ST. Mark’s TS – 2AC AT Counterplans (Grapevine)

## Shameless Plug

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## 2AC CP PIC Pegasus Launch Vehicles

**Zero net benefit—Pegasus is used internationally now**

**Orbital Science 8** - industry leader in small- and medium-class space and rocket systems (2008, Orbital Science Corporation, “Pegasus”, http://www.orbital.com/spacelaunch/pegasus/)

On April 5, 1990, Orbital began a new era in commercial space flight when our Pegasus rocket was launched for the first time from beneath a NASA B-52 carrier aircraft in a mission that originated from Dryden Flight Research Center in California. In the decade since its maiden flight, Pegasus has become the world's standard for affordable and reliable small launch vehicles. It has conducted 40 missions, launching over 80 satellites.

The three-stage Pegasus is used by commercial, government and international customers to deploy small satellites weighing up to 1,000 pounds into low-Earth orbit. Pegasus is carried aloft by our "Stargazer" L-1011 aircraft to approximately 40,000 feet over open ocean, where it is released and then free-falls in a horizontal position for five seconds before igniting its first stage rocket motor. With the aerodynamic lift generated by its unique delta-shaped wing, Pegasus typically delivers satellites into orbit in a little over 10 minutes.

This patented air-launch system reduces cost and provides customers with unparalleled flexibility to operate from virtually anywhere on Earth with minimal ground support requirements. Pegasus launches have been conducted from six separate sites in the U.S., Europe and the Marshall Islands, the first time a space launch vehicle has demonstrated such operational flexibility.

## 2AC CP Prizes

**Government is key**

**Larrimore 7** – Lt Col, USAF (April, Scott C., Air Force Fellows Air University, “Operationally Responsive Space: A New Paradigm or Another False Start?”

https://www.afresearch.org/skins/rims/q\_mod\_be0e99f3-fc56-4ccb-8dfe-670c0822a153/q\_act\_downloadpaper/q\_obj\_5ea32116-b119-43ab-8fcb-9565110bb741/display.aspx?rs=enginespage)RK

Recommendation 5: Purchase and store several small launch vehicles.

By purchasing several small boosters and putting them in storage, the United States begins forming its space tactical reserve. The boosters are ready if called upon in contingency support of joint forces or if needed to replace a damaged satellite. Furthermore, science and technology experimental satellites (e.g. TacSats) can draw upon this reserve, providing launch stability for the science program and offering an opportunity to exercise the operational launch team. Satellites developers could then optimize their spacecraft to the provided rocket. Replacement boosters would be acquired each year and placed into the reserve. This is a similar concept of operation used for Thor launchers supporting Program 437 ASAT mission and ballistic missile tests.4 It is doubtful that resources would allow more than one booster model to be stored and supported.

Recommendation 6: Organize ORS Program Office as standalone joint organization

The Congressionally mandated ORS Program Office should be established as a joint DOD/NRO organization. A joint program office will increase synergy and integration with established on-orbit national space systems while forming another path for emerging operational requirement to be passed to on-orbit systems. Furthermore, providing some ownership of the ORS solution potentially helps obtaining “buy-in” from the Intelligence Community. An organization falling completely under DOD auspices would hinder this needed integration.

A standalone system decoupled from SMC’s Space Development and Test Wing will prevent Congress’ perception of poor performance from the current Joint Warfighter Space (JWS)/ORS from bleeding over into the new ORS Program Office. DOD should disband the current JWS/ORS Program Office upon the new Program Office’s establishment.

Recommendation 7: Organize the Joint ORS Program Office with 2 Components

The ORS Program Office should be expanded to include a joint technology demonstration program office, the focus of current initiatives, as well as a joint reconstitution program office. A reconstitution program office under ORS auspices will allow synergy between technology development, experimentation, and a reconstitution system.

Recommendation 8: Form a Joint Reconstitution Program Office.

A reconstitution capability is an insurance policy to minimize loss of critical space assets. To date, the nation has not needed this insurance due to operational redundancy or geopolitical stability. As ASAT technology proliferates, the number of actors that can affect United States’ space systems grows. A modest reconstitution capability is becoming a wise and prudent investment in a growing multi-polar and fractured world.

A joint DOD/NRO program office should acquire this reconstitution capability. The NRO is the owner and operator of potential adversaries’ most likely targets while the DOD ORS Program Office and associated organizations are the purveyors of responsive space launch systems and technologies. Both organizations would bring to the new program offices their respective technical, operational, and institutional expertise ensuring the reconstitution space system can work with established tasking and dissemination systems.

Recommendation 9: Develop a government-controlled responsive launch operations team.

The nation may not have the time to wait for a launch contractor to provided launch services. That contractor may have conflicting priorities and insufficient staff to support time critical ORS launch requirements. The government should form a government or “blue suit” launch operations team to provide the needed responsiveness. If contracted out, support to contingency launches should be explicit in the contract. This team would be responsible for integrating a small launcher, processing, and checking out a satellite aboard the booster, and launch operations. Besides training for contingency launches, the team would gain valuable experience launching periodic technology demonstration satellites. Due to the inherently local nature of the launch support, the Air Force Reserves in the state in which the launch facility is located may be well suited for this mission.

Recommendation 10: Develop a government-controlled responsive satellite operations team.

Once the ORS satellite is launched, it will need to be commanded. The satellite will need to be expeditiously deployed, checked out, and readied for operational use and then placed into nominal operation. A government or “blue suit” team should provide this capability. The team would have to exercise with simulators to develop proficiency operating reconstitution and augmentation spacecraft. Depending upon similarity with stored contingency satellites, the space operations team could operate technology demonstration satellites as well. If the reconstitution capability includes reconnaissance spacecraft, the satellite operations organization should be Joint. Due to the potential for surge operations, this may be a mission well suited to the Air Force Reserves. Satellite operations location can be independent from launch site. Further discussion is required with operating organizations to determine the appropriate command relationship and authorities.

**CP links to politics**

**Hillhouse 11** - BSE and MSE in Aerospace Engineering at the University of Texas at Austin, worked as an undergraduate and graduate assistant with the GNC group at the Center for Space Research (3/6/11, Jim, America Space, “Moon Race: China Gears Up While US Downshifts,” http://www.americaspace.org/?p=7003)RK

In Fast Company’s China Gears Up for Lunar Space Race With World’s Biggest Rocket Factory, China is setting its sites on winning the next Moon Race. Meanwhile, in Washington the Administration wants to let a thousand commercial space companies bloom even as it ignores the will of Congress by not following either in spirit or letter the 2010 NASA Authorization Act. At least, that’s the charitable explanation for the disconnect between the President’s 2012 NASA Budget and the 2010 NASA Act that the President signed last fall. Last week, in separate testimony before the House Space Appropriations and Authorization committees, NASA Administrator Bolden made clear that he didn’t “get it” that Congress had spoken to what the nation’s space policy would be when it passed the 2010 NASA Authorization Act. Instead, NASA’s budget inverts the policy priorities outlined by Congress in the 2010 Act so that national space is sacrificed in favor of continued subsidies for commercial space.

While taking the same basic path that the Administration took last year, one is left guessing that the Administration must believe that this time, unlike in 2010, the battle to outsource our nation’s human space flight program will turn-out differently. The response from Congress, as evidenced from the hearings of both of the House committees last week, must be leaving some in the Administration with a sense of deja vu all over again. If insanity is indeed defined as doing the same thing but expecting a different outcome, it may be time to hold a mental competency hearing for some in the Administration responsible for developing its 2012 NASA Budget.

**Prizes fail – don’t spur sufficient investment or innovation.**

**Kalil 2006,** (Thomas Special Assistant to the Chancellor for Science and Technology at UC Berkeley, December, “Prizes for Technological Innovation,” <http://www.brookings.edu/views/papers/200612kalil.pdf>)

Prizes have significant limitations. In most circumstances, they should not be the policy instrument of choice for science and technology. Since only winning teams receive prizes, and only after they have won, all entrants must have or raise the funds necessary to compete. Most researchers and small and medium-sized companies find it difficult to self-finance or raise external funding. For example, offering a prize for a breakthrough in high-energy physics would not work if it required physicists to raise billions of dollars to build a new particle accelerator. Furthermore, it may be impossible to clearly specify in advance what the victory conditions are, since the outcomes of fundamental research are, by definition, unknowable or difficult to quantify in advance. Many of the most interesting discoveries in science are serendipitous. Even when the goals of a prize are generally understood, it may be difficult to develop appropriately specific proxies for those goals, such as an improvement in the price-to-performance ratio of a given technology, or widespread market acceptance. Finally, prizes are more likely than traditional funding mechanisms to lead to duplication of effort, although this effect can be mitigated through careful program design (Newell and Wilson 2005).