE
FALSE
        extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
     metadata=list()
FALSE
FALSE
       metadata$isRegularOrdered=FALSE
FALSE
        metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE
       metadata$startTime=1984.16675
FALSE
       metadata$deltaTime=0.08333
FALSE
        metadata$whichDimIsTime=1
FALSE
        metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE
        metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
       prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
       prior$trendMaxKnotNum=10
FALSE
        prior$trendMinSepDist=6
FALSE
       prior$K_MAX=132
FALSE
       prior$precValue=1.500000
FALSE
        prior$precPriorType='uniform'
FALSE #..... End of displaying pripr ......
```

```
FALSE
FALSE #.....Start of displaying 'mcmc' ......
      mcmc=list()
FALSE
FALSE
       mcmc$seed=0
FALSE
       mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
FALSE
       mcmc$burnin=200
FALSE
       mcmc$chainNumber=3
FALSE
       mcmc$maxMoveStepSize=12
       {\tt mcmc\$trendResamplingOrderProb=0.1000}
FALSE
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
       extra=list()
FALSE
       extra$dumpInputData=TRUE
FALSE
       extra$whichOutputDimIsTime=1
FALSE
       extra$computeCredible=TRUE
FALSE
       extra$fastCIComputation=TRUE
       extra$computeSeasonOrder=TRUE
FALSE
FALSE
       extra$computeTrendOrder=TRUE
FALSE
       extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
       extra$computeSeasonAmp=TRUE
FALSE
       extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
       extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
       extra$consoleWidth=80
        extra$numThreadsPerCPU=2
FALSE
FALSE
        extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE
       metadata=list()
       metadata$isRegularOrdered=FALSE
FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE
       metadata$startTime=1984.16675
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
       metadata$maxMissingRate=0.7500
FALSE
```

```
FALSE
         metadata$deseasonalize=FALSE
FALSE.
         metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
         prior=list()
FALSE
         prior$modelPriorType=1
FALSE
         prior$seasonMinOrder=1
FALSE
         prior$seasonMaxOrder=5
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
FALSE
         prior$trendMaxOrder=1
FALSE
         prior$trendMinKnotNum=0
FALSE
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE
         prior$K MAX=132
FALSE
         prior$precValue=1.500000
FALSE
         prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
         mcmc=list()
FALSE
         mcmc$seed=0
FALSE
         mcmc$samples=8000
FALSE
         mcmc$thinningFactor=5
FALSE
         mcmc$burnin=200
FALSE
         mcmc$chainNumber=3
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
FALSE
         mcmc$seasonResamplingOrderProb=0.1700
FALSE
         mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
         extra=list()
FALSE.
         extra$dumpInputData=TRUE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE.
         extra$computeSeasonOrder=TRUE
FALSE
         extra$computeTrendOrder=TRUE
FALSE
         extra$computeSeasonChngpt=TRUE
FALSE
         extra$computeTrendChngpt=TRUE
FALSE
         extra$computeSeasonAmp=TRUE
FALSE
         extra$computeTrendSlope=TRUE
FALSE
         extra$tallyPosNegSeasonJump=FALSE
FALSE
         extra$tallyPosNegTrendJump=TRUE
FALSE
         extra$tallyIncDecTrendJump=TRUE
FALSE
         extra$printProgressBar=TRUE
FALSE
         extra$printOptions=TRUE
FALSE
         extra$consoleWidth=80
         extra$numThreadsPerCPU=2
FALSE
```

```
FALSE
       extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE #-----#
         OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE
     metadata$startTime=1984.25000
FALSE metadata$deltaTime=0.08333
FALSE metadata$whichDimIsTime=1
FALSE
     metadata$missingValue=NaN
FALSE metadata$maxMissingRate=0.7500
FALSE metadata$deseasonalize=FALSE
FALSE
       metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
     prior=list()
FALSE
       prior$modelPriorType=1
FALSE
       prior$seasonMinOrder=1
FALSE
       prior$seasonMaxOrder=5
FALSE
       prior$seasonMinKnotNum=0
FALSE
       prior$seasonMaxKnotNum=10
FALSE
       prior$seasonMinSepDist=6
FALSE
       prior$trendMinOrder=0
FALSE
       prior$trendMaxOrder=1
FALSE
       prior$trendMinKnotNum=0
FALSE
       prior$trendMaxKnotNum=10
FALSE.
       prior$trendMinSepDist=6
FALSE
       prior$K MAX=132
FALSE
       prior$precValue=1.500000
FALSE
       prior$precPriorType='uniform'
FALSE #..... End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
     mcmc=list()
FALSE
       mcmc$seed=0
       mcmc$samples=8000
FALSE
FALSE
       mcmc$thinningFactor=5
       mcmc$burnin=200
FALSE
FALSE
       mcmc$chainNumber=3
FALSE
       mcmc$maxMoveStepSize=12
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
       mcmc$credIntervalAlphaLevel=0.950
FALSE
```

```
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
       extra=list()
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE.
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
        extra$computeTrendOrder=TRUE
FALSE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
FALSE.
        extra$numThreadsPerCPU=2
FALSE
        extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE
FALSE #----
           ._____#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
       metadata=list()
FALSE
FALSE
        metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE.
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FALSE
        metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE
        metadata$detrend=FALSE
FALSE #......End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' .....
        prior=list()
FALSE
FALSE
        prior$modelPriorType=1
FALSE
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
```

```
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
       prior$trendMinKnotNum=0
FALSE
        prior$trendMaxKnotNum=10
FALSE
       prior$trendMinSepDist=6
FALSE
       prior$K MAX=132
FALSE
       prior$precValue=1.500000
FALSE
        prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
       mcmc=list()
FALSE
       mcmc$seed=0
FALSE
        mcmc$samples=8000
FALSE
        mcmc$thinningFactor=5
FALSE
        mcmc$burnin=200
FALSE
        mcmc$chainNumber=3
FALSE
        mcmc$maxMoveStepSize=12
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
        mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' .....
        extra=list()
FALSE
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE.
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
FALSE.
        extra$numThreadsPerCPU=2
        extra$numParThreads=0
FALSE
FALSE #.....End of displaying extra .....
FALSE
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' ......
```

```
FALSE
         metadata=list()
FALSE
         metadata$isRegularOrdered=FALSE
         metadata$season='harmonic'
FALSE
FALSE
         metadata$period=1.000000
FALSE
         metadata$startTime=1984.25000
FALSE
         metadata$deltaTime=0.08333
FALSE
         metadata$whichDimIsTime=1
FALSE
         metadata$missingValue=NaN
FALSE.
         metadata$maxMissingRate=0.7500
FALSE
         metadata$deseasonalize=FALSE
FALSE
         metadata$detrend=FALSE
FALSE #......End of displaying MetaData ......
FALSE
FALSE #..... Start of displaying 'prior' ......
FALSE
         prior=list()
FALSE
         prior$modelPriorType=1
FALSE
         prior$seasonMinOrder=1
FALSE
         prior$seasonMaxOrder=5
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
FALSE
         prior$trendMaxOrder=1
FALSE
         prior$trendMinKnotNum=0
FALSE.
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE
         prior$K_MAX=132
FALSE
         prior$precValue=1.500000
FALSE
         prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
         mcmc=list()
FALSE
         mcmc$seed=0
FALSE
         mcmc$samples=8000
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         mcmc$thinningFactor=5
FALSE
         mcmc$burnin=200
FALSE.
         mcmc$chainNumber=3
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
FALSE
         mcmc$seasonResamplingOrderProb=0.1700
         mcmc$credIntervalAlphaLevel=0.950
FALSE.
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
         extra=list()
FALSE
         extra$dumpInputData=TRUE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE
         extra$computeSeasonOrder=TRUE
FALSE
         extra$computeTrendOrder=TRUE
FALSE
         extra$computeSeasonChngpt=TRUE
FALSE
         extra$computeTrendChngpt=TRUE
```

```
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
        extra$consoleWidth=80
FALSE
FALSE
        extra$numThreadsPerCPU=2
        extra$numParThreads=0
FALSE
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE
       metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE metadata$period=1.000000
FALSE
       metadata$startTime=1984.25000
FALSE
       metadata$deltaTime=0.08333
FALSE
        metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
        metadata$deseasonalize=FALSE
FALSE
FALSE
        metadata$detrend=FALSE
FALSE #......End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
      prior=list()
FALSE
       prior$modelPriorType=1
FALSE.
       prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
       prior$seasonMinKnotNum=0
FALSE
       prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
        prior$trendMaxKnotNum=10
        prior$trendMinSepDist=6
FALSE
FALSE
        prior$K_MAX=132
       prior$precValue=1.500000
FALSE
        prior$precPriorType='uniform'
FALSE
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
      mcmc=list()
```

```
FALSE
       mcmc$seed=0
FALSE
       mcmc$samples=8000
FALSE mcmc$thinningFactor=5
FALSE mcmc$burnin=200
FALSE
       mcmc$chainNumber=3
FALSE
       mcmc$maxMoveStepSize=12
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
       mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
       extra=list()
FALSE
       extra$dumpInputData=TRUE
FALSE
       extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
       extra$fastCIComputation=TRUE
FALSE
       extra$computeSeasonOrder=TRUE
FALSE
       extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
       extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
       extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
FALSE
       extra$printOptions=TRUE
       extra$consoleWidth=80
FALSE
       extra$numThreadsPerCPU=2
FALSE
FALSE
        extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE
FALSE #-----#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' ......
FALSE
       metadata=list()
FALSE
       metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
       metadata$startTime=1984.25000
FALSE
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
FALSE
       metadata$deseasonalize=FALSE
FALSE
       metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
```

```
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
         prior=list()
FALSE
         prior$modelPriorType=1
FALSE
         prior$seasonMinOrder=1
FALSE
         prior$seasonMaxOrder=5
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
FALSE
         prior$trendMaxOrder=1
FALSE
         prior$trendMinKnotNum=0
FALSE
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE
         prior$K_MAX=132
FALSE
         prior$precValue=1.500000
FALSE
         prior$precPriorType='uniform'
FALSE #..... End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
       mcmc=list()
FALSE
         mcmc$seed=0
FALSE
         mcmc$samples=8000
FALSE
         mcmc$thinningFactor=5
         mcmc$burnin=200
FALSE.
FALSE
         mcmc$chainNumber=3
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
FALSE
         mcmc$seasonResamplingOrderProb=0.1700
FALSE
         mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
         extra=list()
FALSE
         extra$dumpInputData=TRUE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE
         extra$computeSeasonOrder=TRUE
FALSE
         extra$computeTrendOrder=TRUE
FALSE
         extra$computeSeasonChngpt=TRUE
FALSE
         extra$computeTrendChngpt=TRUE
FALSE
         extra$computeSeasonAmp=TRUE
FALSE
         extra$computeTrendSlope=TRUE
FALSE
         extra$tallyPosNegSeasonJump=FALSE
FALSE
         extra$tallyPosNegTrendJump=TRUE
FALSE
         extra$tallyIncDecTrendJump=TRUE
FALSE
         extra$printProgressBar=TRUE
FALSE
         extra$printOptions=TRUE
FALSE
         extra$consoleWidth=80
FALSE
         extra$numThreadsPerCPU=2
FALSE
         extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
```

```
FALSE.
FALSE #-----#
FALSE #
          OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE
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FALSE
       metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE
       metadata$startTime=1984.16675
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
FALSE
       metadata$deseasonalize=FALSE
FALSE
       metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE #.....Start of displaying 'prior' ......
       prior=list()
FALSE
FALSE
       prior$modelPriorType=1
FALSE
       prior$seasonMinOrder=1
FALSE
       prior$seasonMaxOrder=5
FALSE
       prior$seasonMinKnotNum=0
FALSE
       prior$seasonMaxKnotNum=10
FALSE
       prior$seasonMinSepDist=6
FALSE
       prior$trendMinOrder=0
FALSE
       prior$trendMaxOrder=1
FALSE
       prior$trendMinKnotNum=0
FALSE
       prior$trendMaxKnotNum=10
FALSE
       prior$trendMinSepDist=6
FALSE
       prior$K_MAX=132
FALSE
       prior$precValue=1.500000
FALSE
       prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
      mcmc=list()
FALSE
       mcmc$seed=0
       mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
FALSE
       mcmc$burnin=200
FALSE
FALSE
       mcmc$chainNumber=3
       mcmc$maxMoveStepSize=12
FALSE
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
       mcmc$credIntervalAlphaLevel=0.950
FALSE #..... End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' ......
```

```
FALSE
        extra=list()
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE.
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
FALSE
        extra$numThreadsPerCPU=2
FALSE
        extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE
        metadata=list()
FALSE
        metadata$isRegularOrdered=FALSE
FALSE
        metadata$season='harmonic'
FALSE
       metadata$period=1.000000
        metadata$startTime=1984.33337
FALSE
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE.
       metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE
        metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
```

```
FALSE
       prior$trendMaxKnotNum=10
FALSE
       prior$trendMinSepDist=6
FALSE
       prior$K MAX=132
       prior$precValue=1.500000
FALSE
FALSE
       prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE #.....Start of displaying 'mcmc' ......
FALSE
       mcmc=list()
       mcmc$seed=0
FALSE
FALSE
       mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
       mcmc$burnin=200
FALSE
FALSE
       mcmc$chainNumber=3
FALSE
       mcmc$maxMoveStepSize=12
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
       mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE extra=list()
FALSE
       extra$dumpInputData=TRUE
FALSE
       extra$whichOutputDimIsTime=1
FALSE
       extra$computeCredible=TRUE
FALSE
       extra$fastCIComputation=TRUE
FALSE
       extra$computeSeasonOrder=TRUE
FALSE
       extra$computeTrendOrder=TRUE
FALSE
       extra$computeSeasonChngpt=TRUE
FALSE
       extra$computeTrendChngpt=TRUE
FALSE
       extra$computeSeasonAmp=TRUE
FALSE
       extra$computeTrendSlope=TRUE
FALSE
       extra$tallyPosNegSeasonJump=FALSE
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
       extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
FALSE
       extra$printOptions=TRUE
FALSE.
       extra$consoleWidth=80
FALSE
       extra$numThreadsPerCPU=2
FALSE
       extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE metadata$isRegularOrdered=FALSE
```

metadata\$season='harmonic'

FALSE

```
FALSE
         metadata$period=1.000000
FALSE.
         metadata$startTime=1984.33337
         metadata$deltaTime=0.08333
FALSE
FALSE
         metadata$whichDimIsTime=1
FALSE
         metadata$missingValue=NaN
FALSE
         metadata$maxMissingRate=0.7500
FALSE
         metadata$deseasonalize=FALSE
FALSE
         metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
         prior=list()
FALSE
         prior$modelPriorType=1
FALSE
         prior$seasonMinOrder=1
FALSE
         prior$seasonMaxOrder=5
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
FALSE
         prior$trendMaxOrder=1
FALSE
         prior$trendMinKnotNum=0
FALSE
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE
         prior$K MAX=132
FALSE.
         prior$precValue=1.500000
FALSE
         prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
         mcmc=list()
FALSE
         mcmc$seed=0
FALSE
         mcmc$samples=8000
         mcmc$thinningFactor=5
FALSE
FALSE
         mcmc$burnin=200
         mcmc$chainNumber=3
FALSE
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
FALSE
         mcmc$seasonResamplingOrderProb=0.1700
FALSE
         mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' ......
FALSE
         extra=list()
FALSE
         extra$dumpInputData=TRUE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE
         extra$computeSeasonOrder=TRUE
FALSE
         extra$computeTrendOrder=TRUE
FALSE
         extra$computeSeasonChngpt=TRUE
FALSE
         extra$computeTrendChngpt=TRUE
FALSE
         extra$computeSeasonAmp=TRUE
FALSE
         extra$computeTrendSlope=TRUE
FALSE
         extra$tallyPosNegSeasonJump=FALSE
```

```
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
       extra$tallyIncDecTrendJump=TRUE
FALSE extra$printProgressBar=TRUE
       extra$printOptions=TRUE
FALSE
FALSE
       extra$consoleWidth=80
FALSE
     extra$numThreadsPerCPU=2
       extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
FALSE #
          OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE
       metadata$isRegularOrdered=FALSE
FALSE metadata$season='harmonic'
FALSE metadata$period=1.000000
FALSE metadata$startTime=1984.25000
FALSE
       metadata$deltaTime=0.08333
FALSE metadata$whichDimIsTime=1
FALSE metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
FALSE
       metadata$deseasonalize=FALSE
       metadata$detrend=FALSE
FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
       prior=list()
FALSE
       prior$modelPriorType=1
FALSE
       prior$seasonMinOrder=1
FALSE
       prior$seasonMaxOrder=5
FALSE
       prior$seasonMinKnotNum=0
FALSE
       prior$seasonMaxKnotNum=10
FALSE
       prior$seasonMinSepDist=6
FALSE
       prior$trendMinOrder=0
FALSE
       prior$trendMaxOrder=1
FALSE
       prior$trendMinKnotNum=0
FALSE
       prior$trendMaxKnotNum=10
FALSE
       prior$trendMinSepDist=6
FALSE
       prior$K_MAX=132
       prior$precValue=1.500000
FALSE
       prior$precPriorType='uniform'
FALSE
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
     mcmc=list()
FALSE
     mcmc$seed=0
FALSE mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
```

```
FALSE
       mcmc$burnin=200
FALSE
       mcmc$chainNumber=3
       mcmc$maxMoveStepSize=12
FALSE
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
       mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
       extra=list()
FALSE
       extra$dumpInputData=TRUE
FALSE
       extra$whichOutputDimIsTime=1
FALSE
       extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
       extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
       extra$computeSeasonChngpt=TRUE
FALSE
       extra$computeTrendChngpt=TRUE
FALSE
       extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
       extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
FALSE
       extra$printOptions=TRUE
FALSE
       extra$consoleWidth=80
FALSE
       extra$numThreadsPerCPU=2
       extra$numParThreads=0
FALSE
FALSE #..... End of displaying extra .....
FALSE
FALSE #-----#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE
       metadata$startTime=1984.25000
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
FALSE
       metadata$deseasonalize=FALSE
       metadata$detrend=FALSE
FALSE
FALSE #.....End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
       prior=list()
```

```
FALSE
        prior$modelPriorType=1
FALSE.
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
        prior$trendMaxKnotNum=10
FALSE
        prior$trendMinSepDist=6
FALSE
        prior$K_MAX=132
FALSE
        prior$precValue=1.500000
        prior$precPriorType='uniform'
FALSE
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
       mcmc=list()
FALSE
        mcmc$seed=0
FALSE
        mcmc$samples=8000
        mcmc$thinningFactor=5
FALSE
FALSE
        mcmc$burnin=200
FALSE
        mcmc$chainNumber=3
FALSE
        mcmc$maxMoveStepSize=12
        mcmc$trendResamplingOrderProb=0.1000
FALSE
FALSE
        mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
        extra=list()
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
        extra$numThreadsPerCPU=2
FALSE
FALSE
        extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE
FALSE #-----#
```

```
OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE
        metadata$isRegularOrdered=FALSE
FALSE
        metadata$season='harmonic'
        metadata$period=1.000000
FALSE
FALSE
        metadata$startTime=1984.25000
FALSE
        metadata$deltaTime=0.08333
FALSE
        metadata$whichDimIsTime=1
FALSE
        metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE
        metadata$detrend=FALSE
FALSE #......End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' .....
FALSE
      prior=list()
FALSE
        prior$modelPriorType=1
FALSE
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
        prior$seasonMaxKnotNum=10
FALSE
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
        prior$trendMaxKnotNum=10
FALSE
        prior$trendMinSepDist=6
FALSE
        prior$K_MAX=132
FALSE
        prior$precValue=1.500000
FALSE
        prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
       mcmc=list()
FALSE
      mcmc$seed=0
FALSE mcmc$samples=8000
        mcmc$thinningFactor=5
FALSE
FALSE
        mcmc$burnin=200
FALSE
        mcmc$chainNumber=3
FALSE
        mcmc$maxMoveStepSize=12
FALSE
        mcmc$trendResamplingOrderProb=0.1000
FALSE
        mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE extra=list()
FALSE
        extra$dumpInputData=TRUE
        extra$whichOutputDimIsTime=1
FALSE
```

```
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE.
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
FALSE
        extra$numThreadsPerCPU=2
FALSE
        extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE #.....Start of displaying 'MetaData' .....
FALSE
       metadata=list()
FALSE
       metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE
        metadata$period=1.000000
FALSE
       metadata$startTime=1984.25000
       metadata$deltaTime=0.08333
FALSE
FALSE
       metadata$whichDimIsTime=1
FALSE
        metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE.
        metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' .....
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
        prior$trendMaxKnotNum=10
FALSE
        prior$trendMinSepDist=6
FALSE
        prior$K MAX=132
```

```
FALSE
       prior$precValue=1.500000
FALSE prior$precPriorType='uniform'
FALSE #..... End of displaying pripr ......
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE mcmc=list()
FALSE mcmc$seed=0
FALSE mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
       mcmc$burnin=200
FALSE
FALSE
       mcmc$chainNumber=3
FALSE
       mcmc$maxMoveStepSize=12
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
       mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE extra=list()
FALSE
       extra$dumpInputData=TRUE
FALSE
       extra$whichOutputDimIsTime=1
FALSE
       extra$computeCredible=TRUE
FALSE
       extra$fastCIComputation=TRUE
FALSE
       extra$computeSeasonOrder=TRUE
FALSE
       extra$computeTrendOrder=TRUE
FALSE
       extra$computeSeasonChngpt=TRUE
FALSE
       extra$computeTrendChngpt=TRUE
FALSE
       extra$computeSeasonAmp=TRUE
FALSE
       extra$computeTrendSlope=TRUE
FALSE
       extra$tallyPosNegSeasonJump=FALSE
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
       extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
       \verb"extra$printOptions=TRUE"
FALSE
FALSE
       extra$consoleWidth=80
FALSE
       extra$numThreadsPerCPU=2
FALSE
       extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE #-----#
FALSE #
          OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE
      metadata=list()
FALSE
       metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE metadata$period=1.000000
FALSE metadata$startTime=1984.25000
FALSE
       metadata$deltaTime=0.08333
```

```
FALSE
         metadata$whichDimIsTime=1
FALSE
         metadata$missingValue=NaN
         metadata$maxMissingRate=0.7500
FALSE
FALSE
         metadata$deseasonalize=FALSE
FALSE
         metadata$detrend=FALSE
FALSE #..... End of displaying MetaData .....
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
         prior=list()
         prior$modelPriorType=1
FALSE
FALSE
         prior$seasonMinOrder=1
FALSE
         prior$seasonMaxOrder=5
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
FALSE
         prior$trendMaxOrder=1
FALSE
         prior$trendMinKnotNum=0
FALSE
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE.
         prior$K_MAX=132
FALSE
         prior$precValue=1.500000
FALSE
         prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
         mcmc=list()
FALSE
         mcmc$seed=0
FALSE
         mcmc$samples=8000
FALSE
         mcmc$thinningFactor=5
FALSE
         mcmc$burnin=200
FALSE
         mcmc$chainNumber=3
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
FALSE
         mcmc$seasonResamplingOrderProb=0.1700
FALSE
         mcmc$credIntervalAlphaLevel=0.950
FALSE #..... End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
         extra=list()
FALSE
         extra$dumpInputData=TRUE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE
         extra$computeSeasonOrder=TRUE
FALSE
         extra$computeTrendOrder=TRUE
FALSE
         extra$computeSeasonChngpt=TRUE
FALSE
         extra$computeTrendChngpt=TRUE
FALSE
         extra$computeSeasonAmp=TRUE
FALSE
         extra$computeTrendSlope=TRUE
FALSE
         extra$tallyPosNegSeasonJump=FALSE
FALSE
         extra$tallyPosNegTrendJump=TRUE
FALSE
         extra$tallyIncDecTrendJump=TRUE
FALSE
         extra$printProgressBar=TRUE
```

```
FALSE
        extra$printOptions=TRUE
FALSE
       extra$consoleWidth=80
       extra$numThreadsPerCPU=2
FALSE
       extra$numParThreads=0
FALSE
FALSE #.....End of displaying extra .....
FALSE
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' ......
FALSE
       metadata=list()
FALSE
       metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE
       metadata$startTime=1984.25000
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
FALSE
       metadata$deseasonalize=FALSE
FALSE
       metadata$detrend=FALSE
FALSE #......End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' .....
FALSE
       prior=list()
FALSE
       prior$modelPriorType=1
FALSE
       prior$seasonMinOrder=1
FALSE
       prior$seasonMaxOrder=5
FALSE
       prior$seasonMinKnotNum=0
FALSE
       prior$seasonMaxKnotNum=10
FALSE
       prior$seasonMinSepDist=6
FALSE
       prior$trendMinOrder=0
FALSE.
       prior$trendMaxOrder=1
FALSE
       prior$trendMinKnotNum=0
FALSE
       prior$trendMaxKnotNum=10
FALSE
       prior$trendMinSepDist=6
FALSE
       prior$K_MAX=132
FALSE
       prior$precValue=1.500000
FALSE
       prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
       mcmc=list()
FALSE
       mcmc$seed=0
FALSE
       mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
FALSE
       mcmc$burnin=200
FALSE
       mcmc$chainNumber=3
       mcmc$maxMoveStepSize=12
FALSE
```

```
FALSE
        mcmc$trendResamplingOrderProb=0.1000
FALSE.
        mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE extra=list()
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
FALSE
        extra$numThreadsPerCPU=2
        extra$numParThreads=0
FALSE
FALSE #.....End of displaying extra .....
FALSE
4.2%
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE metadata$isRegularOrdered=FALSE
FALSE
        metadata$season='harmonic'
FALSE metadata$period=1.000000
FALSE metadata$startTime=1984.25000
FALSE
        metadata$deltaTime=0.08333
FALSE
        metadata$whichDimIsTime=1
FALSE
        metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE
        metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
```

```
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
        prior$trendMaxKnotNum=10
FALSE.
        prior$trendMinSepDist=6
FALSE
        prior$K_MAX=132
        prior$precValue=1.500000
FALSE
FALSE
        prior$precPriorType='uniform'
FALSE #..... End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
        mcmc=list()
FALSE
        mcmc$seed=0
FALSE
        mcmc$samples=8000
FALSE
        mcmc$thinningFactor=5
       mcmc$burnin=200
FALSE
FALSE
        mcmc$chainNumber=3
FALSE
        mcmc$maxMoveStepSize=12
FALSE
        mcmc$trendResamplingOrderProb=0.1000
FALSE
        mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #..... End of displaying mcmc ......
FALSE #.....Start of displaying 'extra' .....
FALSE
        extra=list()
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
FALSE
        extra$numThreadsPerCPU=2
FALSE
        extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #----#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
```

```
FALSE
FALSE #.....Start of displaying 'MetaData' ......
FALSE metadata=list()
FALSE
        metadata$isRegularOrdered=FALSE
      metadata$season='harmonic'
FALSE
FALSE
        metadata$period=1.000000
FALSE
         metadata$startTime=1984.25000
FALSE
         metadata$deltaTime=0.08333
         metadata$whichDimIsTime=1
FALSE
FALSE
        metadata$missingValue=NaN
FALSE
         metadata$maxMissingRate=0.7500
         metadata$deseasonalize=FALSE
FALSE
FALSE
         metadata$detrend=FALSE
FALSE #......End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' .....
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
         prior$seasonMinOrder=1
FALSE
         prior$seasonMaxOrder=5
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
         prior$trendMinKnotNum=0
FALSE
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE
         prior$K_MAX=132
         prior$precValue=1.500000
FALSE
FALSE
         prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE mcmc=list()
FALSE mcmc$seed=0
FALSE
        mcmc$samples=8000
FALSE
         mcmc$thinningFactor=5
FALSE
        mcmc$burnin=200
FALSE
        mcmc$chainNumber=3
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
FALSE
         mcmc$seasonResamplingOrderProb=0.1700
FALSE
         mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
        extra=list()
         extra$dumpInputData=TRUE
FALSE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE
         extra$computeSeasonOrder=TRUE
```

```
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
        extra$computeTrendChngpt=TRUE
FALSE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
        extra$printOptions=TRUE
FALSE
FALSE
        extra$consoleWidth=80
FALSE
        extra$numThreadsPerCPU=2
FALSE
        extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
      metadata=list()
FALSE
FALSE
       metadata$isRegularOrdered=FALSE
FALSE
        metadata$season='harmonic'
FALSE
        metadata$period=1.000000
FALSE
       metadata$startTime=1984.25000
FALSE
       metadata$deltaTime=0.08333
FALSE
        metadata$whichDimIsTime=1
FALSE
        metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE
        metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
       prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
       prior$trendMaxKnotNum=10
FALSE
        prior$trendMinSepDist=6
FALSE
       prior$K_MAX=132
FALSE
       prior$precValue=1.500000
FALSE
        prior$precPriorType='uniform'
FALSE #..... End of displaying pripr ......
```

```
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
      mcmc=list()
FALSE
       mcmc$seed=0
FALSE
       mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
FALSE
       mcmc$burnin=200
FALSE
       mcmc$chainNumber=3
FALSE
       mcmc$maxMoveStepSize=12
       {\tt mcmc\$trendResamplingOrderProb=0.1000}
FALSE
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
       extra=list()
FALSE
       extra$dumpInputData=TRUE
FALSE
       extra$whichOutputDimIsTime=1
FALSE
       extra$computeCredible=TRUE
FALSE
       extra$fastCIComputation=TRUE
FALSE
       extra$computeSeasonOrder=TRUE
FALSE
       extra$computeTrendOrder=TRUE
FALSE
       extra$computeSeasonChngpt=TRUE
FALSE
       extra$computeTrendChngpt=TRUE
FALSE
       extra$computeSeasonAmp=TRUE
FALSE
       extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
       extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
       extra$consoleWidth=80
        extra$numThreadsPerCPU=2
FALSE
FALSE
        extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE
       metadata=list()
       metadata$isRegularOrdered=FALSE
FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE
       metadata$startTime=1984.25000
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
```

```
FALSE
         metadata$deseasonalize=FALSE
FALSE.
         metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
         prior=list()
FALSE
         prior$modelPriorType=1
FALSE
         prior$seasonMinOrder=1
FALSE
         prior$seasonMaxOrder=5
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
FALSE
         prior$trendMaxOrder=1
FALSE
         prior$trendMinKnotNum=0
FALSE
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE
         prior$K MAX=132
FALSE
         prior$precValue=1.500000
         prior$precPriorType='uniform'
FALSE
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
         mcmc=list()
FALSE
         mcmc$seed=0
FALSE
         mcmc$samples=8000
FALSE
         mcmc$thinningFactor=5
FALSE
         mcmc$burnin=200
FALSE
         mcmc$chainNumber=3
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
FALSE
         mcmc$seasonResamplingOrderProb=0.1700
FALSE
         mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
         extra=list()
FALSE.
         extra$dumpInputData=TRUE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE
         extra$computeSeasonOrder=TRUE
FALSE
         extra$computeTrendOrder=TRUE
FALSE
         extra$computeSeasonChngpt=TRUE
FALSE
         extra$computeTrendChngpt=TRUE
FALSE
         extra$computeSeasonAmp=TRUE
FALSE
         extra$computeTrendSlope=TRUE
FALSE
         extra$tallyPosNegSeasonJump=FALSE
FALSE
         extra$tallyPosNegTrendJump=TRUE
FALSE
         extra$tallyIncDecTrendJump=TRUE
FALSE
         extra$printProgressBar=TRUE
FALSE
         extra$printOptions=TRUE
FALSE
         extra$consoleWidth=80
         extra$numThreadsPerCPU=2
FALSE
```

```
FALSE
       extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE #-----#
         OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE
     metadata$startTime=1984.25000
FALSE metadata$deltaTime=0.08333
FALSE metadata$whichDimIsTime=1
FALSE
     metadata$missingValue=NaN
FALSE metadata$maxMissingRate=0.7500
FALSE metadata$deseasonalize=FALSE
FALSE.
       metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
     prior=list()
FALSE
       prior$modelPriorType=1
FALSE
       prior$seasonMinOrder=1
FALSE
       prior$seasonMaxOrder=5
FALSE
       prior$seasonMinKnotNum=0
FALSE
       prior$seasonMaxKnotNum=10
FALSE
       prior$seasonMinSepDist=6
FALSE
       prior$trendMinOrder=0
FALSE
       prior$trendMaxOrder=1
FALSE
       prior$trendMinKnotNum=0
FALSE
       prior$trendMaxKnotNum=10
FALSE
       prior$trendMinSepDist=6
FALSE
       prior$K MAX=132
FALSE
       prior$precValue=1.500000
FALSE
       prior$precPriorType='uniform'
FALSE #..... End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
     mcmc=list()
FALSE
       mcmc$seed=0
       mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
FALSE
       mcmc$burnin=200
FALSE
FALSE
       mcmc$chainNumber=3
FALSE
       mcmc$maxMoveStepSize=12
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
       mcmc$credIntervalAlphaLevel=0.950
FALSE
```

```
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
       extra=list()
FALSE
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
FALSE.
        extra$numThreadsPerCPU=2
FALSE
        extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE
FALSE #--
           _____#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
       metadata=list()
FALSE
FALSE
        metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE.
       metadata$startTime=1984.25000
FALSE
        metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
        metadata$detrend=FALSE
FALSE
FALSE #......End of displaying MetaData ......
FALSE
FALSE #..... Start of displaying 'prior' ......
        prior=list()
FALSE
FALSE
        prior$modelPriorType=1
FALSE
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
```

```
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
       prior$trendMinKnotNum=0
FALSE
FALSE
        prior$trendMaxKnotNum=10
FALSE
       prior$trendMinSepDist=6
FALSE
       prior$K MAX=132
FALSE
       prior$precValue=1.500000
FALSE
        prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
       mcmc=list()
FALSE
       mcmc$seed=0
FALSE
        mcmc$samples=8000
FALSE
        mcmc$thinningFactor=5
FALSE
        mcmc$burnin=200
FALSE
        mcmc$chainNumber=3
FALSE
        mcmc$maxMoveStepSize=12
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
        mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' .....
        extra=list()
FALSE
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE.
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
FALSE.
        extra$numThreadsPerCPU=2
        extra$numParThreads=0
FALSE
FALSE #.....End of displaying extra .....
FALSE
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' ......
```

```
FALSE
         metadata=list()
FALSE.
         metadata$isRegularOrdered=FALSE
         metadata$season='harmonic'
FALSE
FALSE
         metadata$period=1.000000
         metadata$startTime=1984.41675
FALSE
FALSE
         metadata$deltaTime=0.08333
FALSE
         metadata$whichDimIsTime=1
FALSE
         metadata$missingValue=NaN
FALSE.
         metadata$maxMissingRate=0.7500
FALSE
         metadata$deseasonalize=FALSE
FALSE
         metadata$detrend=FALSE
FALSE #......End of displaying MetaData ......
FALSE
FALSE #..... Start of displaying 'prior' ......
FALSE
         prior=list()
FALSE
         prior$modelPriorType=1
FALSE
         prior$seasonMinOrder=1
FALSE
         prior$seasonMaxOrder=5
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
FALSE
         prior$trendMaxOrder=1
FALSE
         prior$trendMinKnotNum=0
FALSE.
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE
         prior$K_MAX=132
FALSE
         prior$precValue=1.500000
FALSE
         prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
         mcmc=list()
FALSE
         mcmc$seed=0
FALSE
         mcmc$samples=8000
FALSE
         mcmc$thinningFactor=5
FALSE
         mcmc$burnin=200
FALSE
         mcmc$chainNumber=3
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
FALSE
         mcmc$seasonResamplingOrderProb=0.1700
         mcmc$credIntervalAlphaLevel=0.950
FALSE.
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
         extra=list()
FALSE
         extra$dumpInputData=TRUE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE
         extra$computeSeasonOrder=TRUE
FALSE
         extra$computeTrendOrder=TRUE
FALSE
         extra$computeSeasonChngpt=TRUE
FALSE
         extra$computeTrendChngpt=TRUE
```

```
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
       extra$tallyPosNegSeasonJump=FALSE
FALSE
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
       extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
FALSE
       extra$printOptions=TRUE
       extra$consoleWidth=80
FALSE
FALSE
       extra$numThreadsPerCPU=2
FALSE
       extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE
FALSE #-----#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #-----
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE
       metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE metadata$period=1.000000
FALSE
       metadata$startTime=1984.33337
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
       metadata$deseasonalize=FALSE
FALSE
FALSE
       metadata$detrend=FALSE
FALSE #.....End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
      prior=list()
FALSE
       prior$modelPriorType=1
FALSE.
       prior$seasonMinOrder=1
FALSE
       prior$seasonMaxOrder=5
FALSE
       prior$seasonMinKnotNum=0
FALSE
       prior$seasonMaxKnotNum=10
FALSE
       prior$seasonMinSepDist=6
FALSE
       prior$trendMinOrder=0
FALSE
       prior$trendMaxOrder=1
FALSE
       prior$trendMinKnotNum=0
FALSE
       prior$trendMaxKnotNum=10
FALSE
       prior$trendMinSepDist=6
FALSE
       prior$K_MAX=132
FALSE
       prior$precValue=1.500000
       prior$precPriorType='uniform'
FALSE
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
     mcmc=list()
```

```
FALSE
       mcmc$seed=0
FALSE
       mcmc$samples=8000
FALSE mcmc$thinningFactor=5
FALSE mcmc$burnin=200
FALSE
       mcmc$chainNumber=3
FALSE
     mcmc$maxMoveStepSize=12
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
       mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
       extra=list()
FALSE
       extra$dumpInputData=TRUE
FALSE
       extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
       extra$fastCIComputation=TRUE
FALSE
       extra$computeSeasonOrder=TRUE
FALSE
       extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
       extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
       extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
FALSE
       extra$printOptions=TRUE
       extra$consoleWidth=80
FALSE
       extra$numThreadsPerCPU=2
FALSE
FALSE
        extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE
FALSE #-----#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' ......
FALSE
       metadata=list()
FALSE
       metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
       metadata$startTime=1984.33337
FALSE
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
FALSE
       metadata$deseasonalize=FALSE
FALSE
       metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
```

```
FALSE
FALSE #.....Start of displaying 'prior' ......
         prior=list()
FALSE
FALSE
         prior$modelPriorType=1
FALSE
         prior$seasonMinOrder=1
FALSE
         prior$seasonMaxOrder=5
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
FALSE
         prior$trendMaxOrder=1
FALSE
         prior$trendMinKnotNum=0
FALSE
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE
         prior$K_MAX=132
FALSE
         prior$precValue=1.500000
FALSE
         prior$precPriorType='uniform'
FALSE #..... End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
        mcmc=list()
FALSE
         mcmc$seed=0
FALSE
         mcmc$samples=8000
FALSE
         mcmc$thinningFactor=5
         mcmc$burnin=200
FALSE.
FALSE
         mcmc$chainNumber=3
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
FALSE
         mcmc$seasonResamplingOrderProb=0.1700
FALSE
         mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
         extra=list()
         extra$dumpInputData=TRUE
FALSE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE
         extra$computeSeasonOrder=TRUE
FALSE
         extra$computeTrendOrder=TRUE
FALSE
         extra$computeSeasonChngpt=TRUE
FALSE
         extra$computeTrendChngpt=TRUE
FALSE
         extra$computeSeasonAmp=TRUE
FALSE
         extra$computeTrendSlope=TRUE
FALSE
         extra$tallyPosNegSeasonJump=FALSE
FALSE
         extra$tallyPosNegTrendJump=TRUE
FALSE
         extra$tallyIncDecTrendJump=TRUE
FALSE
         extra$printProgressBar=TRUE
FALSE
         extra$printOptions=TRUE
FALSE
         extra$consoleWidth=80
FALSE
         extra$numThreadsPerCPU=2
FALSE
         extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
```

```
FALSE
FALSE #-----#
FALSE #
          OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE
     metadata=list()
FALSE
       metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE
       metadata$startTime=1984.33337
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
FALSE
       metadata$deseasonalize=FALSE
       metadata$detrend=FALSE
FALSE
FALSE #.....End of displaying MetaData ......
FALSE #.....Start of displaying 'prior' ......
       prior=list()
FALSE
FALSE
       prior$modelPriorType=1
FALSE
       prior$seasonMinOrder=1
FALSE
       prior$seasonMaxOrder=5
FALSE
       prior$seasonMinKnotNum=0
FALSE
       prior$seasonMaxKnotNum=10
FALSE
       prior$seasonMinSepDist=6
FALSE
       prior$trendMinOrder=0
FALSE
       prior$trendMaxOrder=1
FALSE
       prior$trendMinKnotNum=0
FALSE
       prior$trendMaxKnotNum=10
FALSE
       prior$trendMinSepDist=6
FALSE
       prior$K_MAX=132
FALSE
       prior$precValue=1.500000
FALSE
       prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
      mcmc=list()
FALSE
       mcmc$seed=0
       mcmc$samples=8000
FALSE
FALSE
       mcmc$thinningFactor=5
FALSE
       mcmc$burnin=200
FALSE
       mcmc$chainNumber=3
       mcmc$maxMoveStepSize=12
FALSE
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
       mcmc$credIntervalAlphaLevel=0.950
FALSE #..... End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' ......
```

```
FALSE
        extra=list()
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE.
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
FALSE
        extra$numThreadsPerCPU=2
FALSE
        extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE
        metadata=list()
FALSE
        metadata$isRegularOrdered=FALSE
FALSE
        metadata$season='harmonic'
FALSE
       metadata$period=1.000000
        metadata$startTime=1984.25000
FALSE
       metadata$deltaTime=0.08333
FALSE
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE
        metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
```

```
FALSE
       prior$trendMinSepDist=6
       prior$K MAX=132
FALSE
FALSE
       prior$precValue=1.500000
FALSE
       prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE #.....Start of displaying 'mcmc' ......
FALSE
       mcmc=list()
       mcmc$seed=0
FALSE
FALSE
       mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
       mcmc$burnin=200
FALSE
FALSE
       mcmc$chainNumber=3
FALSE
       mcmc$maxMoveStepSize=12
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
       mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' ......
FALSE extra=list()
FALSE
       extra$dumpInputData=TRUE
FALSE
       extra$whichOutputDimIsTime=1
FALSE
       extra$computeCredible=TRUE
FALSE
       extra$fastCIComputation=TRUE
FALSE
       extra$computeSeasonOrder=TRUE
FALSE
       extra$computeTrendOrder=TRUE
FALSE
       extra$computeSeasonChngpt=TRUE
FALSE
       extra$computeTrendChngpt=TRUE
FALSE
       extra$computeSeasonAmp=TRUE
FALSE
       extra$computeTrendSlope=TRUE
FALSE
       extra$tallyPosNegSeasonJump=FALSE
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
       extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
FALSE
       extra$printOptions=TRUE
FALSE
       extra$consoleWidth=80
FALSE
       extra$numThreadsPerCPU=2
FALSE
       extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE metadata$isRegularOrdered=FALSE
```

FALSE

prior\$trendMaxKnotNum=10

metadata\$season='harmonic'

FALSE

```
FALSE
         metadata$period=1.000000
FALSE.
         metadata$startTime=1984.33337
         metadata$deltaTime=0.08333
FALSE
FALSE
         metadata$whichDimIsTime=1
FALSE
         metadata$missingValue=NaN
FALSE
         metadata$maxMissingRate=0.7500
FALSE
         metadata$deseasonalize=FALSE
FALSE
         metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
         prior=list()
FALSE
         prior$modelPriorType=1
FALSE
         prior$seasonMinOrder=1
FALSE
         prior$seasonMaxOrder=5
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
FALSE
         prior$trendMaxOrder=1
FALSE
         prior$trendMinKnotNum=0
FALSE
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE
         prior$K MAX=132
FALSE.
         prior$precValue=1.500000
FALSE
         prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
         mcmc=list()
FALSE
         mcmc$seed=0
         mcmc$samples=8000
FALSE
FALSE
         mcmc$thinningFactor=5
FALSE
         mcmc$burnin=200
         mcmc$chainNumber=3
FALSE
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
FALSE
         mcmc$seasonResamplingOrderProb=0.1700
FALSE
         mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' ......
FALSE
         extra=list()
FALSE
         extra$dumpInputData=TRUE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE
         extra$computeSeasonOrder=TRUE
FALSE
         extra$computeTrendOrder=TRUE
FALSE
         extra$computeSeasonChngpt=TRUE
FALSE
         extra$computeTrendChngpt=TRUE
FALSE
         extra$computeSeasonAmp=TRUE
FALSE
         extra$computeTrendSlope=TRUE
FALSE
         extra$tallyPosNegSeasonJump=FALSE
```

```
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
       extra$tallyIncDecTrendJump=TRUE
FALSE extra$printProgressBar=TRUE
       extra$printOptions=TRUE
FALSE
FALSE
       extra$consoleWidth=80
FALSE
     extra$numThreadsPerCPU=2
FALSE
       extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
FALSE #
          OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE
       metadata$isRegularOrdered=FALSE
FALSE metadata$season='harmonic'
FALSE metadata$period=1.000000
FALSE metadata$startTime=1984.41675
FALSE
       metadata$deltaTime=0.08333
FALSE metadata$whichDimIsTime=1
FALSE metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
FALSE
       metadata$deseasonalize=FALSE
       metadata$detrend=FALSE
FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
       prior=list()
FALSE
       prior$modelPriorType=1
FALSE
       prior$seasonMinOrder=1
FALSE
       prior$seasonMaxOrder=5
FALSE
       prior$seasonMinKnotNum=0
FALSE
       prior$seasonMaxKnotNum=10
FALSE
       prior$seasonMinSepDist=6
FALSE
       prior$trendMinOrder=0
FALSE
       prior$trendMaxOrder=1
FALSE
       prior$trendMinKnotNum=0
FALSE
       prior$trendMaxKnotNum=10
FALSE
       prior$trendMinSepDist=6
FALSE
       prior$K_MAX=132
       prior$precValue=1.500000
FALSE
       prior$precPriorType='uniform'
FALSE
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
     mcmc=list()
FALSE
     mcmc$seed=0
FALSE mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
```

```
FALSE
       mcmc$burnin=200
FALSE
       mcmc$chainNumber=3
FALSE mcmc$maxMoveStepSize=12
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
       mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
       extra=list()
FALSE
       extra$dumpInputData=TRUE
FALSE
       extra$whichOutputDimIsTime=1
FALSE
       extra$computeCredible=TRUE
FALSE
       extra$fastCIComputation=TRUE
FALSE
       extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
       extra$computeSeasonChngpt=TRUE
FALSE
       extra$computeTrendChngpt=TRUE
FALSE
       extra$computeSeasonAmp=TRUE
FALSE
       extra$computeTrendSlope=TRUE
FALSE
       extra$tallyPosNegSeasonJump=FALSE
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
FALSE
       extra$printOptions=TRUE
FALSE
       extra$consoleWidth=80
FALSE
       extra$numThreadsPerCPU=2
       extra$numParThreads=0
FALSE
FALSE #..... End of displaying extra .....
FALSE
FALSE #-----#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE metadata$isRegularOrdered=FALSE
FALSE metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE
       metadata$startTime=1984.41675
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
FALSE
       metadata$deseasonalize=FALSE
       metadata$detrend=FALSE
FALSE
FALSE #.....End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
       prior=list()
```

```
FALSE
        prior$modelPriorType=1
FALSE.
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
        prior$trendMaxKnotNum=10
FALSE
        prior$trendMinSepDist=6
FALSE
        prior$K_MAX=132
FALSE
        prior$precValue=1.500000
        prior$precPriorType='uniform'
FALSE
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
        mcmc=list()
FALSE
        mcmc$seed=0
        mcmc$samples=8000
FALSE
        mcmc$thinningFactor=5
FALSE
FALSE
        mcmc$burnin=200
FALSE
        mcmc$chainNumber=3
FALSE
        mcmc$maxMoveStepSize=12
        mcmc$trendResamplingOrderProb=0.1000
FALSE
FALSE
        mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
        extra=list()
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
        extra$numThreadsPerCPU=2
FALSE
FALSE
        extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE
FALSE #-----#
```

```
OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE
        metadata$isRegularOrdered=FALSE
FALSE
        metadata$season='harmonic'
        metadata$period=1.000000
FALSE
FALSE
        metadata$startTime=1984.50000
FALSE
        metadata$deltaTime=0.08333
FALSE
        metadata$whichDimIsTime=1
FALSE
        metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE
        metadata$detrend=FALSE
FALSE #......End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' .....
FALSE
      prior=list()
FALSE
        prior$modelPriorType=1
FALSE
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
        prior$seasonMaxKnotNum=10
FALSE
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
        prior$trendMaxKnotNum=10
FALSE
        prior$trendMinSepDist=6
FALSE
        prior$K_MAX=132
FALSE
        prior$precValue=1.500000
FALSE
        prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
       mcmc=list()
FALSE
      mcmc$seed=0
FALSE mcmc$samples=8000
        mcmc$thinningFactor=5
FALSE
FALSE
        mcmc$burnin=200
FALSE
        mcmc$chainNumber=3
FALSE
        mcmc$maxMoveStepSize=12
FALSE
        mcmc$trendResamplingOrderProb=0.1000
FALSE
        mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE extra=list()
FALSE
        extra$dumpInputData=TRUE
        extra$whichOutputDimIsTime=1
FALSE
```

```
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE.
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
FALSE
        extra$numThreadsPerCPU=2
FALSE
        extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE \Progress: 0.0% done[>***********************************||Progress: 4.2%
FALSE
FALSE #-----#
            OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE #.....Start of displaying 'MetaData' .....
FALSE
        metadata=list()
FALSE
        metadata$isRegularOrdered=FALSE
FALSE
        metadata$season='harmonic'
FALSE
        metadata$period=1.000000
FALSE
        metadata$startTime=1984.50000
        metadata$deltaTime=0.08333
FALSE
FALSE
        metadata$whichDimIsTime=1
FALSE
        metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE.
        metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' .....
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
        prior$trendMaxKnotNum=10
FALSE
        prior$trendMinSepDist=6
FALSE
        prior$K MAX=132
```

```
FALSE
       prior$precValue=1.500000
     prior$precPriorType='uniform'
FALSE
FALSE #..... End of displaying pripr ......
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE mcmc=list()
FALSE mcmc$seed=0
FALSE mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
       mcmc$burnin=200
FALSE
FALSE
       mcmc$chainNumber=3
FALSE
       mcmc$maxMoveStepSize=12
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
       mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
     extra=list()
       extra$dumpInputData=TRUE
FALSE
FALSE
       extra$whichOutputDimIsTime=1
FALSE
       extra$computeCredible=TRUE
FALSE
       extra$fastCIComputation=TRUE
FALSE
       extra$computeSeasonOrder=TRUE
FALSE
       extra$computeTrendOrder=TRUE
FALSE
       extra$computeSeasonChngpt=TRUE
FALSE
       extra$computeTrendChngpt=TRUE
FALSE
       extra$computeSeasonAmp=TRUE
FALSE
       extra$computeTrendSlope=TRUE
FALSE
       extra$tallyPosNegSeasonJump=FALSE
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
       extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
FALSE
       extra$printOptions=TRUE
FALSE
       extra$consoleWidth=80
FALSE
       extra$numThreadsPerCPU=2
FALSE
       extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
FALSE #
          OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE
      metadata=list()
       metadata$isRegularOrdered=FALSE
FALSE
FALSE
       metadata$season='harmonic'
FALSE metadata$period=1.000000
FALSE metadata$startTime=1984.41675
       metadata$deltaTime=0.08333
FALSE
```

```
FALSE
         metadata$whichDimIsTime=1
FALSE
         metadata$missingValue=NaN
         metadata$maxMissingRate=0.7500
FALSE
FALSE
         metadata$deseasonalize=FALSE
FALSE
         metadata$detrend=FALSE
FALSE #..... End of displaying MetaData .....
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
         prior=list()
         prior$modelPriorType=1
FALSE
FALSE
         prior$seasonMinOrder=1
FALSE
         prior$seasonMaxOrder=5
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
FALSE
         prior$trendMaxOrder=1
FALSE
         prior$trendMinKnotNum=0
FALSE
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE.
         prior$K_MAX=132
FALSE
         prior$precValue=1.500000
FALSE
         prior$precPriorType='uniform'
FALSE #..... End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
         mcmc=list()
FALSE
         mcmc$seed=0
FALSE
         mcmc$samples=8000
FALSE
         mcmc$thinningFactor=5
FALSE
         mcmc$burnin=200
FALSE
         mcmc$chainNumber=3
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
FALSE
         mcmc$seasonResamplingOrderProb=0.1700
FALSE
         mcmc$credIntervalAlphaLevel=0.950
FALSE #..... End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
         extra=list()
FALSE
         extra$dumpInputData=TRUE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE
         extra$computeSeasonOrder=TRUE
FALSE
         extra$computeTrendOrder=TRUE
FALSE
         extra$computeSeasonChngpt=TRUE
FALSE
         extra$computeTrendChngpt=TRUE
FALSE
         extra$computeSeasonAmp=TRUE
FALSE
         extra$computeTrendSlope=TRUE
FALSE
         extra$tallyPosNegSeasonJump=FALSE
FALSE
         extra$tallyPosNegTrendJump=TRUE
FALSE
         extra$tallyIncDecTrendJump=TRUE
FALSE
         extra$printProgressBar=TRUE
```

```
FALSE
       extra$printOptions=TRUE
FALSE
       extra$consoleWidth=80
       extra$numThreadsPerCPU=2
FALSE
       extra$numParThreads=0
FALSE
FALSE #.....End of displaying extra .....
FALSE
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE
       metadata=list()
FALSE
       metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE
     metadata$period=1.000000
FALSE
       metadata$startTime=1984.50000
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
FALSE
       metadata$maxMissingRate=0.7500
FALSE
       metadata$deseasonalize=FALSE
FALSE
       metadata$detrend=FALSE
FALSE #......End of displaying MetaData ......
FALSE
FALSE #..... Start of displaying 'prior' ......
FALSE
       prior=list()
FALSE
       prior$modelPriorType=1
FALSE
       prior$seasonMinOrder=1
FALSE
       prior$seasonMaxOrder=5
FALSE
       prior$seasonMinKnotNum=0
FALSE
       prior$seasonMaxKnotNum=10
FALSE
       prior$seasonMinSepDist=6
FALSE
       prior$trendMinOrder=0
FALSE.
       prior$trendMaxOrder=1
FALSE
       prior$trendMinKnotNum=0
FALSE
       prior$trendMaxKnotNum=10
FALSE
       prior$trendMinSepDist=6
FALSE
       prior$K_MAX=132
FALSE
       prior$precValue=1.500000
       prior$precPriorType='uniform'
FALSE
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
       mcmc=list()
FALSE
       mcmc$seed=0
       mcmc$samples=8000
FALSE
FALSE
       mcmc$thinningFactor=5
FALSE
       mcmc$burnin=200
FALSE
       mcmc$chainNumber=3
       mcmc$maxMoveStepSize=12
FALSE
```

```
FALSE
        mcmc$trendResamplingOrderProb=0.1000
FALSE.
        mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE extra=list()
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE.
        extra$consoleWidth=80
FALSE
        extra$numThreadsPerCPU=2
        extra$numParThreads=0
FALSE
FALSE #.....End of displaying extra .....
FALSE
4.2%
FALSE
FALSE #-----#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE metadata$isRegularOrdered=FALSE
FALSE
        metadata$season='harmonic'
FALSE metadata$period=1.000000
FALSE metadata$startTime=1984.50000
FALSE
        metadata$deltaTime=0.08333
FALSE
        metadata$whichDimIsTime=1
FALSE
        metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE
        metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' .....
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
        prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
```

```
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
        prior$trendMaxKnotNum=10
FALSE.
        prior$trendMinSepDist=6
FALSE
        prior$K_MAX=132
        prior$precValue=1.500000
FALSE
FALSE
        prior$precPriorType='uniform'
FALSE #..... End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
        mcmc=list()
FALSE
        mcmc$seed=0
FALSE
        mcmc$samples=8000
FALSE
        mcmc$thinningFactor=5
       mcmc$burnin=200
FALSE
FALSE
        mcmc$chainNumber=3
FALSE
        mcmc$maxMoveStepSize=12
FALSE
        mcmc$trendResamplingOrderProb=0.1000
FALSE
        mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #..... End of displaying mcmc ......
FALSE #.....Start of displaying 'extra' .....
FALSE
        extra=list()
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE.
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
        extra$consoleWidth=80
FALSE
        extra$numThreadsPerCPU=2
FALSE
        extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #----#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
```

```
FALSE
FALSE #.....Start of displaying 'MetaData' ......
FALSE metadata=list()
FALSE
        metadata$isRegularOrdered=FALSE
FALSE metadata$season='harmonic'
FALSE
        metadata$period=1.000000
FALSE
         metadata$startTime=1984.25000
FALSE
         metadata$deltaTime=0.08333
        metadata$whichDimIsTime=1
FALSE
FALSE
        metadata$missingValue=NaN
FALSE
         metadata$maxMissingRate=0.7500
         metadata$deseasonalize=FALSE
FALSE
FALSE
         metadata$detrend=FALSE
FALSE #......End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' .....
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
         prior$seasonMinOrder=1
        prior$seasonMaxOrder=5
FALSE
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
         prior$trendMinKnotNum=0
FALSE
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE
         prior$K_MAX=132
         prior$precValue=1.500000
FALSE
FALSE
         prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE mcmc=list()
FALSE mcmc$seed=0
FALSE mcmc$samples=8000
FALSE
        mcmc$thinningFactor=5
        mcmc$burnin=200
FALSE
FALSE
        mcmc$chainNumber=3
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
FALSE
         mcmc$seasonResamplingOrderProb=0.1700
         mcmc$credIntervalAlphaLevel=0.950
FALSE
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
        extra=list()
         extra$dumpInputData=TRUE
FALSE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE
         extra$computeSeasonOrder=TRUE
```

```
FALSE
        extra$computeTrendOrder=TRUE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
        extra$printProgressBar=TRUE
        extra$printOptions=TRUE
FALSE
FALSE
        extra$consoleWidth=80
FALSE
        extra$numThreadsPerCPU=2
FALSE
        extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
FALSE #
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
     metadata=list()
FALSE
FALSE
       metadata$isRegularOrdered=FALSE
FALSE
        metadata$season='harmonic'
FALSE
        metadata$period=1.000000
FALSE
       metadata$startTime=1984.58337
FALSE
       metadata$deltaTime=0.08333
FALSE
        metadata$whichDimIsTime=1
FALSE
        metadata$missingValue=NaN
FALSE
        metadata$maxMissingRate=0.7500
FALSE
        metadata$deseasonalize=FALSE
FALSE
        metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
        prior=list()
FALSE
        prior$modelPriorType=1
FALSE
       prior$seasonMinOrder=1
FALSE
        prior$seasonMaxOrder=5
FALSE
        prior$seasonMinKnotNum=0
FALSE
        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
FALSE
        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
FALSE
        prior$trendMinKnotNum=0
FALSE
       prior$trendMaxKnotNum=10
FALSE
        prior$trendMinSepDist=6
FALSE
       prior$K_MAX=132
FALSE
       prior$precValue=1.500000
FALSE
        prior$precPriorType='uniform'
FALSE #..... End of displaying pripr ......
```

```
FALSE
FALSE #.....Start of displaying 'mcmc' ......
      mcmc=list()
FALSE
FALSE
       mcmc$seed=0
FALSE
       mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
FALSE
       mcmc$burnin=200
FALSE
       mcmc$chainNumber=3
FALSE
       mcmc$maxMoveStepSize=12
       {\tt mcmc\$trendResamplingOrderProb=0.1000}
FALSE
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
FALSE
        mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
       extra=list()
FALSE
       extra$dumpInputData=TRUE
FALSE
       extra$whichOutputDimIsTime=1
FALSE
       extra$computeCredible=TRUE
FALSE
       extra$fastCIComputation=TRUE
       extra$computeSeasonOrder=TRUE
FALSE
FALSE
       extra$computeTrendOrder=TRUE
FALSE
       extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
       extra$computeSeasonAmp=TRUE
FALSE
       extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
       extra$tallyPosNegTrendJump=TRUE
FALSE
       extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
FALSE
        extra$printOptions=TRUE
FALSE
       extra$consoleWidth=80
        extra$numThreadsPerCPU=2
FALSE
FALSE
        extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
FALSE
FALSE #-----#
           OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE
       metadata=list()
       metadata$isRegularOrdered=FALSE
FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE
       metadata$startTime=1984.41675
FALSE
       metadata$deltaTime=0.08333
FALSE
       metadata$whichDimIsTime=1
FALSE
       metadata$missingValue=NaN
       metadata$maxMissingRate=0.7500
FALSE
```

```
FALSE
         metadata$deseasonalize=FALSE
FALSE.
         metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
         prior=list()
FALSE
         prior$modelPriorType=1
FALSE
         prior$seasonMinOrder=1
FALSE
         prior$seasonMaxOrder=5
FALSE
         prior$seasonMinKnotNum=0
FALSE
         prior$seasonMaxKnotNum=10
FALSE
         prior$seasonMinSepDist=6
FALSE
         prior$trendMinOrder=0
FALSE
         prior$trendMaxOrder=1
FALSE
         prior$trendMinKnotNum=0
FALSE
         prior$trendMaxKnotNum=10
FALSE
         prior$trendMinSepDist=6
FALSE
         prior$K MAX=132
FALSE
         prior$precValue=1.500000
FALSE
         prior$precPriorType='uniform'
FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
FALSE
         mcmc=list()
FALSE
         mcmc$seed=0
FALSE
         mcmc$samples=8000
FALSE
         mcmc$thinningFactor=5
FALSE
         mcmc$burnin=200
FALSE
         mcmc$chainNumber=3
FALSE
         mcmc$maxMoveStepSize=12
FALSE
         mcmc$trendResamplingOrderProb=0.1000
FALSE
         mcmc$seasonResamplingOrderProb=0.1700
FALSE
         mcmc$credIntervalAlphaLevel=0.950
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
         extra=list()
FALSE.
         extra$dumpInputData=TRUE
FALSE
         extra$whichOutputDimIsTime=1
FALSE
         extra$computeCredible=TRUE
FALSE
         extra$fastCIComputation=TRUE
FALSE.
         extra$computeSeasonOrder=TRUE
FALSE
         extra$computeTrendOrder=TRUE
FALSE
         extra$computeSeasonChngpt=TRUE
FALSE
         extra$computeTrendChngpt=TRUE
FALSE
         extra$computeSeasonAmp=TRUE
FALSE
         extra$computeTrendSlope=TRUE
FALSE
         extra$tallyPosNegSeasonJump=FALSE
FALSE
         extra$tallyPosNegTrendJump=TRUE
FALSE
         extra$tallyIncDecTrendJump=TRUE
FALSE
         extra$printProgressBar=TRUE
FALSE
         extra$printOptions=TRUE
FALSE
         extra$consoleWidth=80
         extra$numThreadsPerCPU=2
FALSE
```

```
FALSE
       extra$numParThreads=0
FALSE #.....End of displaying extra .....
FALSE
FALSE #-----#
         OPTIONS used in the MCMC inference
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #-----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE metadata$isRegularOrdered=FALSE
FALSE
       metadata$season='harmonic'
FALSE
       metadata$period=1.000000
FALSE
     metadata$startTime=1984.25000
FALSE metadata$deltaTime=0.08333
FALSE metadata$whichDimIsTime=1
FALSE
     metadata$missingValue=NaN
FALSE metadata$maxMissingRate=0.7500
FALSE metadata$deseasonalize=FALSE
FALSE.
       metadata$detrend=FALSE
FALSE #..... End of displaying MetaData ......
FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
     prior=list()
FALSE
       prior$modelPriorType=1
FALSE
       prior$seasonMinOrder=1
FALSE
       prior$seasonMaxOrder=5
FALSE
       prior$seasonMinKnotNum=0
FALSE
       prior$seasonMaxKnotNum=10
FALSE
       prior$seasonMinSepDist=6
FALSE
       prior$trendMinOrder=0
FALSE
       prior$trendMaxOrder=1
FALSE
       prior$trendMinKnotNum=0
FALSE
       prior$trendMaxKnotNum=10
FALSE.
       prior$trendMinSepDist=6
FALSE
       prior$K MAX=132
FALSE
       prior$precValue=1.500000
FALSE
       prior$precPriorType='uniform'
FALSE #..... End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' ......
FALSE
     mcmc=list()
FALSE
       mcmc$seed=0
       mcmc$samples=8000
FALSE
       mcmc$thinningFactor=5
FALSE
       mcmc$burnin=200
FALSE
FALSE
       mcmc$chainNumber=3
FALSE
       mcmc$maxMoveStepSize=12
FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
       mcmc$seasonResamplingOrderProb=0.1700
       mcmc$credIntervalAlphaLevel=0.950
FALSE
```

```
FALSE #.....End of displaying mcmc .....
FALSE
FALSE #.....Start of displaying 'extra' .....
FALSE
       extra=list()
FALSE
        extra$dumpInputData=TRUE
FALSE
        extra$whichOutputDimIsTime=1
FALSE
        extra$computeCredible=TRUE
FALSE.
        extra$fastCIComputation=TRUE
FALSE
        extra$computeSeasonOrder=TRUE
        extra$computeTrendOrder=TRUE
FALSE
FALSE
        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
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FALSE
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FALSE
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FALSE
        extra$tallyPosNegTrendJump=TRUE
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FALSE
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FALSE
        metadata$deseasonalize=FALSE
FALSE
        metadata$detrend=FALSE
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FALSE
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FALSE
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         metadata$detrend=FALSE
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         prior$K_MAX=132
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         prior$precValue=1.500000
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         prior$precPriorType='uniform'
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FALSE
         extra$computeSeasonChngpt=TRUE
FALSE
         extra$computeTrendChngpt=TRUE
```

```
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FALSE
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FALSE #.....Start of displaying 'mcmc' ......
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      mcmc=list()
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       mcmc$maxMoveStepSize=12
FALSE
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       mcmc$seasonResamplingOrderProb=0.1700
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       mcmc$credIntervalAlphaLevel=0.950
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         prior$precValue=1.500000
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FALSE #..... End of displaying pripr .....
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FALSE #..... End of displaying MetaData ......
FALSE #.....Start of displaying 'prior' ......
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FALSE
       prior$K_MAX=132
FALSE
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FALSE
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FALSE #.....End of displaying pripr .....
FALSE
FALSE #.....Start of displaying 'mcmc' .....
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FALSE
       mcmc$trendResamplingOrderProb=0.1000
FALSE
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       mcmc$credIntervalAlphaLevel=0.950
FALSE #..... End of displaying mcmc ......
FALSE
FALSE #.....Start of displaying 'extra' ......
```

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        extra$computeSeasonChngpt=TRUE
FALSE
        extra$computeTrendChngpt=TRUE
FALSE
        extra$computeSeasonAmp=TRUE
FALSE
        extra$computeTrendSlope=TRUE
FALSE
        extra$tallyPosNegSeasonJump=FALSE
FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
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        extra$printProgressBar=TRUE
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FALSE #-----#
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        prior$seasonMaxKnotNum=10
FALSE
        prior$seasonMinSepDist=6
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        prior$trendMinOrder=0
FALSE
        prior$trendMaxOrder=1
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        prior$trendMinKnotNum=0
```

```
FALSE
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       extra$computeTrendOrder=TRUE
FALSE
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FALSE
        extra$computeTrendChngpt=TRUE
FALSE
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FALSE
        extra$computeTrendSlope=TRUE
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FALSE
        extra$tallyPosNegTrendJump=TRUE
FALSE
        extra$tallyIncDecTrendJump=TRUE
FALSE
       extra$printProgressBar=TRUE
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       extra$printOptions=TRUE
FALSE.
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        extra$numThreadsPerCPU=2
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       extra$numParThreads=0
FALSE #.....End of displaying extra .....
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FALSE #-----#
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FALSE #
FALSE #-----#
FALSE #set extra$printOptions=0 to suppress the printing #
FALSE #----#
FALSE
FALSE #.....Start of displaying 'MetaData' .....
FALSE metadata=list()
FALSE metadata$isRegularOrdered=FALSE
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metadata\$season='harmonic'

FALSE

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FALSE
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         metadata$whichDimIsTime=1
FALSE
         metadata$missingValue=NaN
FALSE
         metadata$maxMissingRate=0.7500
FALSE
         metadata$deseasonalize=FALSE
FALSE
         metadata$detrend=FALSE
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FALSE
FALSE #.....Start of displaying 'prior' ......
FALSE
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FALSE
         prior$modelPriorType=1
FALSE
         prior$seasonMinOrder=1
FALSE
         prior$seasonMaxOrder=5
FALSE
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FALSE
         prior$seasonMaxKnotNum=10
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         prior$trendMinOrder=0
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         prior$trendMinSepDist=6
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         prior$precPriorType='uniform'
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         extra$computeSeasonAmp=TRUE
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         extra$computeTrendSlope=TRUE
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FALSE metadata$missingValue=NaN
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       metadata$deseasonalize=FALSE
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       prior$precPriorType='uniform'
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        extra$computeTrendChngpt=TRUE
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        extra$printOptions=TRUE
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FALSE
        extra$consoleWidth=80
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        extra$numThreadsPerCPU=2
FALSE
        extra$numParThreads=0
FALSE #..... End of displaying extra .....
FALSE
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FALSE

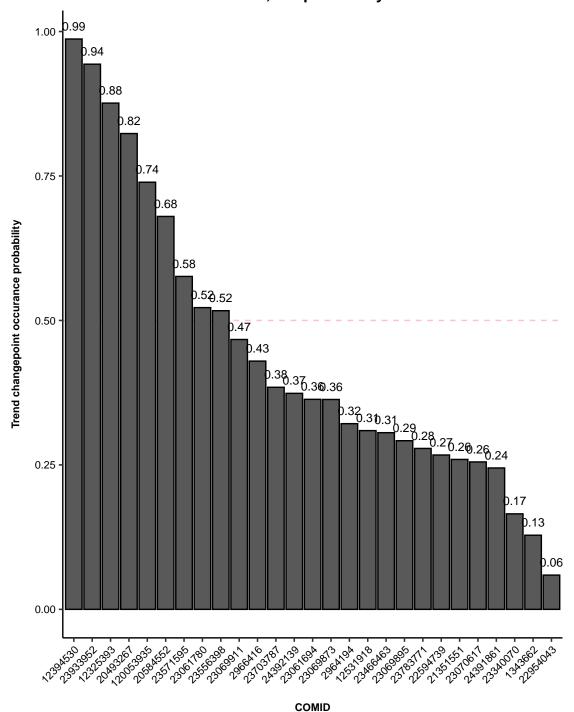
FALSE

mcmc\$burnin=200
mcmc\$chainNumber=3

FALSE Time difference of 46.6103 secs

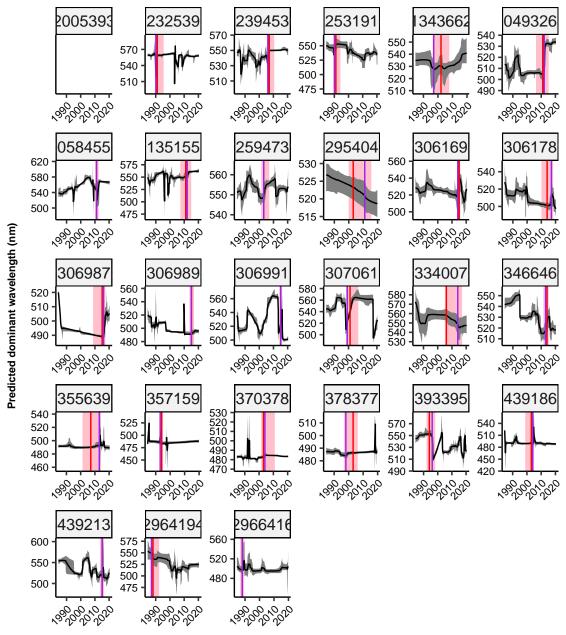
## 2.1.1 Questions:

2.1.1.1 Do any of the trend changepoint confidence intervals span the year of the fire? For 28 lakes, the confidence intervals on the trend changepoint encc burn. For 10 of those lakes, the probability if 0.50



## All the lakes where the confidence intervals on one of the trend changepoints encompasses the year of the watershed burn

The black line with grey shading shows the predicted dWL with 95% CI around the trend. The red line show the time that >90% of the watershed burned. The purple line shows the date of the actual changepoint while the pink shading shows the confidence intervals around the trend changepoint.



Year

2.1.1.2 Do any of the seasonal changepoint confidence intervals span the year of the fire? For 15 lakes, the confidence intervals on the seasonal changepoint el watershed burn. For 2 of those lakes, the probability if 0.50

