

Rascal Weekly Subsystem

Meeting Minutes

Meeting Date	4/1/2014		
Meeting Place	SSRL	Leader	Tom Moline
Minutes Date	4/1/2014	Participants	Nate Richard, Nick Mercadante, Max Polley, Kate Clements, Denana Vehab, Tyler Olson, Casey Smith, Chris Berry, Nathan Bossart, Joseph Mayer, Richard Henry, Manu, Dr. Swartwout

[illegible]



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Description	Action	Due Date
<p>Need to perform a trade study between each option.</p> <p>Weekly meeting time: Monday at 4:00 PM</p> <p>ADC:</p> <p>We have lots of different methods for nutation damping.</p> <ul style="list-style-type: none"> • Damping fluids • Electromagnetic • Electromechanical • Etc <p>So, we can look into these options.</p> <p>What is reasonable for detumbling rates and timeframe?</p> <ul style="list-style-type: none"> • Responsibility is shared between separation and ADC system. • Usually handled based on an error budget. • Could say 1 Orbit for requirement. • Then do work based on that within each system. • Just need to set values at this point (big design driver). • Need to also decide on rotation axis. • Might be able to do this with a single reaction wheel. <p>STR:</p> <p>Preliminary design on the secondary spacecraft design is done.</p> <p>Is capable of folding into and out of itself.</p> <p>A lot easier to deal with than the CSK skeleton.</p> <p>Going to have meeting on Thursdays at 5:30 PM</p> <p>BRT:</p> <p>Working on a separation mechanism between the secondary and primary spacecraft.</p> <p>Initial concept consists of a mating piece between each, with a solenoid used for actual separation.</p> <p>Might use a spring to induce separation.</p> <p>TM: need to account for the fact that the secondary spacecraft will be off during this time.</p>	<p>Perform trade study into nutation dampening systems (KC)</p> <p>Draft initial control system for z-axis position estimation (TM)</p> <p>Have an updated skeleton with feedthroughs and mounting for PCB's (CB)</p> <p>Have trade study conducted on various methods (DV)</p>	<p>4/08/2014</p> <p>4/08/2014</p> <p>4/08/2014</p> <p>4/08/2014</p>



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<p>MS: there are power connectors that exist to relay power from the primary spacecraft to the secondary spacecraft.</p> <p>This would also turn on the secondary spacecraft as well.</p> <p>Need to talk to Boeing about how to deal with mating the spacecraft next to each other over a whole side.</p> <p>Also need constraints on positioning.</p> <p>Meeting time is 5:30 PM on Mondays.</p> <p>PRP:</p> <p>Had first meeting yesterday at 6:30 PM.</p> <p>Tried looking at Manu's previous work, couldn't get the files open.</p> <p>Going to limit the propulsion volume to 0.5 U</p> <p>Also imposing a 3W power limit.</p> <p>Also imposing a mass limit of 75% of payload mass.</p> <p>Need to ask Boeing a bunch of questions, like form factor, location, etc.</p> <p>MS: Should just send a drawing to Boeing of what we would think that our attachment scheme would look like.</p> <ul style="list-style-type: none">• <i>Motivates</i> Boeing to answer questions. <p>Oak Ridge is offering free titanium printing for scientific purposes.</p> <p>PWR:</p> <p>Power meeting is scheduled for Thursday at 2:00 PM.</p> <p>Will have an updated budget by next Tuesday.</p>	<p>Send a preliminary drawing to Boeing (TO)</p>	<p>4/8/2014</p>