Stability	@STABILITY_ACTION

List action to be taken when stabilization occurs.

Keyword:

@STABILITY_ACTION

Usage:

If the `@STABILITY_SPECS` keyword is used to specify stabilization criteria, then this keyword may be used to specify what actions are required after the criteria are met. Possible actions are:

`MODE_TERMINATE`

`TERMINATE_TO_ELSE_MODE`

`WAIT_FOR_STABILITY`

Data Fields:

action_code	a code which indicates certain special actions to perform

Example Specification:

```
@STABILITY_ACTION
        #action_code
        MODE_TERMINATE
```

Terminate the test mode when stabilization is complete.

Notes:

The actions associated with any keyword which uses the AFTER_STABILITY macro for a start_type is assumed to be one of the actions taken when stability is complete.

The MODE_TERMINATE action means that when stabilization is complete, the test mode is immediately terminated. It may be terminated prior to the completion of stability by other mechanisms, such as timeout, limits, etc.

The WAIT_FOR_STABILITY action means that no other mechanism for mode termination may precede the completion of stability. If some other action occurs prior to completion of stability, the request to terminate is suspended until stabilization is complete. The WAIT_FOR_STABILITY action code by itself does not specify that the mode be terminated, only that no other action can cause termination prior to stability.

The code TERMINATE_TO_ELSE_MODE is used to force the execution of the mode specified with keyword @ELSE_MODE when stability occurs.

The action codes may be used in combination to achieve the desired effect.

Other Examples:

```
@STABILITY_ACTION
        #action_code
        TERMINATE_TO_ELSE_MODE
```

Completion of stabilization will cause a branch to the mode specified by the @ELSE_MODE keyword.

```
@STABILITY_ACTION
        #action_code
        WAIT_FOR_STABILITY
```

This mode cannot be terminated until stabilization is complete. Completion of stability will, however, not necessarily cause the termination of the mode.

Stability	@STABILITY_SPECS

List stability criteria.

Keyword:

@STABILITY_SPECS

Usage:

This keyword is used to specify a list of the stability criteria that are to be evaluated during the test mode. Stability is complete when all of the specified criteria are achieved. See the chapter on Stability for a more complete explanation of each type of stability criterion.

Data Fields:

type_code	the type of criteria – options are TIME_DELAY, VARIANCE, DEVIATION, CURRENT_DEVIATION, K_VARIANCE, STD_DEVIATION
variable	the variable label to which the criteria is supplied (except type = TIME_DELAY)
timeout	the time window associated with the criteria (except type = CURRENT_DEVIATION)
rate	the rate at which the criteria is evaluated
reference	the reference value for the criteria. This may be a constant, variable, or expression.
tolerance	the tolerance for the criteria.
minimum_reference	for type=K_VARIANCE, the lower threshold for the reference

Example Specification:

```
@STABILITY_SPECS
        #type_code    variable  timeout      rate reference   tolerance  min_ref
        DEVIATION     TORQUE    20[sec]      SLO  1200[lb_ft] 10.0               -
```

The engine torque must be within 10 lb-ft of 1200 for 20 seconds to have stability.

Notes:

The reference data field may be either a constant, variable label, or a computed expression.

Other Examples:

```
@STABILITY_SPECS
        #type_code      variable   timeout   rate   reference   tolerance    min_ref
        VARIANCE        fuel_rate  10[sec]   SLO    -           1.0[lb/hr]
        TIME_DELAY      -          20[sec]
```

If after at least 20 seconds the fuel_rate doesn’t wander by more than 1 lb/hr for 10 seconds, stabilization is achieved.