

Building Crash index with ULE Similarity module

Small-sample statistical analysis

The ULE Similarity module is closely related to the *Turning Points Astro Indicator* module (https://timingsolution.com/TS/Study/ts_stat/index.htm) . Both modules analyze the relationship between astrological/astronomical phenomena and the stock market behavior. For example, they can be used to determine how astrological aspects are associated with major stock market declines.

Despite the similarities, these two modules perform different tasks and are used for different purposes.

The *Turning Points Astro Indicator (TPAI)* module performs a full-scale statistical analysis. It works best when there are enough price events available, typically 30 or more. For example, we can apply the TPAI module to analyze 50 market turning points. The module can identify statistically significant astrological aspects associated with these turning points.

To perform the analysis, the TPAI module builds a control group and compares the occurrence of aspects near the turning points with their occurrence in the control group. This is the basis of the statistical approach. At least 30 price turning points are recommended for reliable results.

In practice, we often encounter situations where the number of available price events is very limited. For example, if we want to build a model for major stock market crashes, we have only four significant events over the past century: the crashes of 1929, 1987, 2008, and 2020. With such a small sample size, classical statistical analysis is not applicable.

To address this problem, we apply a simplified statistical approach specifically designed for small samples, which we refer to as Small-Sample Statistical Analysis – ULE Similarities module.

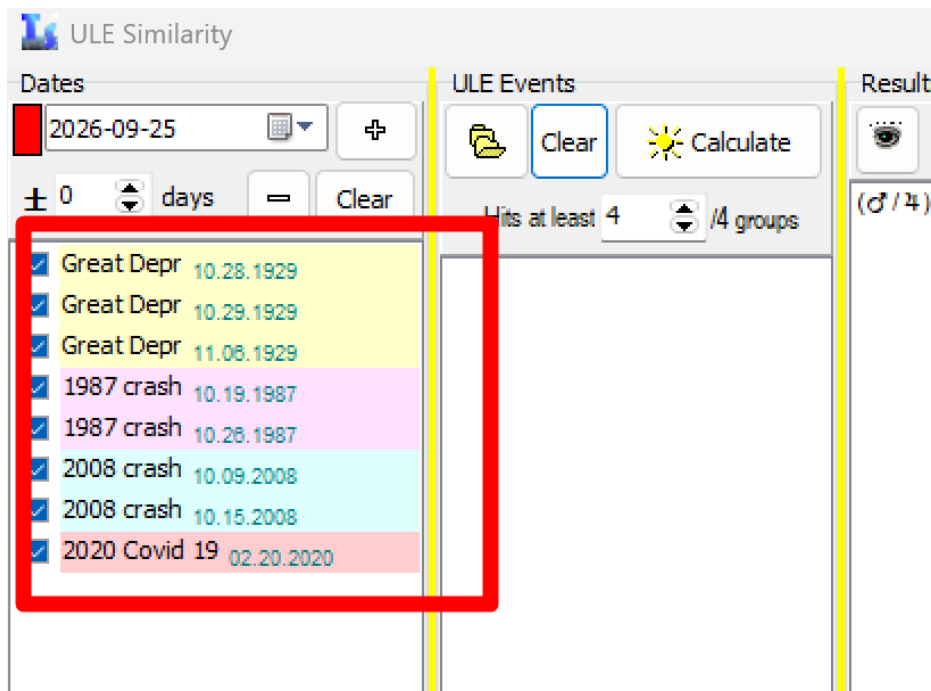
The core idea of Small-Sample Statistical Analysis is straightforward. We search for astrological aspects that are present during all four major stock market crashes. A less restrictive approach is to identify aspects that occur during at least three out of the four crashes.

In contrast to classical statistical analysis, no control group is constructed. Instead, the analysis focuses directly on the occurrence of the selected aspects at the crash dates. This approach is specifically designed for situations where the number of available events is too small for traditional statistical methods.

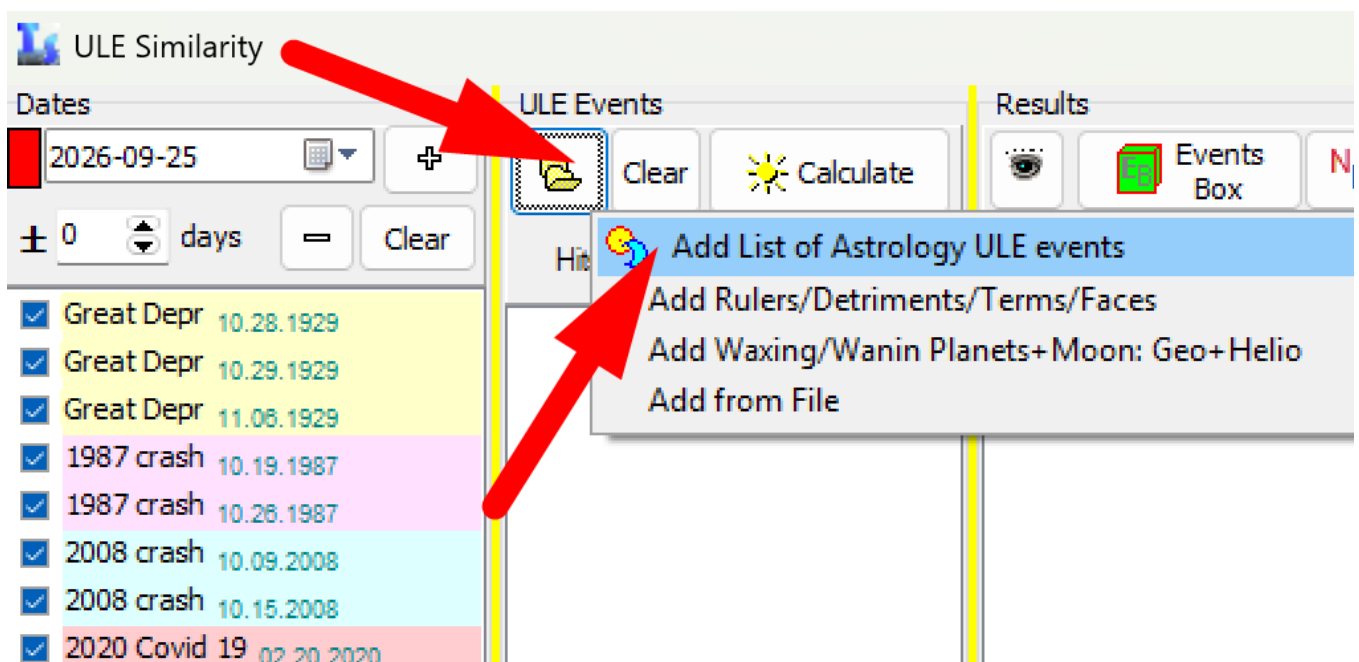
Fist run

Now let's demonstrate how this approach works.

When you run the ULE Similarity module, the four most important stock market crashes are displayed by default in the Price Events section:



Now we build the astrological model. Let's build a model based on midpoint aspects. Do this:



It opens the standard Events List module, to build a list of ULE events.

This module is explained here: https://timingsolution.com/Doc/level_1/List_ULE.pdf You can build a wide variety of astronomical and astrological events there.

We build this ULE events list- list of midpoints aspects:

List of ULE Events

Aspects
Middle Points
 Position
 Coordinates
 Retrogrades
 FAM Model

Sunspot FAM
 Dynamic Waxing/Waning
 Pl. Picture Aspects
 Back/Front
 Planetary Phases
 Patterns

Stellium
 Zodiacal Aspects
 Angle Between (Value)
 Days of Week
 Planetary Hours
 Artificial Chart

Gravitation
 Graded Planetary Speed
 Waxing/Waning
 Fundamentals
 Between
 Key Chart Similarity

Aspects Middle Points Position Coordinates Retrogrades FAM Model Sunspot FAM Dynamic Waxing/Waning

One of the planets is aspected between two other planets

Transit / Transit

Find the time when the aspect is in orb

Zodiac Geo Longitude

Orb = 10 ° 00 ' 00 "

Harmonics

☒	1H	☐	5H	☐	9H	☐	13H	☐	17H	☐	21H	☐	25H
☒	2H	☐	6H	☐	10H	☐	14H	☐	18H	☐	22H	☐	26H
☒	3H	☐	7H	☐	11H	☐	15H	☐	19H	☐	23H	☐	27H
☒	4H	☐	8H	☐	12H	☐	16H	☐	20H	☐	24H	☐	28H

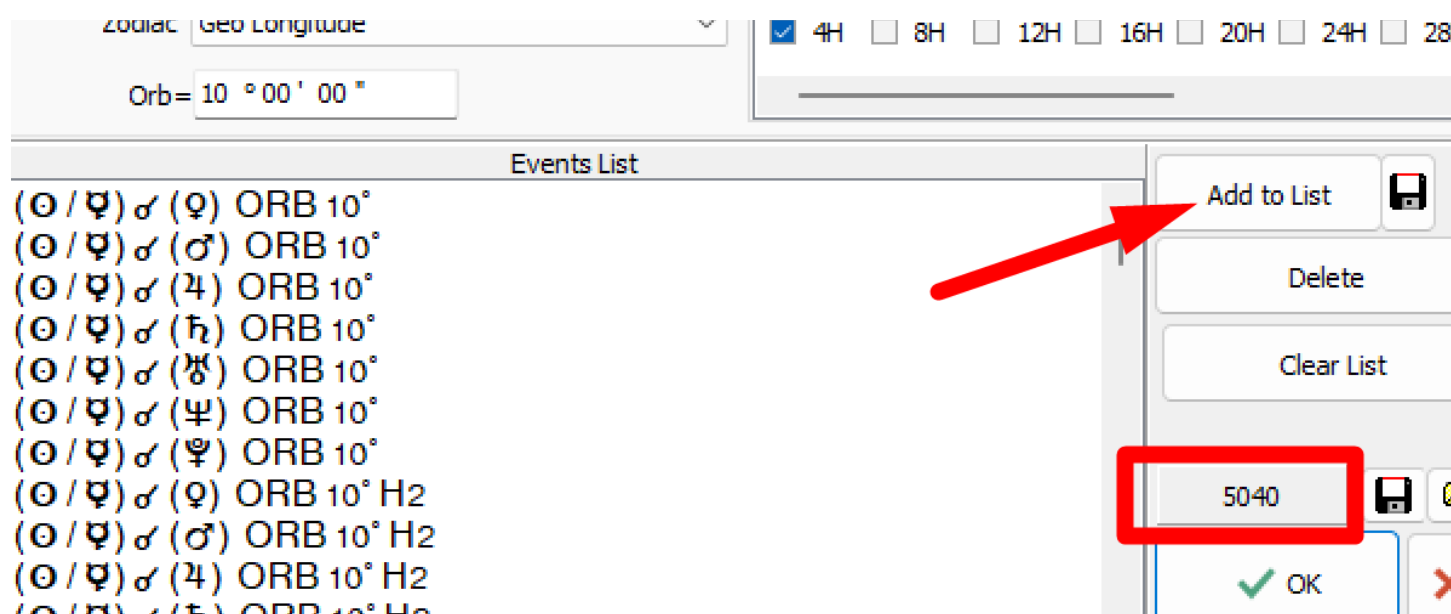
Events List

Add to List

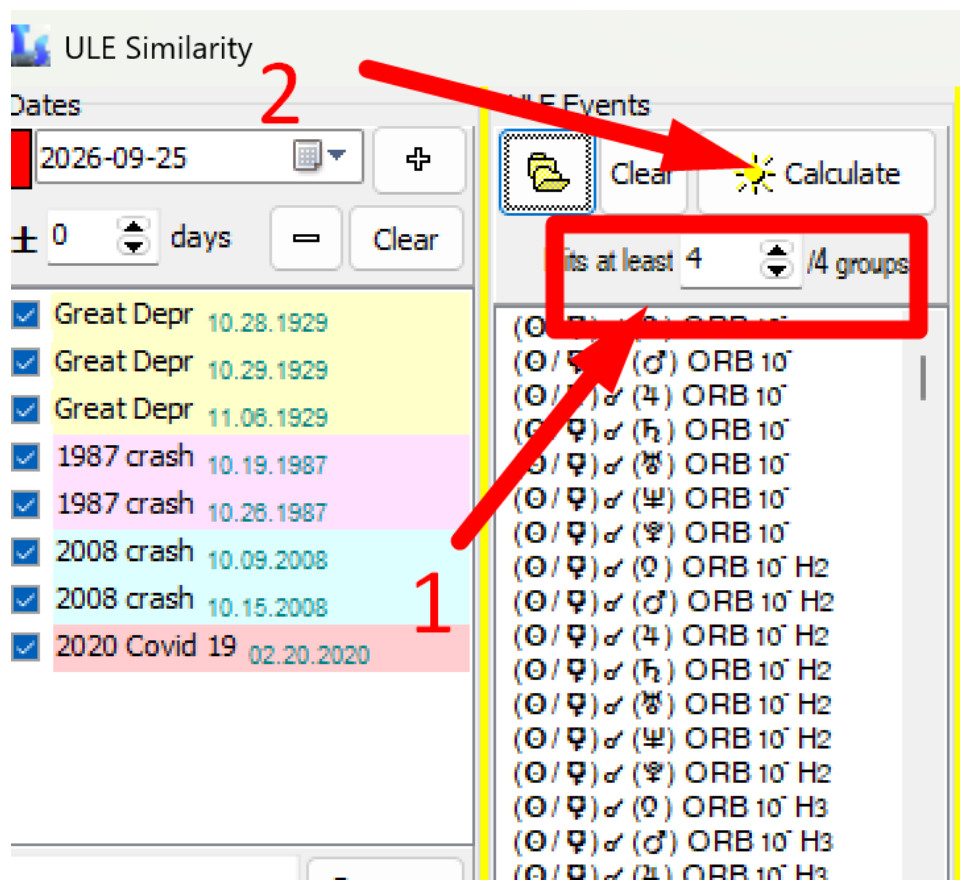
Delete

That will be a list of conjunctions of planetary midpoints to planets, orb 10 degrees, H1,H2,H3 and H4 harmonics.

Click “Add to List”; you get a list of 5040 midpoint aspects:



Now let us find the aspects that hit all four stock market crashes. Click “Calculate”:



Within a few seconds, the program analyzes all 5,000+ aspects. It finds that only one aspect coincides with all four major stock market crashes:

Mars/Jupiter trine Mercury 2H chart

The screenshot shows the 'ULE Similarity' software interface. The 'Dates' section on the left lists several historical events: 'Great Depr' (10.28.1929), 'Great Depr' (10.29.1929), 'Great Depr' (11.08.1929), '1987 crash' (10.19.1987), '1987 crash' (10.26.1987), and '2008 crash' (10.09.2008). The 'ULE Events' section in the center has a 'Hits at least' dropdown set to '4' and a 'Calculate' button. The 'Results' section on the right displays a single result: $(♂/♂) \Delta (♀) \text{ ORB } 10^\circ \text{ H}_2$. A red arrow points from this result to a series of five red exclamation marks (!!!!!) below it.

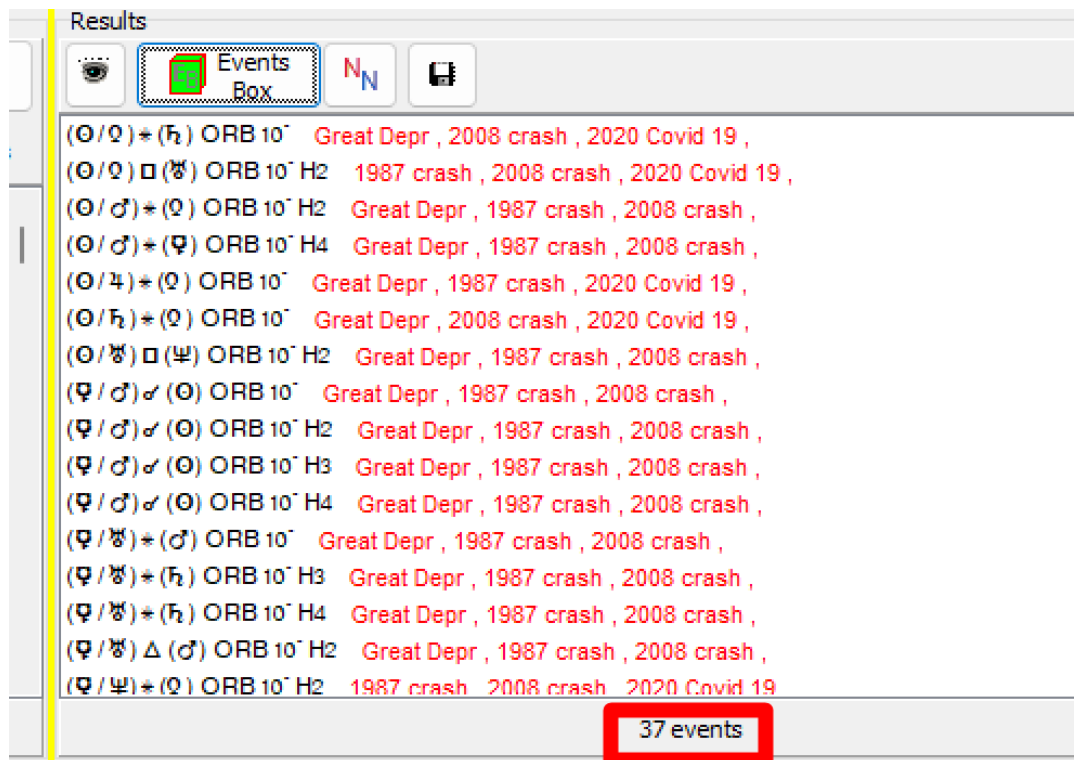
Enriching Model

To enrich our model, we may incorporate more aspects. There are two ways to do this: (1) increase the aspect orb, and/or (2) decrease the minimum number of hits to 3:

This screenshot shows the same 'ULE Similarity' software interface, but with the 'Hits at least' dropdown menu highlighted by a red square. The dropdown is currently set to '4' and shows '4 groups'. The 'Results' section on the right is partially visible, showing several astrological aspects like $(♂/♂) \Delta (♂)$ and $(♂/♂) \Delta (♀)$.

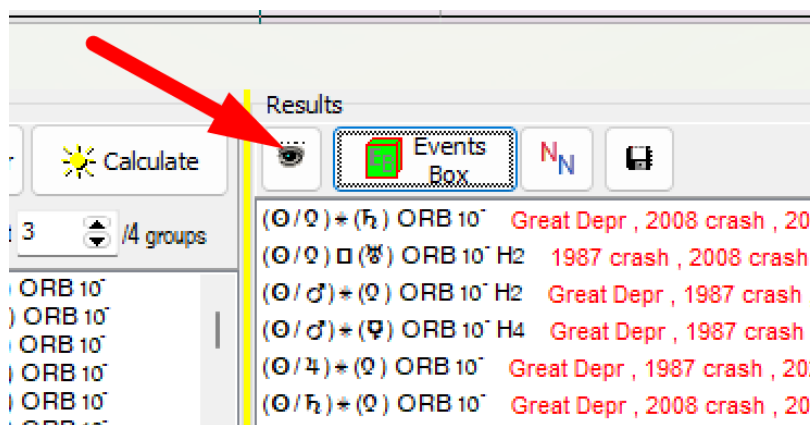
We will start with the second option. The first one is discussed at the end of this article.

Let me show how the model changes if we set the minimum number of hits to 3. Instead of just one aspect (that is present at all four major crashes), we get a list of 37 aspects that hit at least three of them:

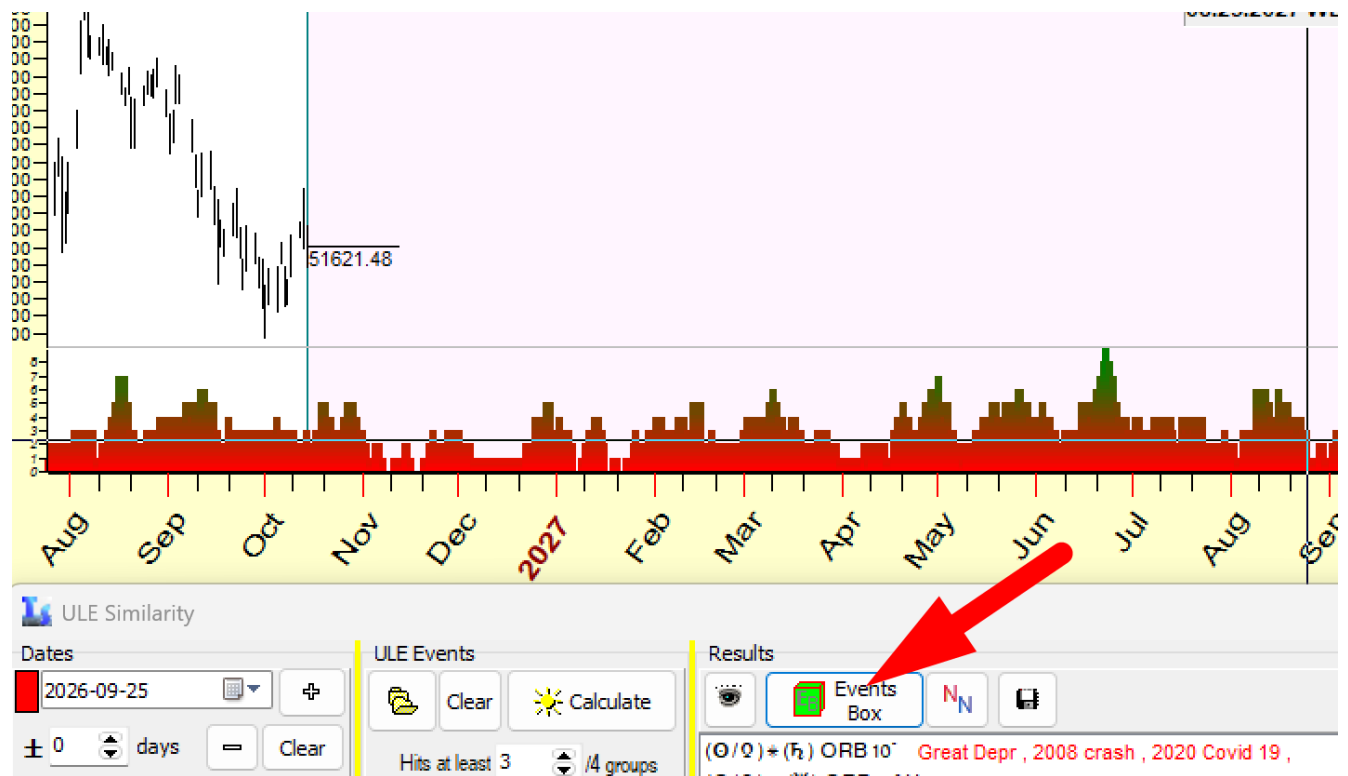


Preview Model

Let explore know how these aspects work in time. Click this button:



It activates a stand-alone window containing the list of our ULE events. Double-click any aspect, and the program will calculate that event and display it on the Main Screen:



This diagram can be considered as a *crash index based on midpoint aspects*. It shows how many aspects are currently active, specifically those that previously coincided with major market declines over the last 100 years. The higher is the peak on the diagram, the more aspects from our list are active at that moment and the bigger is the chance of market decline.

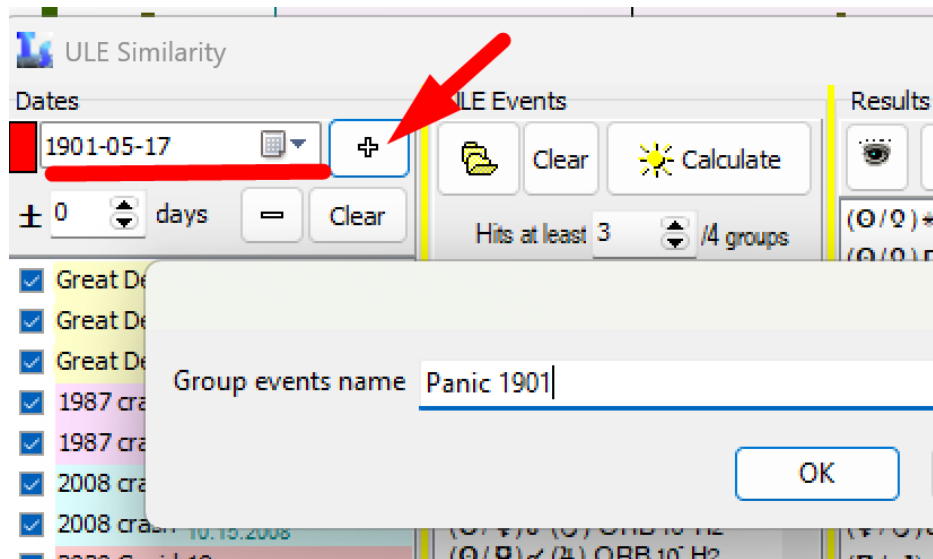
The next step is to verify this index and evaluate how well it tracks other stock market declines. We recommend reviewing the index visually, as formal mathematical methods are of limited help in this case. Common sense and visual inspection are more important here than strict mathematical criteria.

Forming List of Price Events

Now we have the model that gives alerts of *timing* for possible market declines. This model can be applied to analyze and forecast the *price* changes. To do that, we need to create (or enrich the existing) the List of price events.

We have already a list of 4 major crashes. You may keep working with them only. However, historically, all major crashes in the list did not happen at just one day. It was more like a chain of events. That is why we suggest making *groups* of price events.

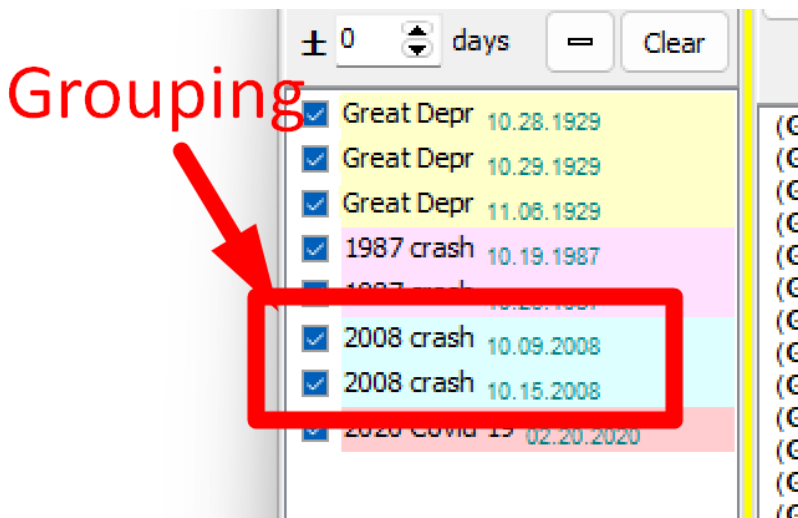
Set the date of an event and click the "+" button. In the pop-up window enter a name for the group that event is associated with, such as **"Panic 1901"**:



Then add another event the same way.

Events Grouping

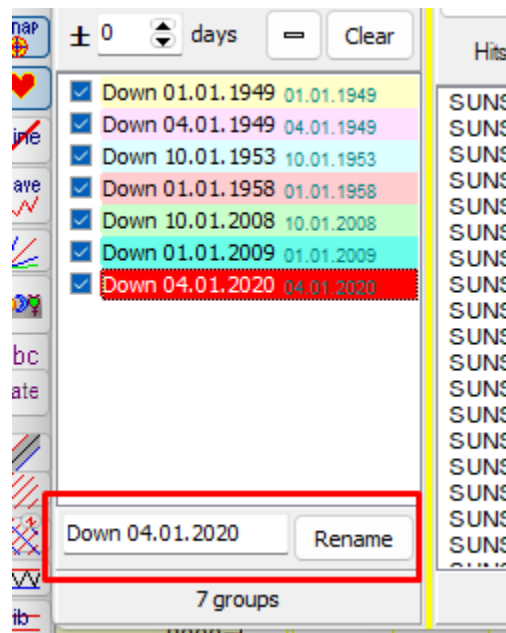
Please note that events associated with the same group are shown in the same color. For example, the **"2008 Crash"** event is associated with two dates of major drops: **October 9, 2008**, and **October 15, 2008**:



Events that share the same name are considered a single group. In small-sample statistical analysis, it is very important to group closely spaced events. This prevents double-counting of nearby events.

Look at the groups in our example. The Great Depression group contains three events, the 1987 group contains two events, and the 2008 group contains two events. A group is considered being hit by some aspect if at least one event from that group is hit by it.

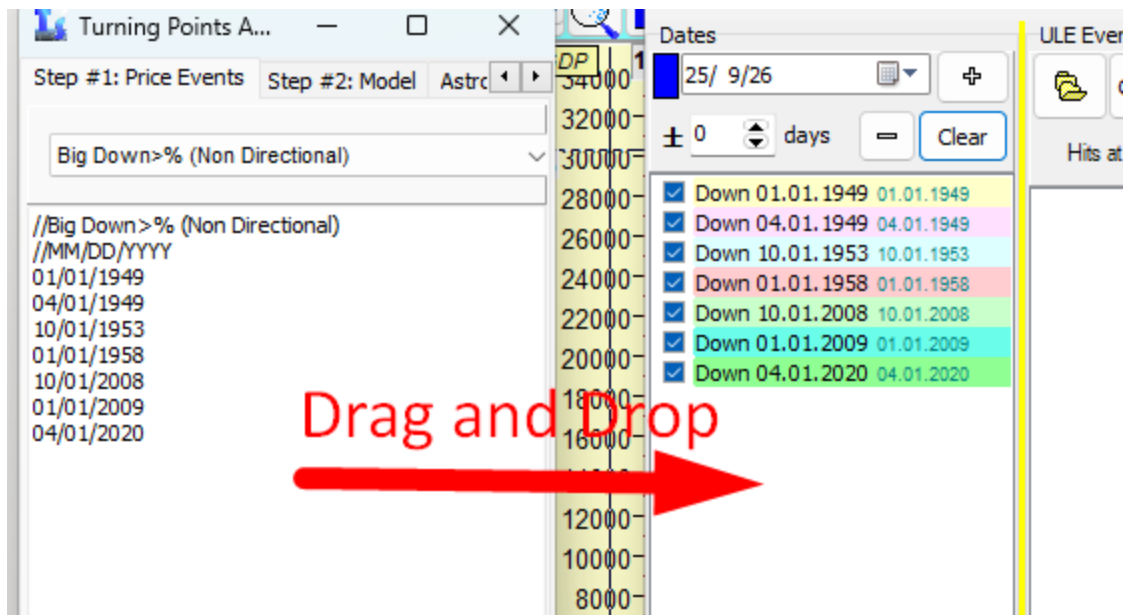
To customize the event groups and/or create your own groups, use these controls:



Drag and Drop price events from Turning Points Astro Indicator (TPAI) module

If you have created a list of turning points in the TPAI module related to some price event (like big price changes, such as 10% drop or 7% increase), that means that you have a list of dates of similar price events.

You can transfer the dates of these price events from TPAI into ULE Similarity module, using Drag and Drop feature:



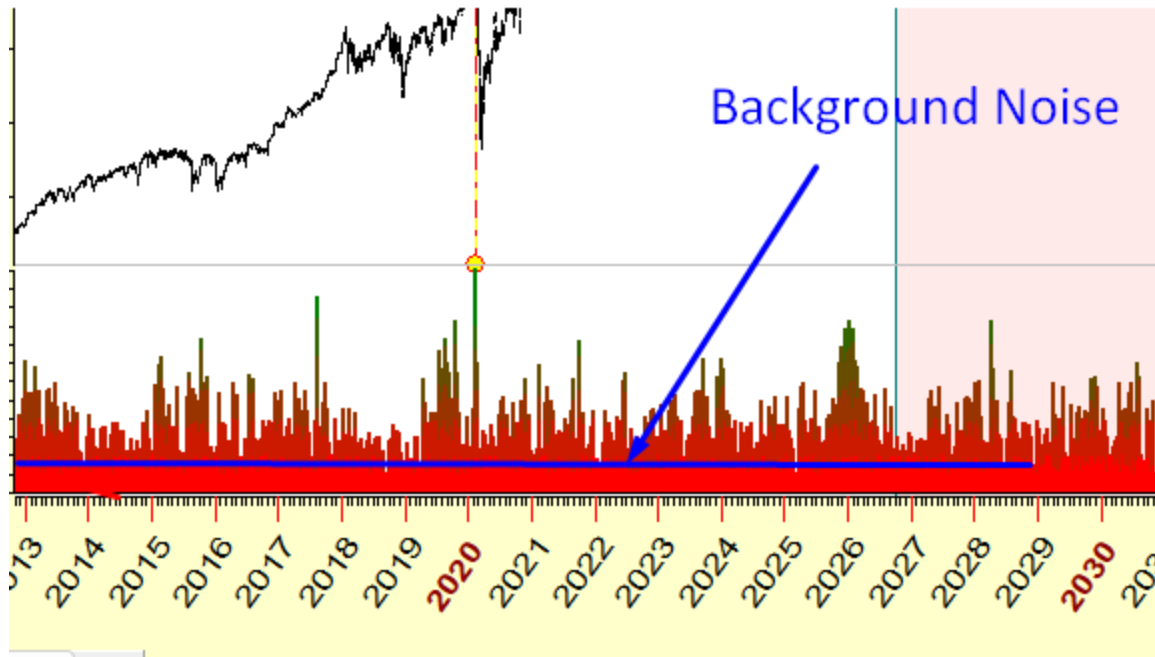
These events may form a new Group (do not forget to give it a name) or added to the existing one (in that case, use "Rename" option shown above).

Recommendation to improve model

First, we recommend trying different astronomical and astrological models. In particular, we recommend exploring the Waxing/Waning Planetary Harmonics and FAM Planetary Harmonics models. These models are explained in this class:

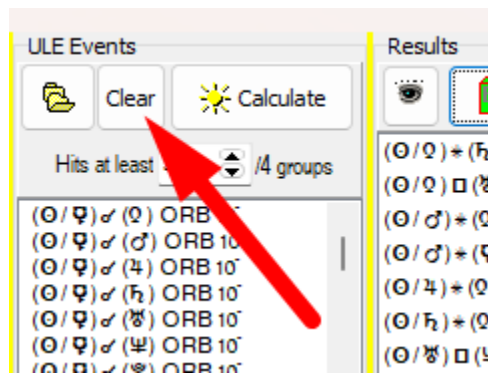
https://timingsolution.com/Doc/level_1/List_ULE.pdf The quality of the forecast strongly depends on the underlying model.

Second, try to minimize the noise in the model. As an example for this article, we built a midpoint model that incorporates 37 midpoint aspects. The resulting diagram based on these 37 aspects is shown below. Often this diagram appears to be too noisy, as it contains a large 'always-active' background component:



To get rid of that noise, we recommend applying stricter criteria. In this case, you can modify the model by reducing the aspect orb from 10° to 5° (it is another way to enrich the model, discussed earlier in the “Enriching model” section).

Delete old model clicking clear:



and create the new one with orb 5°:

Transit / Transit

Find the time when the aspect is in orb

Zodiac Geo Longitude

Orb = 05 ° 00 ' 00 "

Harmonics

☒ 1H	☐ 5H	☐ 9H
☒ 2H	☐ 6H	☐ 10H
☒ 3H	☐ 7H	☐ 11H
☒ 4H	☐ 8H	☐ 12H

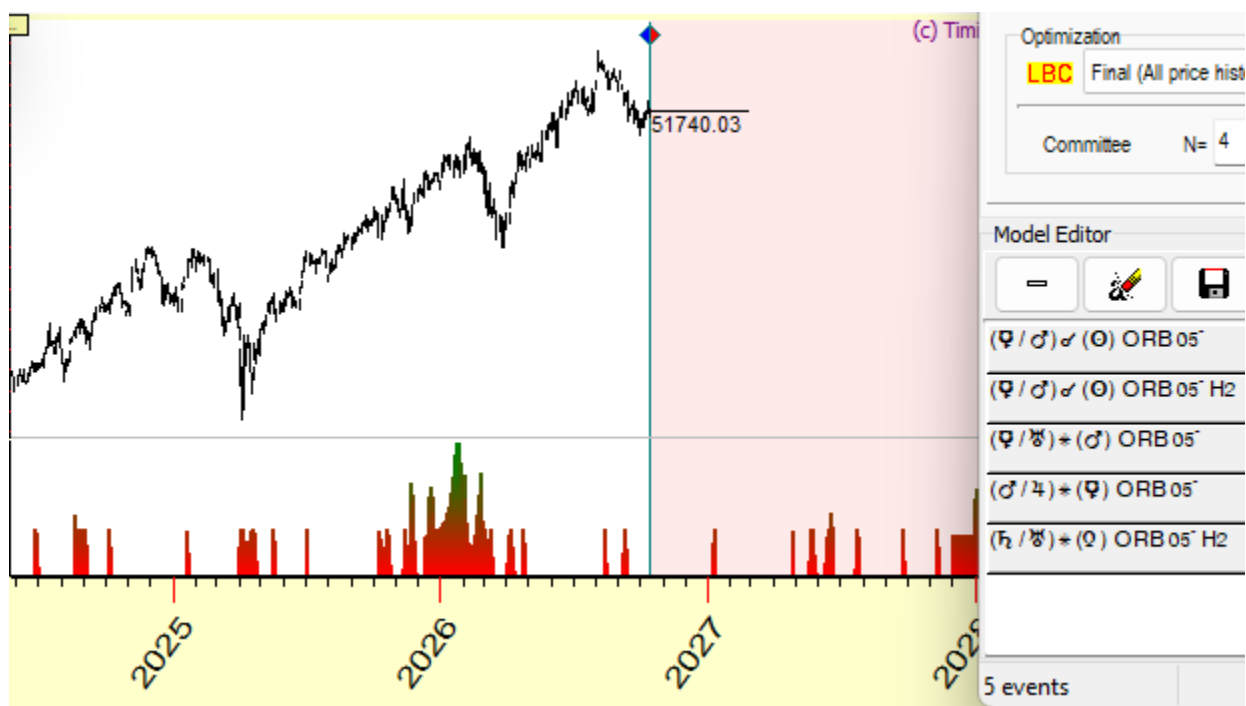
Events List

After calculation you will get 5 important aspects only:

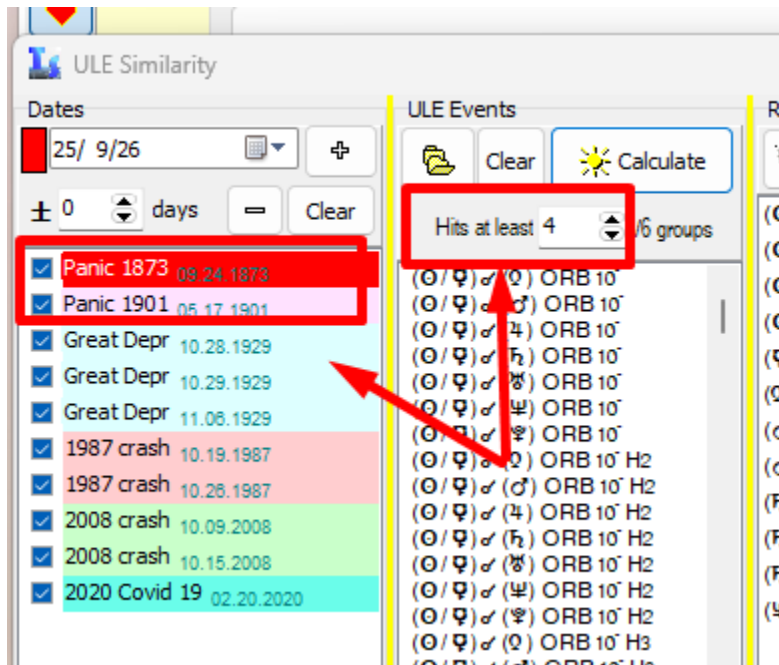
(♂ / ♀)♂ (♂) ORB 05°	Great Depr , 1987 crash , 2008 crash ,
(♂ / ♀)♂ (♂) ORB 05° H2	Great Depr , 1987 crash , 2008 crash ,
(♂ / ♀)♂ (♂) ORB 05°	Great Depr , 1987 crash , 2008 crash ,
(♂ / ♀)♂ (♂) ORB 05°	Great Depr , 2008 crash , 2020 Covid 19 ,
(♂ / ♀)♂ (♂) ORB 05° H2	1987 crash , 2008 crash , 2020 Covid 19 ,

5 events

And new crash index looks less noisy now:



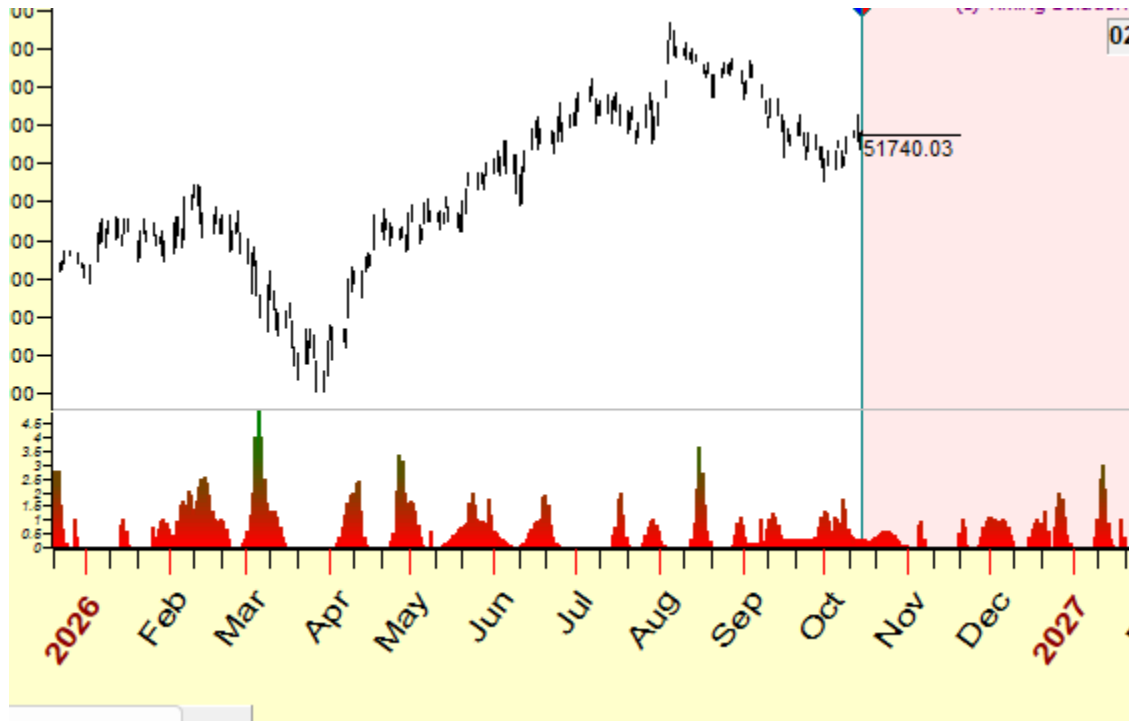
An alternative way to apply stricter criteria is to add more crash events. We have added the crashes of 1873 and 1901 and applied the same midpoint-aspect model with a 10° orb. Also, the minimum number of hits was set to 4 out of 6. In other words, an aspect must hit at least 4 of the 6 major stock market crashes. Including more crash events and requiring a higher number of hits makes the model more selective:



After the calculations, we get 12 significant aspects that hit at least 4 of the crashes:

	Box
(O/Q) □ (h) ORB 10° H2	Panic 1873 , Panic 1901 , 1987 crash , 2008 crash ,
(O/d) □ (h) ORB 10° H3	Panic 1873 , Panic 1901 , Great Depr , 2020 Covid 19 ,
(O/4) Δ (d) ORB 10° H3	Panic 1873 , Panic 1901 , Great Depr , 2020 Covid 19 ,
(O/h) * (Q) ORB 10°	Panic 1901 , Great Depr , 2008 crash , 2020 Covid 19 ,
(Q/h) * (h) ORB 10° H3	Panic 1873 , Great Depr , 1987 crash , 2008 crash ,
(Q/ψ) Δ (h) ORB 10° H3	Panic 1873 , 1987 crash , 2008 crash , 2020 Covid 19 ,
(d/4) Δ (Q) ORB 10° H2	Great Depr , 1987 crash , 2008 crash , 2020 Covid 19 ,
(d/ψ) * (h) ORB 10° H4	Panic 1901 , Great Depr , 2008 crash , 2020 Covid 19 ,
(h/h) * (Q) ORB 10° H2	Panic 1901 , 1987 crash , 2008 crash , 2020 Covid 19 ,
(h/h) □ (Q) ORB 10° H3	Panic 1901 , 1987 crash , 2008 crash , 2020 Covid 19 ,
(h/h) Δ (Q) ORB 10° H4	Panic 1901 , 1987 crash , 2008 crash , 2020 Covid 19 ,
(ψ/ψ) □ (Q) ORB 10° H4	Panic 1901 , Great Depr , 1987 crash , 2020 Covid 19 ,
12 events	

The summary chart of the modified crash index based on midpoint aspects is shown below:



October 17, 2026

Ontario, Canada