



Published on *CD-adapco* (<http://www.cd-adapco.com>)

[Home](#) > Experimental Validation of STAR-CCM+ for Liquid Container Slosh Dynamics

---

## Experimental Validation of STAR-CCM+ for Liquid Container Slosh Dynamics



The NASA Launch Services Program has funded several propellant slosh related projects over the years with the goal of obtaining experimental data to anchor CFD predictions.

STAR-CCM+ is used to create a CFD model of water sloshing in an 8' diameter spherical tank. The predictions from this CFD slosh model are compared to experimental data to validate the results. The data compared include slosh natural frequency, damping rate and free surface topology. These important validations allow us to increase our confidence in STAR-CCM+ for use on NASA missions.

### **Author Company:**

NASA Kennedy Space Center, US

A.I solutions

### **Author Name:**

Brandon Marsell

### **Industries:**

[Aerospace & Defense](#) [2] ? [Aerospace - Sub-Industry](#) ? [Space](#)[3]

### **Products:**

### **Conference:**

[STAR Global Conference 2013](#)[4]

CD-adapco is the world's largest independent CFD focused provider of engineering simulation software, support and services. We have over 30 years of experience in delivering industrial strength engineering simulation.

---

**Source URL:** <http://www.cd-adapco.com/presentation/experimental-validation-star-ccm-liquid-container-slosh-dynamics>

### **Links:**

[1] [http://www.cd-adapco.com/sites/default/files/Presentation/2\\_ai\\_solutions\\_NASA\\_BM.pdf](http://www.cd-adapco.com/sites/default/files/Presentation/2_ai_solutions_NASA_BM.pdf)

[2] <http://www.cd-adapco.com/industries/aerospace-defense>

[3] <http://www.cd-adapco.com/industries/aerospace-defense/%E8%88%AA%E5%A4%A9>

[4] <http://www.cd-adapco.com/conference/star-global-conference-2013>