



Spotting algorithmic opportunities in the energy market

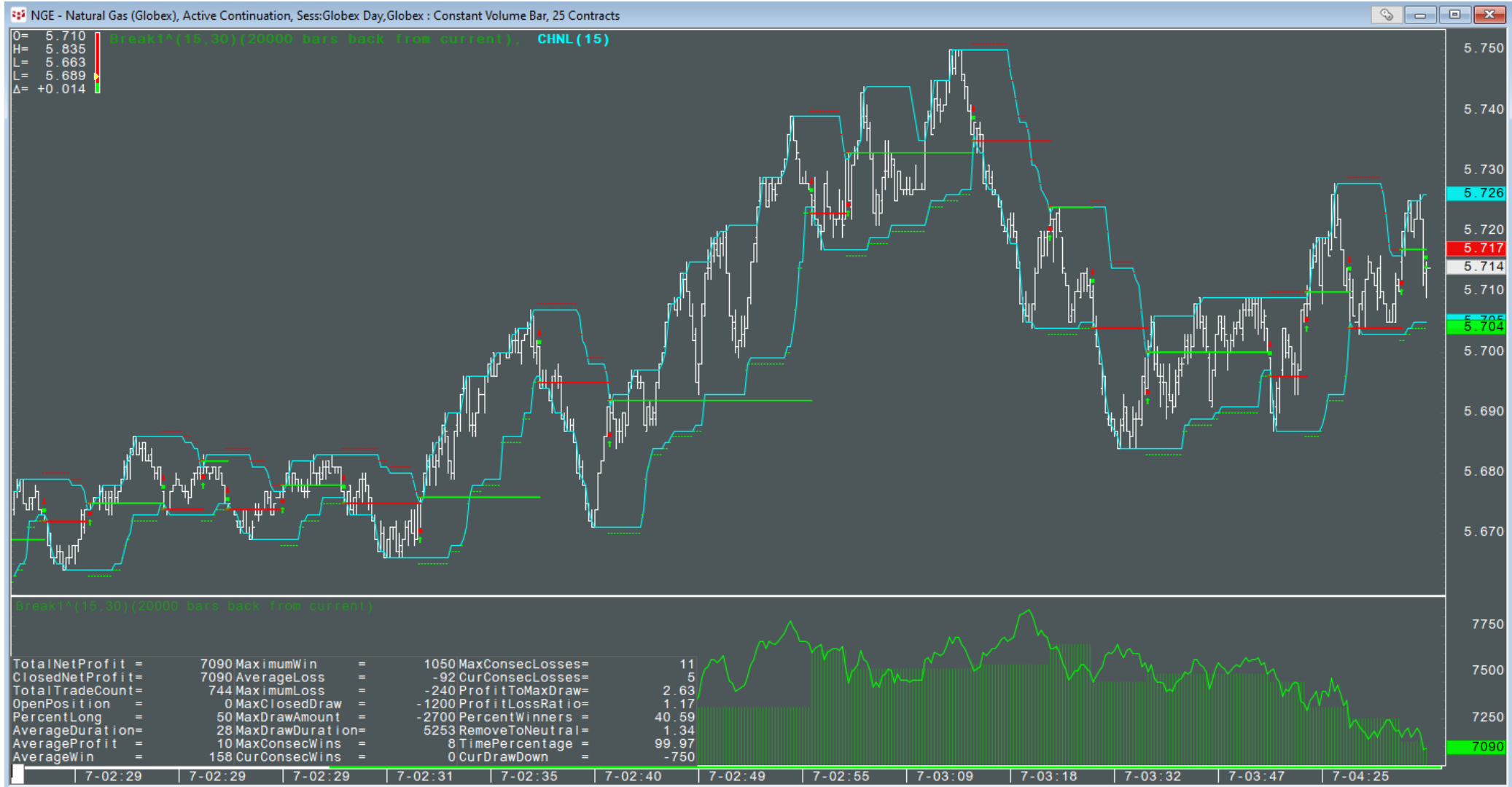
Anthony Cohen

Application Specialist, CQG



Sample strategy

Donchian Breakout example





Formula

Formula - Entries

Formula Builder

QFormulas Conditions User Values Custom Studies Trade Systems

All Folders

Name	Modified	Description	F...	New	Trade Name	Use As	New
Breakout	10/04/2021				Long	Long	
					Short	Short	

Abbreviation: Toolbar Button

Entry Exits Costs Hide Formula when 'Deny Copy' is set in Permissions

Order Type: Allow: Multiple entries before exit (Pyramids) Entry on exit

Signal Price Size **Break1^.Long.Signal**

```
High(@) XABOVE CHI(@,Period)
```

Setup... Offset... Undo Redo

Formula Builder

QFormulas Conditions User Values Custom Studies Trade Systems

All Folders

Name	Modified	Description	F...	New	Trade Name	Use As	New
Breakout	10/04/2021				Long	Long	
					Short	Short	

Abbreviation: Toolbar Button

Entry Exits Costs Hide Formula when 'Deny Copy' is set in Permissions

Order Type: Allow: Multiple entries before exit (Pyramids) Entry on exit

Signal Price Size **Break1^.Short.Signal**

```
Low(@) XBELOW CLO(@,Period)
```

Setup... Offset... Undo Redo

Formula - Exits

Formula Builder

QFormulas Conditions User Values Custom Studies Trade Systems

All Folders **brea**

Name	Modified	Description	F...	New	Trade Name	Use As	New
Breakout	10/04/2021			Copy	Long	Long	Copy
				Del	Short	Short	Del
				Parm			Note
				Note			

Abbreviation: **Break1** Toolbar Button

Entry Exits Costs Hide Formula when 'Deny Copy' is set in Permissions

New	Exit Name	Use	Order type	Duration	Allow exit on entry	Allow > than once	^
Copy	EOD	<input checked="" type="checkbox"/>	Market	DAY	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Del	Stop	<input checked="" type="checkbox"/>	Stop	DAY	<input checked="" type="checkbox"/>	<input type="checkbox"/>	^

Restrict Exits Total Size to Open Position

Signal Price Size **Break1^.Long.Stop.Price**

```
OpenPositionAverageEntryPrice(@,ThisTradeOnly) - (TSize(@)*Stop)
```

Setup... Offset... Undo Redo

Formula Builder

QFormulas Conditions User Values Custom Studies Trade Systems

All Folders **brea**

Name	Modified	Description	F...	New	Trade Name	Use As	New
Breakout	10/04/2021			Copy	Long	Long	Copy
				Del	Short	Short	Del
				Parm			Note
				Note			

Abbreviation: **Break1** Toolbar Button

Entry Exits Costs Hide Formula when 'Deny Copy' is set in Permissions

New	Exit Name	Use	Order type	Duration	Allow exit on entry	Allow > than once	^
Copy	EOD	<input checked="" type="checkbox"/>	Market	DAY	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Del	Stop	<input checked="" type="checkbox"/>	Stop	DAY	<input checked="" type="checkbox"/>	<input type="checkbox"/>	^

Restrict Exits Total Size to Open Position

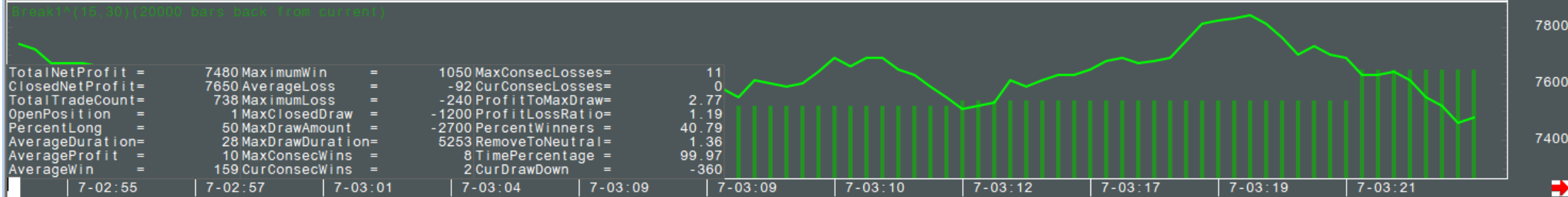
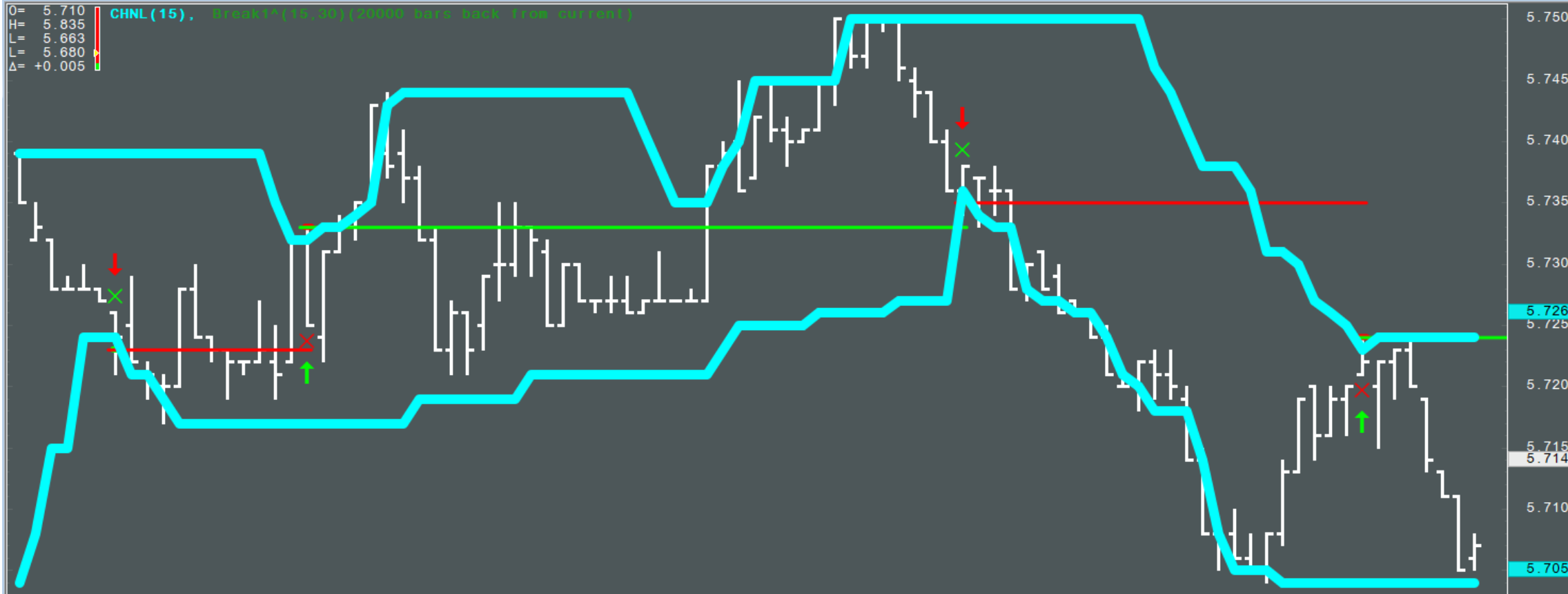
Signal Price Size **Break1^.Short.Stop.Price**

```
OpenPositionAverageEntryPrice(@,ThisTradeOnly) + (TSize(@)*Stop)
```

Setup... Offset... Undo Redo

NGE - Natural Gas (Globex), Active Continuation, Sess:Globex Day,Globex : Constant Volume Bar, 25 Contracts

O= 5.710 H= 5.835 L= 5.663 L= 5.680 Δ= +0.005
 CHNL (15), Break1*(15,30)(20000 bars back from current)



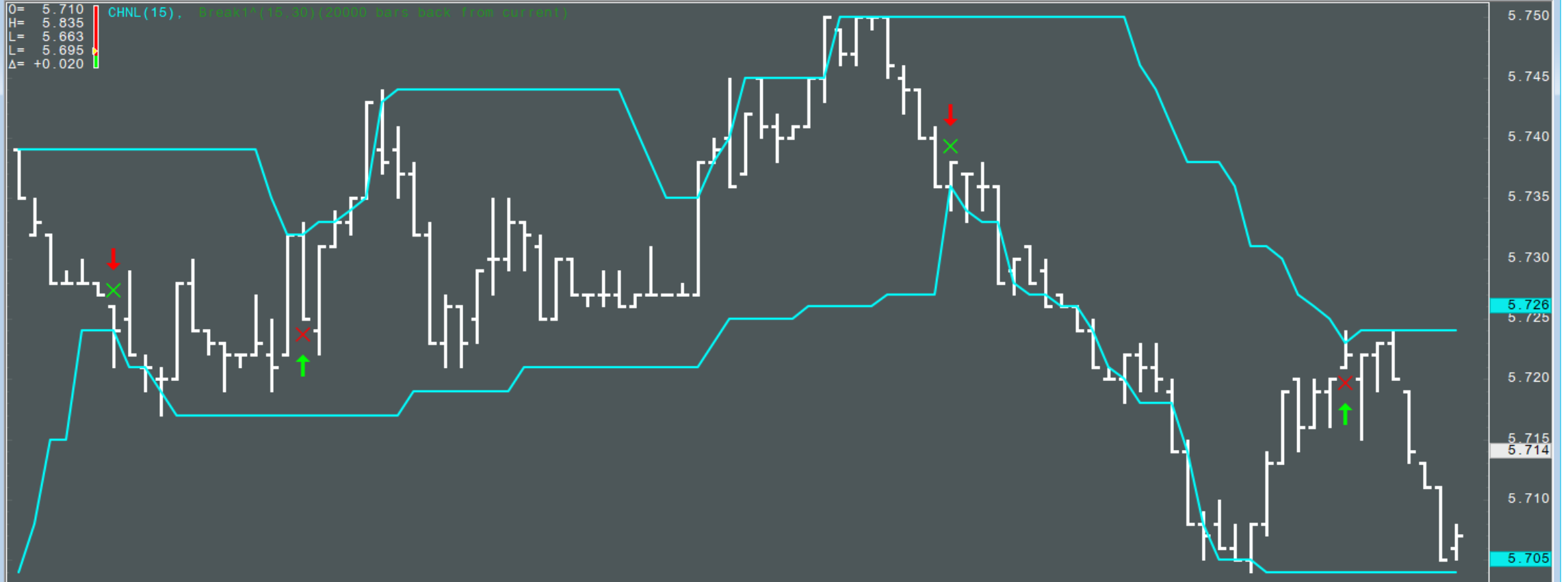
TotalNetProfit =	7480	MaximumWin =	1050	MaxConsecLosses =	11
ClosedNetProfit =	7650	AverageLoss =	-92	CurConsecLosses =	0
TotalTradeCount =	738	MaximumLoss =	-240	ProfitToMaxDraw =	2.77
OpenPosition =	1	MaxClosedDraw =	-1200	ProfitLossRatio =	1.19
PercentLong =	50	MaxDrawAmount =	-2700	PercentWinners =	40.79
AverageDuration =	28	MaxDrawDuration =	5253	RemoveToNeutral =	1.36
AverageProfit =	10	MaxConsecWins =	8	TimePercentage =	99.97
AverageWin =	159	CurConsecWins =	2	CurDrawDown =	-360

7-02:55 | 7-02:57 | 7-03:01 | 7-03:04 | 7-03:09 | 7-03:09 | 7-03:10 | 7-03:12 | 7-03:17 | 7-03:19 | 7-03:21

NGE - Natural Gas (Globex), Active Continuation, Sess:Globex Day,Globex : Constant Volume Bar, 25 Contracts

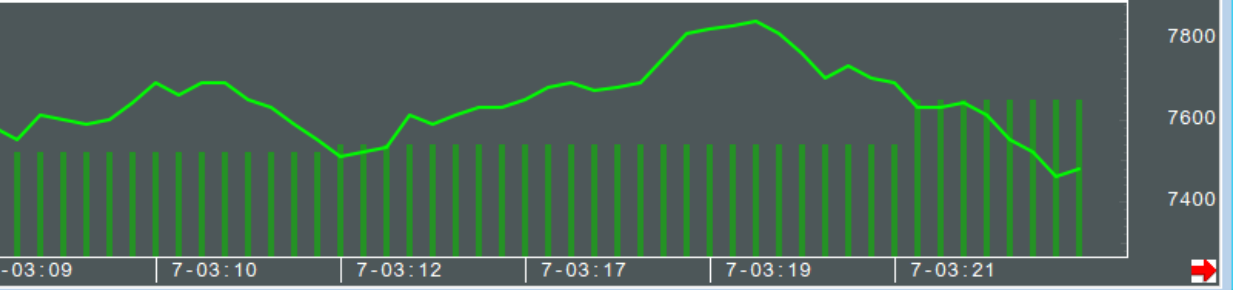
O= 5.710
 H= 5.835
 L= 5.663
 L= 5.695
 Δ= +0.020

CHNL(15), Break1*(15,30)(20000 bars back from current)



Break1*(15,30)(20000 bars back from current)

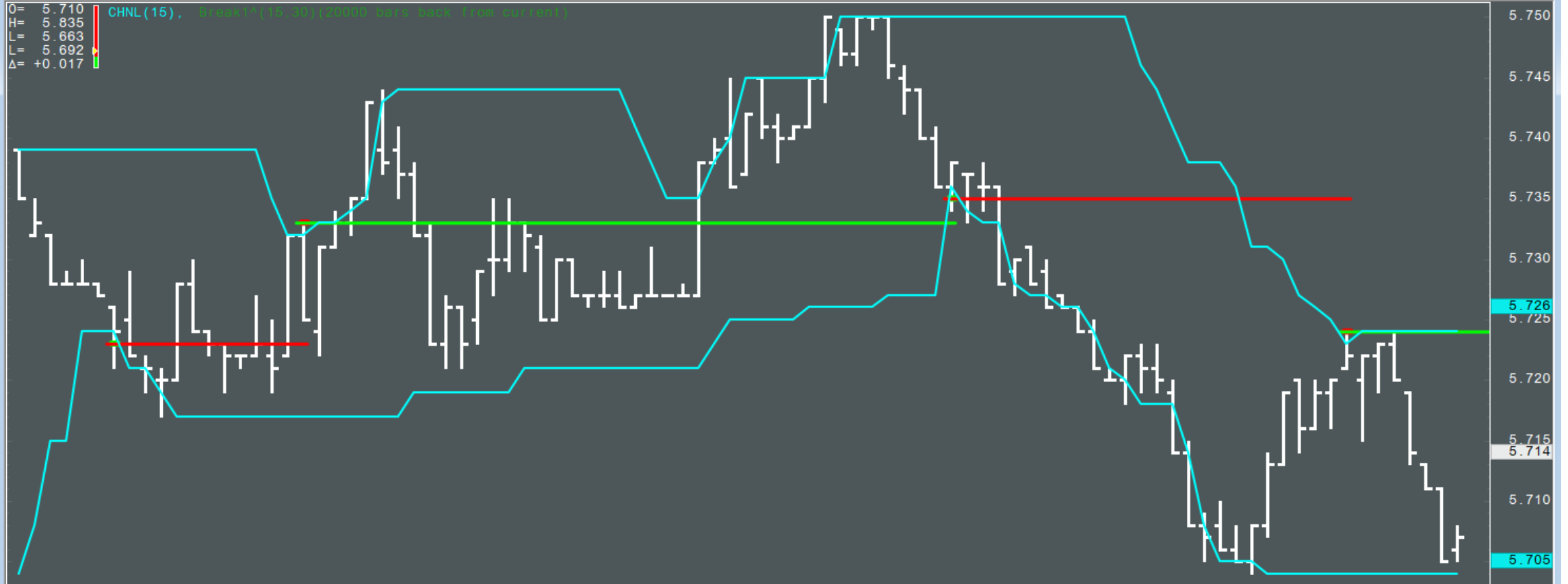
TotalNetProfit =	7480	MaximumWin =	1050	MaxConsecLosses=	11
ClosedNetProfit=	7650	AverageLoss =	-92	CurConsecLosses=	0
TotalTradeCount=	738	MaximumLoss =	-240	ProfitToMaxDraw=	2.77
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NGE - Natural Gas (Globex), Active Continuation, Sess:Globex Day,Globex : Constant Volume Bar, 25 Contracts

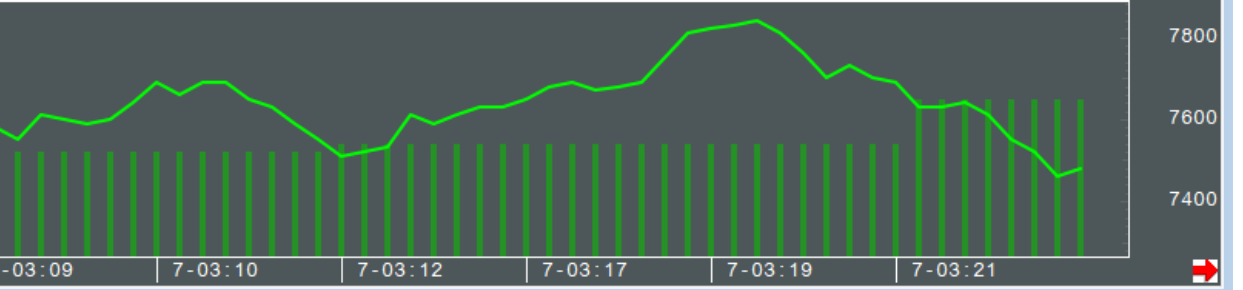
O= 5.710
 H= 5.835
 L= 5.663
 L= 5.692
 Δ= +0.017

CHNL(15), Break1*[15,30][20000 bars back from current]



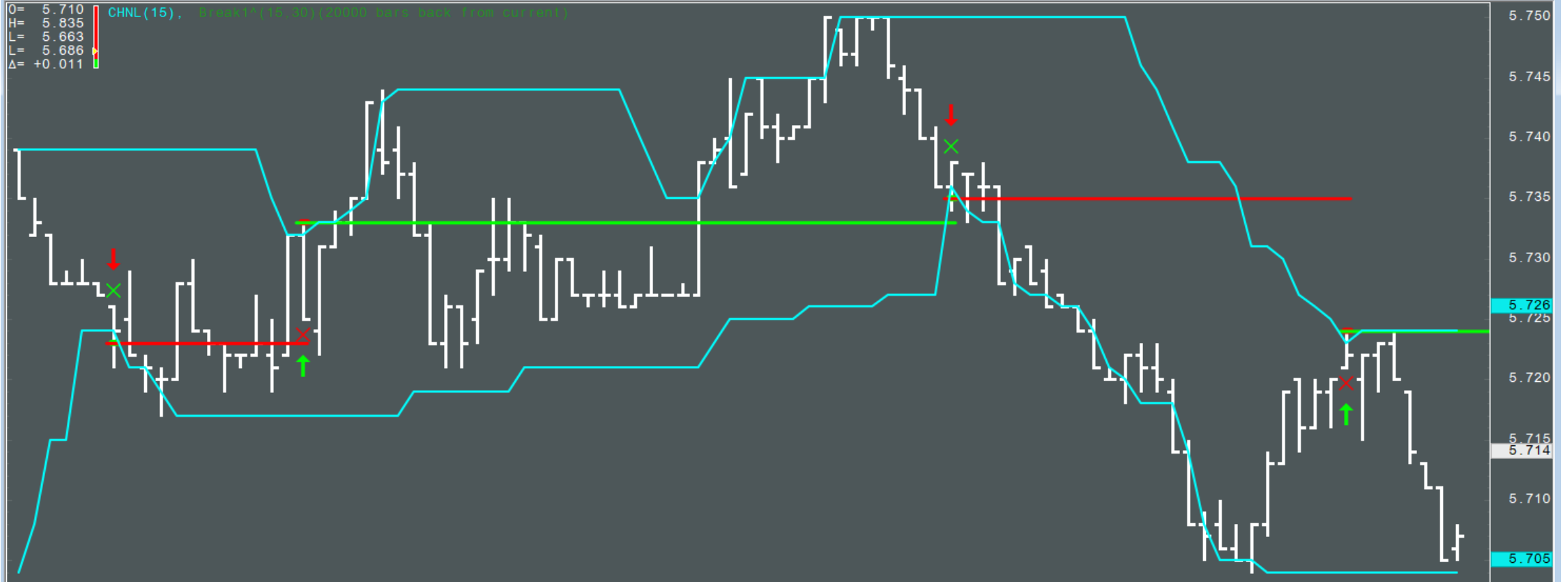
Break1*[15,30][20000 bars back from current]

TotalNetProfit =	7480	MaximumWin =	1050	MaxConsecLosses =	11
ClosedNetProfit =	7650	AverageLoss =	-92	CurConsecLosses =	0
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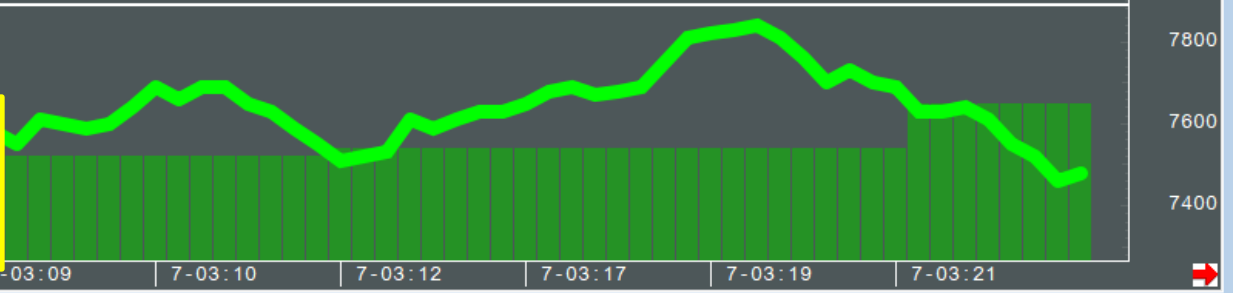
NGE - Natural Gas (Globex), Active Continuation, Sess:Globex Day,Globex : Constant Volume Bar, 25 Contracts

O= 5.710
 H= 5.835
 L= 5.683
 L= 5.686
 Δ= +0.011



Break1*(15,30)(20000 bars back from current)

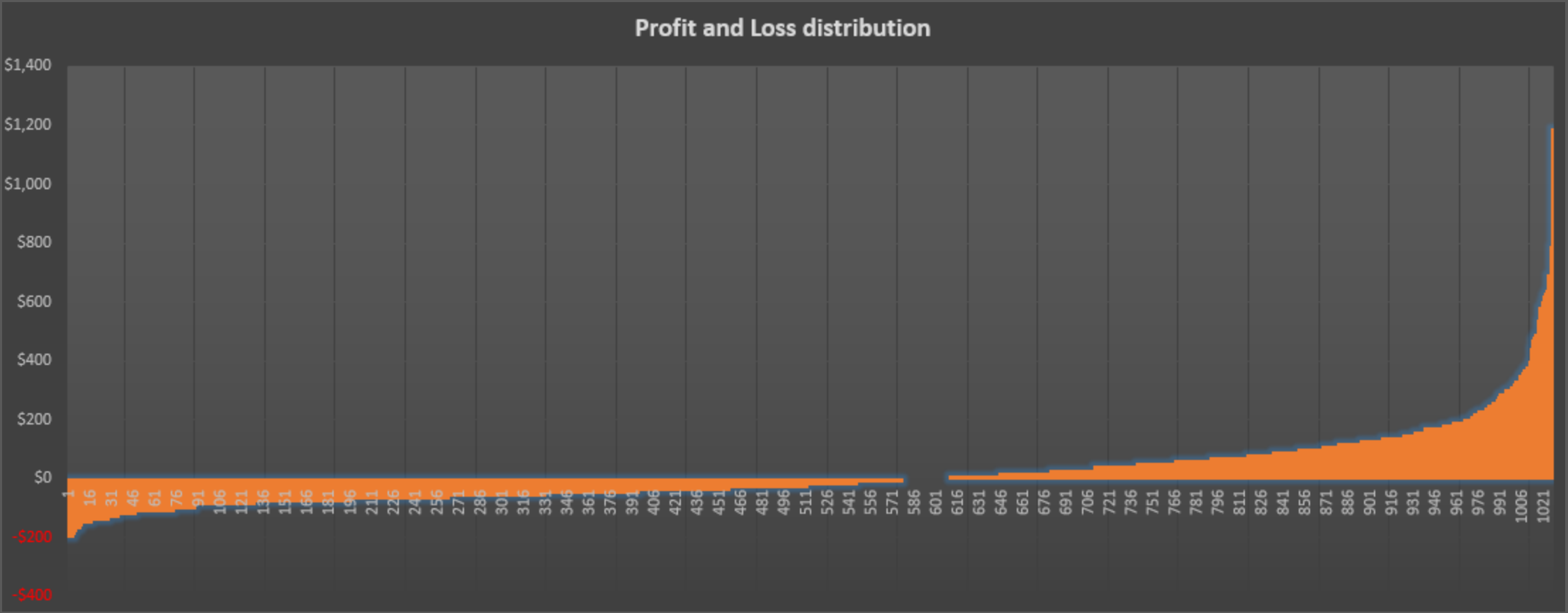
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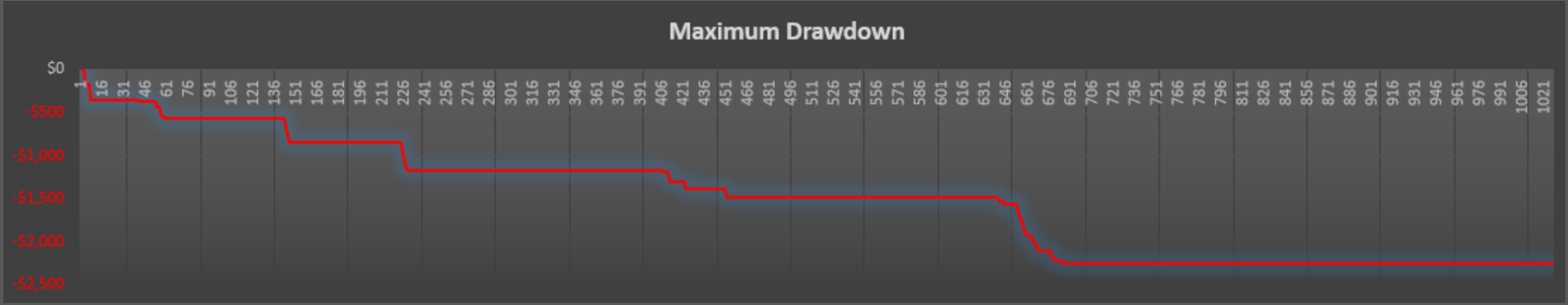
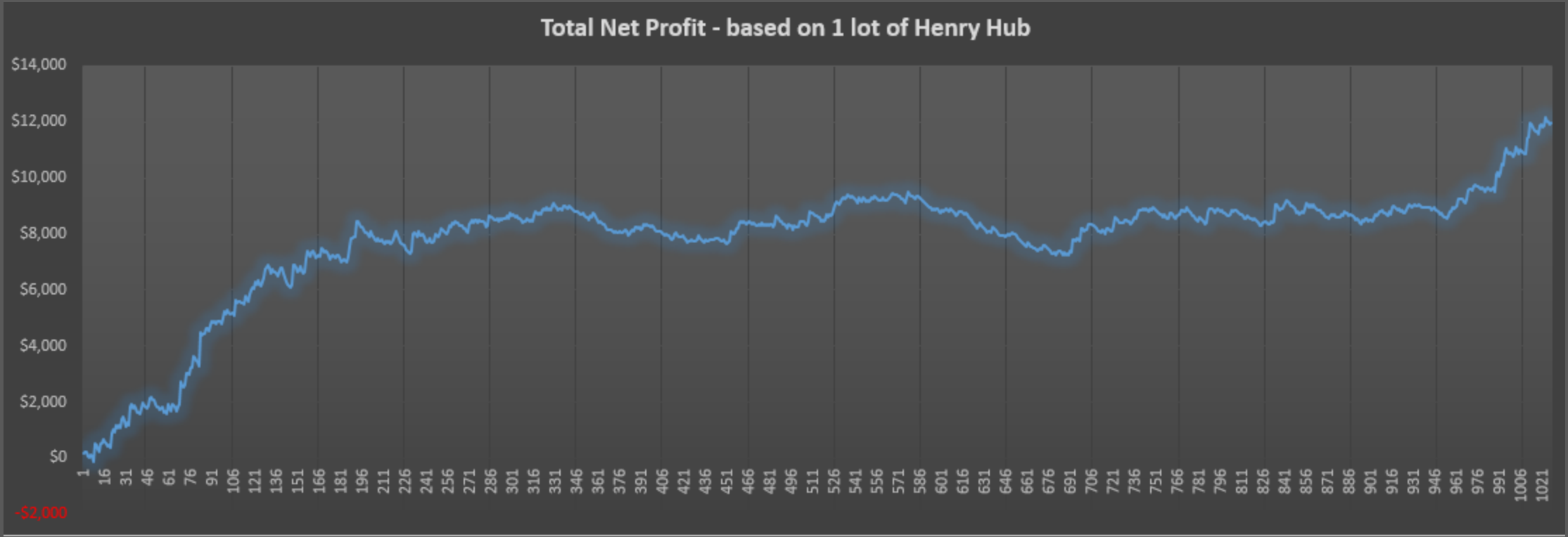
Statistics

Total Trade Count	Total number of buys and sells indicated by the system.
Open Position	Number of contracts long or short.
Percent Long	Percentage of the total trades that were long trades.
Average Duration	Average number of bars a trade is held.
Average Profit	Average gain for all trades.
Average Win	Average gain for all winning trades.
Average Loss	Average loss for all losing trades.
Maximum Win	Biggest winning trade.
Maximum Loss	Biggest losing trade.
Max Closed Draw	Biggest amount lost for any string of losing trades.
Max Draw Amount	Largest loss in equity during any time, i.e., the amount needed to trade the system.
Max Draw Duration	Largest number of bars from a peak to a trough
Max Consec Wins	Largest number of consecutive winning trades.
Cur Consec Wins	Current number of consecutive winning trades.
Max Consec Losses	Largest number of consecutive losing trades.
Cur Consec Losses	Current number of consecutive losing trades.
Profit to Max Draw	$(\text{Total Net Profit}) / (\text{Maximum Draw Amount})$.
Profit Loss Ratio	$(\text{Total gain for open and closed trades}) / (\text{Total loss for open and closed trades})$.
Percent Winners	Percentage of profitable trades.
Remove To Neutral	Starting with the biggest winning trade, the percentage of all the trades that can be removed before breaking even.

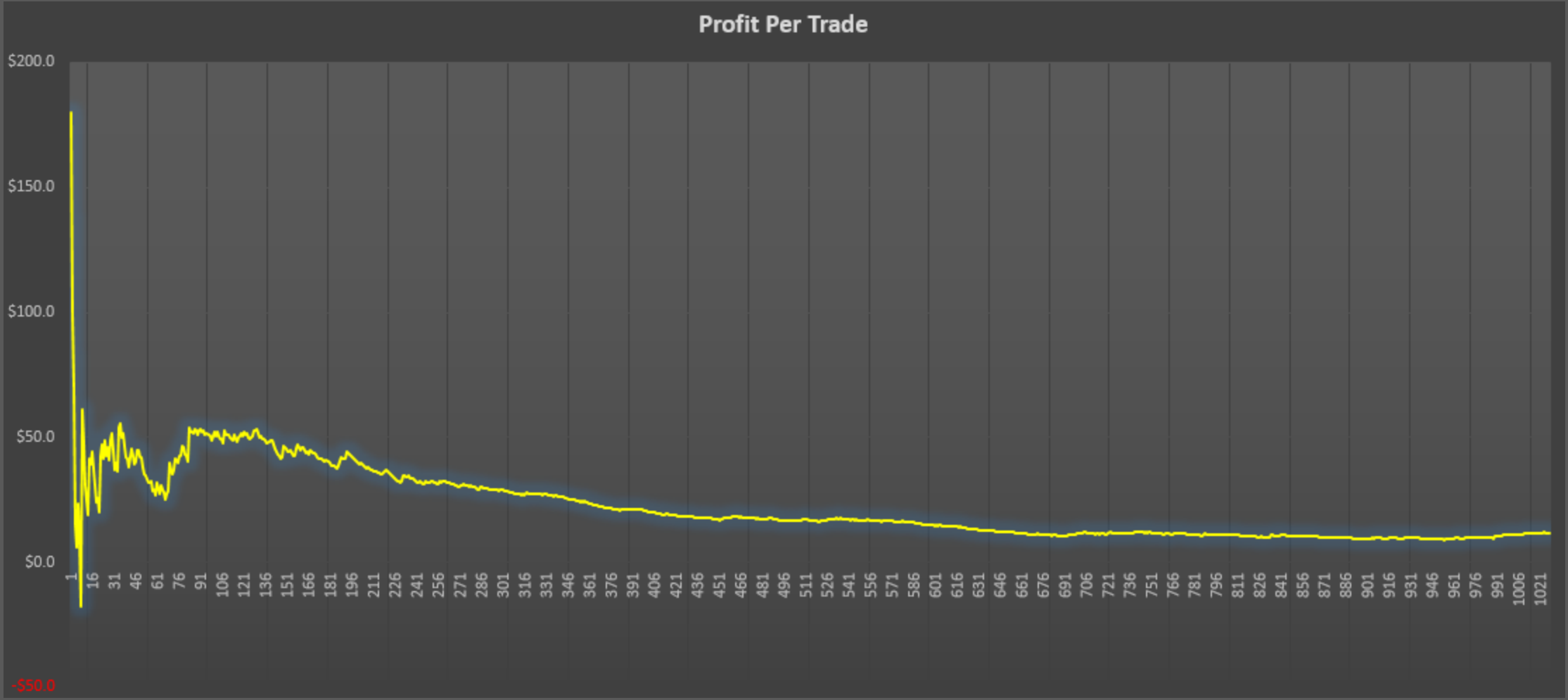
Statistics – Remove to Neutral



Statistics – Profits vs Drawdowns



Statistics – Average Profit





Optimization

Optimization - Steps

TSO Setup

Runs

Name	Trade System	Symbol	Interval	Status
unknown175	EPLS	F.US.ENQ	A5C	0%
unknown176	Breakout	F.US.NGE	CVB, 25	100%
unknown177	3	X.US.DJI	D	0%
unknown178	Breakout	F.US.NGE	CVB, 25	100%
unknown179	3	X.US.DJI	D	0%
unknown18	B12	X.US.DJI	D	0%
unknown180	Breakout	F.US.NGE	CVB, 10	0%

New...
Copy...
Delete...
Clear Results

Run Info
Creator: anthonyclC
Started at: none

Trade System Parameters

Use	Optimize Order	Parameter Name	Start Value	End Value	Step
<input checked="" type="checkbox"/>	1st	Period	10	30	2
<input checked="" type="checkbox"/>	2nd	Stop	10	30	2

Disable ReturnRetrace and LinearRegress calculation

Number of steps: 121 Statistics calculation: per trade

Optimize on:
TotalNetProfit

Maximizing Minimizing

Algorithm: Exhaustive

Chart type: Constant Volume Ba Setup...

Chart parameters
Interval: 1 Min

All Sessions Setup...

Active Continuation

Bar Range
From: 20000 bars back To: 01:16 10-07-21

Not to exceed: 20000 bars Edit...

Thresholds
... Setup...

Close

Optimization - Steps

known180

Start the Trade System Optimizer run

Symbol: F.US.NGEX21, CVB, 10 Trade System: Breakout ...

20000 bars back 01:16 10-07-2 Maximizing: TotalNetProfit

Step 0 of 121 (0%) Thresholds: ...

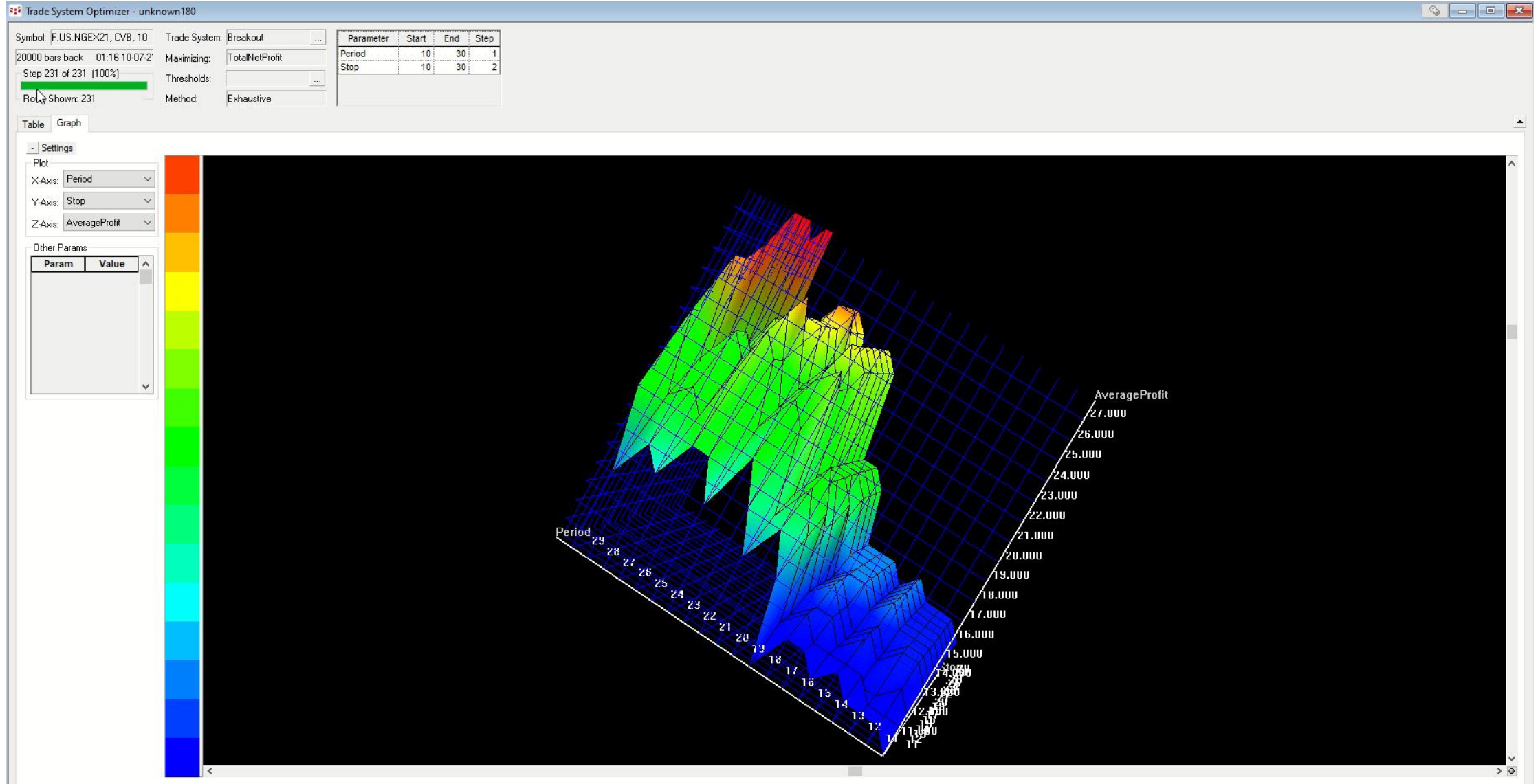
Rows Shown: 0 Method: Exhaustive

Parameter	Start	End	Step
Period	10	30	2
Stop	10	30	2

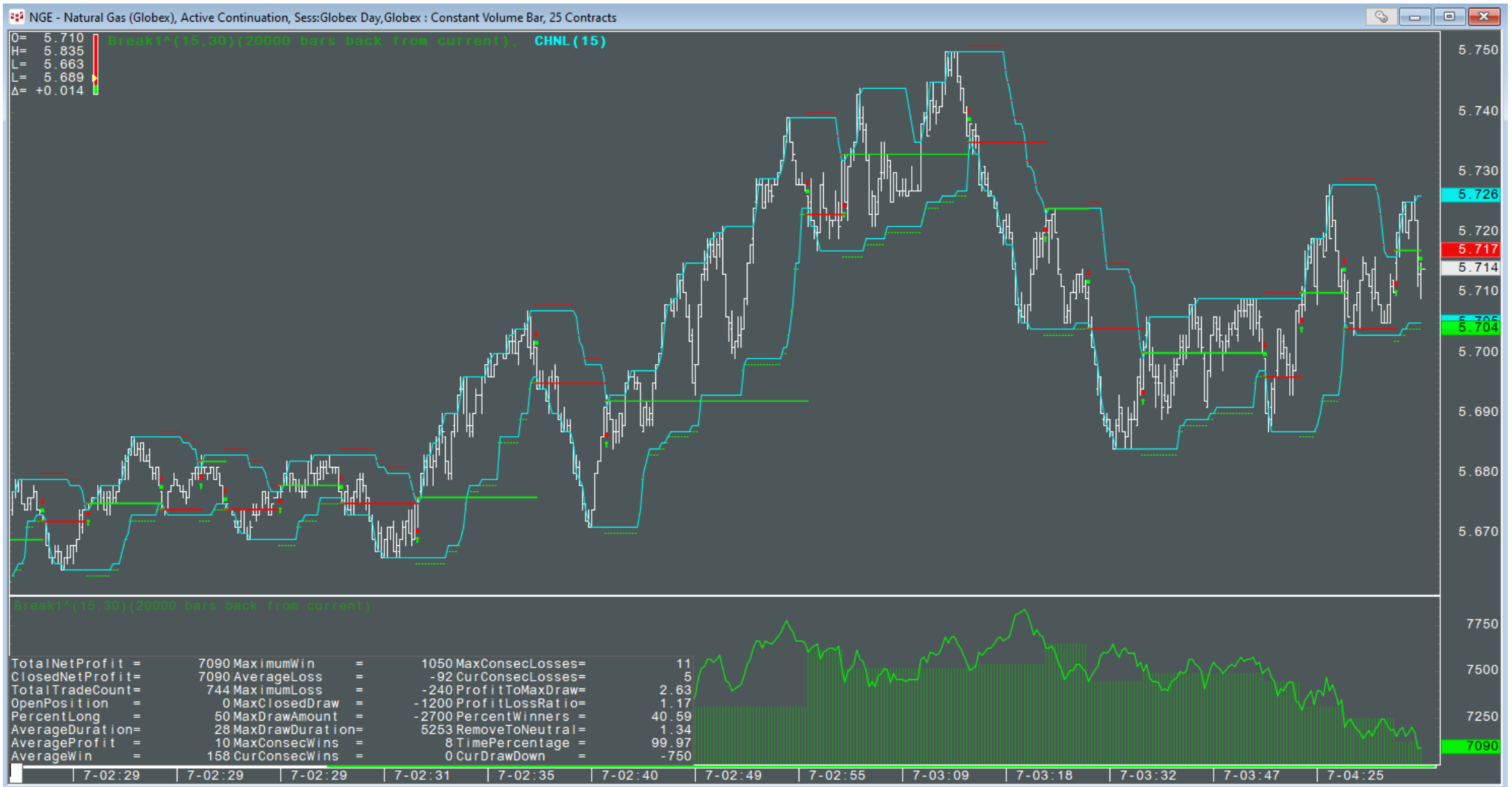
Table Graph

Settings	Parameters	Statistics																	
Note	Period	Stop	TotalNetProfit	ClosedNetProfit	TotalTradeCount	OpenPosition	PercentLong	AverageDuration	AverageProfit	AverageWin	MaximumWin	AverageLoss	MaximumLoss	MaxClosedDraw	MaxDrawAmount	MaxDrawDuration	MaxConsecLosses	ProfitToMaxDraw	Pr

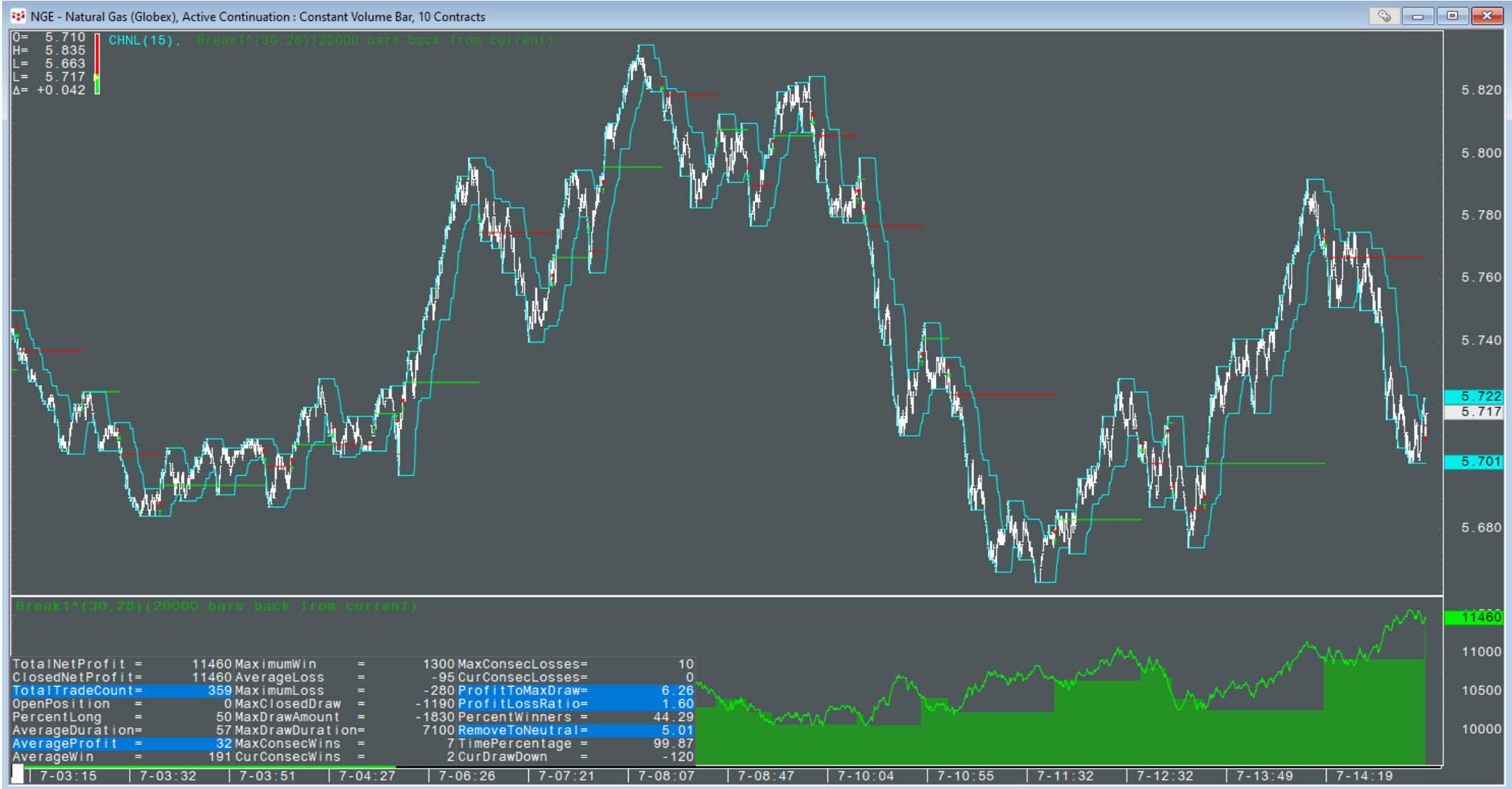
Optimization - Steps

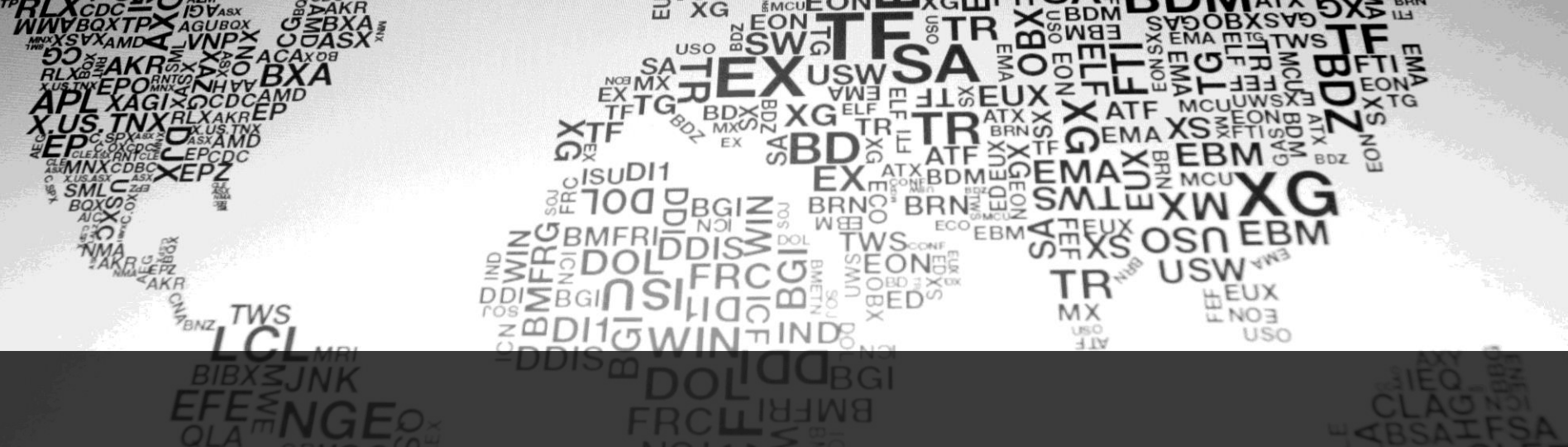


Statistics – Improvements



Statistics – Improvements





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