



8TH BRIEFING FOR INDUSTRY

# Transferring Technology to Industry

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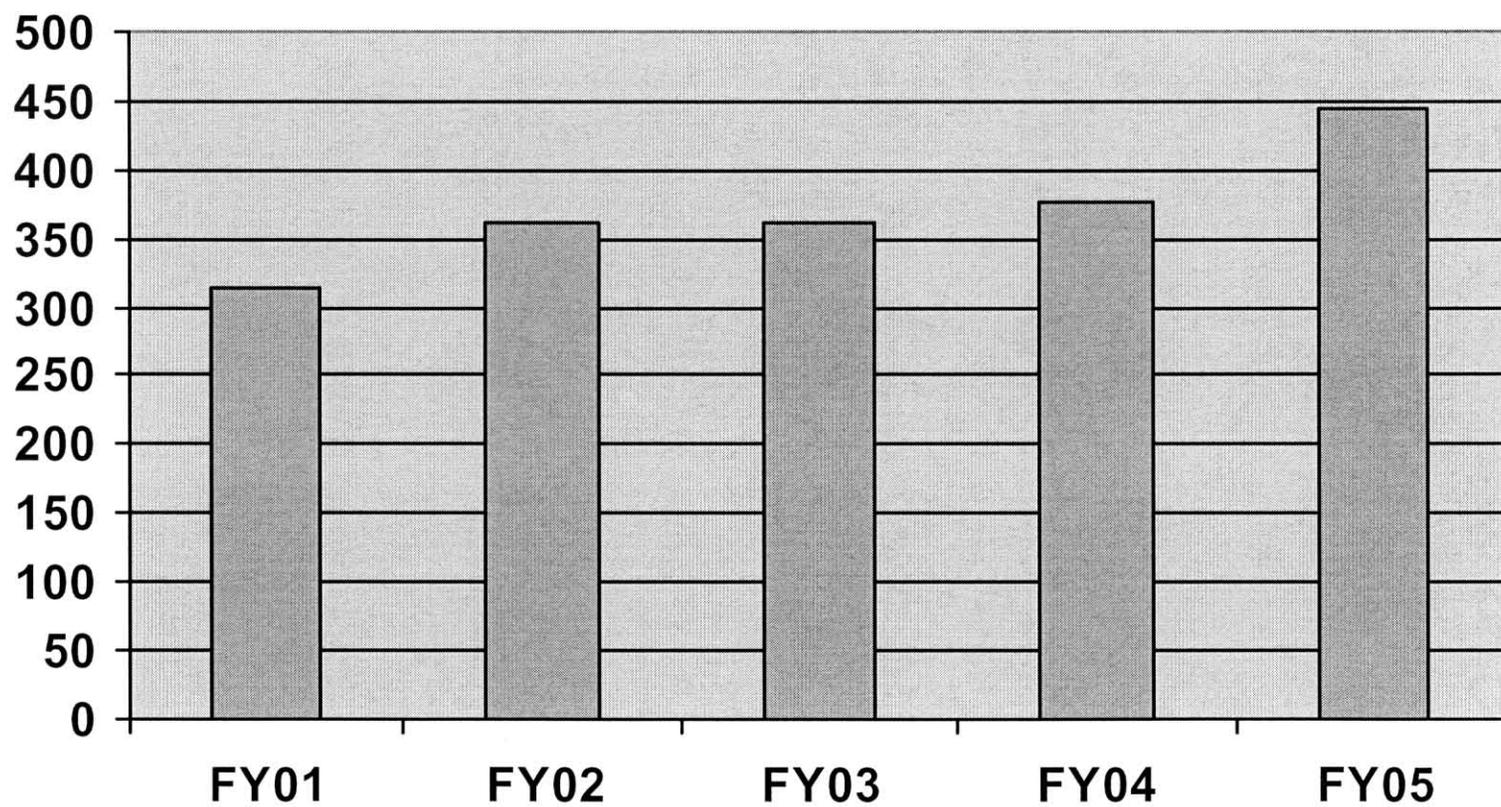
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California Institute of Technology

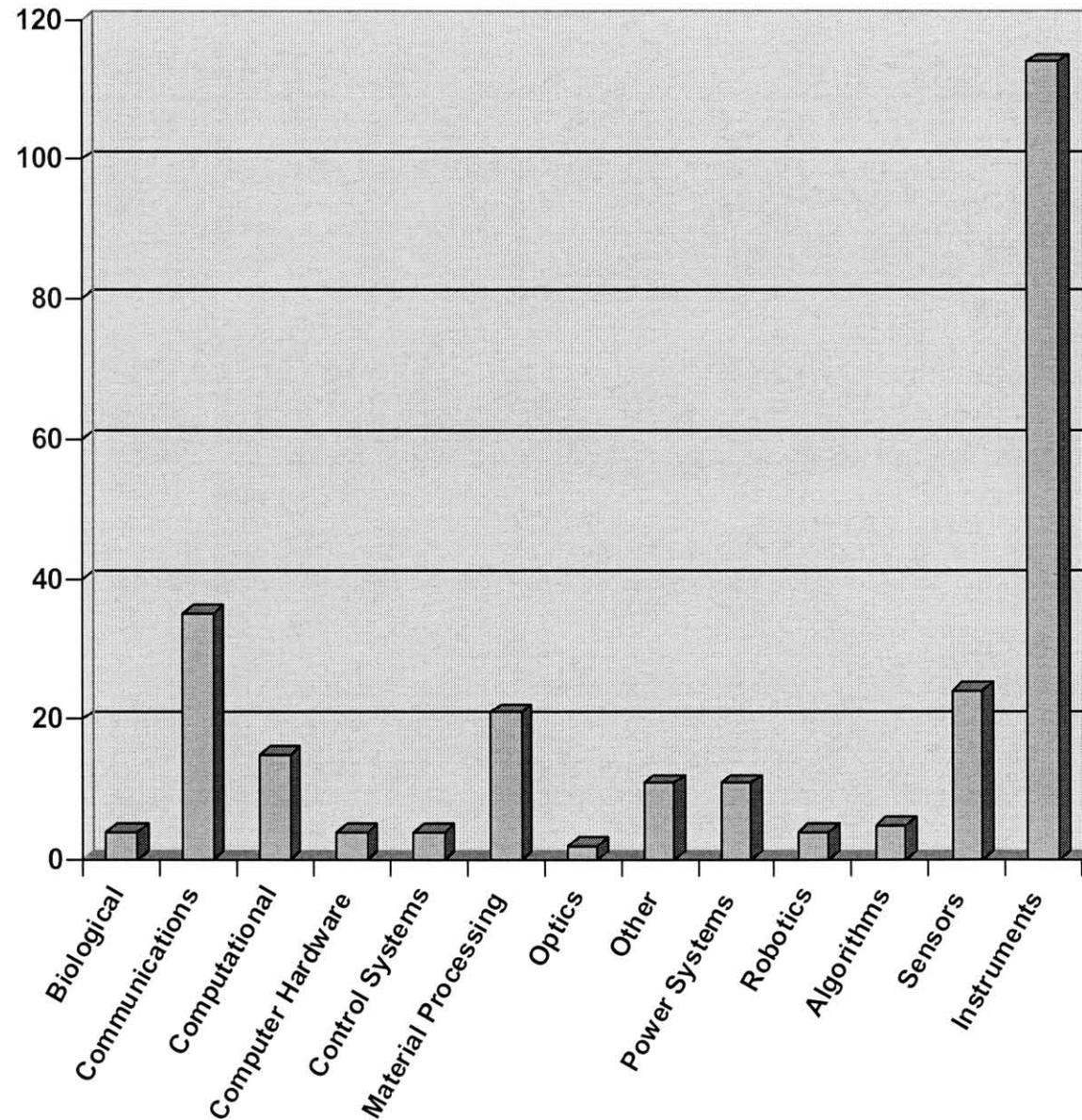
# Technology Transfer Processes

- Collaborate
- License
- Outreach
- Protect and patent
- Disclose 'inventions'
- Invest in new technology

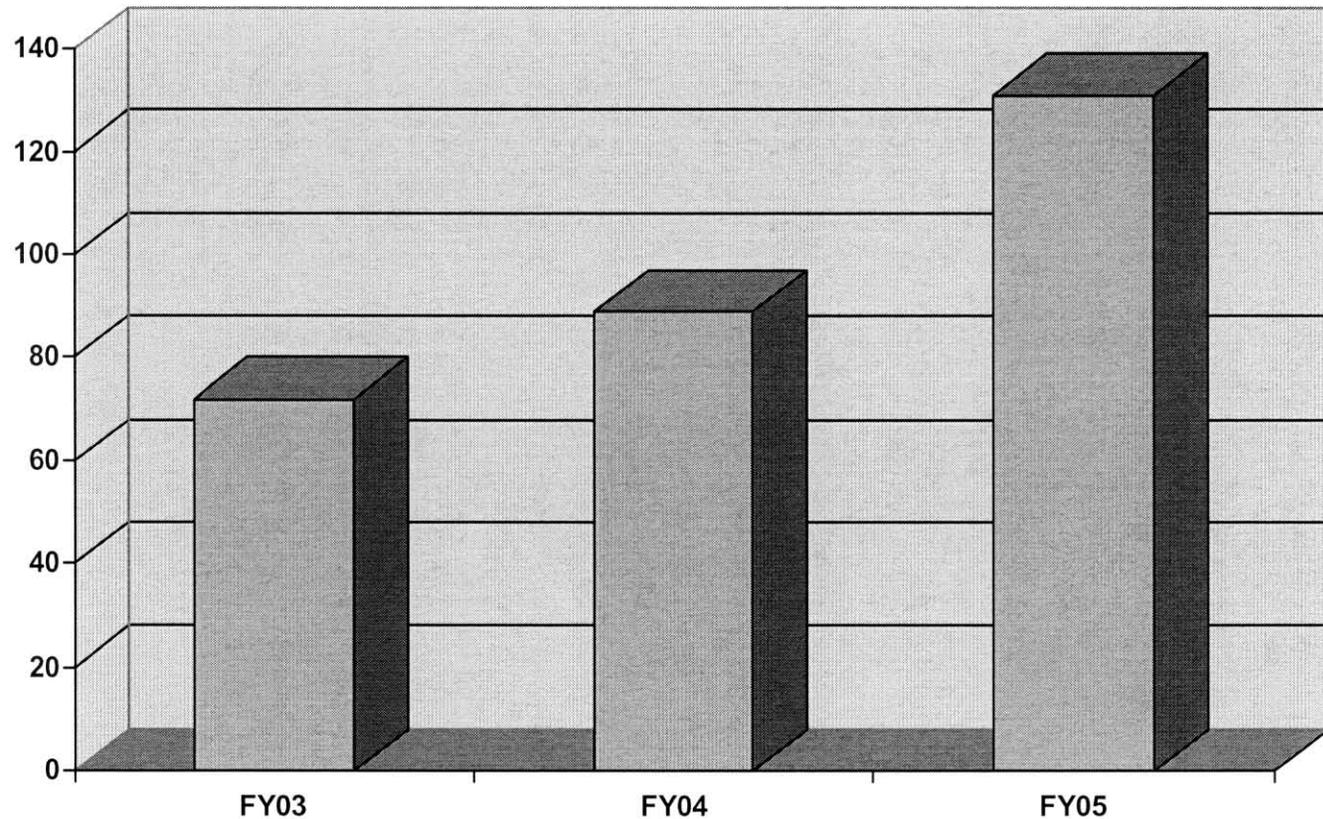
# JPL Invention Disclosures



# FY'05 Hardware Invention Disclosures



# Non-provisional Patent Applications



- ✦ Caltech can take title to JPL inventions
- ✦ Caltech copyrights all JPL software
- ✦ Government has royalty-free license to use

# Caltech leads in patenting

## PRESS RELEASE

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### USPTO Releases List of Top 10 Universities Receiving Most Patents in 2005

*University of California leads U.S. academic institutions for 12th consecutive year*

The Department of Commerce's United States Patent and Trademark Office (USPTO) today announced the top 10 U.S. universities receiving the most patents during calendar year 2005. Listed below are the universities receiving the most patents for inventions in 2005, along with their 2004 ranking. The University of California tops the list for the 12th consecutive year.

"America's economic strength and global leadership depend on continued technological advances," said Under Secretary of Commerce for Intellectual Property Jon Dudas. "Groundbreaking discoveries and patented inventions generated by innovative minds at academic institutions have paid enormous dividends, improving the lives and livelihoods of generations of Americans."

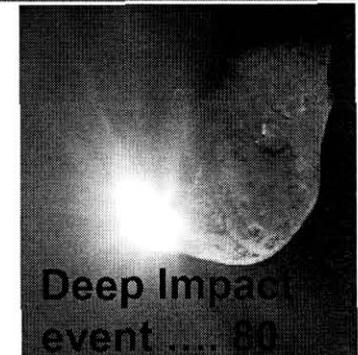
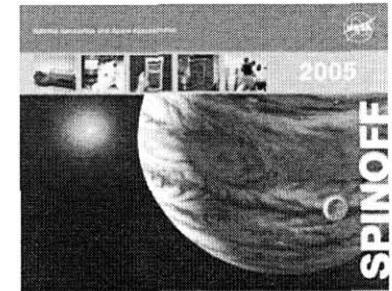
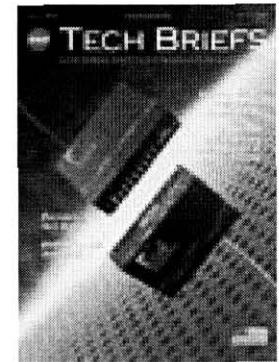
### PRELIMINARY LIST OF TOP PATENTING U.S. UNIVERSITIES Calendar Year 2005

This report presents a preliminary list of the U.S. universities receiving the most patents for invention (i.e., utility patents) during the 2005 calendar year. All campuses are included.

Rank in 2005*	Number of Patents in 2005*	U.S. University*	Rank in 2004*	Number of Patents in 2004*
1	390	University of California	(1)	(424)
2	136	Massachusetts Institute of Technology	(3)	(132)
3	101	California Institute of Technology	(2)	(135)
4**	90	Stanford University **	(6)	(75)
**	90	University of Texas **	(4)	(101)

# Outreach

- ✦ JPL has a dedicated organization to transfer technologies: National Space Technology Applications (NSTA)
- ✦ Tech Brief Magazine:
  - Describes NASA, JPL new Technologies
  - Circulation ~200,000
  - 2 million web visitors per year
- ✦ Spinoff Magazine: documents selected NASA, JPL technology transfer successes
- ✦ JPL Publications: >4,000 documents cleared for public release in 2005



# Licenses

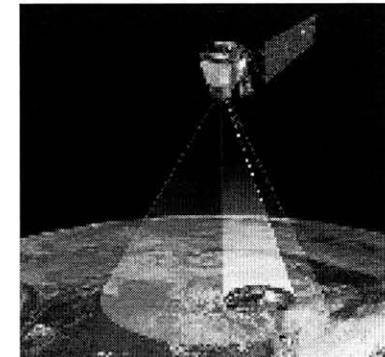
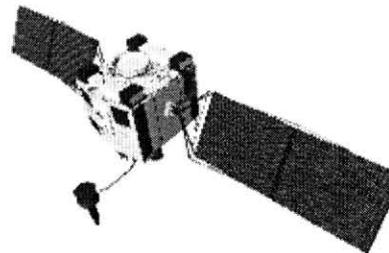
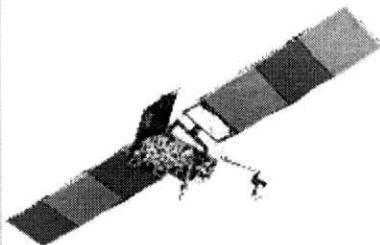
- ✦ Royalty-free government use licenses
- ✦ Royalty-free university research licenses
- ✦ Licenses for Commercial Use
  - Negotiated by Caltech
  - Can be exclusive for specific fields of use
  - Negotiable royalty terms

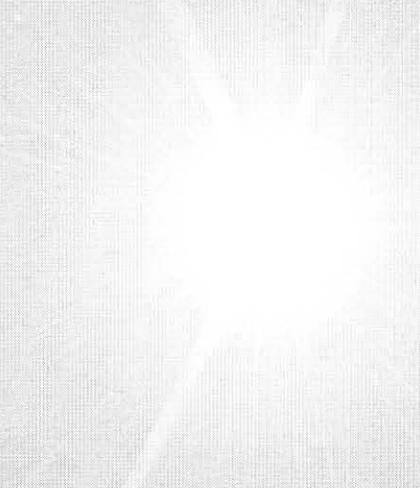
# Caltech Start-ups

<b>Aurora</b>	<b>Maxygen</b>	
<b>Calhoun Vision</b>	<b>MBI</b>	
<b>Celltech</b>	<b>MetaProbe</b>	
<b>Cyrano Sciences</b>	<b>Micron Technologies</b>	
<b>Eidogen</b>	<b>Motorola Life Sciences</b>	
<b>FitMe.com</b>	<b>Myricom</b>	
<b>Fluidigm</b>	<b>Oakgrove Systems</b>	
<b>Fulcrum Microsystems</b>	<b>OEwaves</b>	
<b>GeneSoft</b>	<b>OmniCorder Technologies</b>	
<b>GeneOhm Sciences</b>	<b>Ondax Advanced Optical Filter Technologies</b>	
<b>Geometrix</b>	<b>Oraxion Diagnostics</b>	
<b>G-TEC</b>	<b>Phasebridge</b>	<b>VioSense</b>
<b>HighTower Software</b>	<b>Photobit</b>	<b>Vision Rx</b>
<b>Impinj</b>	<b>QWIP Technologies</b>	<b>Volcano Therapeutics</b>
<b>Insert Therapeutics</b>	<b>Rainfinity</b>	<b>VRVS</b>
<b>iSheres</b>	<b>Robomedica</b>	<b>Xencor</b>
<b>Kuros Biosurgery</b>	<b>Sonic Innovations</b>	<b>Xponent</b>
<b>Lexicon Pharmaceuticals</b>	<b>Spectra Sensors</b>	
<b>Lightcross</b>	<b>Stem Cells</b>	
<b>Liquidmetal Technologies</b>	<b>VasGene</b>	
<b>Luxtera</b>	<b>ViaSpace</b>	
<b>Materia</b>		

# Industry Funded Collaborations

- ✦ 60+ active collaborations with industry
  - Transfer technology
  - Co-develop dual use technology
  - Jointly respond to government solicitations
    - ✦ Advanced sensors and instruments
    - ✦ Flight, airborne, ground demos
    - ✦ Software systems for autonomous operations
  
- ✦ Guidelines
  - JPL does not compete with industry
  - Collaborations are relevant to JPL's mission



A bright, multi-pointed starburst light effect is positioned on the left side of the image, set against a dark, textured background. The light is white and yellow, with several sharp rays extending outwards. The background has a fine, grid-like texture and is peppered with small white specks, resembling a night sky or a microscopic view.

Questions?