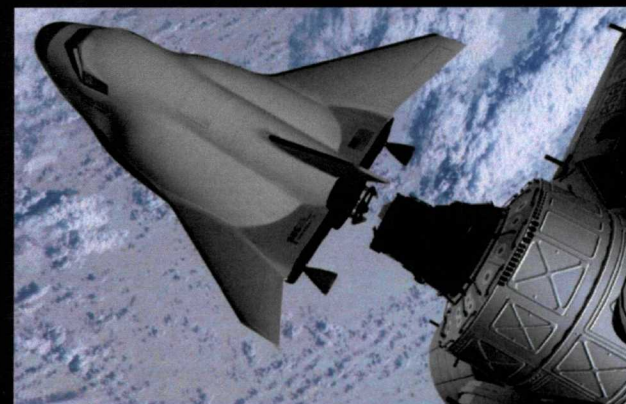
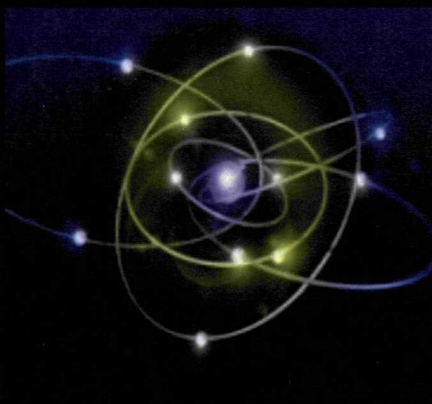




Opportunities for Partnering in Aerospace: A NASA Perspective

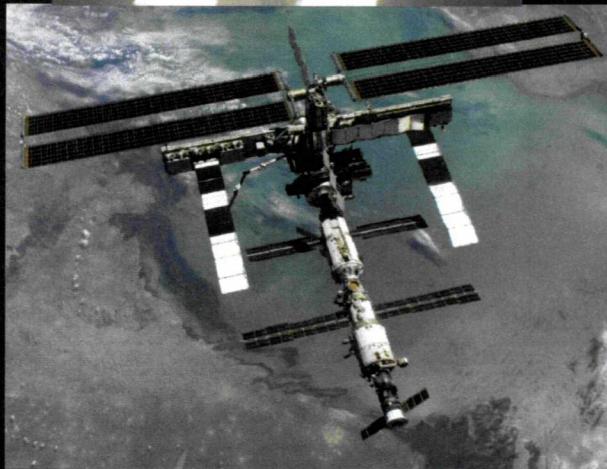
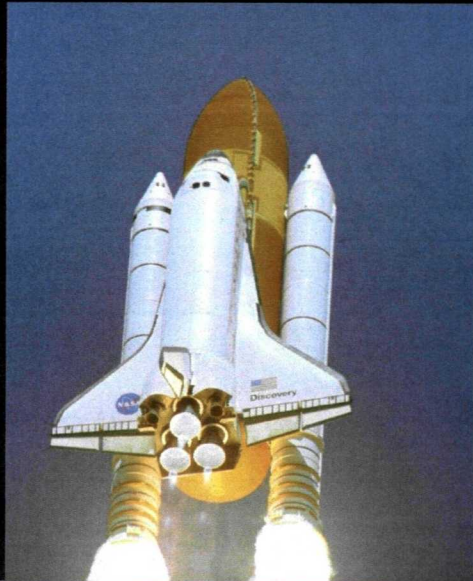


**Presented by: Janet Petro, Deputy Director
NASA Kennedy Space Center**

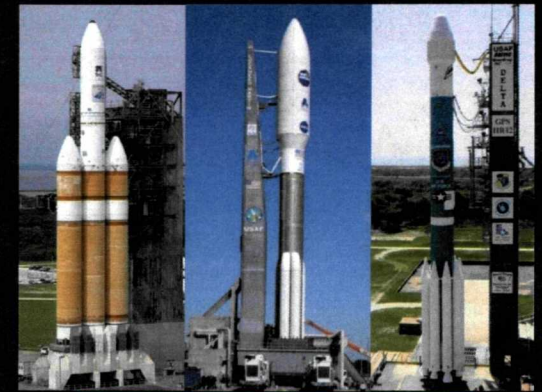
July 2010



Kennedy Space Center – A National Spaceport

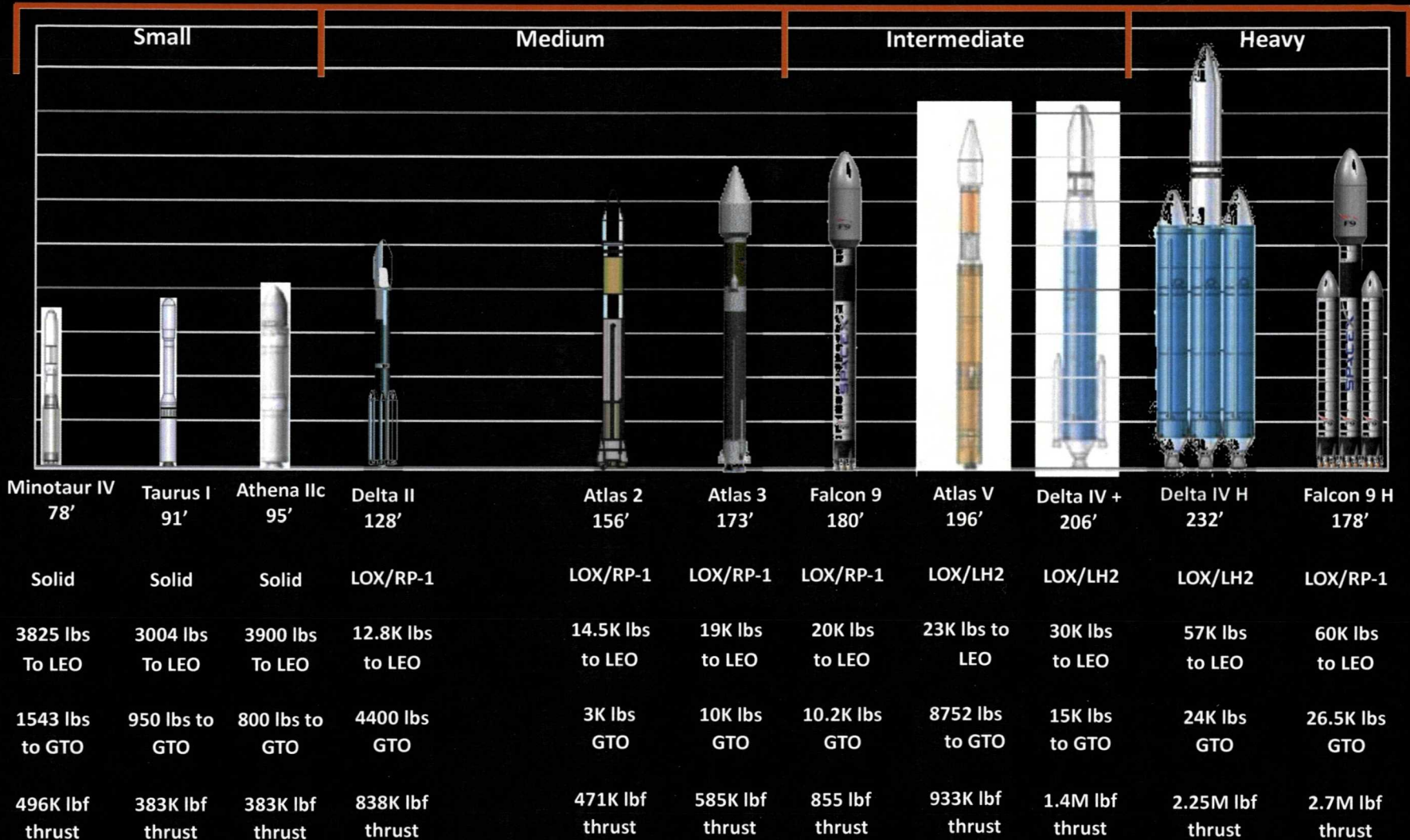


- Major Programs
 - Space Shuttle
 - International Space Station
 - Launch Services
 - Constellation
- Multiple Commercial Ventures
 - Exploration Park
 - COTS
 - Orion Production
- Employing 15,000
 - 2,000 NASA Civil Servants
 - 13,000 Contractors/Tenants
- Economic Impact
 - \$1.67 Billion
- Covering 140,000 Acres
 - Over 900 Facilities
 - National Wildlife Refuge





Florida's Spaceport Launch Capability

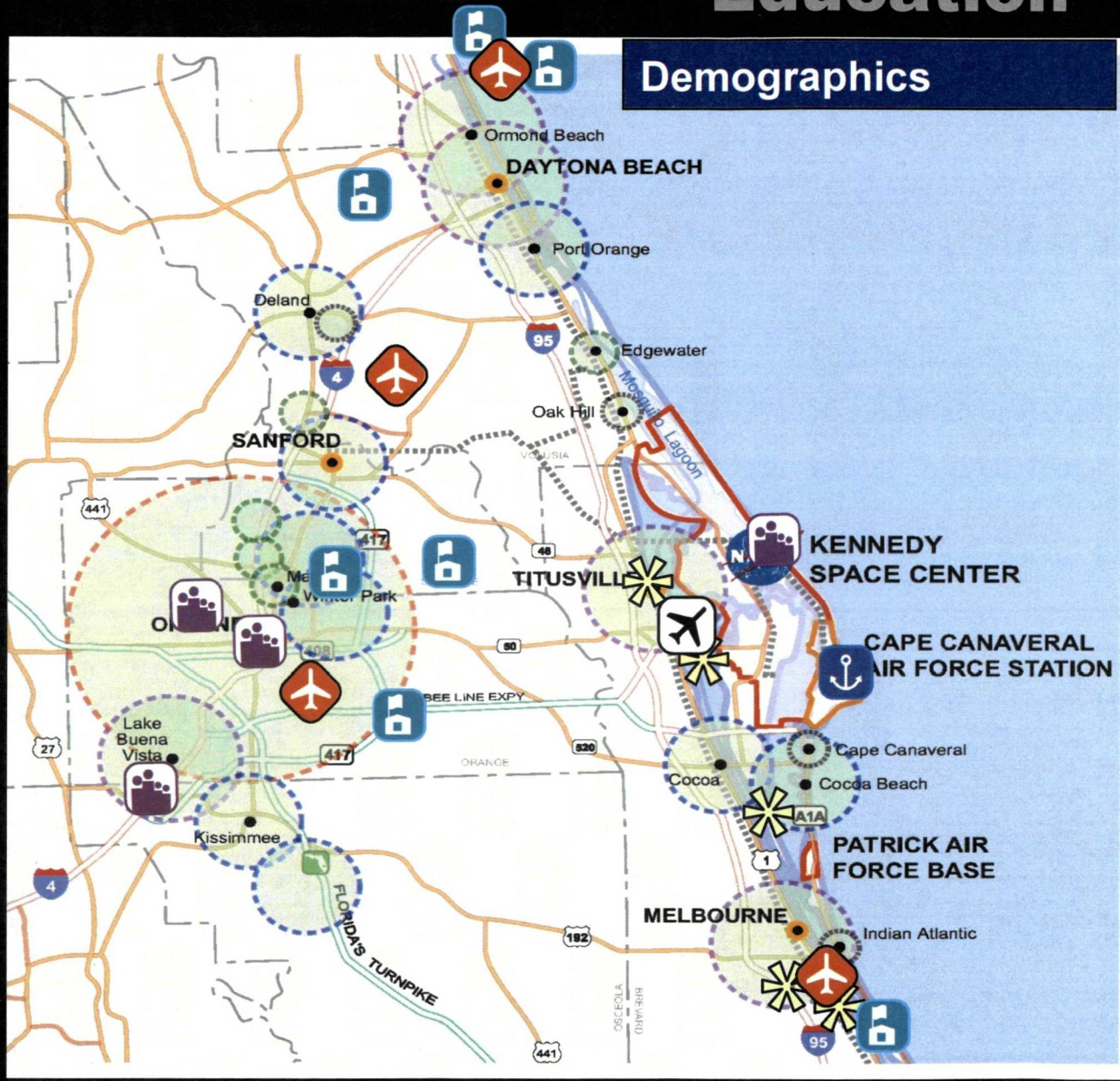




Transportation, Tourism & Education

Demographics

- CITY POPULATION***
 - 100,001 - 200,000
 - 40,001 - 100,000
 - 20,001 - 40,000
 - 10,001 - 20,000
 - 1 - 10,000
 - Major Airport
 - Regional Airport
 - Port
 - Higher Education
 - Tourism
 - Industry Partners
 - Interstate, State Highway, State Route, Turnpike
 - Interstate, Freeway
 - Toll Road
 - Highway, State Route
 - Primary Road
 - County Boundary
 - Rail
- *SOURCE: 2000 CENSUS





KSC – More than just rockets

KSC Mission

- **KSC safely manages, develops, integrates, and sustains space systems through partnerships that enable innovative, diverse access to space and inspires the Nation's future**

KSC Core Competencies

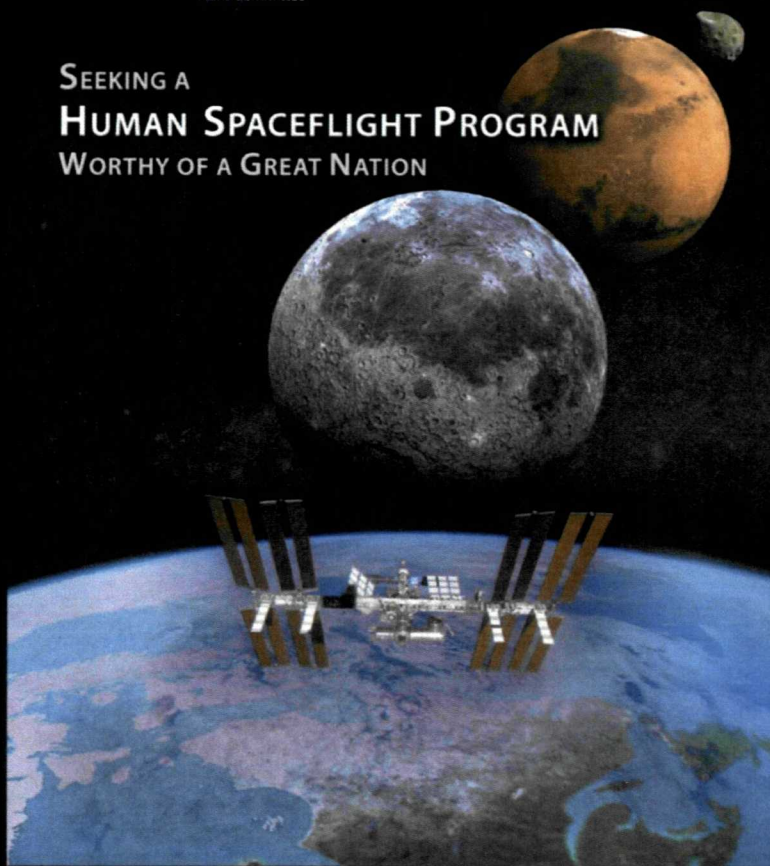
- **Acquisition and management of launch services and commercial crew development**
- **Launch vehicle and spacecraft processing, launching, landing and recovery, operations and sustaining**
- **Payload and flight science experiment processing, integration and testing**
- **Designing, developing, operating, and sustaining flight and ground systems, and supporting infrastructure**
- **Development, test and demonstration of advanced flight systems and transformational technologies**
- **Developing technology to advance exploration and space systems**



President's Space Policy

Review of U.S.
HUMAN SPACEFLIGHT
Plans Committee

SEEKING A
HUMAN SPACEFLIGHT PROGRAM
WORTHY OF A GREAT NATION



After a review of U.S. human spaceflight, the President has proposed that NASA:

- **Perform R&D that enables exploration beyond earth orbit**
- **Use ISS as a national lab, and operate until at least 2020**
- **Rely on commercial services to transport ISS crew and cargo**



Preparing for the Future

GOAL 1: Provide Government & commercial access to space

Government only, end stage



Government & Commercial, full lifecycle

GOAL 2: Develop, operate and sustain a robust launch complex for all providers

Program Specific



Multi-User Capability

GOAL 3: Conduct research and technology development

Narrowly specified areas



Leading key research & technology areas

GOAL 4: Provide a robust institution

Program centered



Multi-program & commercial



Kennedy Space Center Launch Complex

**Reliable Access to Unique
Launch Property and
Associated Services**





Access to Facilities



Orbital Processing Facility



Thermal Protection System Facility



Operations & Checkout Facility



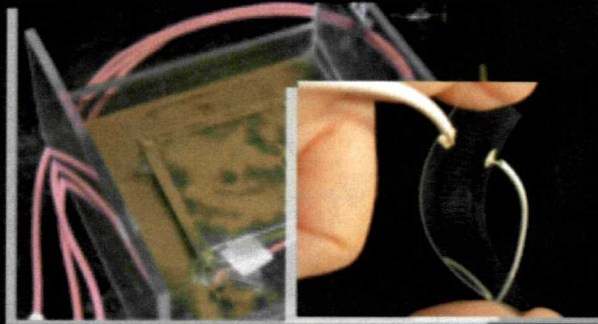
Space Station Processing Facility



Payload Maintenance Facility



KSC Technology Capabilities



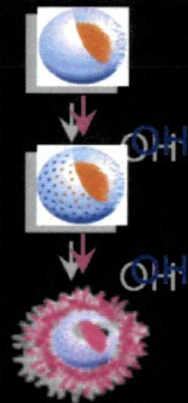
Dust Mitigation:
Electrodynamic dust shield technology for self-cleaning surfaces



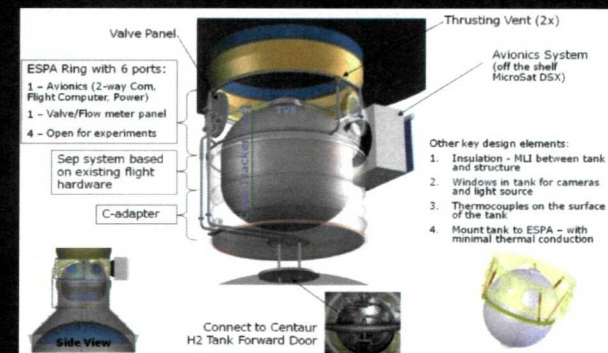
Early Wire Failure Detection & Repair



**Human Robotic Systems (HRS)
Lightweight Chariot
Bulldozer Blade**



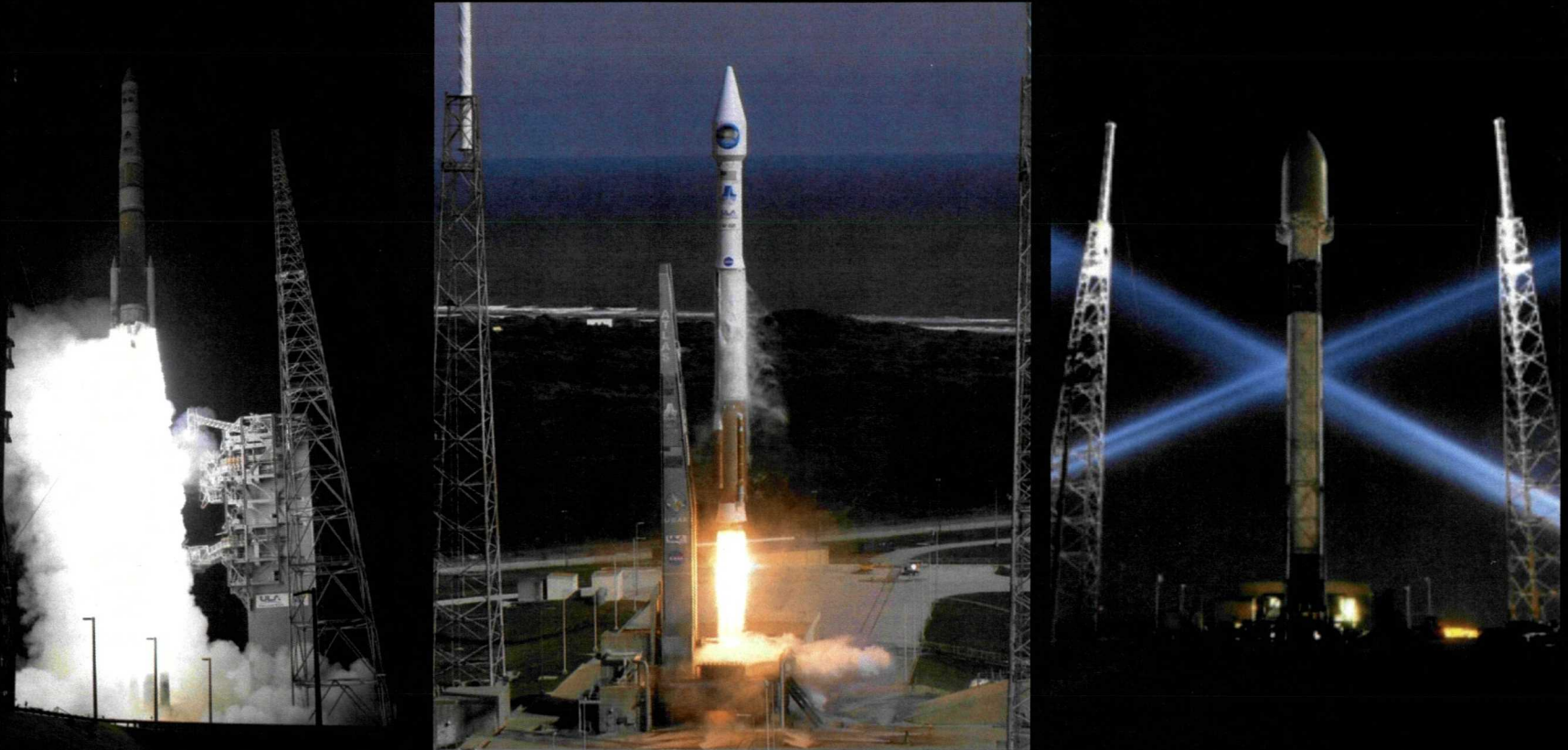
Smart, self-healing coatings



**CRYOTE
Propellant
Payload**



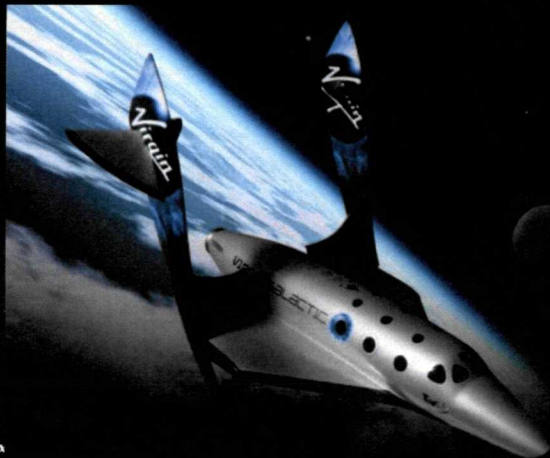
Opportunities – Commercial Crew and Cargo



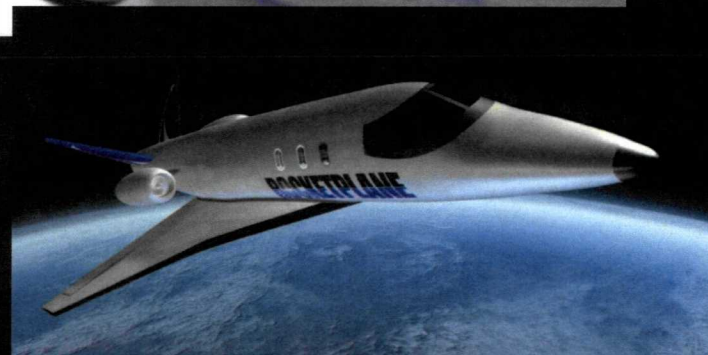
New and growing commercial space activities



Opportunities – Entrepreneurial Space



 Concept of SpaceShipTwo © Virgin Galactic



New emerging entrepreneurial industries at KSC

- Reusable launch vehicles
- Suborbital spaceflight for science, STEM, tourism



Opportunities - Exploration Park

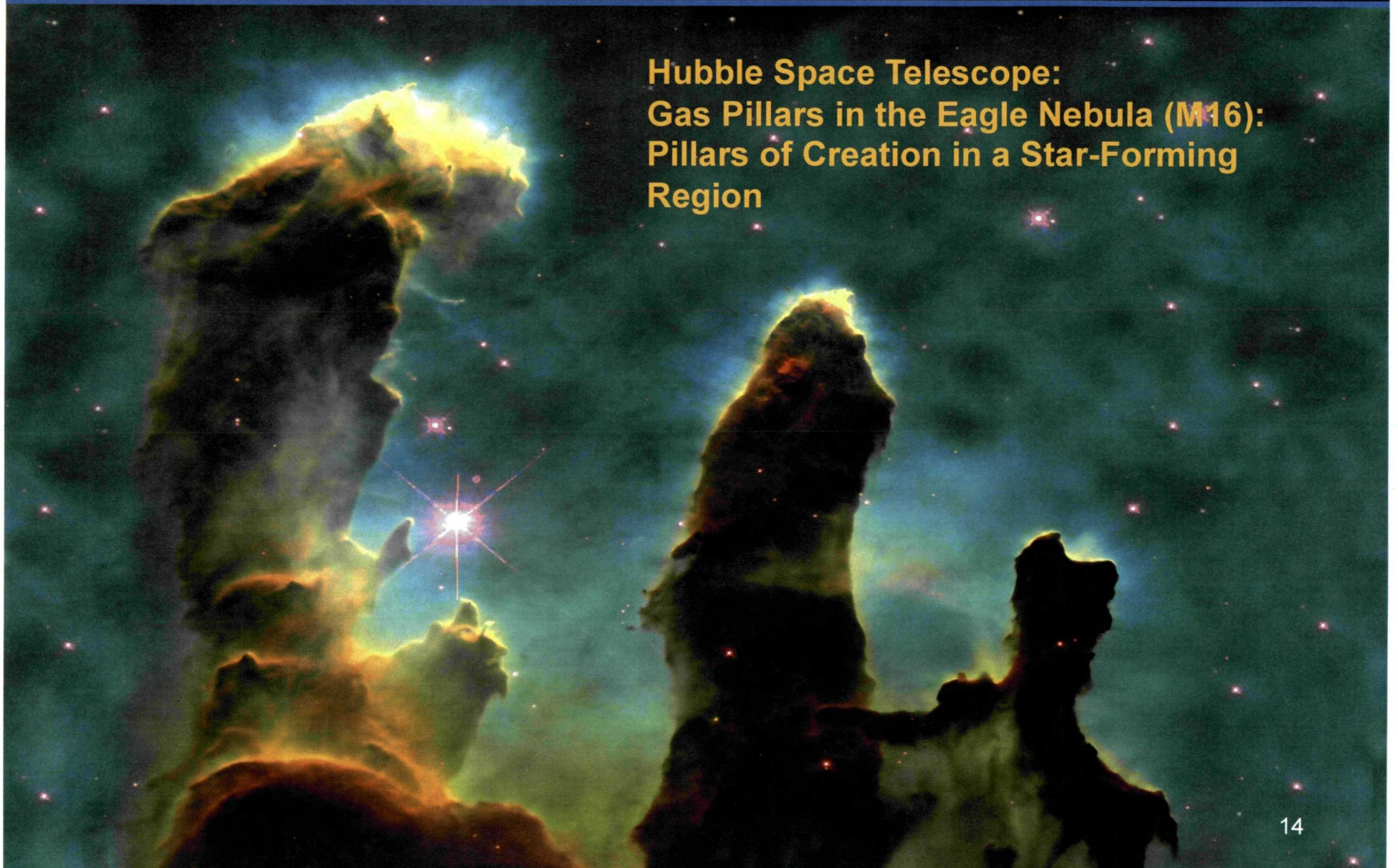
- **An innovative development partnership with State of Florida**
- **Offers a commercial environment with close connection to KSC assets but outside KSC Security Perimeter**
- **Payload processing**
- **Life Science Research**
- **Modeling & Simulation**
- **Clean Energy**
- **Research**
- **Space Technology**





NASA and UK - Partners in Space

Hubble Space Telescope:
Gas Pillars in the Eagle Nebula (M16):
Pillars of Creation in a Star-Forming
Region





KSC Development Office

**KSC Development Office is the
front door for business and
partnerships**

<http://kscpartnerships.ksc.nasa.gov>

Joyce Riquelme

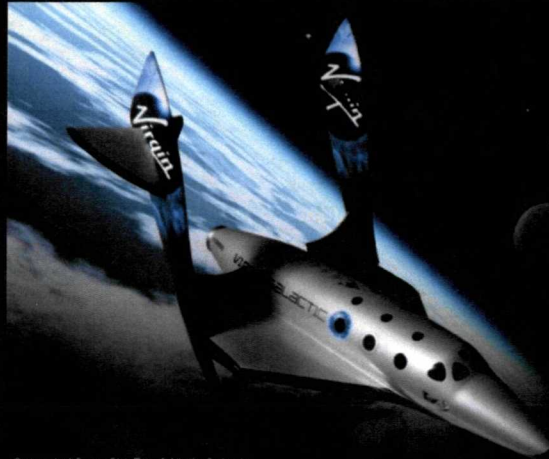
Center Planning & Development Office

Joyce.M.Riquelme@nasa.gov

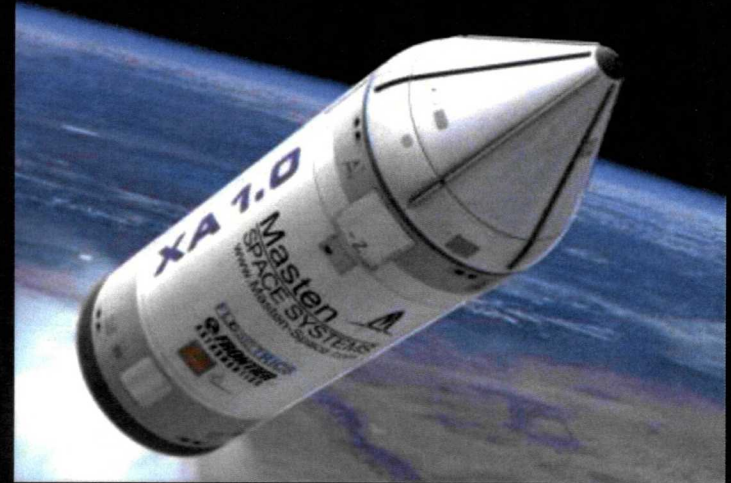




Seeking opportunities to Partner with you



Concept of SpaceShipTwo © Virgin Galactic



Commercial and international companies are welcome at the Kennedy Space Center

