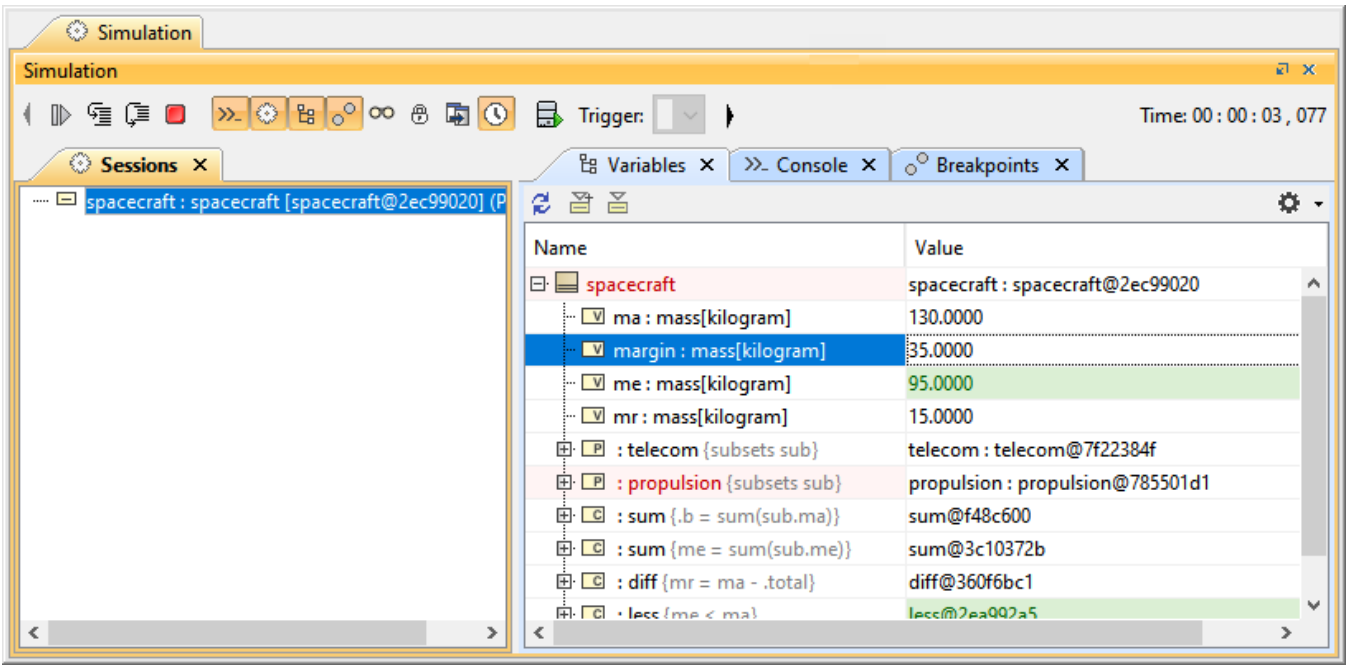



# Variables pane

The **Variables** pane displays the structure of a model being executed, as well as runtime values during model simulation. This pane contains two primary columns: **Name** and **Value**, and are outlined below.





- **Name**: represents the context and structural features of a model being simulated. The `[]` and `{}` notations are automatically shown after the structural feature as follows:
  - `[]`: the current State and number of Events of a State Machine and multiplicities.
  - `{}`: constraint expressions with parameters and subsets.
- **Value**: represents runtime values of structural features from the **Name** column. A runtime value can be the input or output of a simulation. You can directly edit runtime values in the **Value** column if they are Boolean, Integer, Real, and String.



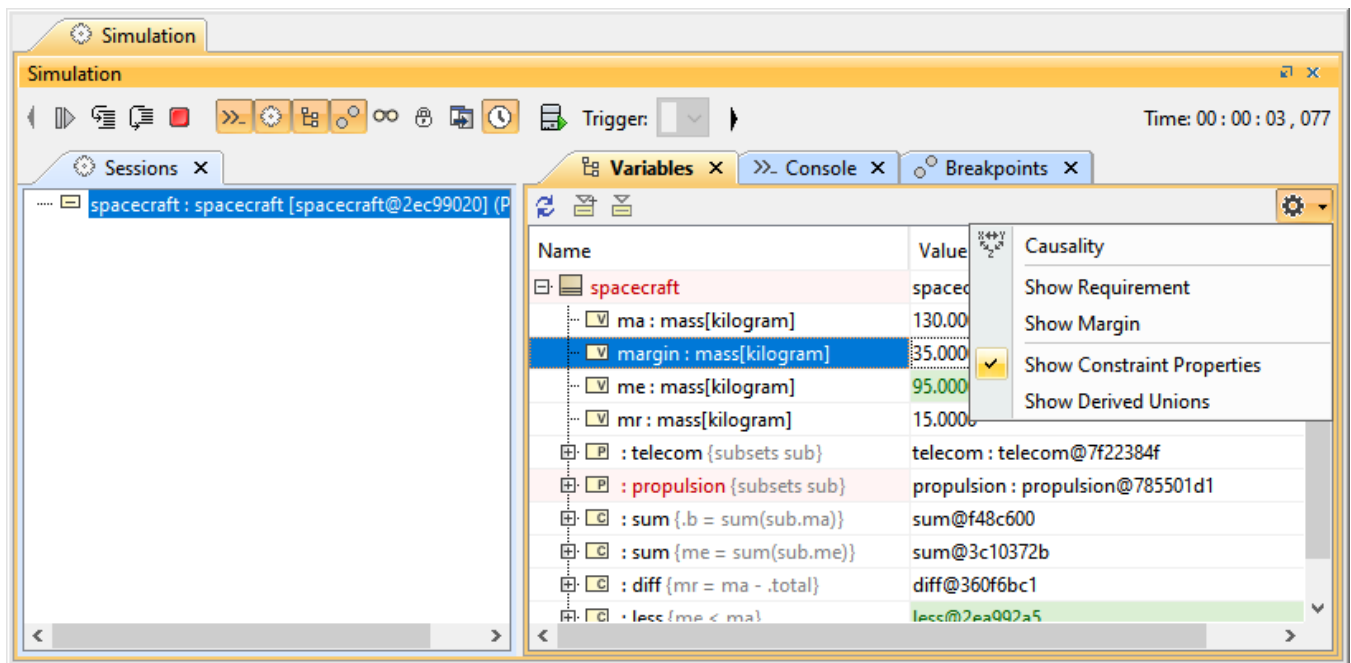
The Variables pane of a simulation model session.

You can also display the **Causality**, **Show Requirement**, and **Show Margin** columns and configure the filtering by clicking  at the top-right corner. Also, you can select a session in the **Sessions** pane to display its runtime objects and values that will be shown in the **Variables** pane accordingly.

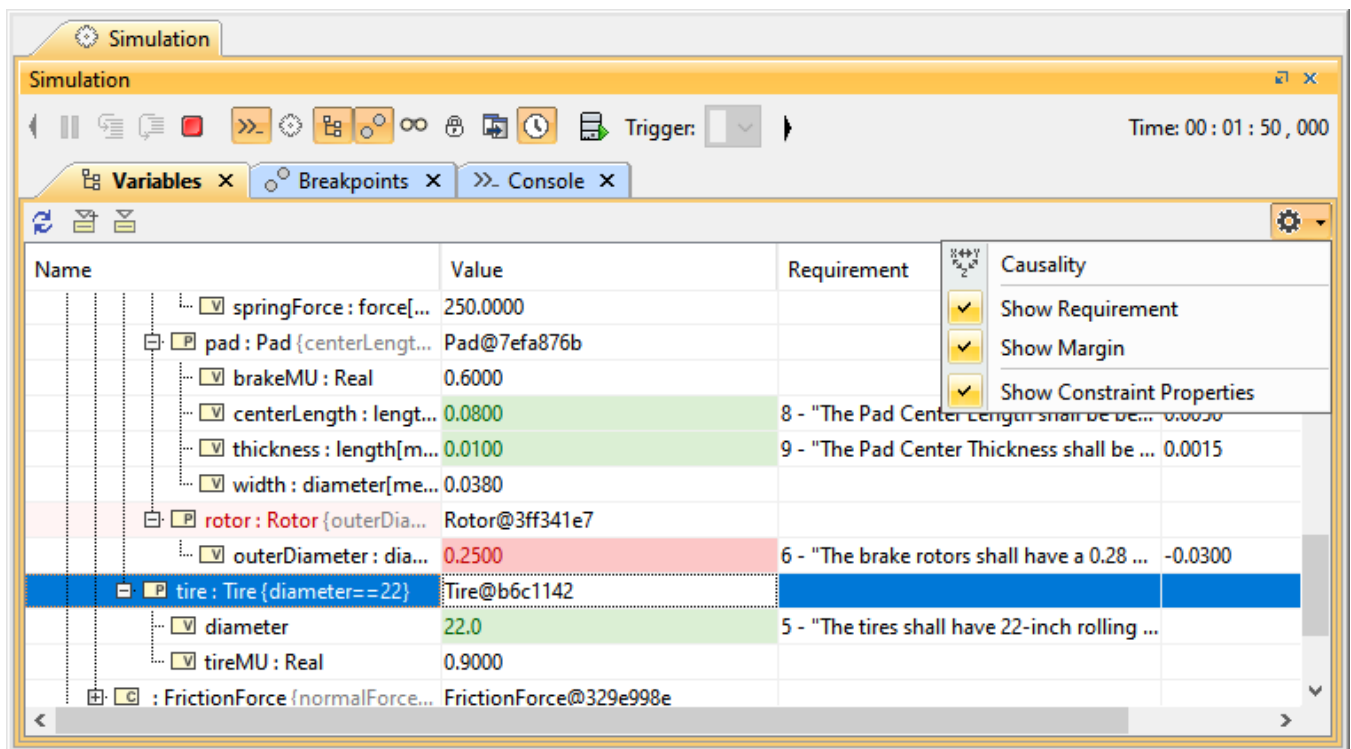
The following table lists the toolbar buttons and options of the **Variables** pane.

Button	Name	Function
	Refresh	To refresh the tree and values in the <b>Variables</b> pane.
	Export to New Instance	To create a new InstanceSpecification and export a selected runtime object to a newly created InstanceSpecification.
	Export to Instance	To export a selected runtime object to an InstanceSpecification, which is used to create the runtime object, or to an existing InstanceSpecification (see <a href="#">Exporting Runtime Objects to InstanceSpecifications</a> ). All of the slot values of the InstanceSpecification will be replaced by the runtime values of the runtime object.
	Options:	To allow displaying and filtering elements in the <b>Variables</b> pane. Each option will be available only when the simulating model contains the kind of element to be filtered.
	<ul style="list-style-type: none"><li>• <b>Causal ity</b></li></ul>	To show the <b>Causality</b> column. The value of a property represents the result of <a href="#">evaluating a mathematical equation</a> : <b>None</b> , <b>G iven</b> , and <b>Target</b> . You can change the causality of the property using the symbolic math toolbox if the parametric evaluator (e.g., MATLAB) supports solving symbolic expressions.

	<ul style="list-style-type: none"> <li>• <b>Show Requirement</b></li> </ul>	To display the <b>Requirement</b> column. The value is shown only for properties that have Satisfy Relations with the Requirements in req IDs (req text format).
	<ul style="list-style-type: none"> <li>• <b>Show Margin</b></li> </ul>	To display the <b>Margin</b> column. The value is calculated from value properties and the Requirement boundary with a Satisfy Relation.
	<ul style="list-style-type: none"> <li>• <b>Show Derived Unions</b></li> </ul>	To display derived unions.
	<ul style="list-style-type: none"> <li>• <b>Show Redefined Properties</b></li> </ul>	To display redefined properties.
	<ul style="list-style-type: none"> <li>• <b>Show Reference Properties</b></li> </ul>	To display reference properties.
	<ul style="list-style-type: none"> <li>• <b>Show Adjunct Properties</b></li> </ul>	To display SysML adjunct properties.
	<ul style="list-style-type: none"> <li>• <b>Show Constraint Properties</b></li> </ul>	To display SysML constraint properties.
	<ul style="list-style-type: none"> <li>• <b>Show Ports</b></li> </ul>	To display Ports.



The options for displaying and filtering elements in the Variables pane.



The result of selecting Show Requirement and Show Margin options of the Variables pane.

## Related page

- Exporting runtime objects to InstanceSpecifications