



December 15<sup>th</sup>, 2015

## Guest Speaker: A Brief History of Rockets

As told by Mr. Chuck Pierce

Hello HARA Members, and Happy Holidays. We find ourselves at the end of another fun, safe, and exciting year for our little rocketry club. And, there is more to be excited about next year with NASA Student Launch, and the National Sport Launch. Our next club meeting will be on January 7<sup>th</sup> where we will hold 2016 officer elections, and continue our discussion of some pending bylaw amendments. All officer positions are up for grabs, and please, don't be shy about stepping up for the big seat either ;-). But, without further delay, below is a summary of the meeting discussions from December 3<sup>rd</sup>.

## Safety Moment

Last month, a California Boy Scout Troop leader named Michael Bentley, died as a result of injuries sustained from a ballistic rocket. Mr. Bentley was struck in the face by a mid-power sized rocket at a launch. Details surrounding the incident are not fully known, but the effects, felt hardest by his family, have the power to affect how we implement safety at all rocket launches. I asked HARA member Dr. Bill Cooke to present a synopsis of his ballistics analysis he wrote in his blog, the rocketeer's corner. His comparative analysis of the kinetic energy per unit area put into perspective the energy that can be delivered by even the smallest low power rockets if on a ballistic trajectory. The energy of a lawn darting Estes Alpha rocket has more in common with a 38 caliber bullet fired from a pistol than being tackled by a Crimson Tide defender. This highlights the often overlooked lethality of our hobby and why it is each rocketeer's responsibility to minimize risks that their rocket could do harm, and why the club should continuously foster an environment for safety as well as enjoyment.

## Bylaw Amendment – to Vote

The club was to vote on the following bylaw amendment that was proposed at the November meeting.

*Amendment - Create the club officer position of "TARC Coordinator":*

*3.1.1 The officers of HARA shall be a President, Vice-President, Secretary, Treasurer, NAR Advisor, TRA Prefect, and a TARC Coordinator.*

*Addition - Requirements for eligibility of the TARC Coordinator:*

*3.2.7 Any nominee for the position of TARC Coordinator must be on the official current list of TARC mentors posted on the TARC website ([www.rocketcontest.org](http://www.rocketcontest.org)). Club will stipulate that Paragraph 3.2.7. will be renumbered a 3.2.8. to maintain continuity of context regarding officer eligibility.*

*Addition – Duties of the TARC Coordinator:*

*3.3.7 It shall be the duty of the TARC Coordinator to serve as primary HARA point of contact for matters pertaining to the TARC competition. The Coordinator will also promote TARC locally, assist in the recruiting of TARC participants during summer/fall and organize/execute classes, workshops, launches and other needed events for local TARC teams.*

In discussion, the club decided to delay the vote on this proposed amendment until the January meeting, prior to officer elections. The delay is intended to allow the author to further develop the role and distinction of the proposed TARC Coordinator from other officer duties.

**HARA** December 3<sup>rd</sup> 2015  
Meeting @ 7:30pm

Join HARA for a NASA guest speaker and free pizza! Bring your rocket projects for show and tell.

**Guest Speaker**  
**Chuck Pierce**  
MSFC Spacecraft Propulsion Systems Branch Chief

**Club Business**  
Bylaw Amendments  
Equipment & Trailer  
NSL Updates  
NSL Kit Competition  
Safety Moment  
2016 Officer Nominations

**Upcoming Events**  
Jan 7<sup>th</sup>, 2016 – Elections  
May 28-30<sup>th</sup>, 2016 - NSL



## Bylaw Amendment – Proposed

I proposed the following bylaw amendment to come to a vote at the January meeting prior to officer elections.

*Abolition – Dissolution of the Website Committee as established and managed per existing bylaws*

*Section 7.2 Website Committee*

*Addition – Formation of a Public Outreach Committee*

*Section 7.2 Public Outreach Committee*

*7.2.1. The purpose of the Public Outreach Committee is to create and disseminate media-focused material to promote interest in hobby rocketry on both national and local levels through such means as website and other social media, newsletter, public engagements, public service announcements (PSAs), and collaborative efforts with other clubs and organizations with shared interests in STEM promotion.*

*7.2.2. A chair shall be appointed to manage the committee members, and to coordinate and report on HARA's activities. The committee chair will work closely with the HARA president to coordinate media activities and content.*

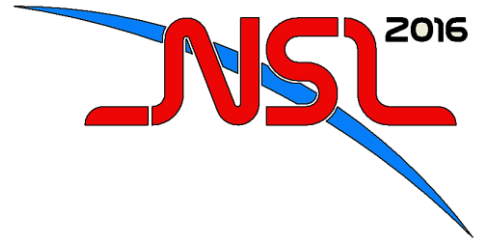
*7.2.3. Ex Officio Members of the committee will be the president, vice president, the NAR advisor, and the TARC coordinator.*

## Open Nomination for 2016 Officers

Per the club bylaws, I opened nominations for 2016 club officers. The positions to be filled are President, Vice President, Treasurer, Secretary, NAR Advisor, TRA Prefect. Eligibility for positions are defined in the bylaws available on the HARA website. All nominations are to be made in formal meeting. There were no nominations made at the December meeting. I encourage members to please consider taking on these roles. There are ways known and yet unknown to you or the club as to how we may benefit from your involvement.

## NSL Update

I gave an update to the club officers on the status of NSL planning. The HARA officers had an out of board meeting at Blue Pants Brewery the Monday before meeting. Many actions were assigned and some closed. The NAR has secured reduced rate lodging options at both the Ambassador Inn and the Holiday Inn in Manchester. Details will be on the NSL website which should be ready to go live on January 1<sup>st</sup>, 2016.



The club officers had to address the topic of limitations on rocketeers at NSL to preserve our good relationship with the land owner and the surrounding community. As a result of that discussion, the officers have decided to exclude the use of sparky motors, to limit rockets to a total impulse of 10,240 Ns, to limit flights to 2 miles above ground level, and to prohibit camping, barbecuing, fires, or driving on the field.

With regard to those flights that may be considered 'special or large projects', Mr. Chuck Pierce and myself will be the points of entry for both pre-coordination of launch and will coordinate those activities on the field. Chuck or myself will serve as RSO for those projects. Additionally, the RSO on duty is limited to performing pre-flight inspections on rockets at or lower than the certification level that the RSO holds.

## In Closing

At the beginning of the year, I set several goals for the club to build on the great success we had in 2014, but then some things happened that I was not expecting as my focus and energy was directed away from the club, a couple of leaders stepped up to keep things going. I thank you Woody, Duane, Art, Bill, and Chuck. We didn't accomplish all that I thought we could, but sometimes when you aim high and miss, you still land among the stars. I want 2016 to be that year that we reach new heights, and we cannot do it without our membership. Please, be thinking of how to engage the membership base in 2016. Once the 2016 officers are decided, I would like to schedule a kick-off meeting with the new leadership (even if I am not among them) to help develop a strategic vision for 2016 and beyond. Until then, I hope you all have a safe and cheerful holiday season, and we'll see you on the flip side.