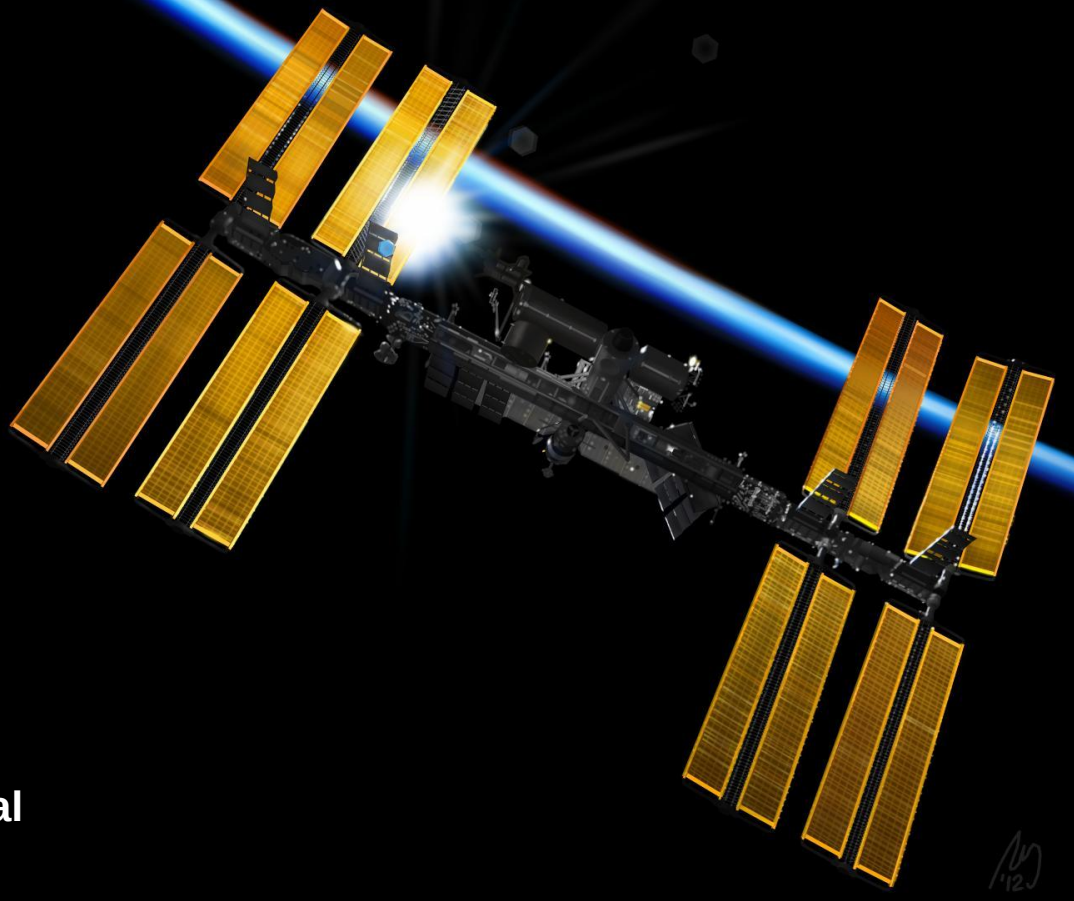
National Aeronautics and Space Administration

Vuelos Espaciales Tripulados –

Compartir la experiencia y el futuro de la NASA



Michael Lutomski
Director de Riesgo
Programa Estación Espacial Internacional
Universidad Modelo
Merida, Yucatan, Mexico
19 October 2012

Hoshide

РЕВИН АСАВА ПАДАЛКА WILLIAMS 星出 МАЛЕНЧЕНКО
XXXII

Future of Spaceflight

Is here... !

Commercialization of Space

McDonald's
EXXON
Energizer
Coca-Cola
go?
Microsoft
AT&T
intel inside
pentium
Sun
USA
NASA
Atlantis
BOEING
USA

SPACEX

Falcon 9 Rocket and Dragon Spacecraft Demonstration Flight

December 8th, 2010

May 25th, 2012

Expedition 31 - Don Pettit May 25th, 2012

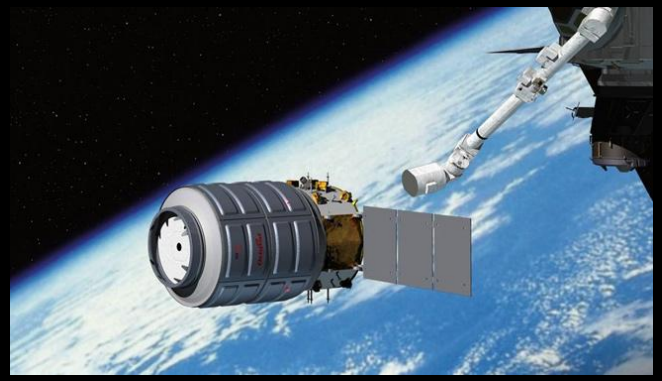
Expedition 31 Inside the Dragon Spacecraft – May 26th, 2012

SpaceX's Dragon
Pacific Ocean about 560 miles west of Baja California
8:42 a.m. Pacific time, May 31, 2012

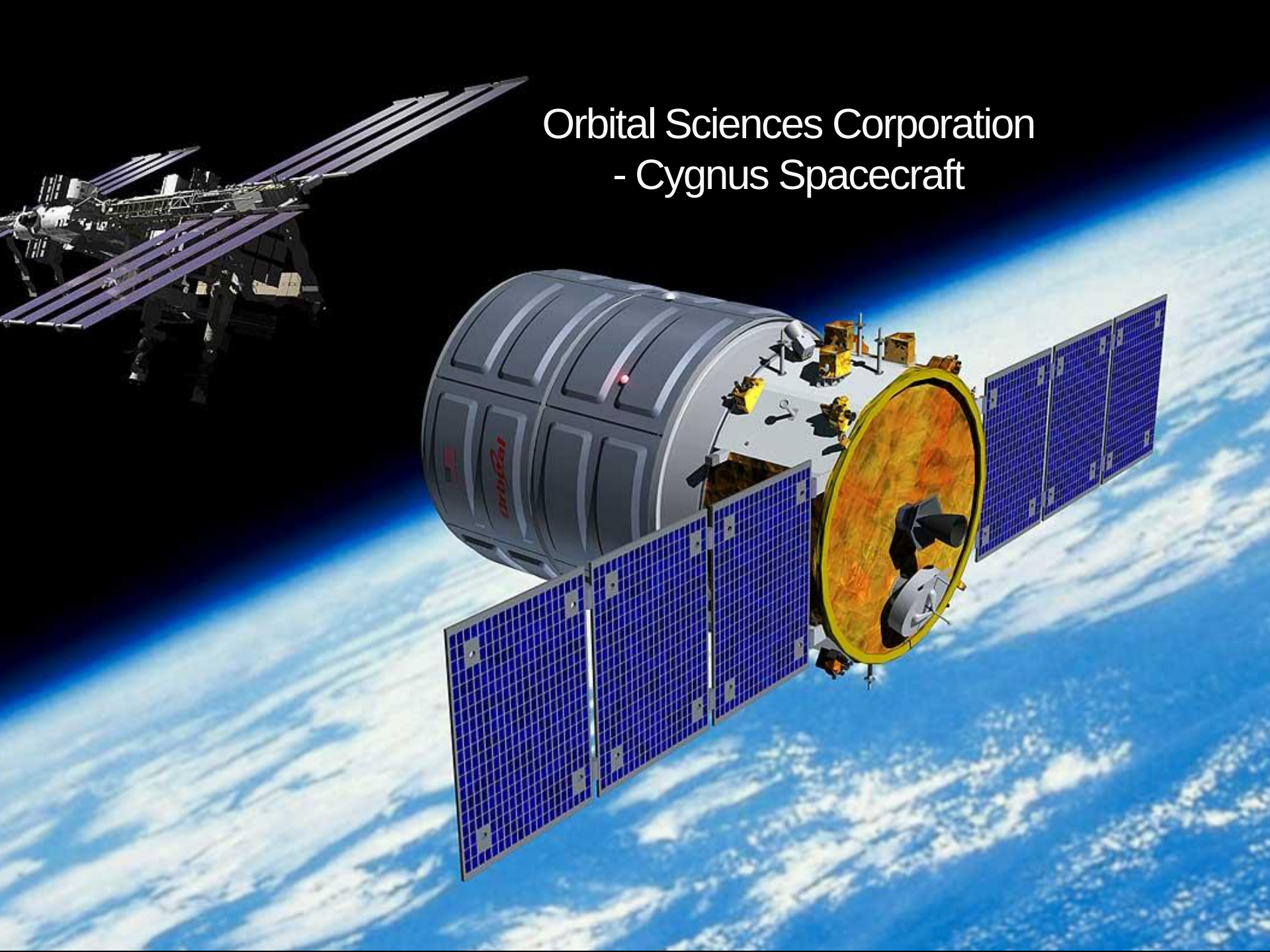
Post Shuttle Retirement

- ESA, JAXA, and the Russians that will resupplying the ISS

- Along with 2 Commercial Companies,
  - SpaceX
  - Orbital Sciences Corporation



Orbital Sciences Corporation - Cygnus Spacecraft



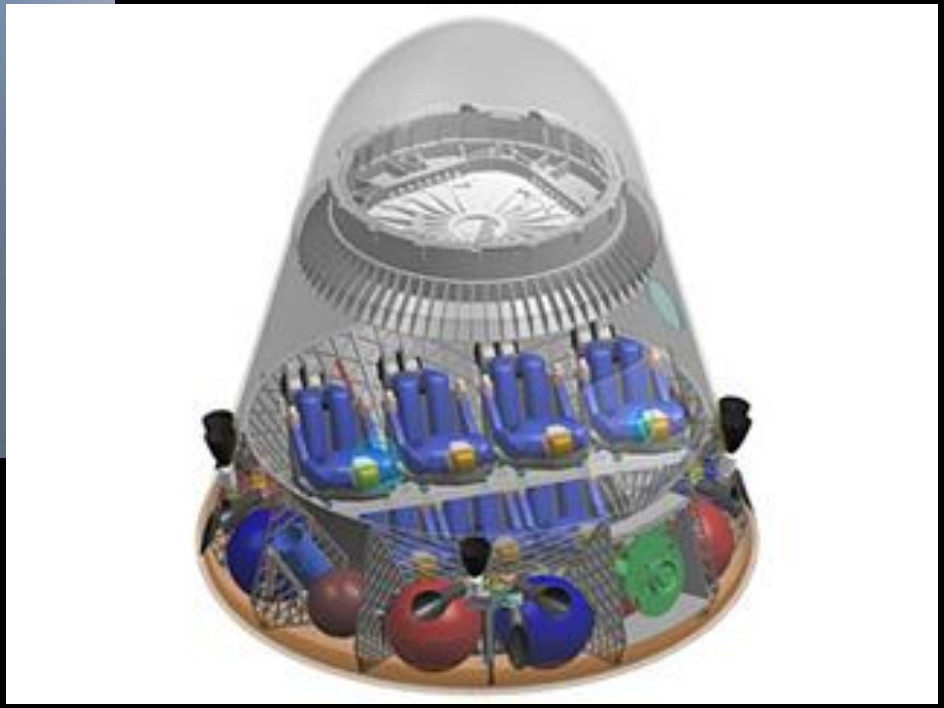
COMMERCIAL

CREW

PROGRAM

Sierra Nevada
- Dream Chaser

SPACEX

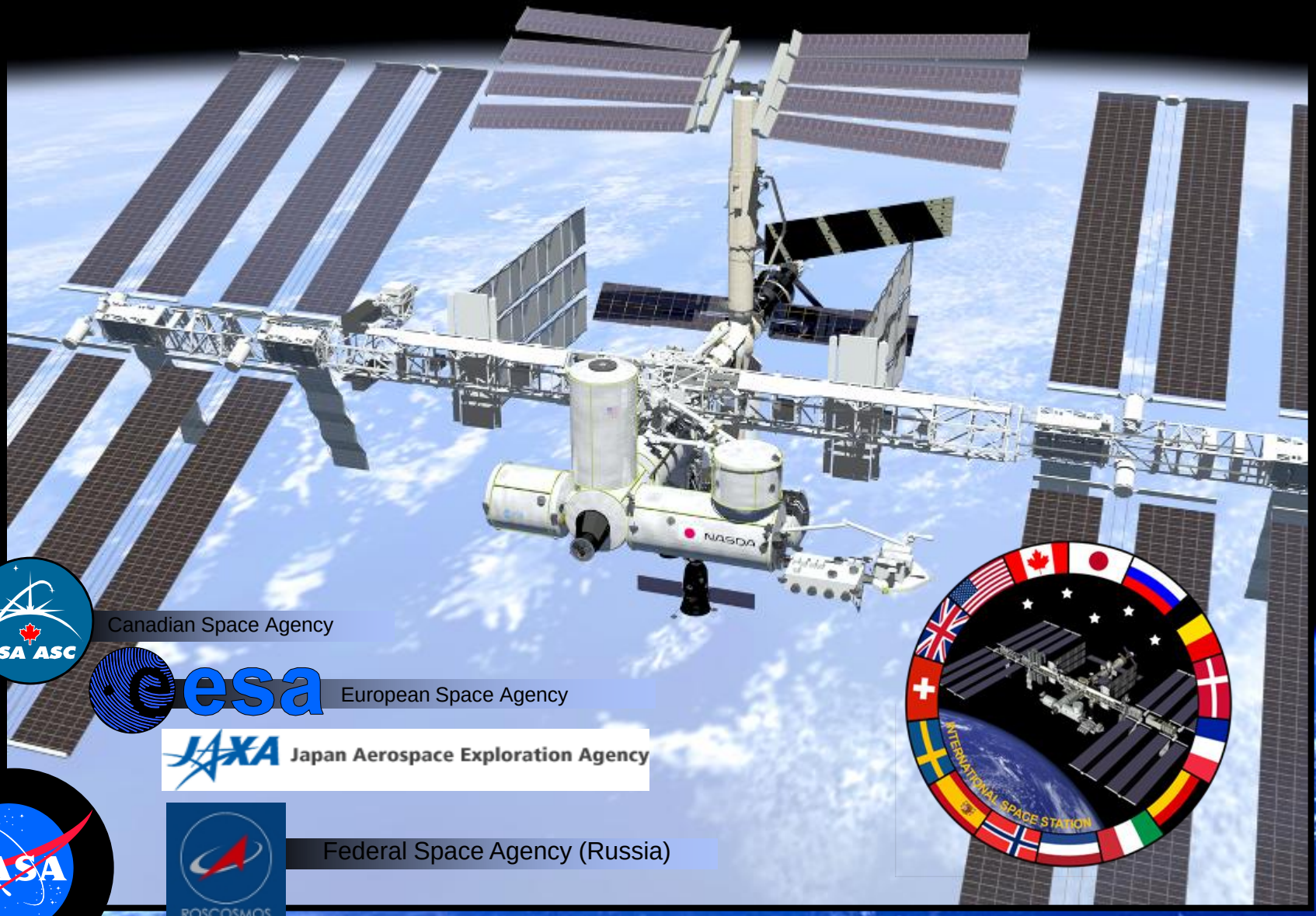


Boeing CST-100

Commercial Crew Transportation System

BOEING

ISS International Partnership



Canadian Space Agency

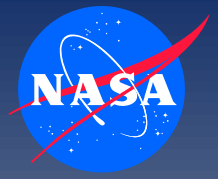
European Space Agency

Japan Aerospace Exploration Agency

Federal Space Agency (Russia)

National Aeronautics and Space Administration

Belgium

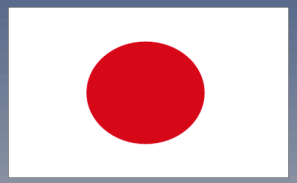


France

Spain

The Netherlands

Germany


Japan

Sweden

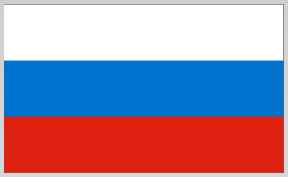
Denmark

Canada

Switzerland

Norway

Italy

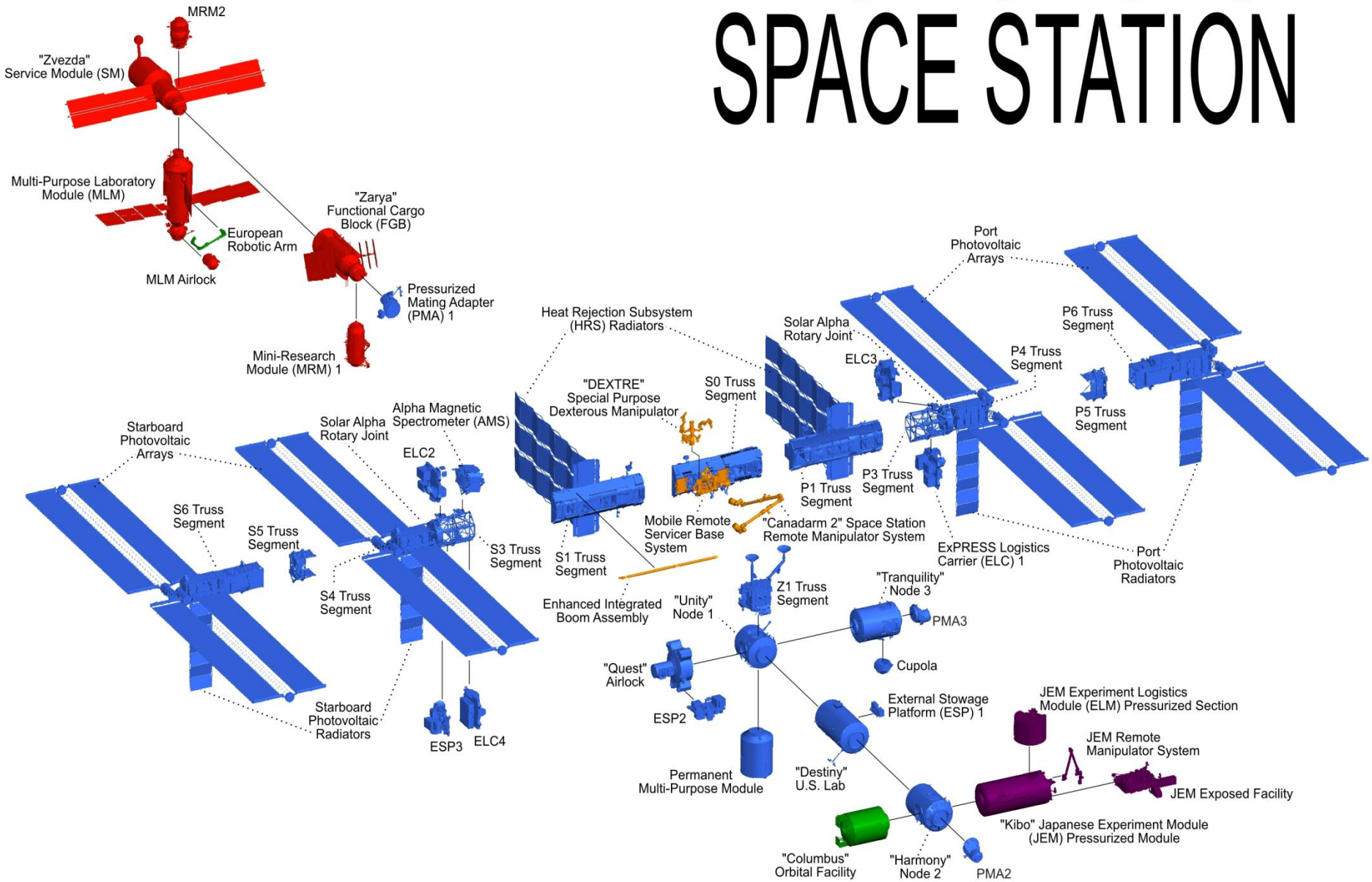

Russia

United Kingdom

United States

MAGIK
Based on MIM Rev K

International SPACE STATION



NASA Elements | ROSCOSMOS Elements | CSA Elements | JAXA Elements | ESA Elements

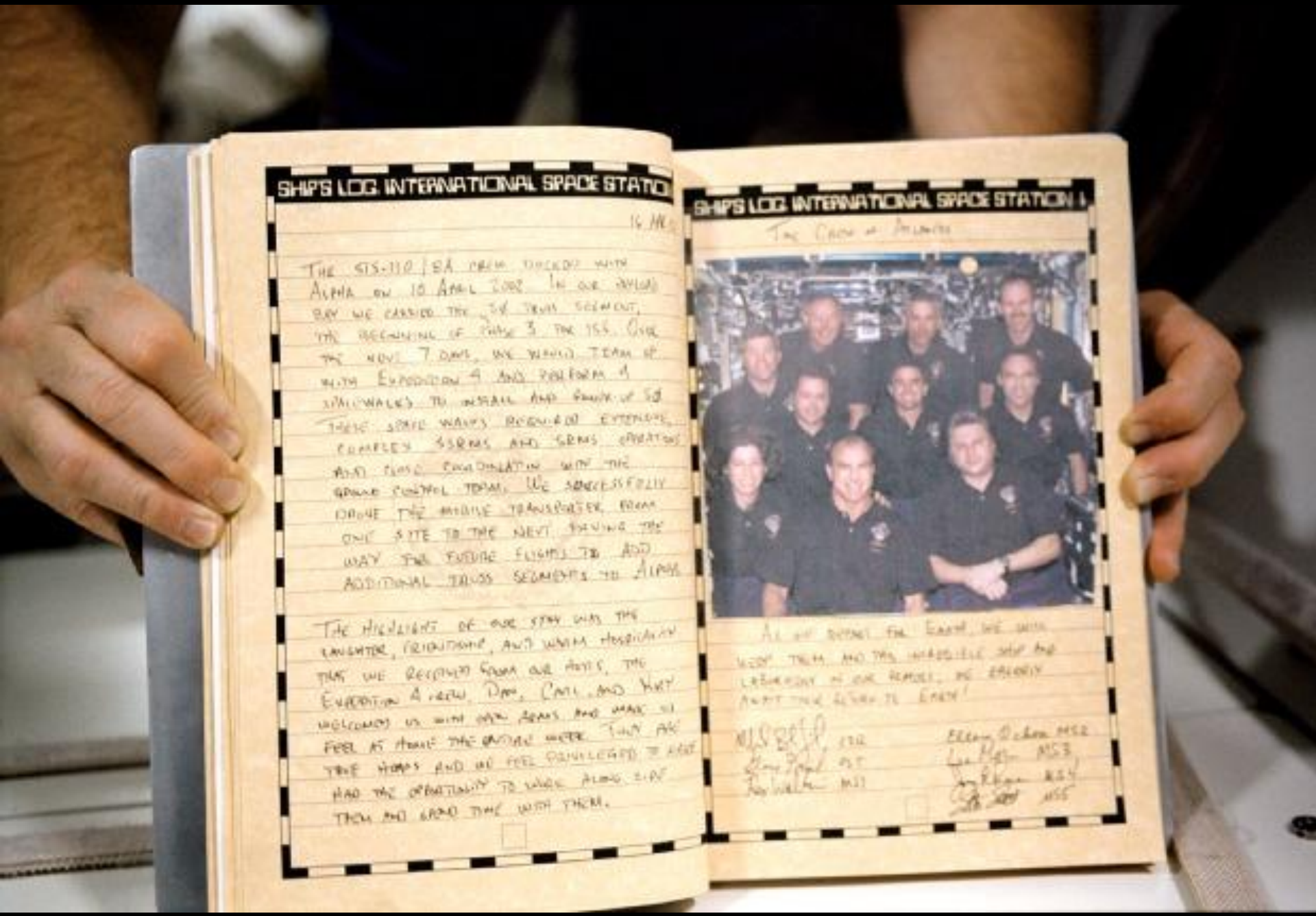
Vivir en el Espacio

6

EAGLES

ELC1

Vivir en el Espacio


SHIP'S LOG. INTERNATIONAL SPACE STATION
16 APR
THE STS-110 / 8A CREW DOCKED WITH ALPHA ON 10 APRIL 2002. IN OUR PAYLOAD BAY WE CARRIED THE 3/4 TRUSS SEGMENT, THE BEGINNING OF PHASE 3 FOR ISS. OVER THE NEXT 7 DAYS, WE WOULD TEAM UP WITH EXPEDITION 4 AND PERFORM 4 SPACEWALKS TO INSTALL AND GROUP UP 5 THESE SPACE WALKS REQUIRED EXTENSIVE, COMPLEX SSRMS AND SRMS OPERATIONS AND CLOSE COORDINATION WITH THE GROUND CONTROL TEAM. WE SUCCESSFULLY DROVE THE MOBILE TRANSPORTER FROM ONE SITE TO THE NEXT PAVING THE WAY FOR FUTURE FLIGHTS TO ADD ADDITIONAL TRUSS SEGMENTS TO ALPHA.
THE HIGHLIGHT OF OUR STAY WAS THE LAUGHTER, FRIENDSHIP, AND WARM HOSPITALITY THAT WE RECEIVED FROM OUR HOSTS, THE EXPEDITION 4 CREW. DAN, CARL, AND KIRT WELCOMED US WITH OPEN ARMS AND MADE US FEEL AT HOME THE ENTIRE WEEK. THEY ARE TRUE HOMES AND WE FEEL PRIVILEGED TO HAVE HAD THE OPPORTUNITY TO WORK ALONG SIDE THEM AND SPEND TIME WITH THEM.
SHIP'S LOG. INTERNATIONAL SPACE STATION 1
THE CREW OF ATLANTIS
AS WE DEPART FOR EARTH, WE WILL KEEP THEM AND THIS INCREDIBLE SHIP AND LABORATORY IN OUR REMOTE. WE EAGERLY AWAIT THEIR RETURN TO EARTH!
CDR
PST
MS1
MS2
MS3
MS4
MS5

E5088, 2001/04/21 06:18:00

S98E5049 2001/02/09 19:07:23

Exercicio

MF7G
MF7H
MF7K
MF7M
MF7P
ARS SERVICING
STRAPS
REENTRY

To FGB
1576

LAB

To FGB
RIGHT
LOCK

Sunita L. Williams, Expedition 14 flight engineer, circled Earth almost three times as she participated in the Boston Marathon.

Williams' official completion time was four hours, 23 minutes and 10 seconds as she completed the race at 2:24 p.m. (EDT).

Bill McArthur, Jr. runs the Aramco Half Marathon onboard the International Space Station (ISS).

He is running simultaneously with the Chevron Houston Marathon/ Aramco Half Marathon, as it is run in Houston, January 15, 2006.

CLOSING HATCH
HD
PORT

Higiene

02/09 13:10:28

NAVY
82
NASA

Sueño

ALE

/09/11 10:37:06

0 2001/04/22 00:58:21

Nutrición

S110E5035

S105E5200 2001/08/15 00:05:40

宇宙食サンプル（いなり寿司）
Space OINARI-san
Nissin Food Products Co., Ltd.
紅生姜いなり
宇宙食サンプル
やまかけ天ぷらそば
1. 70～80℃のお湯120mlを入れ、空気を抜きながらチャックを閉じる。
2. パウチを寝かして左右に振りスープの溶けにくいところを溶かし、6分間待つ。（待つ間に70℃のオーブン又はお湯で温めるのが理想的）
3. ハサミでパウチの中間部を切断し食べる。
Nissin Food Products Co., Ltd.
宇宙食サンプル
京風あんかけ五目うどん
1. 70～80℃のお湯120mlを入れ、空気を抜きながらチャックを閉じる。
2. パウチを寝かして左右に振りスープの溶けにくいところを溶かし、6分間待つ。（待つ間に70℃のオーブン又はお湯で温めるのが理想的）
3. ハサミでパウチの中間部を切断し食べる。
Nissin Food Products Co., Ltd.
宇宙食サンプル（お好み
Space OKONO
Nissin Food Products Co., Ltd.

8E017005

El Fin