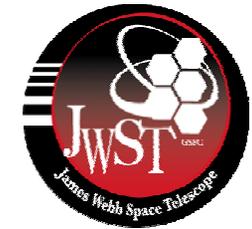


Export Control of JWST Hardware & Technology Presentation

Jim Frost, JWST ITAR Specialist
Joel Offenberg, JWST Web / IT Manager
Maureen Disharoon, JWST Documentation Manager



ITAR HORROR STORIES

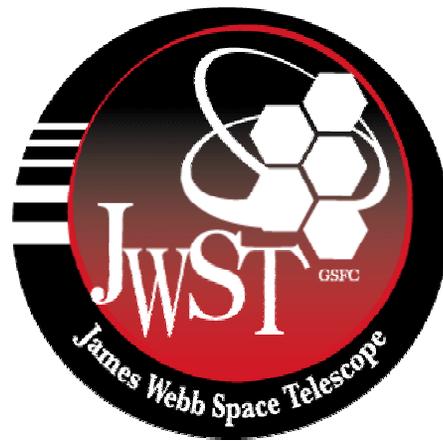


- ❖ Bad things can happen: Lockheed Martin, Boeing, Hughes, Loral have all been fined for ITAR violations with China
- ❖ NASA has been cited in Testimony to Congress for release of improper technical information to India during the 1960's, which may have helped deliver the launch vehicle to deliver India's atomic bomb
- ❖ Need to Be Extremely Deliberate with Exchange to the International Partners
 - International Meetings (telecons)- do not let your guard down; exchange only what you need to exchange
 - **Over 50% of desired unclassified technical data is NASA technical data**

JWST ITAR Points of Contact



- ❖ Jim Frost, Export Control Lead, 301-286-5406
(james.r.frost.1@gsfc.nasa.gov)
- ❖ Joel Offenberg IT Lead, 301-286-4625
(Joel.D.Offenberg.1@gsfc.nasa.gov)
- ❖ Maureen Disharoon, Data Manager, 301-286-8396
(Maureen.O.Disharoon.1@gsfc.nasa.gov)
- ❖ Bob Smith, JWST Observatory Lead, 301-286-9065
(bsmith@hst.nasa.gov)
- ❖ Jamie King, NGST Contract, 301-286-4787
(James.S.King@nasa.gov)
- ❖ Lori Eakin, NIRCcam Contract, 301-286-5383
(Lorrie.L.Eakin@nasa.gov)
- ❖ Karen Smith, STScI Contract, 301-286-3840
(Karen.Smith@nasa.gov)
- ❖ Tom Weisz, GSFC Center Export Administrator, 301-286-4541
(Thomas.A.Weisz@nasa.gov)



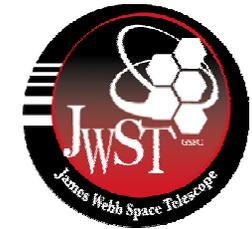
ITAR LEGAL FRAMEWORK

SCOPE OF EXPORT CONTROL BRIEFING



THIS PRESENTATION RELATES TO THE APPLICATIONS OF THE INTERNATIONAL TRAFFIC IN ARMS REGULATIONS (ITAR) AND THE EXPORT ADMINISTRATION REGULATIONS (EAR), WHERE NASA GSFC HAS EXPORT RESPONSIBILITIES IN MAKING THE APPROPRIATE EXPORT DETERMINATIONS. **EXEMPTIONS/EXCEPTIONS AVAILABLE TO NASA AND/OR FEDERAL GOVERNMENT AGENCIES MAY NOT BE AVAILABLE TO SUPPORT EXPORT DETERMINATIONS TO BE MADE BY OUTSIDE ENTITIES, I.E. PRIVATE CORPORATIONS, PRIVATE CONTRACTORS, UNIVERSITIES, ETC.**

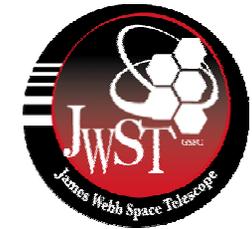
SCOPE OF EXPORT CONTROL BRIEFING (Continued)



- ❖ Per newly released NPG 2190.1 (April 10th, 2003), Procedures and Guidelines for the NASA Export Control Program

“In general, NASA is not responsible for contractors’ export compliance in the execution of contracted work (see NFS 1825.1103-70 and 1852.225-70). The exception is an instance in which NASA directs or authorizes a contractor to effect exports using a NASA-obtained IVL or GBL.”

FINES/PENALTIES ITAR & EAR



- Fines/Penalties
 - Export Laws & Regulations Are Binding
 - Penalties for Violations will Be Assessed to the Person Responsible & Not to NASA
 - International Traffic In Arms (ITAR) Penalties
 - Fine of \$1 Million per Violation
 - Imprisonment - 10 years per Violation
 - Export Administration Penalties (EAR)
 - Fine of Up to \$10K+
 - Imprisonment for Up to 10 years
- Violations of Export Control Regulations jeopardize NASA's export privileges**

EXPORT DEFINED



❖ What is an “Export”

– A SIMPLIFIED DEFINITION

“The transfer of anything to a “Foreign Person” by any means, anywhere, anytime, or the knowledge that what you are transferring to a “U.S. Person”, will be further transferred to a “Foreign Person”



– **Methods of export include Mail, Fax, E-mail, WWW, FTP, Shipping, Handcarry, Phone, Face-to-Face discussion, other**

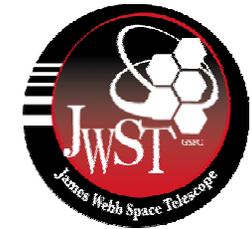
International Traffic in Arms (ITAR) Definition (22 CFR Part 120.17)*

– <http://www.pmdtc.org/itar2.htm>

United States Commerce Department Definition (15 CFR Part 734)*

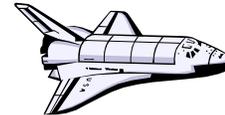
– http://w3.access.gpo.gov/bxa/ear/ear_data.html

U.S. Export Laws & Regulations



❖ INTERNATIONAL TRAFFIC IN ARMS (UNITED STATES MUNITIONS LIST)

- ITAR (USML) - 22 CFR 120



- Covers items such as Space Launch Vehicles (e.g., the Space Shuttle), **all** rocket systems and engines, **all** satellite systems, missile tracking systems, etc. (both the hardware and the technology)

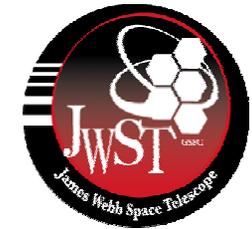


❖ EXPORT ADMINISTRATION REGULATIONS

- (EAR) - 15 CFR 730

- Covers what is commonly referred to as “dual-use” items, including the Space Station (the hardware and certain technology)

What products/technology(s) are ITAR Sensitive within a GSFC Flight Project ?

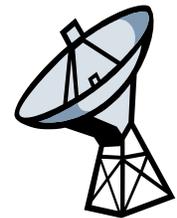


- ❖ Spaceflight hardware including flight parts, components, accessories, engineering models, ground support equipment and technical data



- ❖ Space launch vehicles and sounding rockets/meteorological rockets to include parts, components, accessories, engineering models, launch support equipment and technical data

- *The most publicized recent fines have come from launch technology violations.*



- ❖ NASA STDN & DSN (parts, components, accessories, tech data).

NASA IMPORTS



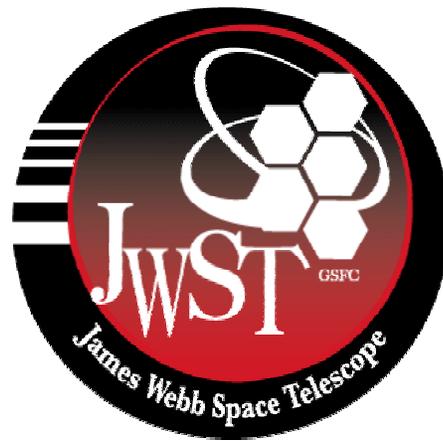
- Typically, imports of ITAR sensitive items are subject to import duties and licensing.
- NASA can import foreign hardware and accessorial items into the U.S. utilizing the NASA Importation Certification process, which provides for duty free and license free importation of international partner items (14 CFR Part 1217). The Import Certification is executed by NASA Headquarters, Code I.
- A separate Import Certification process is available to import foreign hardware procured by NASA outside of the U.S., duty and license free

We are working with “leading edge”, ITAR Sensitive Technology(s) on JWST



Can NASA exchange? How Does This Effect Me?

- ❖ First, contrary to belief by some, this is not a gag order for NASA.
- ❖ Exchange of ITAR sensitive technical data must always satisfy a “need to know” argument
- ❖ Exchange of ITAR sensitive technical data must always support the **NASA** responsibilities in the current international agreement between NASA and the international partner
- ❖ In following charts, NASA support contractors may function as implementers of exchanges or transactions for NASA Civil Servants.
 - Be aware of support contract task language, and/or travel instructions as authorization for this role.
 - Seek Non-Disclosure Agreements as needed. These are often direct agreements between your hardware contractor and your support contractor. Ask the NASA Contracting Officer for further information.

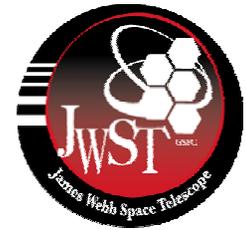


TYPES OF AGREEMENTS

Basic Document Terms



- ❖ Letter of Agreement (LOA) is utilized for “routine” NASA international collaborations.
 - Or, front-end agreement prior to MOU
 - Worked through NASA Office of External Relations (HQ Code I)
 - State Department is now reviewing/approving these
- ❖ Memorandum of Understanding (MOU) is utilized for “significant” NASA international collaborations.
 - Worked through NASA Office of External Relations (HQ Code I)
 - State Department Circular 175 approval process required
- ❖ Technical Assistance Agreements (TAA) are U.S. industry’s license to exchange technical data and/or technical assistance with NASA international partners
 - **NASA Support Service Contractors can not automatically “piggyback” on license exemptions enjoyed by NASA civil servants**
 - TAA(s) are also approved by the U.S. State Department and require foreign partner’s signatures
 - Projected TAA(s) for JWST is equivalent to one third of 2003 NASA Headquarters TAA activity

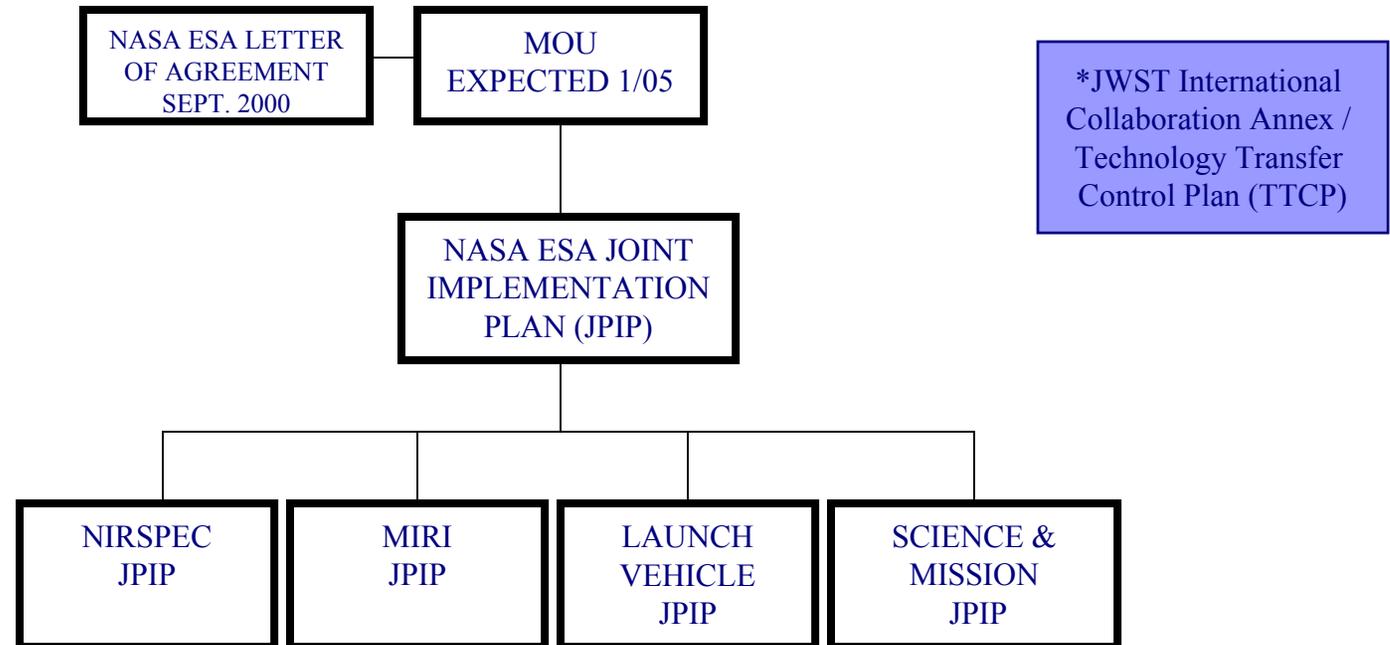


VERY IMPORTANT!

- ◆ Be familiar with the JWST International Agreement you are working under!!!
- ◆ Exchange of ITAR sensitive technical data must always satisfy a “need to know” argument
 - Exchange must be within the context of the NASA responsibilities of the current international agreement.
 - “They asked for it” is not a good rationale
- ◆ NASA unclassified technical data is very valuable to international activities
 - “The Future of the World is Space”

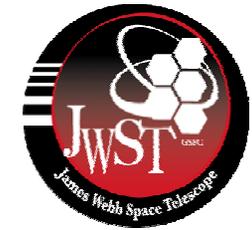


JWST “ESA” ITAR Document Hierarchy



- *Meets new NPG requirement for Technology Transfer Control Plan (TTCP)
- *Defines NASA compliance with International Traffic In Arms Regulations (ITAR)

Technology Transfer Control Plans



As a requirement to a newly released NPG for Export Control NPG 2190.1, all programs/projects are required to develop an internal Technology Transfer Control Plan (TTCP)

JWST is in process of developing the JWST International Collaboration Annex (JICA) (As an annex to JWST Project/Program Plan)

A Technology Transfer Control Plan documents and plans your Program/Project's Export Control Activities



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Technology Transfer Control Plans (Continued)

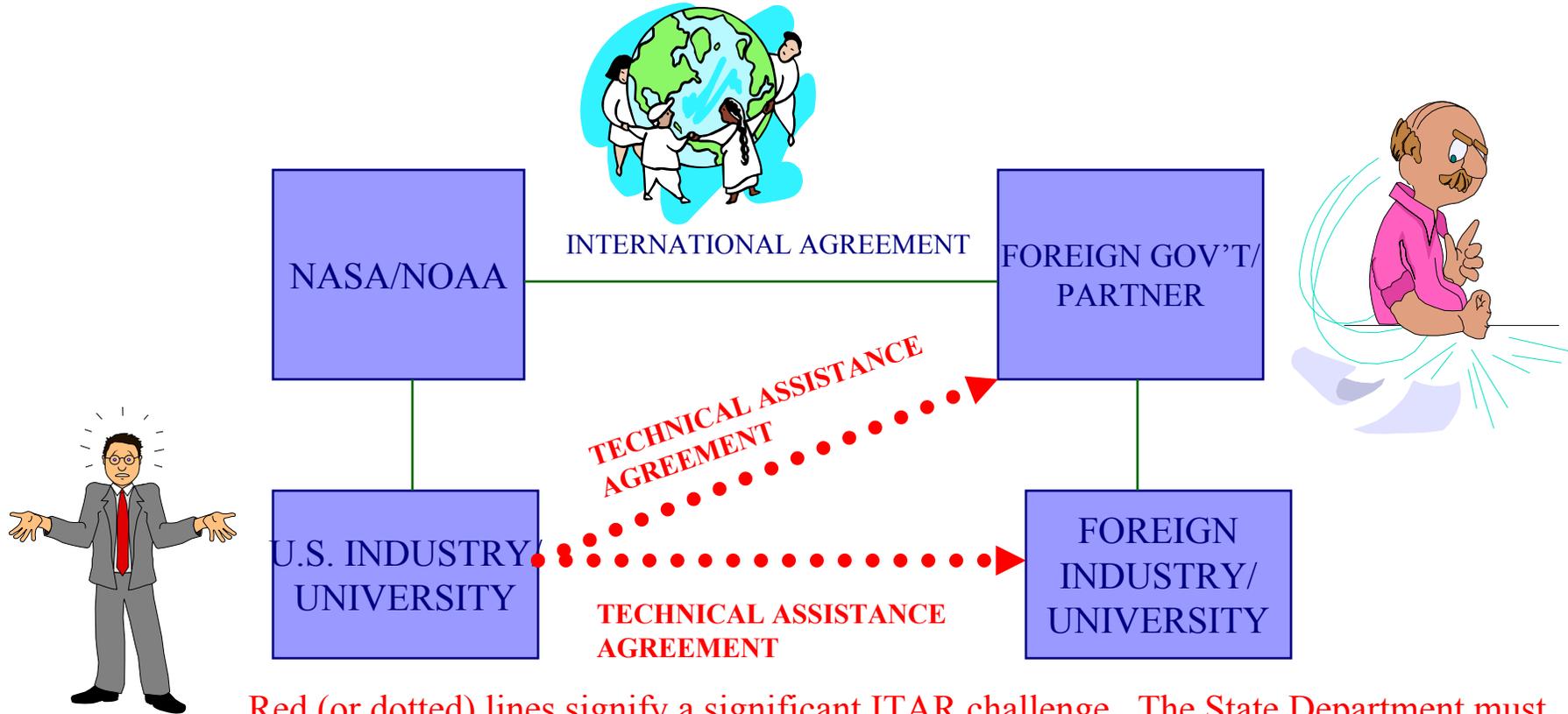


In addition to developing an internal Technology Transfer Control Plan (TTCP), many programs are starting to present briefings to Code I in the early stages of programs to ensure that proposed technology exchanges will ultimately be acceptable.

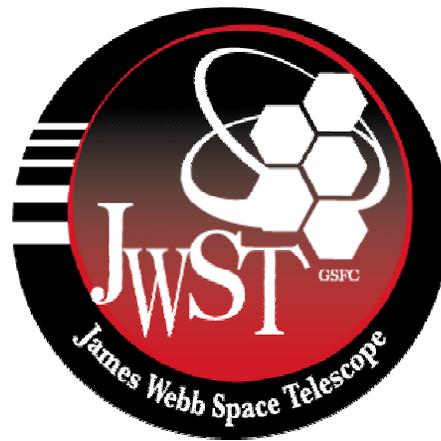
In 2002, JWST & LISA presented briefings to Code I, and received very helpful feedback. JWST re-briefed Code I on May 15th, to provide a post replan update to last year's briefing.



NASA INTERNATIONAL COLLABORATION, BASIC AGREEMENT STRUCTURE



Red (or dotted) lines signify a significant ITAR challenge. The State Department must approve all TAAs. TAAs between U.S. industry & foreign government partners can take many months. **TAAs between U.S. industry and foreign industry teams are Impacted by the reluctance of foreign governmental partners to sign TAAs.**



INTERNATIONAL EXCHANGE / INTERACTIONS

JWST ITAR PRESENTATIONS/ VISITS/CONFERENCES WHAT INFO CAN BE EXCHANGED?



GSFC LEVEL ONE

NEED TO KNOW MUST BE SATISFIED

YOU ARE PRESENTING, VISITING WITH FOREIGN NATIONALS IN AN OPEN FORUM, OR WITH FUTURE PARTNERS IN THE ABSENCE OF A SIGNED INTERNATIONAL AGREEMENT.

YOUR DISCUSSIONS ARE LIMITED TO PUBLIC DOMAIN INFORMATION, AS WELL AS BASIC MARKETING INFORMATION ON FUNCTION OR PURPOSE OR GENERAL SYSTEM DESCRIPTIONS OF DEFENSE ARTICLES (ITAR CONTROLLED ITEMS) OR INFORMATION APPROVED FOR PUBLIC RELEASE THROUGH THE NASA STI PROCESS.

“TRUE” “DOCUMENTED” REQUIREMENTS ARE NOT EXPORT RESTRICTED.

PURE SCIENTIFIC INFORMATION IS NOT RESTRICTED BY THE ITAR. 21

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GSFC LEVEL ONE: The Determination of What Should be Placed Into the Public Domain



NASA STI Process NPG 2200.2 “Guidelines for Documentation, Approval, and Dissemination of NASA STI”, NASA Form 1676

- ❖ Used to Introduce NASA “owned” Technical Data Into Public Domain via Publication / Presentation
- ❖ Requires completion of NASA GSFC Export Control Checklist
- ❖ I can help with the completion of both of these forms

**JWST ITAR
PRESENTATIONS/
VISITS/CONFERENCES
WHAT INFO CAN BE
EXCHANGED?**



GSFC LEVEL TWO

NEED TO KNOW MUST BE SATISFIED

YOU ARE OPERATING UNDER A (SIGNED) INTERNATIONAL AGREEMENT WHICH PROVIDES FOR THE EXPORT OF TECHNICAL DATA.

IN ADDITION TO WHAT CAN BE EXCHANGED AT LEVEL ONE, YOUR DISCUSSIONS ARE LIMITED TO INTERFACE INFORMATION, SPECIFICATIONS, PERFORMANCE, EFFICIENCY, DISCRETE CONTROL CAPABILITY, RELIABILITY, MTBF, OPERATION, REPAIR, TESTING, MAINTENANCE, MODIFICATION AND FORM AND FIT WHERE RELATIVE TO THE AGREEMENT. **GENERALLY, DETAILED ENGINEERING DESIGN INFORMATION CAN NOT BE EXCHANGED**

GSFC LEVEL TWO: The Determination of What Should be Shared with the NASA Foreign Partner(s)



Be Familiar with the International Agreement that you are working under; particularly the NASA responsibilities.

- ❖ I can help guide individuals through determining what is appropriate to exchange.

JWST ITAR PRESENTATIONS/ VISITS/CONFERENCES WHAT INFO CAN BE EXCHANGED?



GSFC LEVEL THREE

NEED TO KNOW MUST BE SATISFIED

- ◆ DETAILED ENGINEERING DESIGN INFORMATION MAY BE EXCHANGED ONLY WHEN:
 - Required to support NASA requirements and responsibilities as stated in the Letter of Agreement / Memorandum of Understanding, **and**
 - Detailed Engineering Design information is not specifically excluded in the Transfer of Technical Data and Goods section, in the Letter of Agreement / Memorandum of Understanding



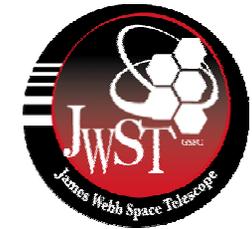
GSFC LEVEL THREE; The Determination of What Should be Shared with the NASA Foreign Partner(s)



Be Familiar with the International Agreement that you are working under; particularly the NASA responsibilities.

- ❖ Ask yourself if you really need to exchange detailed design information;
- ❖ JWST may need to seek guidance from GSFC Center Export Officials, and possibly approval from NASA Headquarters Code I
- ❖ I can help guide individuals through this process.

International Partner Participation in JWST Design Reviews



As a general rule, in any review attended by foreign participants, NASA must stick to presenting the “what” rather than the “how” of a design (in the case of a hardware design, generally meaning “how to produce” the design). Design information can generally (conservatively) be interpreted to fall into the “how” category, and therefore the simplest and safest (i.e., most conservative) approach is for NASA to preclude foreign participation in design reviews. However, on the JWST project, NASA is supplying certain GFE items to foreign partners for integration into their science instrument. As such, the foreign partners have a legitimate “need to know” a certain amount of design information regarding the GFE items. Therefore, NASA must make a case-by-case determination of how to honor the foreign partners’ “need to know” without compromising the prohibition on presenting the “how” aspects of the design.

Use of Public Domain Information As a Basis For Technical Assistance



Per NPG 2190.1,

“Currently the ITAR states that performance of defense services or technical assistance relating to any defense article to any foreign party, even when using **exclusively publicly available information**, is an activity subject to export control. (See 22 CFR Part 124.1 (a).)

JWST ITAR PRESENTATIONS/ VISITS/CONFERENCES WHAT INFO CAN BE EXCHANGED?

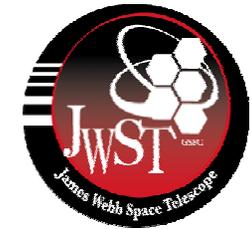


A Different Perspective

- ◆ A select team of individuals has developed an *Export Control Applicability Matrix for Information Products – Version 1* which is available at:

<http://export.gsfc.nasa.gov/regsitar.htm> under What Is an ITAR Item?

JWST ITAR SENSITIVE HARDWARE



- ❖ My JWST Export contains ITAR Controlled Hardware. Can It be Shipped?
 - If the Export is Pursuant to a Signed International Agreement
 - And, is to Remain Under NASA/NOAA Ownership
 - And is **not** to remain permanently or be launched from foreign locationNASA can export immediately without a license under a License Exemption.
Government will typically utilize a Government Bill of Lading (GBL) for international exports under most conditions

The requirement to return ITAR sensitive hardware to the U.S. within four years is no longer being recognized nor enforced by NASA Headquarters

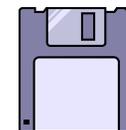
- ❖ Export of the integrated JWST to French Guiana will require State Department Export License(s).

JWST ITAR SENSITIVE TECHNICAL DATA

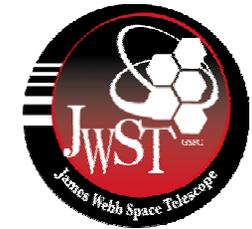


- ❖ My JWST Export Is ITAR Controlled Technical Data. Can It Be Shipped?
 - If the Export is within the context of NASA responsibilities of a Signed International Agreement
 - Or is to be hand-carried by or for NASA for the sole use of NASA GSFC

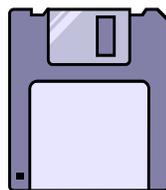
- ❖ NASA can export immediately without a license under a License Exemption



JWST ITAR SENSITIVE SOFTWARE



- ❖ My JWST Export consists of ITAR Controlled Technical software.
Can It Be Shipped?
 - ❖ Software is handled similar to technical data.
 - If the Export is within the context of NASA responsibilities of a Signed International Agreement
- NASA can export immediately without a license under a License Exemption
- ❖ **Exchange of application software is generally OK. Exchange of software containing encryption and/or source code may take additional authority (license) or may be denied.**



NASA Destination Control Statement



- ◆ These items are licensed by the United States for ultimate destination to *European Space Agency / Canadian Space Agency (select which international partner is appropriate)*. Diversion, retransfer, disclosure, or use contrary to applications specified in NASA agreement without prior U.S. authorization are prohibited.

Data Marking

Is Your ITAR Sensitive Data Marked??



- ❖ ITAR sensitive technical data should be marked with appropriate destination control statements.
- ❖ ITAR sensitive technical data should not only be marked only in cases when international dissemination is planned; such data should be marked when completed
 - If other projects see our technical data, they should know how we control it and we should expect them to do the same
 - We do not want other projects sharing our technical data with their foreign partners, simply because we did not mark it
- ❖ Unfortunately, JWST technical presentations are made without destination control statements
 - ◆ If we do not mark our ITAR sensitive data as such, ESA and CSA and their teams are under no obligation (per international agreement technical data clauses) to protect it.
 - ◆ As a condition of exchanging ITAR sensitive data with our international partners, we should be marking it!!
- ❖ The JWST Data Manager recently reviewed all existing library documentation and revised data marking as needed
- ❖ The person submitting the document to the JWST Library or **presenting the material in a meeting**, is responsible for including appropriate markings.

Data Marking

Is Your ITAR Sensitive Data Marked??



- ❖ Compared to the private sector, NASA enjoys a great deal of latitude with respect to what technical data it can justify going to the international partners
 - Auditors of our processes will be looking for JWST to be marking technical data with destination control statements

ITAR Sensitive Data

(Previously marked as ITAR sensitive by the Prime, or other contractor)



- ❖ Question -Can NASA further disseminate to JWST international partners?
- ❖ Answer - Data **delivered** to NASA can be reassessed by NASA for further dissemination.
 - If appropriate, NASA can exchange with JWST international partners under ITAR license exemption
 - ◆ Separate destination control statement would need to be referenced
 - If appropriate, NASA can evaluate for public release, if appropriate under ITAR license exemption
 - ◆ Contractor destination control statements would need to be removed

ITAR Sensitive, Proprietary Data

(Previously marked as ITAR sensitive
and Proprietary by the Prime, or
other contractor)



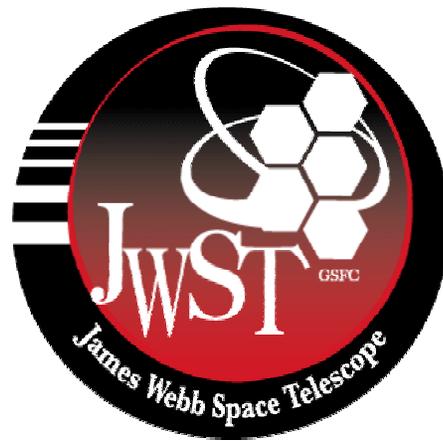
- ❖ Question -Can NASA further disseminate to JWST international partners?
- ❖ Answer – First condition, data should be delivered to NASA. Second, document should be thoroughly “scrubbed” for to determine appropriate release of part and/or all of the content to the international partners. There is language in international agreements to cover such scenarios. The data should be marked with appropriate destination control statements. Advisable to run the proposed release past originating contractor for assessment.

Foreign Partner Proprietary Data

(Marked as Proprietary by international
partner or by their industry team)



- ❖ Question -Can NASA further disseminate to JWST team in U.S.?
- ❖ Answer – Through language in international agreements, NASA has the ability to share such “marked” data with its related entities (I.e. contractors and subcontractors). NASA currently evaluating individual contractor contract language to ensure that all proprietary data and otherwise sensitive data is protected by program contractors.



EXPORT CONTROL AND COMPUTER SECURITY

Export Control & Computer Security

Joel Offenberg



On the JWST project, we take the following steps to secure export restricted (and other sensitive classes of) information:

- Data repository on NGIN server requires username/password to access.
- NGIN server access is encrypted. The server is in a physically secure room. Backups are routinely stored in a secure facility.
- Servers and desktop computers are routinely patched and scanned for vulnerabilities.
- Access to the HSTnet is restricted at the network “front door.” Outside access is validated by IP address or Virtual Private Network (VPN) account.
- Wireless access secured by encryption and by VPN.
- <http://filedepot.hst.nasa.gov> provides a means for encrypted file exchange without using e-mail or anonymous FTP. FileDepot can handle larger files than the mailer can handle.
- Non-HSTnet folks may wish to consult their local IT management.

Export Control & Computer Security (cont'd)



Some parts of protecting ITAR data come from the user.

The user's responsibilities include:

**NEVER put ITAR or
Export Restricted
information on a publicly
accessible website or
anonymous FTP server.**

Export Control & Computer Security (cont'd)



- Do not send Export Restricted information to a mailing list or exploder without verifying who is on it.
- Be mindful of ITAR issues if taking your laptop out of the USA.
- Take reasonable precautions to protect your computer against theft, both on-center and off.
- Do not transfer ITAR data via unencrypted wireless network (note that VPN connections are encrypted).
- Lock your computer (e.g. with a screen saver) when unattended. Make sure nobody is looking over your shoulder as you type in your password.
- Do not share your computer account or password with anyone.
- Choose a secure password: At least 8 characters long, use at least 3 of the 4 categories: uppercase, lowercase, numeral and punctuation.
- Rely on encrypted communications whenever possible [e.g. use the NGIN sharefile system instead of e-mailing a .ppt file to the team].

ITAR Data Posted to JWST Website

Maureen Disharoon

- ❖ The JWST online Library hosts more than 3000 documents, some of which contain **ITAR** and/or **Proprietary** information. The Data Management Office (DMO) will ensure that each document is properly marked prior to posting to website. The DMO receives input from the submitter of the data.
- ❖ The Sharefile area of the website may also contain **ITAR** and/or **Proprietary** information. Since the DMO does not post to this area, each website user must mark each document and assign an access level to each document prior to posting.
- ❖ Before posting a document to the website, each user **MUST** indicate whether or not a document should be marked as **ITAR SENSITIVE** or **Proprietary**. If there are any questions, the website provides links to the Export Control Office and to the JWST Export Control Rep (Jim Frost).

Submitting a Document to Library

Submit a Document - Microsoft Internet Explorer

Address: <https://ngst1.hst.nasa.gov/dmdocnew.asp>

Submit a Document to the Library

Submitter's Name: Disharoon, Maureen	Author's Name: Disharoon, Maureen
Org/Code: SGT/ 443	Other: (Please enter last name, first name)
Phone: 301-286-8396	Responsible Group: JWST Project Office
E-Mail: mdisharoon@hst.nasa.gov	
Submittal Date: 11/25/2003	Document / Data Item Date: 12/1/2003

Title of Data Item: (Max 160 chrs)

This is a test document

Keywords:

Notes & Comments: (Max 200 chrs)

ALT ID 1:

ALT ID 2:

ITAR Statement:

Generally, the export of information pertaining to the design, development, production, manufacture, assembly, operation, repair, testing, maintenance or modification of defense articles, i.e., space flight hardware, ground tracking systems, launch vehicles to include sounding rockets and meteorological rockets, radiation hardened hardware and associated hardware and engineering units for these items are controlled by the State Department under the ITAR. A complete listing of items covered by the ITAR can be accessed at:

<http://export.gsfc.nasa.gov/>

Still Unsure?

Please Contact [Jim Frost](#) (301-286-5406) For Further Information

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Submitting a Document to Library (cont.)

Submit a Document - Microsoft Internet Explorer

Address <https://ngst1.hst.nasa.gov/dmdocnew.asp>

ITAR Statement:

Generally, the export of information pertaining to the design, development, production, manufacture, assembly, operation, repair, testing, maintenance or modification of defense articles, i.e., space flight hardware, ground tracking systems, launch vehicles to include sounding rockets and meteorological rockets, radiation hardened hardware and associated hardware and engineering units for these items are controlled by the State Department under the ITAR. A complete listing of items covered by the ITAR can be accessed at:

<http://export.gsfc.nasa.gov/>

Still Unsure?

Please Contact [Jim Frost](#) (301-286-5406) For Further Information

Does this data item contain ITAR-sensitive Information? Yes No

Any document submitted to the library must be evaluated by the submitter for its proprietary content. If any information could be construed as sensitive (i.e., containing proprietary design, development, manufacturing, budget information) distribution access must be controlled.

Does this data item contain proprietary Information?: Yes No

Access Group(s):

Please select ALL groups that require access to the data item you are submitting.

Hold down control key to select multiple groups.

- A-Public Information (avail. via JWST public website)
- C-Northrop Grumman/Ball Aerospace and subcontractors**
- D-STScI
- E-CSA and subcontractors
- F-ESA and subcontractors
- F1-ESA-MIRI
- G-Project Team (civil servants & core contractor team only)**
- G1-Civil Servants
- H-Project Management and Resources group only**
- I-Detector Group (civil servants only)
- I1-Detector Sub 1 only
- I2-Detector Sub 2 only
- J-NIRCam Prime Contractor group only (Univ. AZ, LMATC)
- K-NIRSpec Prime group only (civil servants)
- K1-NIRSpec (Alcatel group only)

Filename: C:\Documents and Settings\mdisharoon\Desktop\NGI Browse...

If you have a question, contact the JWST DM Office at: 301.286.8396 or 301.286.4176

SUBMIT to DMO

Done Local intranet

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James Webb Space Telescope

Visiting a Time When Galaxies Were Young



- Home
- Project Info
- Risk Management
- Action Items
- Systems
- Observatory
- ISIM
- Ground & Ops
- Resources & Budget
- Configuration Management
- Library
- Library Maintenance
- Weekly Reports
- Schedules
- Shared Files
- Knowledge Management
- ISO 9000
- Other Links
- LOGOUT**



ITAR SENSITIVE

JWST-PRES-002404



ISIM Structural Joint and Instrument Interface Study

March 11, 2003

Acey Herrera
Swales Aerospace



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**** WARNING ****

WELCOME TO THE JWST SHARED FILES AREA.
Prior to adding a file to this area, please note:

1) Files in this collaborative work area are considered to be in draft form and do not necessarily represent the latest official JWST version. Please consult the Project Library for the current official version of any document.

2) You are responsible for any documents, presentations, or other items posted to this workspace. Please assure:

- A) All materials are properly marked as "ITAR-SENSITIVE", "PROPRIETARY", etc., as required.
- B) A proper security rating is assigned to the item.

If you have any doubts on A or B, please contact the persons listed below for further information:

General Data Management Questions: Maureen Disharoon, JWST Data Manager, 301-286-8396

ITAR-Sensitive Information: Jim Frost, JWST Export Control Lead, 301-286-5406

Proprietary Information: The cognizant Contracting Officer

3) The leads for the top level sharefile groups are: John Mather (Science), Joe Burt (Systems Engineering), Dan Blackwood (Observatory), Lloyd Purves (Spacecraft), Pam Sullivan (ISIM), and Alan Johns (Ground Systems and Operations). These leads should be aware of any materials you are uploading or modifying in their respective groups. Please notify or consult with them as appropriate.

Failure to comply with these steps may result in serious consequences for the JWST Project!

[Click here to continue.](#)

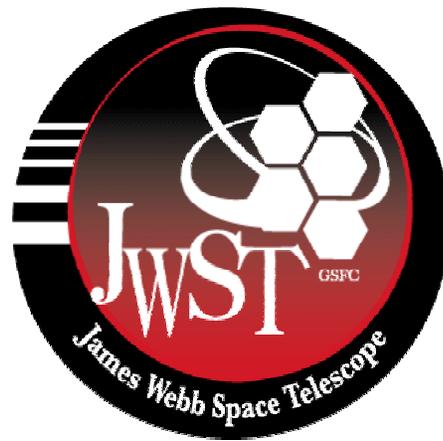
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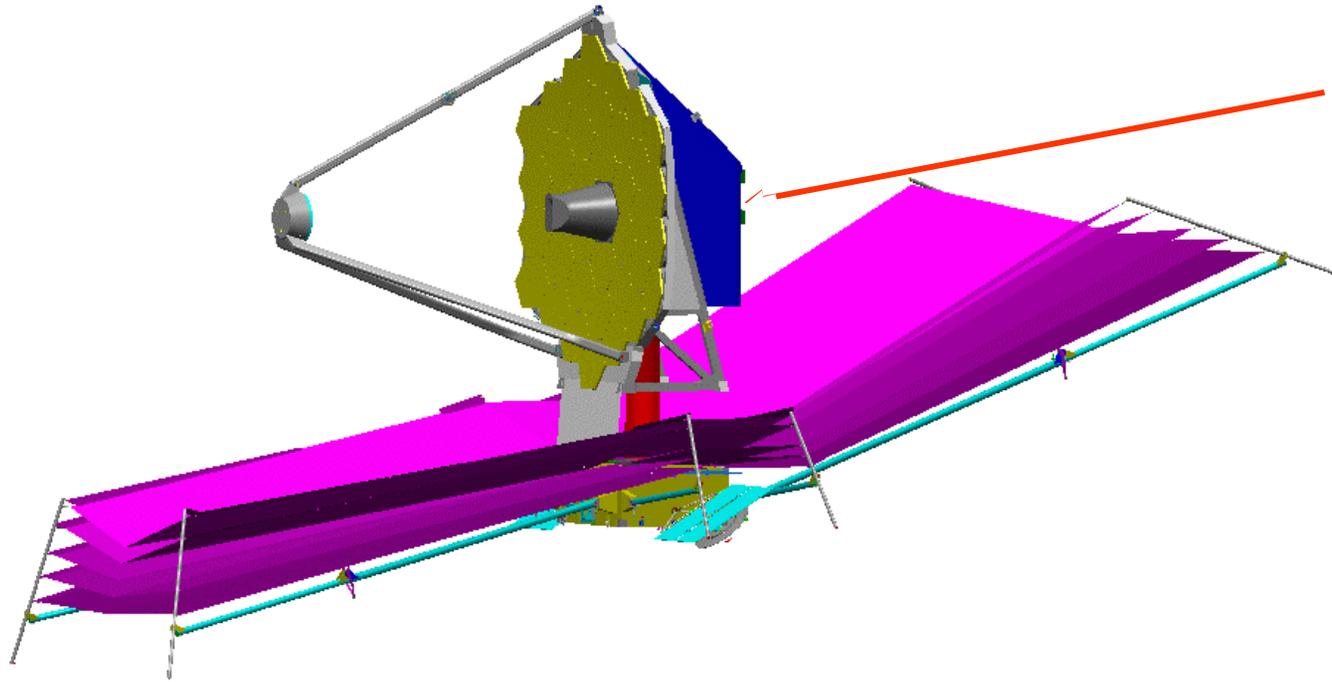


JWST ISTAR SUMMARY

JWST International Contributions Summary

#	Element/ Subsystem	Agency	Contacts
1	Fine Guidance Sensor	CSA	CSA: Alain Ouellet JWST: Mitra Dutta
2	SOC	CSA	CSA: John Hutchings JWST: Joe Sparmo
3	Launch Vehicle	ESA	ESA: Peter Jensen JWST: Bob Smith
4	MIRI	ESA-NASA partnership	ESA: Peter Jensen JWST: Phil Driggers
5	NIRSPEC	ESA-NASA partnership	ESA: Peter Jensen JWST: Scott Lambros
6	SOC	ESA	ESA: Peter Jakobsen/NIRSpec Gillian Wright/MIRI JWST: Joe Sparmo

JWST Observatory Architecture



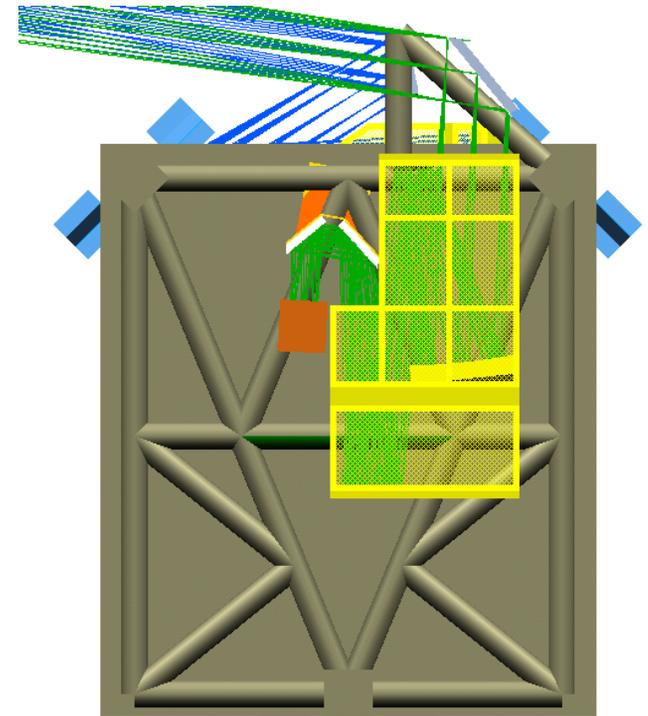
ISIM

- The ISIM is the primary interface location for exchange with the JWST international

Fine Guidance Sensor (FGS)

Overview

- CSA is to provide an integrated FGS
 - This is the traditional “box level” collaboration
 - No export of “major” NASA flight hardware is anticipated.
 - NASA provided hardware (flight, GSE and simulators) expected to be exported by NASA to Canada under ITAR license exemption
 - NASA should be providing “interface level” data only, supported by the responsibilities of the NASA CSA LOA, MOU
 - NASA to import flight FGS and associated GSE under NASA generated import certification
 - IC&DH Source Code export being evaluated
-
- Approximately 10 company(s) could obtain TAA(s) from CSA team in support of FGS



ESA Provided Ariane 5 Overview

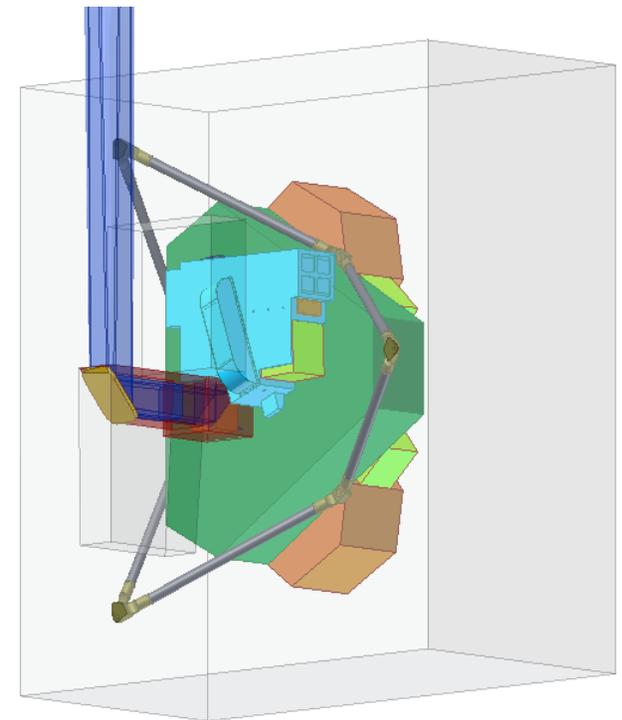
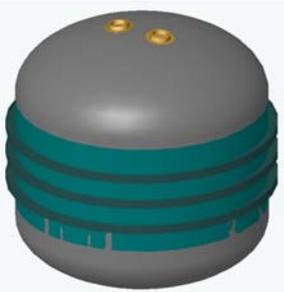
- **NGST Launch TAA currently in interagency review**
- **NGST is going to “tread very lightly” in the launch vehicle interface**
 - **Most noteworthy industry ITAR violations have occurred as the result of of launch vehicle technology exchanges**
 - **NGST TAA licensing “hoops” anticipated**
- **NASA Headquarters (Code I) has requested that NGST submit all relevant TAA(s) to NASA Headquarters prior to State Department submittal**
 - **NASA Headquarters is attending all interagency meetings in support of licensing for this Ariane V contribution**
- **NASA Civil Servants exchange must share “interface only” technical data, as supported by context of an international agreement**
 - **More guidance to follow**



Mid-Infrared Instrument (MIRI) Overview

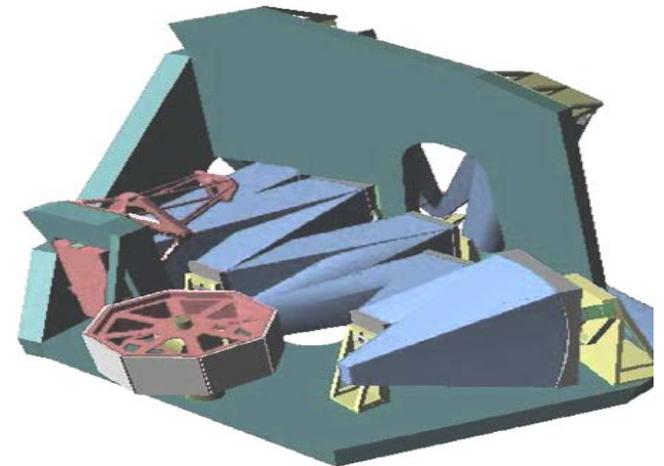
NASA ESA Joint Collaboration

- ◆ **NASA ESA to each provide 50% of collaboration**
- ◆ **JPL to develop NASA portion of collaboration**
 - **JPL to exchange detector system, dewar, flight software with the European Consortium (EC)**
 - ◆ **Dewar may not be physically exported to ESA/EC**
 - **JPL applied for and executed Technical Assistance Agreement (TAA) (license) with ESA to support their MIRI technical assistance requirements**
 - ◆ **Follow on TAA(s) with RAL, Astrium LTD, UK ATC to follow**
 - ◆ **Approach with MIRI EC to follow**
 - **JPL TAA could have conditions, provisos, limitations**
- ◆ **GSFC civil servants covered under NASA ESA LOA, MOU**
- ◆ **NASA should be providing “interface level” data only, supported by the responsibilities of the NASA ESA LOA, MOU**
- ◆ **NASA to import flight MIRI and associated EC GSE under NASA generated import certification**



Near Infrared Spectrograph (NIRSpec)

- ❖ **ESA to develop and build the NIRSpec**
- ❖ **NASA to provide flight focal plane arrays and electronics**
- ❖ **NASA to provide flight micro shutter assembly**
- ❖ **NASA provided hardware (flight, GSE and simulators) expected to be exported by NASA to Europe under ITAR license exemption**
- ❖ **GSFC civil servants covered under NASA ESA LOA, MOU**
 - NASA should be providing “interface level” data, supported by the responsibilities of the NASA ESA LOA, MOU
- ❖ **NASA to import NIRSpec and associated GSE under NASA generated import certification**

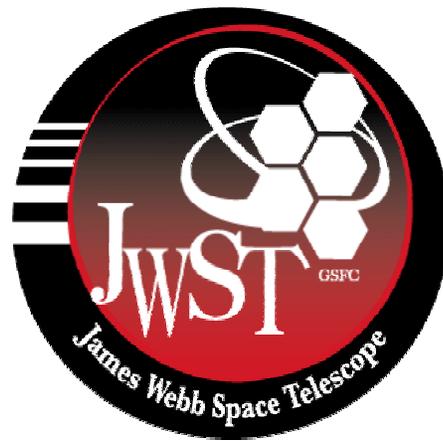


Near Infrared Spectrograph
(NIRSpec)

Science Operations Center (SOC)

- ❖ **ESA is to provide 15 scientists/engineers to STScI a few years prior to launch**
- ❖ **CSA is to provide 2 scientists/engineers to STScI a few years prior to launch**
- ❖ **“True” Science activities should not be controlled by export control regulations**
- ❖ **Observatory & flight instrument development activities are ITAR sensitive**
- ❖ **Command & Control activities are ITAR sensitive**
- ❖ **STScI will need to be export compliant, in accordance with NASA RFP Export clause**



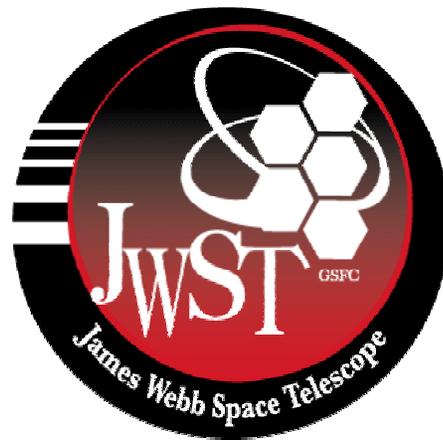


JWST ITR TAKEAWAYS

Export Control Briefing Important Takeaways Review



- ❖ Learned some key phrases and definitions (e.g. ITAR, Proprietary, markings) and have a reference.
- ❖ Understand that each organization must follow its own rules:
 - **Government organizations have special exemptions and rules.**
 - **NASA Support Service Contractors can not automatically “piggyback” on license exemptions enjoyed by NASA civil servants**
- ❖ Know what an ITAR sensitive item is. The JWST Project is controlled by the ITAR. JWST is a “high profile” project which will be utilizing leading edge technologies that our foreign partners would love to have
- ❖ Know that “ITAR sensitive” does not necessarily invoke a “gag order”; technology can be exchanged by NASA
 - Need to Know must always be satisfied
 - “They asked for it” is not a good rationale
- ❖ NASA’s industrial partners will be limited via TAA conditions in what they can exchange
- ❖ ITAR sensitive data should be marked with appropriate ITAR statements, destination control statements



HANDOUTS