\*\*\*ESA CP\*\*\*

## Europe Counterplan – 1NC

The European Space Agency, in a Ministerial Council, should approve a proposal mandating \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The European Space Agency is deciding how to invest in space exploration now- CP solidifies its focus- it solves and is in the literature

Brobinsky and Del Monte 2010 (N and L, both with the ESA, The Space Situational Awareness Program of the European Space Agency, Cosmic Research, 2010, Vol. 48, No. 5 pp. 392–398, http://www.springerlink.com/content/a592j95k5l113715/fulltext.pdf)

CHARACTERISTICS OF THE EUROPEAN SSA SYSTEM General Architecture The architecture of the future European SSA System will be based, as a result of a progressive integration process, on the federation of already existing and available national assets, together with the newly developed and procured elements. The use of existing and available national assets in the construction of a European integrated system is compliant with the principles expressed in the ESP. The procurement of the elements that will be part of the future European SSA System will be realized in successive phases of the SSA Program, in line with the decisions made by the participating States and allocation of corresponding funds. The European SSA system will be based on the requirements formulated after consultations with the SSA User community. It will offer technical and operational responses to the three main segments of SSA: 1) Space Surveillance and Tracking (SST); 2) Space Weather (SWE); and 3) Near-Earth Objects (NEO).

A focused ESA has the resources and tech to solve, and improves current operations of other countries’ space agencies

Brobinsky and Del Monte 2010 (N and L, both with the ESA, The Space Situational Awareness Program of the European Space Agency, Cosmic Research, 2010, Vol. 48, No. 5 pp. 392–398, http://www.springerlink.com/content/a592j95k5l113715/fulltext.pdf)

CONCLUSIONS As stated in the report of the ESA Council in response to the SSA Program Proposal, a well funded and strongly implemented SSA can serve the ambitious goals of Europe to become one of the most dynamic knowledge based societies in the world thus providing a favorable platform for Europe’s institutions, organizations, industry and scientists to maintain a leading edge in preserving the sustainable and peaceful exploitation of outer space while reinforcing global safety and security. In adopting the SSA Program and launching its preparatory phase, the European Union and its Member States have recognized the necessity and usefulness for Europe to have at its disposal an independent and well performed SSA System. Such a system will reduce the dependency of Europe on non European Space Powers. It will also provide Europe with the capability to defend its critical space, air, and ground assets against the effects of space debris, space weather, and NEOs. Finally, based on an agreed data policy and governance scheme currently under discussion, Europe is prepared to share SSA information with other Space Powers, for the benefit of all the interested and cooperating parties.

## Model CP Text vs. the packet aff

The European Space Agency, in a Ministerial Council, should approve a proposal mandating a substantial increase in its exploration of near-Earth objects and its development of near-Earth object deflection systems, including investment in telescopes, radar, and deflection technology. We’ll clarify.

## Solvency: NEO Detection

The EU has the tech to detect and characterize NEOs

Drolshagen, Koschny and Bobrinsky 2010 (G, D and N., all with the European Space Agency, The NearEarth Objects Segment of the European Space Situational Awareness Program, Cosmic Research, 2010, Vol. 48, No. 5 pp. 399–402, http://www.springerlink.com/content/0h0753l6w1vn2766/fulltext.pdf)

EXISTING EUROPEAN FACILITIES FOR SSA–NEO The European SSA–NEO system will be based initially on existing facilities and capabilities. Later, dedicated sensors and instruments will be added. Europe has many optical telescopes, located within or outside Europe, and several radars which are suitable for NEO observations. These facilities were originally built for other purposes. For example, the ESA’s Optical Ground Station was built for optical communications with satellites, but it was regularly and successfully used for space debris and more recently for asteroid observations. Numerous national research telescopes exist at various locations and have different apertures. Some of these telescopes can be used on a regular or occasional basis for NEO observations. Many amateur telescopes which could make valuable contributions to this field also should not be forgotten. Existing European radar facilities were mainly built for military purposes, but some of them can be used on special occasions for NEO observations, as it took place in the past for space debris observations (e.g., the German FGAN and the French GRAVES systems). A unique European NEO asset is the Near Earth Objects–Dynamic Site (NeoDys). The NeoDys system was established in 1998 and is continuously improved [5]. It is a duplicate system whose elements are located at the Universities of Pisa (Italy) and Valladolid (Spain). Based on astrometric measurements obtained worldwide and collected centrally by the MPC, NeoDys computes NEO orbits and predicts their further motion. It then computes impact risks for NEOs on a regular basis (everyday updates). NeoDys keeps a risk list, and it contains a database with information on all known asteroids and NEOs. The NeoDys website also contains a link to European Asteroid Research Node (EARN) which is a database of physical properties of NEOs [6]. EARN was developed by DLR in Berlin and is updated on a regular basis. Other existing European structures include the Spaceguard facility [7] and the Planetary Database [8]. Spaceguard is an association aimed at the protection of the Earth environment against the bombardment of objects of the Solar System. It maintains a priority list of NEO which require additional observations. The Planetary Database was originally developed as a source of information on nonspherical gravitational fields of the Solar System’s bodies. It can serve as kernel of a wider database for all NEO information.

The EU has the resources to solve- CP provides direction to their space program

Flight International 6/14/2011 (MAKING SPACE Headline to come; Europe's space policy aims to ensure the continent's independence, create highly skilled jobs, boost competitiveness and improve the safety and daily lives of its citizens, lexis)

Europe's presence in space has been increasingly visible in recent years. To cite a recent example, the 16 May launch of NASA's Space Shuttle Endeavour carried the biggest, most ambitious science payload ever delivered to the International Space Station, the European Space Agency-built alpha magnetic spectrometer - a 6.9t particle detector physicists hope will help unravel the secrets of so-called "dark matter". Endeavour's crew included Italian astronaut Roberto Vittori - who, on boarding the ISS was greeted by countryman Paolo Nespoli. Meanwhile, Nespoli and his ISS crewmates have been enjoying food, water, air and spare parts delivered by two ESA-built automated transfer vehicle robotic cargo vessels. While trips to the ISS make headlines, and it is to be hoped, strike blows for science and international co-operation, Europe's political leaders are clear-headed about why they support spaceflight, with one theme playing consistently: space is about benefits for Europe's citizens. The European Commission spelled this vision out with admirable clarity in an April 2011 paper detailing its priorities for a new, "reinforced" European space policy, which will emerge from the coming rounds of EU budget making. As commission vice-president for industry Antonio Tajani puts it, space is about improving the safety and daily lives of Europeans. He says: "Space is strategic for Europe's independence, job creation and competitiveness. Space activities create high-skilled jobs, innovation, new commercial opportunities and improve citizens' well-being and security." And, he adds: "In order to achieve our goals, Europe needs to keep an independent access to space." First priorities are realisation of the flagship Galileo navigation and global monitoring for environmental and security (GMES) satellite constellations. Galileo, a European counterpart to the US GPS system, is behind time and budget - 18 spacecraft are expected to be in orbit by 2014, six years after the system was to be fully operational, and Galileo will need 24 spacecraft to provide global coverage - but the Commission has underscored the need to get the constellation deployed "within a reasonable amount of time". One clear benefit of satellite navigation came on stream earlier this year, when Europe's EGNOS safety-of-life service went live. A network of 40 EU-owned EGNOS ground stations take signals from GPS - and, eventually, Galileo - and enhance their accuracy to less than 1m (3ft). As with the wide area augmentation system available in the USA, aircraft with EGNOS receivers can now make super-precision approaches in Europe. And, says Tajani, the free-to-use signals are a public service, so private companies are encouraged to develop receivers capable of exploiting them. ENHANCE UNDERSTANDING The civilian-use GMES system is intended to enhance understanding of the sea, air, land and atmospheric environment, as a basis for policy making, and the data generated would also be available for private use. The EC wants to see GMES fully operational by 2014. A third priority is the establishment of an independent, European space situational awareness (SSA) system. This would be a single radar installation somewhere in Europe supplemented by 20 optical telescopes at four sites equally spaced near the equator, to track the orbiting debris that poses a risk to satellites and other spacecraft. The system, complementing similar observation carried out by the USA and possibly at some point including some space-based telescopes, would also in principle provide some guide to so-called near-Earth objects: meteors and asteroids that could, if they struck the Earth, cause immeasurable damage. The system would be expensive - ESA's SSA programme office foresees an initial five-year development phase starting in 2012 or 2013 with a E600-700 million budget - but looks like a good investment. Orbiting debris and solar radiation are two space-based hazards that the Commission estimates causes around E332 million ($480 million) of damage to European assets annually. The EC has also identified continued European participation in space exploration as a policy priority. As the Commission paper points out - and as programmes ranging from ISS participation to detailed pictures of Mars currently being beamed home by ESA's Mars Express planetary orbiter amply support - "Europe is a partner that is known for its competence and reliability in this sector, but it is not making the most of its potential because its actions are too piecemeal". Thus, the Commission hopes to give momentum to Europe's role in four aspects of international co-operation: development of critical technologies (life-support systems, for example), scientific exploitation of the ISS, access to space (through Europe's indigenous launch capabilities) and the establishment of an international forum to allow the EU to co-ordinate Europe's space activities.

EU solves NEO detection

New Scientist 2009 (It's behind you!; They can strike without warning and devastate the planet, so it's time to get asteroids firmly in our sights, says David Shiga, 9/26, lexis)

There is one major way to improve our prospects - point more eyes at the skies. The European Space Agency wants to get into the monitoring game and may set its telescopes at the European Southern Observatory in Chile on the problem. This could fill a gap in the NASA-funded surveys, which are limited to watching the skies of the northern hemisphere, says Richard Crowther of the UK's Science and Technology Facilities Council, who is a consultant for ESA and heads a United Nations working group on near-Earth objects. Be prepared "Up to now, the US has taken the majority of the responsibility for dealing with this issue and I think it's time for other states to take on a more equitable share of that," he says.

## Solvency: NEO Deflection

EU solves best for NEO deflection

Schweickart 2007 (Russell L., Chair of the B612 Foundation, former astronaut, Executive Vice President of CTA Commercial Systems, Inc. and Director of Low Earth Orbit (LEO) Systems and research, and scientist at the Experimental Astronomy Laboratory of the Massachusetts Institute of Technology (MIT), NEAR-EARTH OBJECTS, CQ Congressional Testimony, lexis)

3. What needs to be done to mitigate the risks of potential NEO impacts? There are two key actions to be taken that would make significant progress toward protecting the Earth from the potential devastation of NEO impacts. Neither of them is expensive yet both of them are extremely important, even urgent, in light of the anticipated rapid rise in the NEO discovery rate in the near future. a) NASA should assign someone in its NEO Program to the specific task of thinking through, analyzing and understanding the NEO deflection challenge. (Recommendation 3) So long as the NASA effort, and therefore thinking, is restricted to the NEO discovery process only, the government will lack the critical information and understanding needed to protect the Earth from NEO impacts. There is critical linkage between the upstream process of NEO search and orbit analysis and the downstream information needed to deflect NEOs. Absent someone explicitly thinking this through we stand justly accused of focusing on numeric goals for the sake of meeting an abstract quota. I hasten to point out that NASA cannot make such an assignment without being given the explicit responsibility for this critical function. b) NASA should validate a basic NEO deflection capability through the execution of a demonstration mission. (Recommendation 4) While deflection concepts can and indeed must first be worked out conceptually, in an endeavor as critical to public safety as deflecting an asteroid bound for an impact, our ultimate success in such a vital undertaking cannot depend solely on a paper analysis. A demonstration program can be performed on a non- threatening asteroid at a cost no more than that of a typical small scientific mission. This effort need not, and perhaps should not, be undertaken as a US mission per se. The European Space Agency (ESA) has already performed the initial feasibility and design phase of such a mission (though it should be modified to validate the "slow push" component). Were an international partnership agreement negotiated a reasonable cost estimate for a complete NEO deflection demonstration campaign could be performed for about the cost of a single scientific mission.

## Solvency: Radar

CP remedies any radar deficiency- EU has the tech, just needs focused investments

Pupillo et al 2011 (G., E. Salerno2, S. Pluchino2, M. Bartolini2, S. Montebugnoli2, M. Di Martino1, S. Righini2, F. Schillir`o2, F. Berizzi3, E. Dalle Mese3, F. Laghezza3, A.A.Konovalenko4;5, and A. Nabatov4;5; 1: INAF - OATO, Via Osservatorio 20; 2: INAF - IRA, Via Gobetti 101; 3: IET - University of Pisa, Via Caruso; 4: Institute of Radioastronomy; 5: National Space Center of Ukraine; A potential Italian radar network for NEO and space debris observations, Mem. S.A.It. Suppl. Vol. 16, 59, http://sait.oat.ts.astro.it/MSAIS/16/PDF/59.pdf)

4. Conclusions The possibility to set an Italian multistatic radar network dedicated to the NEOs and space debris monitoring has been proposed. We only consider the suitable Italian existing facilities, with the exception of the SRT that is currently under completion. An appropriate transmitter should be installed on SRT (for NEO studies) and on a 32-m class antenna, as the Medicina or Noto facilities (for space debris monitoring). Even though further investigations are necessary, observational tests and preliminary simulations confirmed the high sensitivity of such setups. High SNR echoes from NEOs, suitable for highly accurate measurements of physical and dynamical properties, could be received during their close approaches. Moreover the proposed radar network could be also able to detect sub-centimetric space debris in LEO up to centimetric fragments in GEO orbital regions.

## A/T “US Resources Key”

The ESA would coordinate with NASA even if it’s taking the lead- ensures access to the best US resources without US action

Space Daily 2010 (An International Response To Earth Threatening Asteroids, 11/7, lexis)

Planetary Defense The workshop brought together for the first time space agencies to discuss the future deflection of a hazardous asteroid, said former shuttle astronaut, Tom Jones, Chair of the Association of Space Explorers (ASE) Committee on Near-Earth Objects. "Representatives from NASA and the European Space Agency, facilitated by Secure World Foundation and the Association of Space Explorers, talked substantively about how their programs could be coordinated to gather important planetary defense knowledge about asteroids, what asteroid research is needed to facilitate deflection planning, how space agencies should demonstrate asteroid deflection technologies, and when future planning meetings should take place," Jones said. Leading international authorities on planetary defense, space situational awareness, as well as orbital debris, along with astronauts and space scientists, took part in the workshop. It was the latest in a series of meetings organized to report to the United Nations Action Team-14, a group within the UN's Committee on the Peaceful Uses of Outer Space Scientific and Technical Subcommittee established in 2001 for the purposes of addressing the asteroid impact threat. "The workshop series is focusing on plans and recommendations for global coordination and response in the event that an asteroid or other object is found to pose an impact threat to Earth," explained workshop coordinator, Detlef Koschny from the European Space Agency. Global warning and technical analysis Taking a leading role in the workshop was Sergio Camacho, space science researcher, former Director of the UN Office for Outer Space Affairs and now Secretary General of the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean (CRECTEALC). Camacho assisted in defining future planning tasks and studies for the MPOG that will later be merged with findings of other experts to create a final report to the UN committee. Such a report will recommend how to react to an impact threat from a Near Earth Object, or NEO. Earlier this year, a workshop organized by Secure World Foundation in coordination with the Association of Space Explorers and CRECTEALC was hosted by the Mexican Ministry of Foreign Affairs in Mexico City. Participants in that interdisciplinary workshop considered the challenges and problems that a future Information Analysis and Warning Network (IAWN) would face in providing global warning and technical analysis regarding an Earth-threatening asteroid. Big first step The recently held workshop in Darmstadt, Germany "was a big first step on the operations side, bringing together countries that have deep space experience and can actually execute an asteroid deflection," said ASE's Jones. "NASA and the European Space Agency both expressed high interest in working together to solve the technical problems ahead, and I hope they will be joined by the many other space agencies with their additional talents and resources," Jones said. ASE's international community of space fliers, Jones added, "applauds the agencies' participation in MPOG, and looks forward to assisting in getting the message out that global cooperation can take on this very preventable natural hazard."

## A/T “Heg Disad”

The EU won’t compete with the US for space dominance- it wants to cooperate, not dominate

Logsdon 2008 (John M., Professor Emeritus of Political Science and International Affairs at George Washington University's Elliott School of International Affairs. He was the founder and from 1987-2008 Director of the Elliott School's Space Policy Institute, The new European Space Policy as seen from across the Atlantic, Yearbook on Space Policy, 2008, Volume 1, Part 2, 167-181, http://www.springerlink.com/content/ml6222772p60711n/)

This is not to say that the symbolic aspects of the new policy are unimportant. Indeed, the policy sends important messages both to European leaders and to other countries active in space with respect to European aspirations as a global actor, with space capabilities as an important element in pursuing those aspirations. In this way, the European policy mirrors (probably not consciously) the preamble of the most recent statement of U.S. National Space Policy, released in October 2006, which declared that “In this new century, those who effectively utilize space will enjoy added prosperity and security and will hold a substantial advantage over those who do not”.293 Through its new policy, Europe clearly hopes to be one of those who effectively utilize space. This analysis thus suggests that the primary audience for the policy is the political leaders in Europe who will consider in coming years the appropriate priorities and funding levels for space activities at the EU, ESA, and national levels. While the policy states in general terms European aspirations to become even more a leading space power, the immediate competitive challenge to the United States is rather muted. This policy is not a statement that Europe intends to mount an across-the-board challenge to U.S. space leadership, but rather that Europe aspired to be seen as one of the leaders in global space activities to more significant degree than heretofore has been the case. It remains to be seen whether the implementation of the policy will lead to any meaningful changes in the transatlantic space relationship, with Europe, based on its increasing space capabilities, taking on a more assertive role.

Heg solves nothing- past two decades prove

Mearsheimer 2011 (John J., R. Wendell Harrison Distinguished Service Professor of Political Science at the University of Chicago, The National Interest, Imperial by Design, lexis)

One year later, Charles Krauthammer emphasized in "The Unipolar Moment" that the United States had emerged from the Cold War as by far the most powerful country on the planet.2 He urged American leaders not to be reticent about using that power "to lead a unipolar world, unashamedly laying down the rules of world order and being prepared to enforce them." Krauthammer's advice fit neatly with Fukuyama's vision of the future: the United States should take the lead in bringing democracy to less developed countries the world over. After all, that shouldn't be an especially difficult task given that America had awesome power and the cunning of history on its side. U.S. grand strategy has followed this basic prescription for the past twenty years, mainly because most policy makers inside the Beltway have agreed with the thrust of Fukuyama's and Krauthammer's early analyses. The results, however, have been disastrous. The United States has been at war for a startling two out of every three years since 1989, and there is no end in sight. As anyone with a rudimentary knowledge of world events knows, countries that continuously fight wars invariably build powerful national-security bureaucracies that undermine civil liberties and make it difficult to hold leaders accountable for their behavior; and they invariably end up adopting ruthless policies normally associated with brutal dictators. The Founding Fathers understood this problem, as is clear from James Madison's observation that "no nation can preserve its freedom in the midst of continual warfare." Washington's pursuit of policies like assassination, rendition and torture over the past decade, not to mention the weakening of the rule of law at home, shows that their fears were justified. To make matters worse, the United States is now engaged in protracted wars in Afghanistan and Iraq that have so far cost well over a trillion dollars and resulted in around forty-seven thousand American casualties. The pain and suffering inflicted on Iraq has been enormous. Since the war began in March 2003, more than one hundred thousand Iraqi civilians have been killed, roughly 2 million Iraqis have left the country and 1.7 million more have been internally displaced. Moreover, the American military is not going to win either one of these conflicts, despite all the phony talk about how the "surge" has worked in Iraq and how a similar strategy can produce another miracle in Afghanistan. We may well be stuck in both quagmires for years to come, in fruitless pursuit of victory. The United States has also been unable to solve three other major foreign-policy problems. Washington has worked overtime-with no success-to shut down Iran's uranium-enrichment capability for fear that it might lead to Tehran acquiring nuclear weapons. And the United States, unable to prevent North Korea from acquiring nuclear weapons in the first place, now seems incapable of compelling Pyongyang to give them up. Finally, every post-Cold War administration has tried and failed to settle the Israeli-Palestinian conflict; all indicators are that this problem will deteriorate further as the West Bank and Gaza are incorporated into a Greater Israel. The unpleasant truth is that the United States is in a world of trouble today on the foreign-policy front, and this state of affairs is only likely to get worse in the next few years, as Afghanistan and Iraq unravel and the blame game escalates to poisonous levels. Thus, it is hardly surprising that a recent Chicago Council on Global Affairs survey found that "looking forward 50 years, only 33 percent of Americans think the United States will continue to be the world's leading power." Clearly, the heady days of the early 1990s have given way to a pronounced pessimism.

Heg collapse doesn’t cause global nuclear war – conflicts would be small and managable

Richard Haas (president of the Council on Foreign Relations, former director of policy planning for the Department of State, former vice president and director of foreign policy studies at the Brookings Institution, the Sol M. Linowitz visiting professor of international studies at Hamilton College, a senior associate at the Carnegie Endowment for International Peace, a lecturer in public policy at Harvard University’s John F. Kennedy School of Government, and a research associate at the International Institute for Strategic Studies) April 2008 “Ask the Expert: What Comes After Unipolarity?” <http://www.cfr.org/publication/16063/ask_the_expert.html>

Does a non polar world increase or reduce the chances of another world war? Will nuclear deterrence continue to prevent a large scale conflict? Sivananda Rajaram, UK Richard Haass: I believe the chance of a world war, i.e., one involving the major powers of the day, is remote and likely to stay that way. This reflects more than anything else the absence of disputes or goals that could lead to such a conflict. Nuclear deterrence might be a contributing factor in the sense that no conceivable dispute among the major powers would justify any use of nuclear weapons, but again, I believe the fundamental reason great power relations are relatively good is that all hold a stake in sustaining an international order that supports trade and financial flows and avoids large-scale conflict. The danger in a nonpolar world is not global conflict as we feared during the Cold War but smaller but still highly costly conflicts involving terrorist groups, militias, rogue states, etc.

Your evidence overestimates the US’s ability to shape the international system – doesn’t contain conflict and wont shape the new multipolar system

Christopher Layne (Associate Professor in the Bush School of Government and Public Service at Texas A&M University) 2006 “The Peace of Illusions” p 176-7

A second contention advanced by proponents of American hegemony is that the United States cannot withdraw from Eurasia because a great power war there could shape the post conflict international system in ways harmful to U.S. interests. Hence, the United States "could suffer few economic losses during a war, or even benefit somewhat, and still find the postwar environment quite costly to its own trade and investment."sa This really is not an economic argument but rather an argument about the consequences of Eurasia's political and ideological, as well as economic, closure. Proponents of hegemony fear that if great power wars in Eurasia occur, they could bring to power militaristic or totalitarian regimes. Mere, several points need to be made. First, proponents of American hegemony overestimate the amount of influence that the United States has on the international system. There are numerous possible geopolitical rivalries in Eurasia. Most of these will not culminate in war, but it's a good bet that some will. But regardless of whether Eurasian great powers remain at peace, the outcomes are going to be caused more by those states' calculations of their interests than by the presence of U.S. forces in Eurasia. The United States has only limited power to affect the amount of war and peace in the international system, and whatever influence it does have is being eroded by the creeping multipolarization under way in Eurasia. Second, the possible benefits of "environment shaping" have to be weighed against the possible costs of U.S. involvement in a big Eurasian war. Finally, distilled to its essence, this argument is a restatement of the fear that U.S. security and interests inevitably will be jeopardized by a Eurasian hegemon. This threat is easily exaggerated, and manipulated, to disguise ulterior motives for U.S. military intervention in Eurasia.

## Theory- General

Gut check- the neg should get to talk about the *European Space Agency* on the *space* topic about whether the US needs to increase ITS exploration- it’s built into the rez wording

1NC Brobinsky and Del Monte proves there’s a large lit base about whether and how the ESA should move forward, treating it as a single organization- checks any abuse claims and proves allowing THIS CP uniquely expands topic-related education

Additional proof that the ESA acts as a single unit in Ministerial Councils

Brobinsky and Del Monte 2010 (N and L, both with the ESA, The Space Situational Awareness Program of the European Space Agency, Cosmic Research, 2010, Vol. 48, No. 5 pp. 392–398, http://www.springerlink.com/content/a592j95k5l113715/fulltext.pdf)

THE EUROPEAN SSA PREPARATORY PROGRAM During the ESA Council at Ministerial level in November 2008, a new ESA Program on Space Situational Awareness (SSA) has been approved. A preparatory phase with a funding of 50 million Euros is initially taking place during the time period 2009–2011. A continuation of the SSA program will be proposed at the next Ministerial Council for the years 2012 and onwards. During the first three years, the activities will be concentrated on the definition of the overall architecture of the European SSA System, and its associated governance and data policy. Significant efforts are also being put in the early deployment of precursor services, mainly based on already existing National and European structures such as radars, telescopes, data centers, and centers of expertise. Finally, development of prototype radars and pilot data centers will be undertaken for the purpose of validation of the main concepts and in view of an operational deployment during the next program phase. The phasing of the activities of the SSA Preparatory Program during the time frame 2009–2011 showing also the supporting studies is presented in Fig. 5.

## A/T “International Fiat Bad”

INTERNATIONAL FIAT BOOSTS EDUCATION - EXPANDS HORIZONS BEYOND THE US AND INCREASES LITERATURE BASE TO CHOOSE FROM. EDUCATION OUTWEIGHS ABUSE CLAIMS BECAUSE IT'S THE TERMINAL IMPACT TO DEBATE.

INCREASES AFF GROUND - AFF CAN IMPACT TURN OUR COUNTRY’S ACTION. POLITICS DISADS, RELATIONS DISADS, ETC.

KEY TO NEGATIVE GROUND ON THIS TOPIC- THE REZ SAYS USFG SHOULD INCREASE ITS EXPLORATION, WE TEST THAT

SEARCH FOR THE BEST POLICY OPTION SHOULD BE THE FRAMEWORK FOR THE DEBATE. ENCOURAGES RESEARCH AND BEST REAL WORLD POLICYMAKING.

ERR NEG ON THEORY. IT'S TOUGH TO BE NEGATIVE. 1st AND LAST SPEECH AND AN AFF BIASED RESOLUTION WITH HUGE IMPACTS GIVE THEM AN ADVANTAGE.

REJECT THE ARGUMENT, NOT THE TEAM.

BAD STANDARD - ETHNOCENTRIC AND DISCOURAGES CREATIVE ARGUMENTS WHICH DECREASES EDUCATION.

LITERATURE BASE CHECKS - GERMANENESS OF SEARCH TERMS AND SOLVENCY ADVOCATES MAKES IT PREDICTABLE.

NO RIGHT TO PREDICTABILITY - READ ADD-ONS OR SOMETHING.

US KEY WARRANTS CHECK

NET BENEFITS CHECK - IMPACT TURN THEM.

## A/T “Multi-Actor Fiat Bad”

(\_) No Link- the ESA acts as a single organization- 1NC Brobinsky and Del Monte proves

(\_) Counter-interp: we get to fiat one multi-member organization. Solves all infinite regress

(\_) Increases education by allowing us to learn about more actors.

(\_) More real world - actors never work in isolation.

( ) Equalizes ground. Multiple actors are the best test of US key args. That's key to our ground and forces them to find better solvency evidence.

( ) They fiat every member in congress - that adds up to more actors

( ) Perms check abuse - they can strategically perm to get out of disads and capture extra solvency.

( ) It's infinitely regressive - there's no brightline for how many actors is abusive

## \*\*AFF\*\*

## ESA Fails

ESA projects won’t get enough funding and are too slow

Aerospace Daily 2009 (Medium-Sized Missions Could Test ESA Science Management Skills, 12/8, lexis)

A slate of new medium-sized science missions being evaluated by the European Space Agency (ESA) could reignite debate on the agency’s ability to keep within cost and schedule envelopes mandated by its member states. Gross underestimates of technology risks on the BepiColombo Mercury mission have led to more rigorous evaluation of ESA science projects (Aerospace DAILY, Nov. 30). The six missions, presented at the Oceanographic Institute here last week, are being proposed for the so-called «M» (medium) Mission portion of ESA’s new science program, Cosmic Vision 2015-25. The missions cover a range of undertakings, from pinpointing Earth-like planets and exploring dark matter and energy to providing a close-up view of the sun’s polar regions and backside. They will be reviewed and ranked by priority in January in preparation for a downselect by ESA’s Science Program Committee the following month. The SPC is likely to approve 2-4 missions for further study. Final selection of the missions, due to be launched in 2017-19, is planned in 2011. Some of the missions presented may be in for a rough ride on the key criterion of cost. Two of them — the Marco Polo near-Earth-object sample return mission and Cross-Scale, a 12-satellite space plasma experiment — carry an estimated price tag of €600-630 million ($900-$945 million) in 2010 conditions, far above the €475 million target cost for M-Missions and close to cornerstone missions like Gaia, says Frederic Safa, who heads ESA’s advanced studies and technology preparation division. A third, the Euclid dark energy probe, carries an acknowledged mass and schedule risk that could push up its €500 million estimated cost. The high estimates may raise member state concerns that ESA is still not able to keep its science projects within cost and schedule targets. «The last three ESA councils have all taken issue with science mission costs, and the next this month will do so, too,» says ESA’s director of science and robotic exploration, David Southwood, noting that industry bears part of the blame. «We had better get a handle on this.» An important criterion in the M-Mission selection is likely to be whether the projects will be conducted alone or with other agencies. Solar Orbiter is proposed in cooperation with NASA, which wants to fly it in tandem with its Solar Probe Plus mission. Solar Orbiter’s projected €490 million cost assumes a NASA launch and a U.S. contribution to the payload. Three other M-Missions — the Spica mid/far-infrared probe, Marco Polo and Cross-Scale — are proposed in cooperation with the Japan Aerospace Exploration Agency although only the cost estimate for Spica (€160 million for the European part) takes this into account.

ESA can’t solve – can’t get US technology and costs a lot to make new tech.

De Selding -10 (5/28/10. Space News, European Space Agency Seeks To Lessen Its Dependence on U.S. Propulsion Providers, http://www.spacenews.com/civil/100528-esa-lessen-dependence-propulsion-providers.html)

The European Space Agency (ESA) is promoting the creation of European expertise in certain propulsion technologies to avoid technology-transfer roadblocks associated with U.S. components even if the U.S. hardware is substantially less expensive, ESA officials said. These officials said that they have been forced into the policy by the fact that for its satellite programs, ESA requires that it be able to understand the source of a problem that crops up either in ground testing or in orbit. U.S. International Traffic in Arms Regulations (ITAR) policy makes such a post-failure review impossible, they said. “If the U.S. has already developed something and can sell it to us for half of what it would cost us to build it, why should we develop it? We can use our resources elsewhere,” said Jose Gonzalez del Amo of ESA’s European Space Research and Technology Centre (ESTEC) in Noordwijk, Netherlands. “The problem is that if a component doesn’t work, we need to understand what happened, and ITAR prevents this.” As a result, ESA is financing development of satellite regulators, latch and flow-control valves and other components instead of continuing to rely on U.S. goods, Gonzalez del Amo said here May 4 during the Space Propulsion 2010 conference organized by the French Aeronautics and Astronautics Association. It is not just satellite components. The 18-nation ESA’s general policy of nondependence — this can mean independence or maintaining at least two competing non-European suppliers — has worked its way into most of the agency’s programs in the decade since ITAR, which classifies most satellite components as weaponry, became U.S. policy. Mark Ford, head of ESTEC’s propulsion engineering section, said the agency is determined to continue to wean itself from dependence on U.S. suppliers for propulsion technologies to avoid ITAR-related complications. ESA and other European government officials have long said Europe’s space budget is too small to pursue autonomy in all sectors. Besides the cost of developing the technology, maintaining production lines for these components is often difficult given Europe’s relatively low demand, they said. Using U.S. components has been especially attractive in recent years because of the strength of the euro relative to the U.S. dollar, which gives U.S. exports an advantage over European suppliers. Michel Courtois, ESA’s director of technical and quality management, said the large investment needed to design and test new propulsion technologies, coupled with the low price of U.S. and other non-European hardware, holds down market prices and discourages new European market participants. Despite this, Courtois said in a written presentation to the conference, ESA is moving toward “full qualification of European feed system components — regulators, latch valves and flow control valves — to remove ITAR dependencies.” Gonzalez del Amo said several companies are already under ESA contract to develop propulsion-related systems that are considered critical for future European missions and are available in the United States but only under restrictive conditions. The companies include Thales Alenia Space Italy and AMPAC In-Space Propulsion of Britain. He said a European program he declined to name encountered a problem with a valve built by a U.S. company. In response to a request for possible causes of the anomaly, he said, “we got a list of the component’s performance in return. We eventually solved the problem [without the U.S. manufacturer’s assistance], but this was not acceptable.” ESA and other European government officials have long said their limited resources make them willing partners in international programs. This remains true, they say. But with each passing year, decisions based on a policy to minimize ITAR constraints become harder to reverse as investment in equipment suppliers is completed and the new production lines demand business. Courtois said ESA will be wary of entering into program agreements that have the effect of keeping Europe from investing in technology it will need over the long term. “Due to cost of development, international partnerships may be desirable, but this must be balanced against requirements for European nondependence and challenges in shaping up effective collaborations,” Courtois said. “U.S. dual-use propulsion technologies are unobtainable from non-U.S. customers. Even on products already obtained by European industry, unavailability of information imposes constraints on their use, in particular in the case of failures.”

## Heg DA

CP crushes US hegemony in space, only new US space development is able to preserve US hegemony.

Stone 11 (Christopher Stone (B.A., M.A.) is a space policy analyst and strategist near Washington, DC, Collective assurance vs. independence in national space policies, May 16, 2011, http://www.thespacereview.com/article/1843/1)

In addition, one of the bolder international efforts they briefly cover is their interest in opening up potential dialogue with the Chinese and utilizing EU space power for European influence operations in Africa. Also, as expected by many observers, they declare their commitment to the promotion of “responsible behavior” through their proposed Code of Conduct (see “Securing space security”, The Space Review, December 20, 2010). This is the essence of their section on international cooperation. They do not spend any great detail discussing any of their few international cooperation areas, rather stating that the development of any space forum or dialogues with other nations, such as China, must be of “mutual benefit” and that the “scope and objectives of which will be set out in appropriate bilateral agreements.” In other words, the EU space policy is a policy regarding Europe and its goals and objectives for the Union to gain in space leadership worldwide. Gaining added security, prestige, and wealth in space allow Europe to achieve a “key position” in space power based on excellence and “increased European capability.” Many experienced American space professionals, with knowledge of international space cooperation and policy, understand the importance of shaping the strategic space environment to benefit US vital interests. Many in the space community wish to get past the perceived international angst that followed the release of the 2006 space policy while maintaining good rapport with our allies. However, a new US national space policy needs to follow the lead of the Europeans and declare the goals and objectives for the development of American leadership through increased capability, ambitious space objectives, innovation, and global competitiveness of our space industrial base. International cooperation, as the Europeans note, should be best articulated in appropriate bilateral and multilateral agreements and not in a national space policy. The 2010 US national space policy, while containing many good things, reads more like an international statement of principles than a national strategic document. Rather than using language like “collective assurance”, “collective self-defense”, and “interdependence”, and emphasizing a policy of reliance of foreign space capabilities, Europe is pursuing a course of “independence” and “increased European capability” to achieve excellence and increased status for the advancement of European space efforts. In addition, unlike US policy, the European policy omits arms control and “risk sharing among… international partnerships.” This poses some concern for many US space policy makers and influencers. It demonstrates that despite all the writings about how Europe decided on this course because of the 2006 policy, there really is no reason for the EU to pursue a counter to the United States’ vision for collective assurance in space, unless the Europeans wanted to pursue this policy of independence of their own free will. In fact, it seems the Europeans have written a policy similar to the 2006 US policy they rejected internationally, not the 2010 exposition they supported with equal vigor. As the US current space policy notes, every nation has the right to access and use space. Each nation has the right to develop its own nationally-focused “unilateral” space policies that serve to advance their vital interests in security, prestige, and wealth as the baseline for any international cooperation they choose to support. Failure to invest in bold, ambitious space efforts with a national tone (in all sectors) in space will not only hurt the US space industry, but will harm our nation’s ability to advance its global interests in space, impact our traditional vital interests of independence and achievement, and threaten the very preeminence that we have labored so hard to achieve over the past fifty years. If our goal is the advancement of a global exploration program in space, then fine, but the US needs to observe that other nations and partnerships such as the EU and Russia appear to be taking an alternate path toward increased domestic space capabilities and expanded infrastructure for national interests. They are pressing ahead with their goals to step into the vacuum of leadership that the US is allowing through the shutdown of US programs, abandoning capabilities, and allowing the loss of large numbers of skilled space workers. Our next space policy and strategy, while including international efforts of mutual benefit, should focus on advancing American capability and enable a long range strategy for exploration and enhanced military capabilities in space, just as our friends the Europeans are pursuing.

Leadership is essential to prevent global nuclear exchange

Zalmay Khalilzad, RAND, The Washington Quarterly, Spring 1995

Under the third option, the United States would seek to retain global leadership and to preclude the rise of a global rival or a return to multipolarity for the indefinite future. On balance, this is the best long-term guiding principle and vision. Such a vision is desirable not as an end in itself, but because a world in which the United States exercises leadership would have tremendous advantages. First, the global environment would be more open and more receptive to American values -- democracy, free markets, and the rule of law. Second, such a world would have a better chance of dealing cooperatively with the world's major problems, such as nuclear proliferation, threats of regional hegemony by renegade states, and low-level conflicts. Finally, U.S. leadership would help preclude the rise of another hostile global rival, enabling the United States and the world to avoid another global cold or hot war and all the attendant dangers, including a global nuclear exchange. U.S. leadership would therefore be more conducive to global stability than a bipolar or a multipolar balance of power system.

## US Key – Lead in Tech

US solves best – it is in the lead on Asteroid technology now.

Huffington Post 10/29/10 (Astronauts: Asteroid Threat Calls For Teamwork, http://www.huffingtonpost.com/2010/10/29/astronauts-asteroid-threa\_n\_775975.html)

Countries around the world must team up to help prevent an asteroid, or giant speeding rock, from slamming into Earth, scientists and former astronauts said Friday. NASA has tracked nearly 7,000 near-Earth objects that are bigger than several feet across. Of those, 1,157 are considered "potentially hazardous asteroids." "We can't escape the conclusion that one could happen tomorrow," former NASA astronaut Thomas D. Jones said of a possible asteroid strike. "If it happens in the wrong place, it can be deadly. But we now have the technology to prevent them from happening." To the experts, risky asteroids are those that come within 4.6 million miles of Earth's orbit. NASA says that currently none of these is near enough or big enough for public concern. Jones spoke at the European Space Agency's operational center in Darmstadt, Germany, where former NASA astronauts and scientists from space agencies across the globe pushed for international space agencies to band together to address the issue from within the U.N. Jones and his colleagues proposed that a group involving the world's space agencies be established to pool resources to prevent such an asteroid's impact and to better inform the public of the possible threat. Russell Schweickart, a former Apollo 9 astronaut, compared the asteroid threat to that of space debris hitting the International Space Station, which he said is "small enough that we can move it out of the way." The technology exists that would effectively allow scientists to send a craft into space to rear-end an asteroid, and slightly change its velocity. "We can't move the Earth, (so) we have to go up and change the orbit of the asteroid," Schweickart said. "It's the same problem, all relative motion, but it's a massive undertaking." So far, NASA is the only space agency that spends any substantial funds on asteroid research, $4 million a year, but follow-up research also is conducted by other space agencies. Any attempt to intercept an asteroid would require the approval of many nations. "It threatens all parts of the planet, so the solution involves crossing international borders," Jones said.

## Perm

Countries have to work together to prevent asteroids.

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## International Fiat is Bad

PRODUCES AN UNFAIR RESEARCH FOR THE AFF - LIMITLESS NUMBER OF COUNTRIES TO RESEARCH. IT IS THE RESOLUTION THAT BINDS BOTH TEAMS TO THE US - THAT ALSO ANSWERS THEIR ETHNOCENTRISM ARGUMENT.

PREDICTABILITY IS CRUCIAL - KEY TO FAIR DEBATE. INTERNATIONAL FIAT JUSTIFIES A LIMITLESS NUMBER OF DIFFERENT COUNTRY COUNTERPLANS.

NOT IN YOUR JURISDICTION - FRAMEWORK SHOULD BE US POLICYMAKER. ITS CRUCIAL FOR PREDICTABILITY IN THIS CONTEXT.

VOTER FOR POTENTIAL FOR ABUSE, FAIRNESS, AND EDUCATION.

## Multiple Actor Fiat Bad

Multi-actor fiat is a voter

It's not reciprocal - we only get one actor, they should too.

It's not predictable - it forces us to research an infinite number of counterplans

Not real world. Multiple actors never enact the same policy at the same time, there's no literature than answers this contingency

The ESA *is* multi-actor fiat- we should be able to say things like “Italy will say no”- fiating the organization bypasses the literature instead of accessing it

Science 2008 (Cloudy Future for Europe's Space Plans, http://www.sciencemag.org/content/322/5905/1180.full)

With the dark cloud of a global economic crisis overhead—Germany, for example, last week confirmed that it was in a recession—ministers will gather in The Hague, the Netherlands, next week for the latest such meeting. The air of uncertainty leading into this gathering contrasts starkly with the last, which was held in Berlin in 2005, when ESA got almost everything it asked for (Science, 16 December 2005, p. 1749). This time round, governments are tightening their belts, and the run-up to The Hague conference has seen wrangling over funding for even well-established ESA programs. “Earlier in the year, it looked like this meeting would be straightforward. Now it looks to be a very crucial and very tricky one,” says space scientist Mark Sims of the University of Leicester in the United Kingdom. “Economic times are difficult.” In contrast to NASA, whose budget is set by the U.S. Congress every year, ESA works on a roughly 3-year cycle. This gives projects added stability, if approved, but it also means that a lot rides on each ministerial budget meeting. Getting 18 different governments, with differing priorities, to agree on something can be like herding cats. “Germany and Spain are the most ambitious at the moment and want bigger roles. Other countries are retrenching,” says Mike Healy, head of earth observation, navigation, and science with the aerospace company EADS Astrium. The wildcard in the pack is Italy, which contributed generously in 2005 but has since had a change of government and consequently a new chief for the Italian Space Agency, industrialist Enrico Saggese. Apparently following a shift in emphasis ordered by Italian Prime Minister Silvio Berlusconi, Saggese has so far emphasized national space projects, and it looks as though he will not have a lot of new money to put on the table in The Hague. Italy's and other nations' reluctance to increase their contributions to ESA means that next week's negotiations will be tense. At risk will be some high-profile future missions, including ExoMars, an ambitious mission to the surface of the Red Planet, and Kopernikus, an effort to turn environmental monitoring into an operational service. “Ministerials sometimes bring surprises, both pleasant and unpleasant ones,” says Sims. “We all cross our fingers and hope our missions will survive.”