"...intellectual freedom is essential to human society -- freedom to obtain and distribute information, freedom for open-minded and unfearing debate and freedom from pressure by officialdom and prejudices."

Andre Sakharov, 1968, "*Reflections on progress, coexistence and intellectual freedom*"

Irving A. Lerch

APS Forum on International Physics

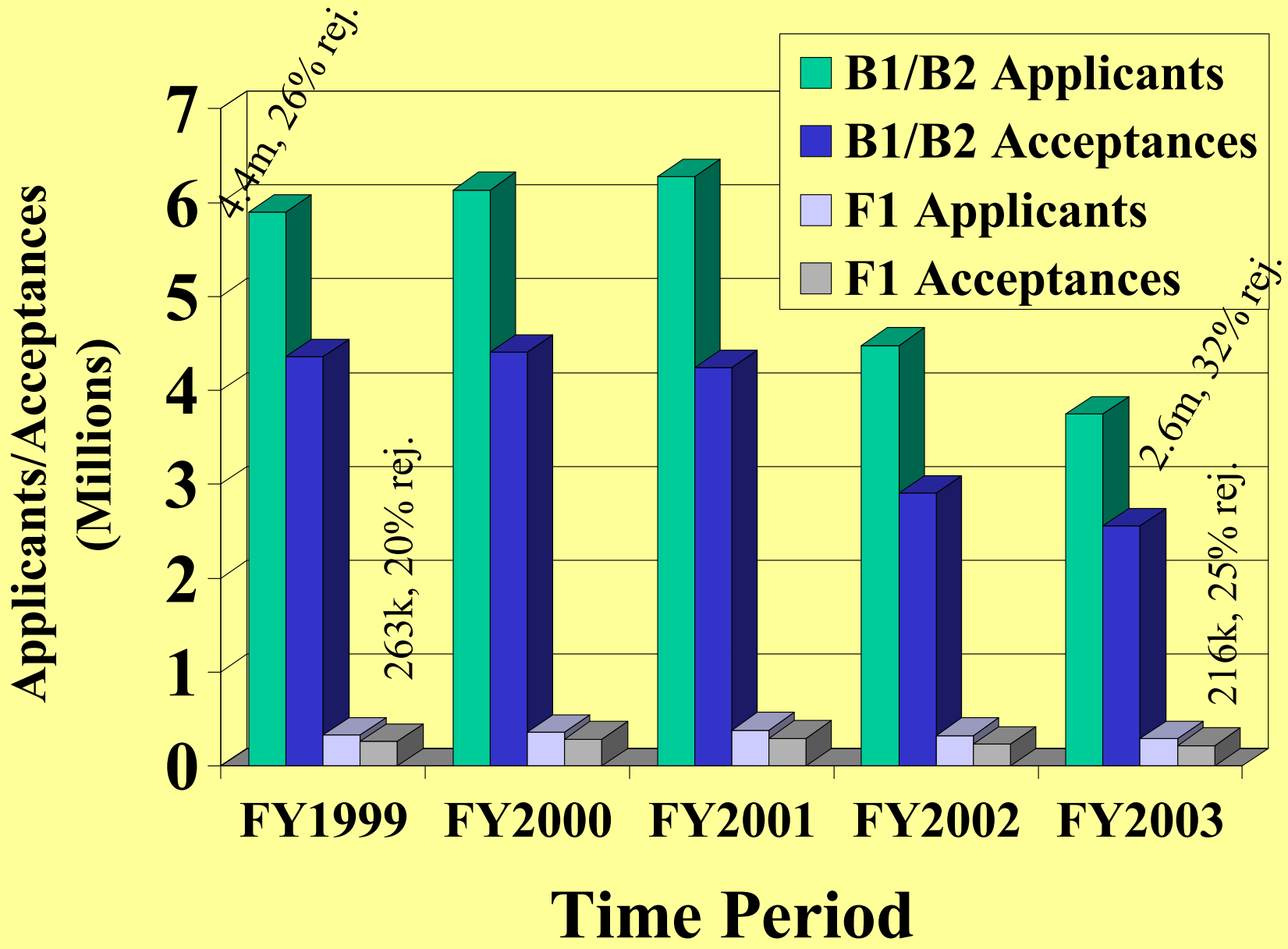
lerch@aps.org

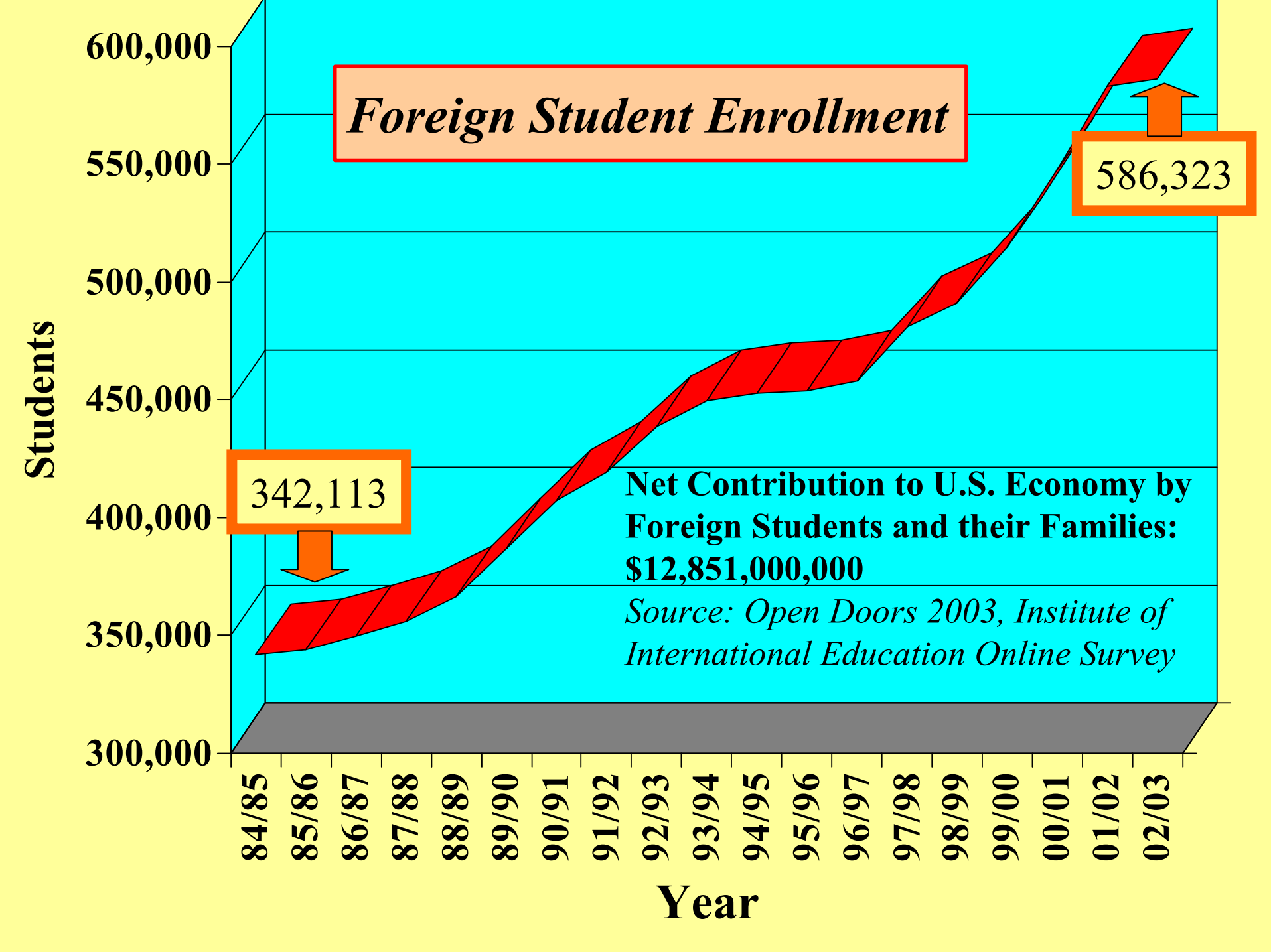
(c) DeLorme Mapping 1994

Overview of the Visa Regime

- ***of approximately 30 million foreign visitors who enter the US each year, roughly a half million come as students on F, M and J visas. And approximately 175,000 of these come to study science***
- ***jointly directed by State and Homeland Security (visa authority is now shared between the departments)***
- ***"Patriot Law" has already authorized the implementation of the Student and Exchange Visitor Information System (SEVIS) to monitor those who come to the US under the Student Exchange and Visitor Program (SEVP). The Patriot Act has also imposed a two-tier review system over consular officers***

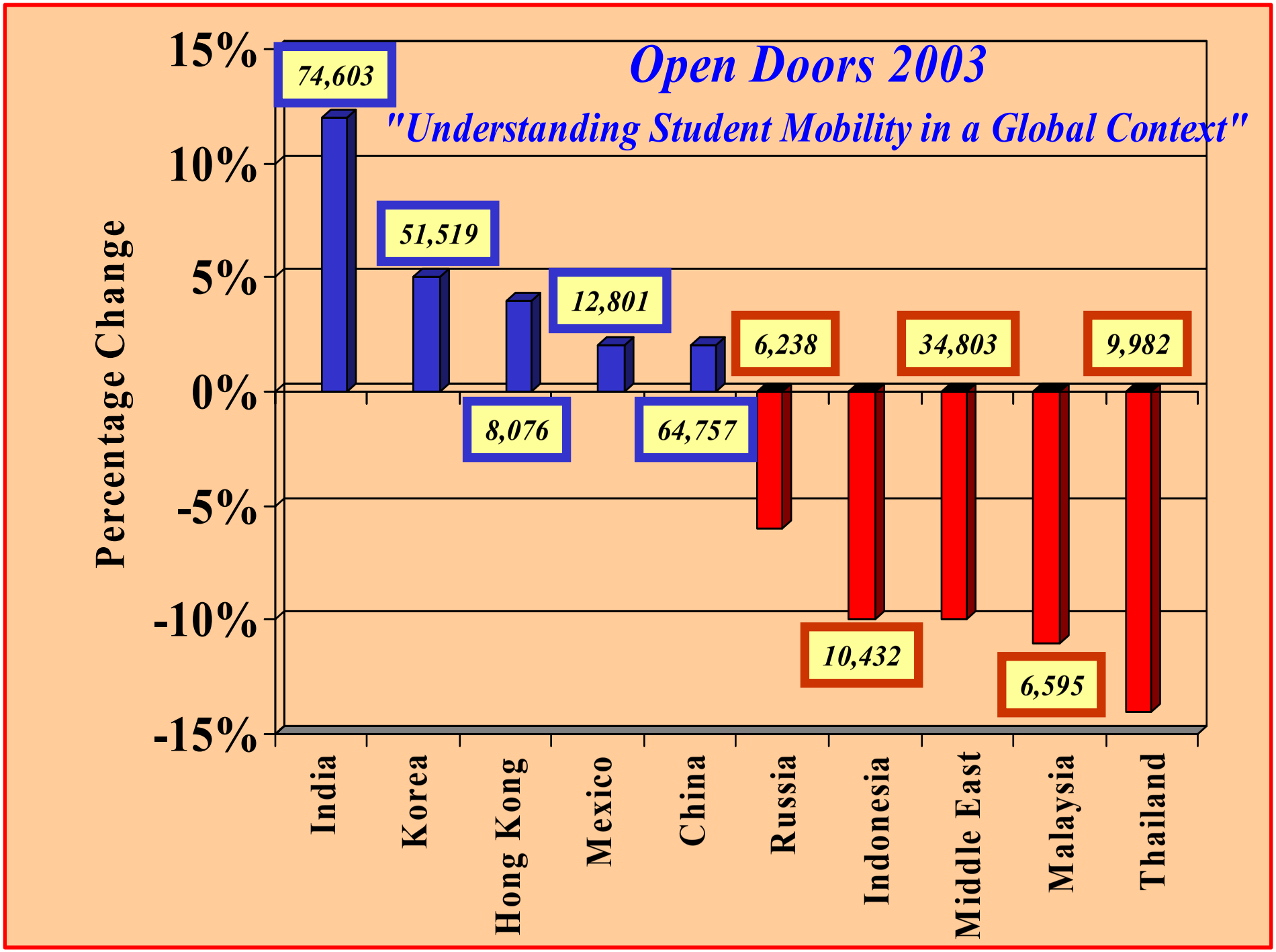
Non-Immigrant Visas before and after 9/11




Foreign Student Enrollment
586,323
342,113
Net Contribution to U.S. Economy by Foreign Students and their Families: $12,851,000,000
Source: Open Doors 2003, Institute of International Education Online Survey
Students
600,000
550,000
500,000
450,000
400,000
350,000
300,000
84/85
85/86
86/87
87/88
88/89
89/90
90/91
91/92
92/93
93/94
94/95
95/96
96/97
97/98
98/99
99/00
00/01
01/02
02/03
Year

What do the personal tragedies portend for the international and domestic enterprises?

- Students prevented from returning from foreign meetings or after attending to urgent family business (many denied or delayed at the outset).
- Colleagues unable to pursue major long-term research owing to visa restrictions.
- Colleagues subjected to summary imprisonment for minor violations of immigration laws.
- Colleagues denied or delayed visas to attend meetings (often after giving up their passports for unconscionably long periods).
- Colleagues at risk in authoritarian states denied sanctuary.


Open Doors 2003
"Understanding Student Mobility in a Global Context"
Percentage Change
15%
10%
5%
0%
-5%
-10%
-15%
74,603
51,519
8,076
12,801
64,757
6,238
10,432
34,803
6,595
9,982
India
Korea
Hong Kong
Mexico
China
Russia
Indonesia
Middle East
Malaysia
Thailand

AAU Summarizes 2003 Visa Survey, November 14, 2003:

- **49% reported research delays**
- **67% reported lengthening time to degree**
- **28% reported classes without instructors**
- **44% reported lost fellowships for foreign students**
- **13% reported students missing major conferences**
- **74% reported institutional financial loss**
- **44% reported foreign students choosing another country**

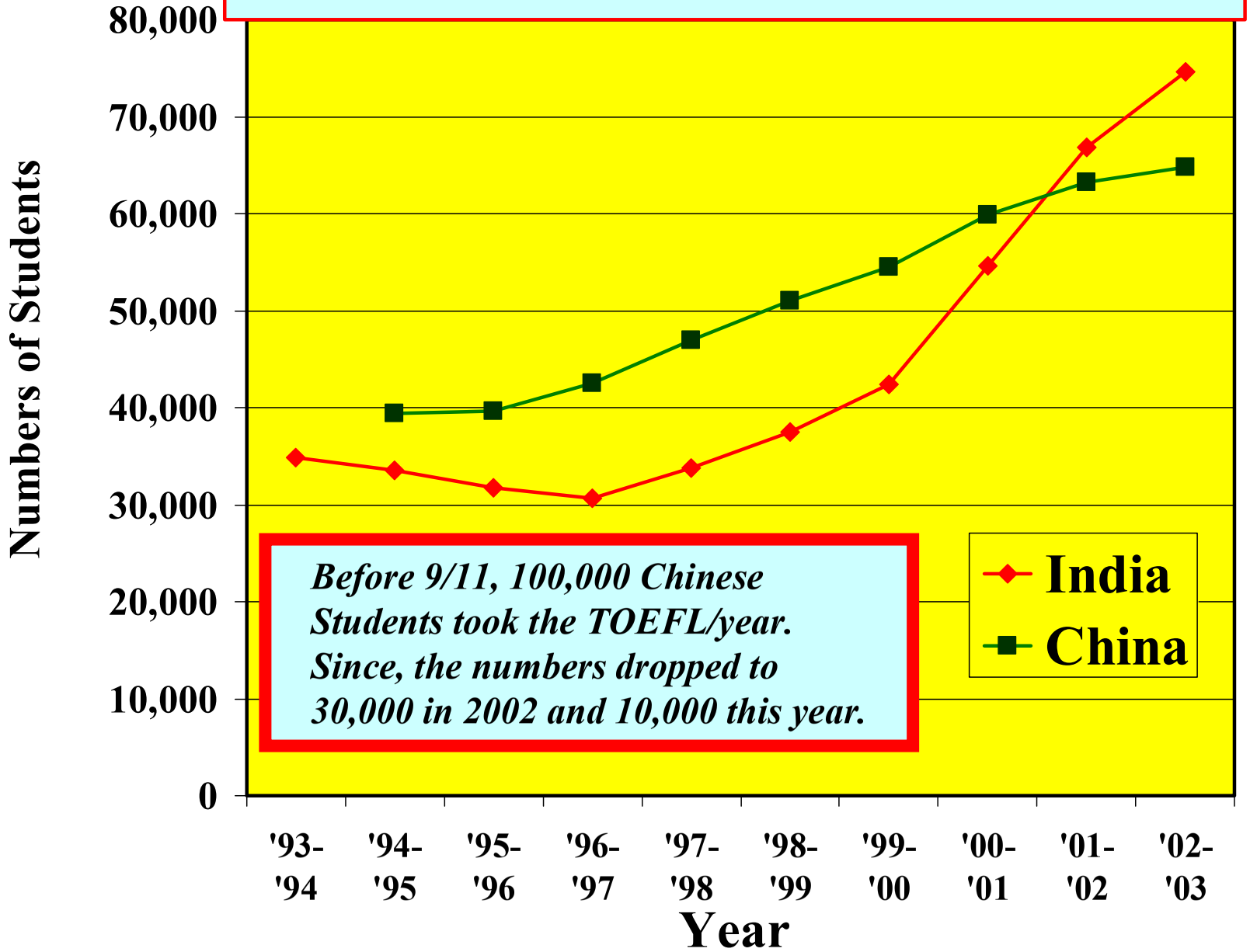
NAFSA/AAU/NASULGC Survey

- **64% report steady or declining enrollments**
- **36% indicate an increase (usually smaller than decline)**
- **Reasons for decline:**
  - **69% noted increase in visa denials**
  - **65% visa delays (interview delays)**
  - **59% decrease in applications**
  - **32% delays for security advisories**
  - **25% applicant went to another country**

Graduate school applications from international students declined 32% over the last year … according to a Council of Graduate Schools survey. … This survey generated responses from 113 graduate schools [which] enroll nearly one-half of all international graduate students in the U.S.

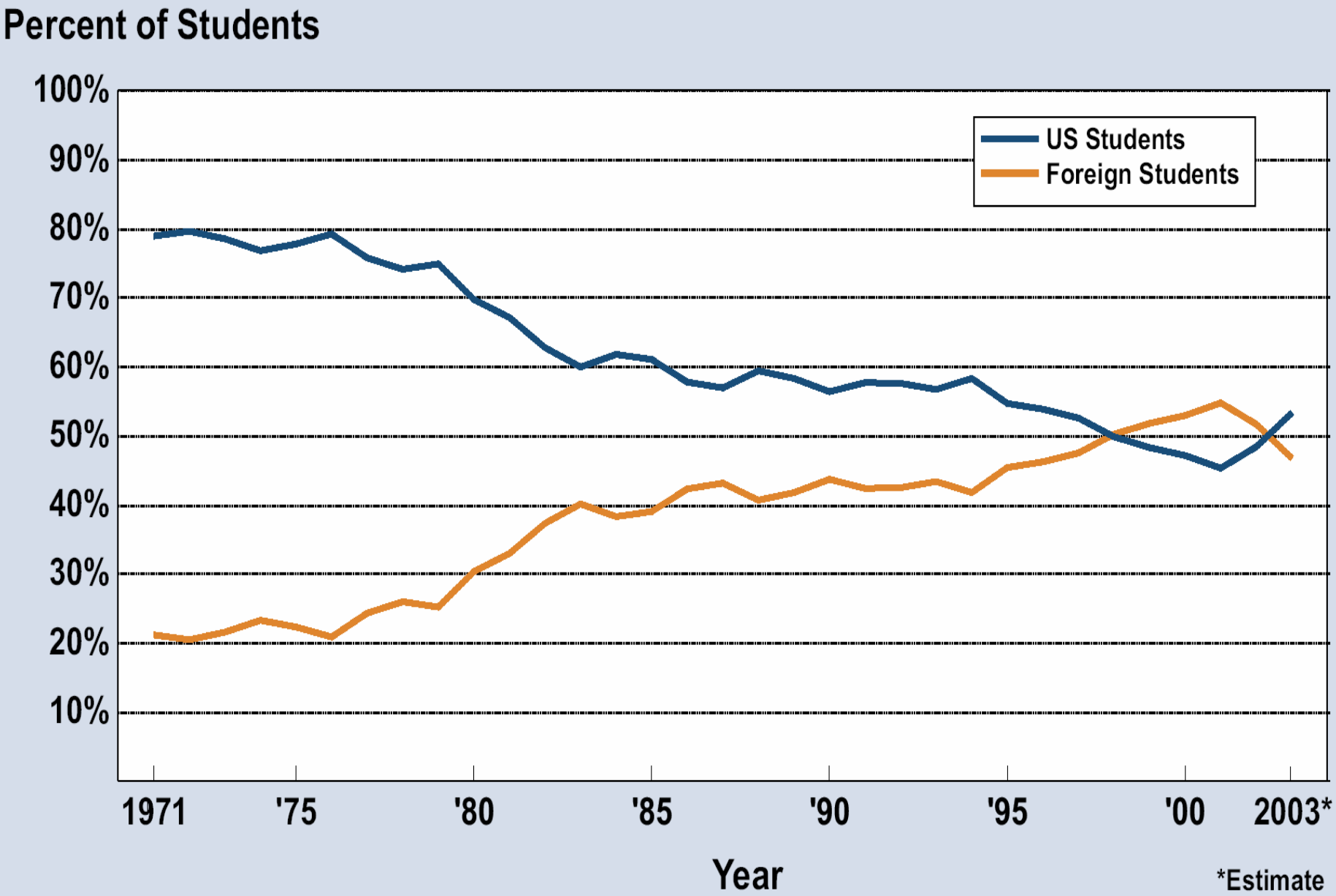
- ***Over 90% of U.S. graduate schools … responding to the survey reported an overall decrease in international graduate student applications.***
- ***Total international applications in the responding graduate schools for Fall 2004 declined 32% from Fall 2003.***
- ***76% reported declines from China and 58% reported declines from India, the two largest sending countries.***
- ***Forty-seven percent of responding institutions reported a decline from Korea, 33% a decline from Taiwan, 30% a decline from Western Europe, 31% a decline from the Middle East, and 36% from all other countries.***
- ***Thirty-two of the 50 research institutions with the largest international student … reported particularly severe declines, with all but one reporting decreases in international graduate student applications.***
- ***International applications declined across all major fields, but the most striking decreases came in engineering, physical sciences, and biological sciences.***
- ***Among the top 50 research institutions, an even greater percentage reported declines in all major fields, compared to the full survey. Over 90% of these graduate schools reported decreases in international applications for engineering programs, and 80% for the physical sciences.***

Foreign Students: China and India



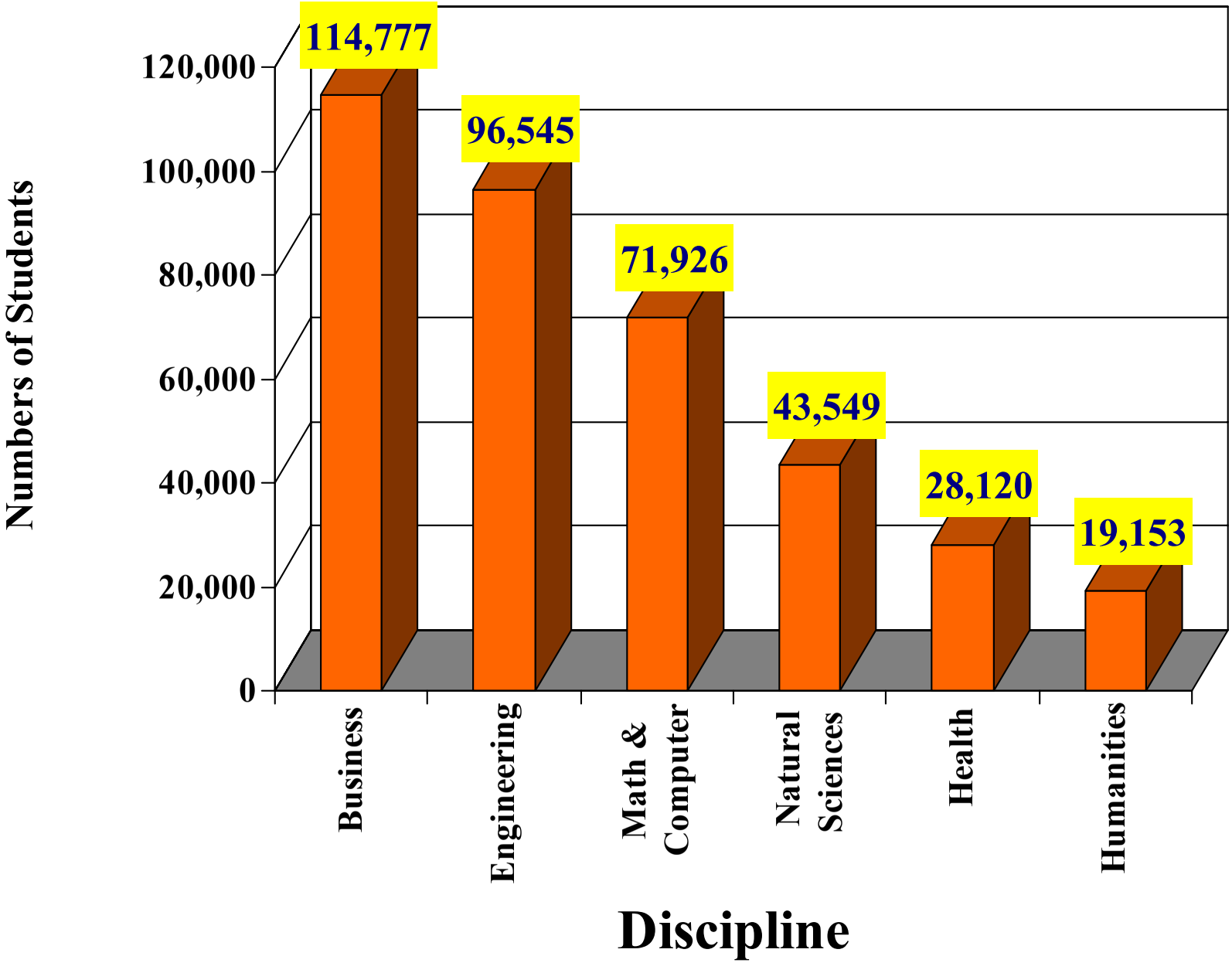
Before 9/11, 100,000 Chinese Students took the TOEFL/year. Since, the numbers dropped to 30,000 in 2002 and 10,000 this year.

Figure 1. Citizenship of First-Year Physics Graduate Students, 1971-2003.



AIP Statistical Research Center: Graduate Student Surveys

Area of Study of Foreign Students

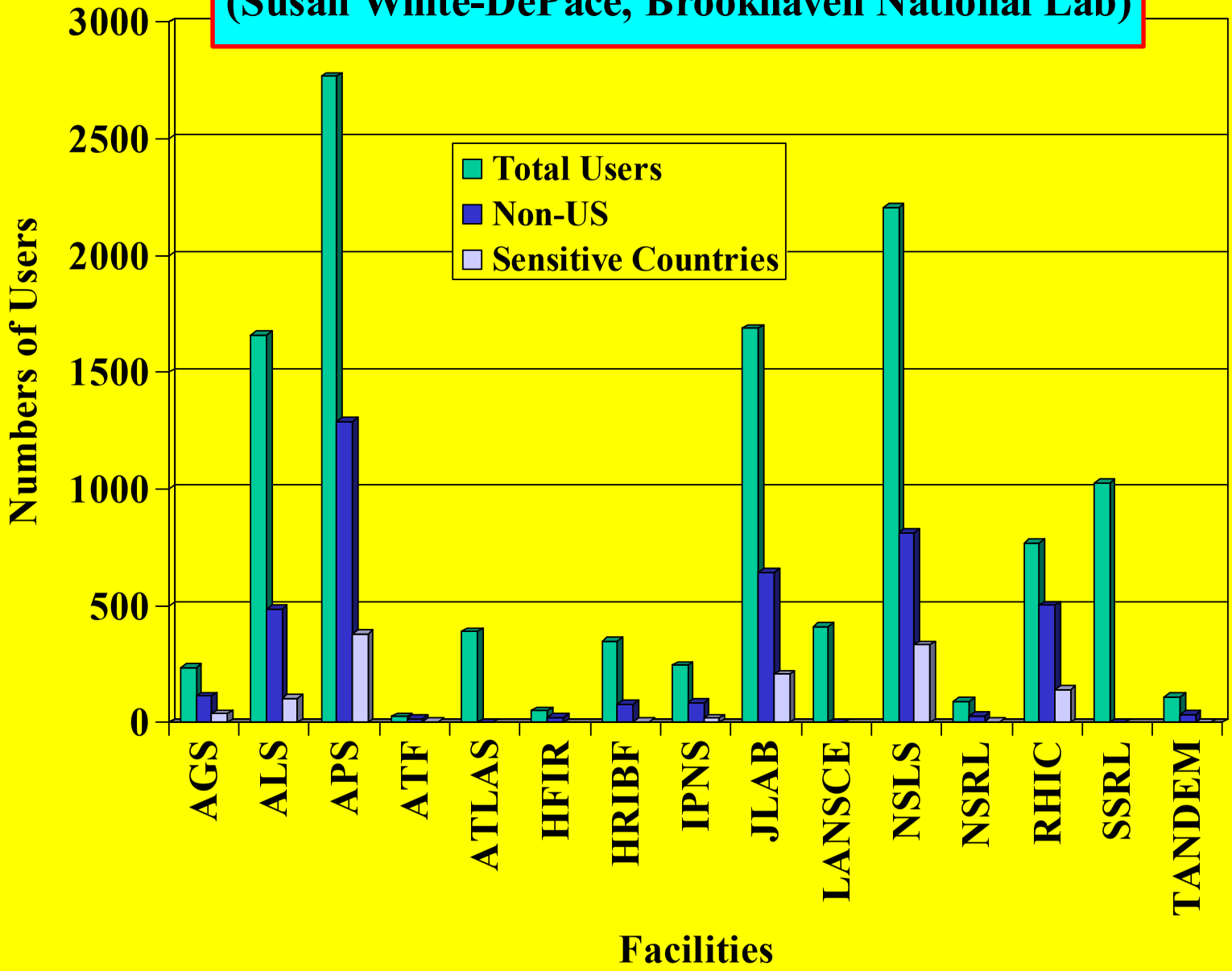


Visa Problems for Delegates to the International Symposium in Lepton Photon Interactions Fermi Lab

At LP-1999 held at Stanford, 12 of 16 invited Chinese citizens and 7 of 25 invited citizens of the former Soviet Union attended. At LP-2003 only one of about 20 invited Chinese and 5 of 20 invited Russians attended. Almost all of Russians who did attend traveled with multi-entry visa or were already in the US.

BNL User Facilities

(Susan White-DePace, Brookhaven National Lab)



Conclusions/Inferences for BNL

(Susan White-DePace, Brookhaven National Lab)

- Approximately 20% of users work at more than one facility
- The average percentage of non-US users is slightly less than 50%
- Approximately 13% of users come from sensitive countries
- Total number of users exceeds 10,000

The International Connection: A Sketch

The 3 weapons laboratories--Los Alamos, Lawrence Livermore and Sandia--received some 6,398 foreign visitors or assignees (stays from 30 days to 2 years) in 1998 including 1,824 visitors from sensitive countries.

In addition, employees traveled to foreign laboratories or scientific conferences encompassing 5,799 trips to include 1,814 trips to sensitive countries.

Result: enhanced access to the 70-75% unclassified work needed to progress in weapons-related research, open scientific research, and cooperative international programs.

The Introduction of More Restrictive Measures

- **New classifications for material already in the public domain.**
- **Special identity badges for foreign nationals.**
- **New restrictions on access to unclassified facilities.**
- **Attempts to place non-classified facilities under restrictive controls.**
- **Increased dependence on procedures of doubtful value--ie, polygraph testing.**
- **New and more draconian classification procedures that threaten to restrict the distribution of scientific information.**
- **Complex management schemes that further dissipate lines of responsibility and authority.**
- **Impose security regimens on non-weapons labs. The "tier system" is now dead.**

Laws	Executive Orders/ Advisories/Directives	Consequences
•1994 Foreign Relations Security Act		•Holds consular officials liable if terrorists slip in.
	•VISAS Mantis	•Technology theft/WMD Proliferation
•1996 INA		•Defines criminal penalties for consular misconduct
	•VISAS Condor -Country Groups	•National Security/Extends watch to certain countries
•2002 Enhanced Border Security and Visa Entry Reform Act		•Imposes border control (INS) on DHS
	•Terrorism List	•7 nations special scrutiny
	•Export Control Posts	•Prevent proliferation
	•Technology Alert List	•Military and Economic
•2002 Patriot Act		•SEVIS, Consular Authority split (State/DHS)
	•May 03 Memo Expanding personal interviews	•Everyone between 16 and 60 •previous clearance irrelevant

LISTS

Visas Mantis and Visas Condor
Directives from the Secretary of State

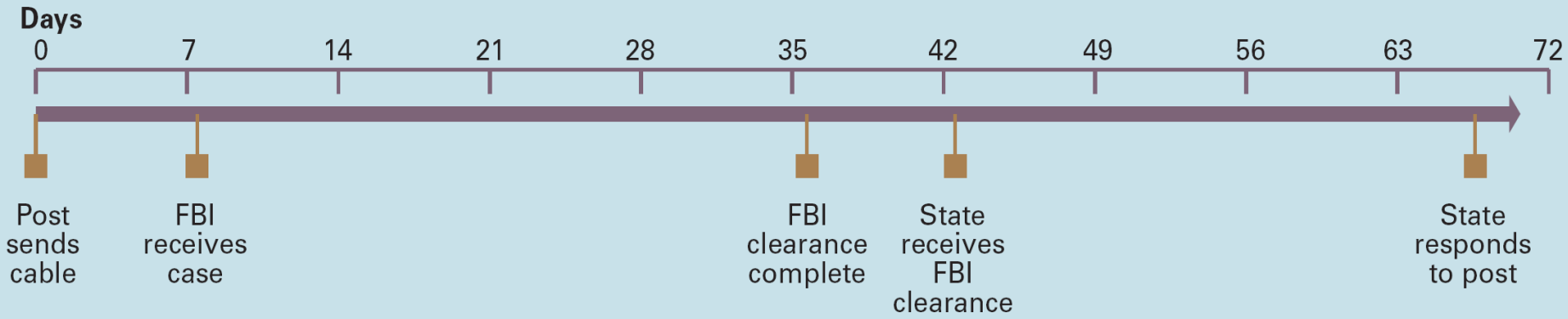
- ***State Sponsors of Terrorism list (Cuba, Libya, Iran, Iraq, North Korea, Sudan and Syria)***
- ***Non-Proliferation Export Control Posts (China, India, Israel, Pakistan, and Russia***
- ***Visas Mantis (Technology, WMD)***
- ***Visas Condor List (classified countries list)***
- ***Technology Alert list contains 16 categories (munitions, warheads and projectiles, nuclear, missiles, aircraft and missile propulsion, navigation and guidance, chemical engineering and biotechnology, remote imaging and reconnaissance, advanced computers, materials, cryptography, lasers and directed energy systems, acoustic and sensors technologies, marine technology, robotics, ceramics, high performance metals and alloys)***

GAO Analysis of Visa Delays for Security Reviews

Electronic Industries Alliance:

"Unfortunately, the U.S.'s ability to adapt, compete and innovate alongside emerging workforces in countries such as China and India is threatened by a systematically weak education system, a dearth of R&D funding, visa policy that discourages the brightest foreign minds and a business climate heavy with regulatory and tax burdens. If the U.S. wants to remain the world's innovation leader, we must adopt positive policy solutions, rather than isolationist or protectionist measures, to address these problems."

Average Time Frames for Visas Mantis Cases, April to June 2003



Note: Calculation of mean processing times and associated standards of error for sample of Visas Mantis cases.

Time Interval	Average processing time in days	Standard error in days	Number of completed applications	Range of processing time in days
Post sends cable and FBI receives case	7.9	2.3	71	1 to 82
FBI clearance complete	28.9	6.8	70	0 to 321
State receives FBI clearance	6.1	0.8	70	1 to 45
State responds to post	23.6	3.2	67	0 to 141

Source: GAO analysis of State Department documents and visa operations

Special Scrutiny

- The first group of individuals subject to Special Registration included:
  - **Iran, Iraq, Libya, Sudan**, or **Syria**
- The second group of individuals subject to Special Registration included:
  - **Afghanistan, Algeria, Bahrain, Eritrea, Lebanon, Morocco, North Korea, Oman, Qatar, Somalia, Tunisia, United Arab Emirates**, or **Yemen**
- The third group of individuals subject to Special Registration includes:
  - **Pakistan** or **Saudi Arabia**
- The fourth group of individuals subject to Special Registration includes:
  - **Bangladesh, Egypt, Indonesia, Jordan,** or **Kuwait**
- ***These in addition to the Technology Alert Post countries***

May 3, 2003, State Department Memo to Embassies: BORDER SECURITY - WAIVER OF PERSONAL APPEARANCE FOR NONIMMIGRANT VISA APPLICANTS - REVISION TO THE REGULATIONS

- ***the visa interview is a crucial tool—in many cases the key tool—in determining visa eligibility. … we have revised substantially the Code of Federal Regulations and … guidelines on when personal appearance and interview can be waived for nonimmigrant visa applicants. This is the next step in preparing for the eventual fingerprinting …***
- ***the requirement for personal appearance for nonimmigrant visa applicants can in general be waived by a consular officer only for a person who the consular officer concludes presents no national security concerns requiring an interview and who: (5) Is an applicant who within twelve months of the expiration of the applicant's previously issued visa is seeking re-issuance of a nonimmigrant visa in the same classification at the consular post of the alien's usual residence, and for whom the consular officer has no indication of visa ineligibility or noncompliance with U.S. immigration laws and regulations. … Let me emphasize strongly, however, that consular officers are not required to waive interview in such cases.***

US-VISIT (United States Visitor and Immigrant Status Indicator Technology) **Program**

automated entry/exit system to,

- Collect, maintain, and share information, including biometric identifiers (fingerprints, photos), through a dynamic system, on foreign nationals …
- Enhance traffic flow for individuals entering or exiting the U.S. for legitimate purpose …

US-VISIT Program

- The US-VISIT system … information will be stored in databases maintained by DHS and the Department of State as part of an individual's travel record.
- The information in the US-VISIT system will be available to inspectors at ports of entry, special agents in the Bureau of Immigration and Customs Enforcement (ICE), adjudications staff at immigration services offices, U.S. consular offices, and other law enforcement agencies.

Reaction of colleagues:

“This is an Orwellian nightmare. If a visit to Fermi Lab implies fingerprinting, I'll stay at home.”

→ *German colleague currently at FNAL*

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Address http://www.aps.org/intaff/visa/

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Visa Information

AMERICAN PHYSICAL SOCIETY - INT'L A

Useful Links:

- National Academy of Sciences (NAS)
  International Visitors Office of the National Academies
  http://www7.nationalacademies.org/visas/)
- American Association for the Advancement of Science (AAAS)
  The Right to Travel: US and Cuba Travel Policies
  http://shr.aaas.org/rtt/policy.htm

visa information
reciprocal societies
matching membership
program areas
announcements
cifs
cisa
forum on intl. physics
outreach
reports
international affairs home
aps home

Visa Information

Important Visa Information for the APS March Meeting 2004

APS Documents

- **Advice for Foreign Nationals Traveling to the United States**
  html version — pdf version — word doc
- **Advice for Organizers of International Physics Conferences in the United States**
  html version — pdf version — word doc
- **List of related Visa Categories**

Internet

Needed Changes

- ***Time limits for security reviews for visiting students and scholars (those subject to Visa Mantis and Visa Condor scrutiny).***
- ***Modify application of 214(b) for J-1, F-1 and B visa applications by scientific students and visitors.***
- ***Classify as "returning scholars" all employees, students and long-time visitors supported by government funds (DoE, NSF, NASA, etc).***
- ***Extend parole by Bureau of Citizenship and Immigration Services of the Department of Homeland Security to students and scholars.***
- ***Consular officials should not be held liable for such post-hoc charges as "criminal negligence."***
- ***Widen the visa waiver program to provide for extended visits for J-1 and H-1B scholars and their families.***

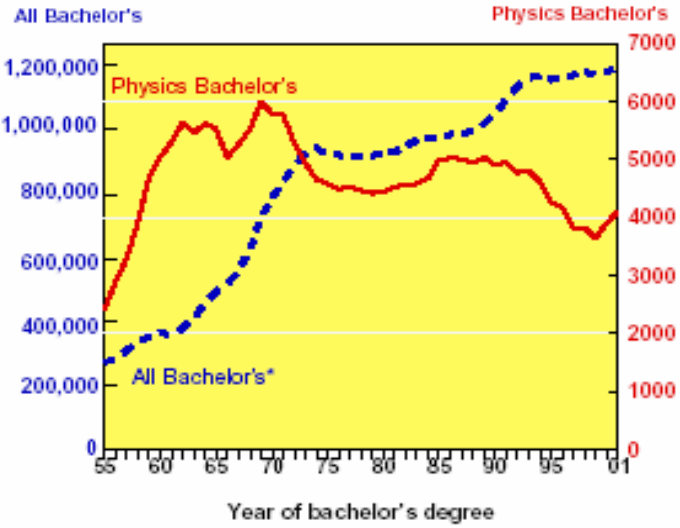
Statement and Recommendations on Visa Problems: Harming America's Scientific, Economic, and Security Interests

- ***Problem***: Inefficient visa renewal process that causes lengthy delays. ***Recommendation***: Establish a timely process by which exchange visitors holding F and J visas can revalidate their visas, or at least begin the visa renewal process, before they leave the United States to attend academic and scientific conferences, visit family, or attend to personal business. A visa renewal process that allows individuals to at least initiate the process before leaving the country would greatly diminish, and in many cases eliminate, lengthy visa delays, and it would allow them to continue their studies and work uninterrupted.
- ***Problem:*** Lack of transparency and priority processing in the visa system. ***Recommendation:*** Create a mechanism by which visa applicants and their sponsors may inquire about the status of pending visa applications, and establish a process by which applications pending for more than 30 days are given priority processing. Implementing these measures would greatly add to the transparency of the visa process and would help to ensure that applications do not get buried at the bottom of the pile or lost.
- ***Problem***: Inconsistent treatment of visa applications. ***Recommendation***: Provide updated training of consular staff, establish clear protocols for initiating a Visas Mantis review, and ensure that screening tools are being used in the most appropriate manner. We recognize that the government is pursuing efforts to enhance training, and we encourage this. Consular staff need the best available tools and training to perform their vital responsibilities. Additional training and guidance for consular staff could greatly enhance security while simultaneously reducing the number of applications submitted for Visas Mantis reviews, thereby alleviating potential delays.
- ***Problem***: Repetitive processing of visa applications for those with a proven track record. ***Recommendation***: Revise visa reciprocity agreements between the United States and key sending countries, such as China and Russia, to extend the duration of visas each country grants citizens of the other, thereby reducing the number of times that visiting international students, scholars, and scientists must renew their visas. We recognize that renegotiating bilateral agreements is a time-consuming process, and we believe it should be pursued as a long-term measure that allows the government to focus its visa screening resources by reducing the number of visa renewals that must be processed.
- ***Problem***: Potential new impediment to international students, scholars, and scientists entering the U.S. created by proposed SEVIS fee collection mechanism. ***Recommendation***: Implement a fee collection system for the Student and Exchange Visitor Information System (SEVIS) that allows for a variety of simple fee payment methods that are quick, safe, and secure, including payment after the individual arrives in the United States.

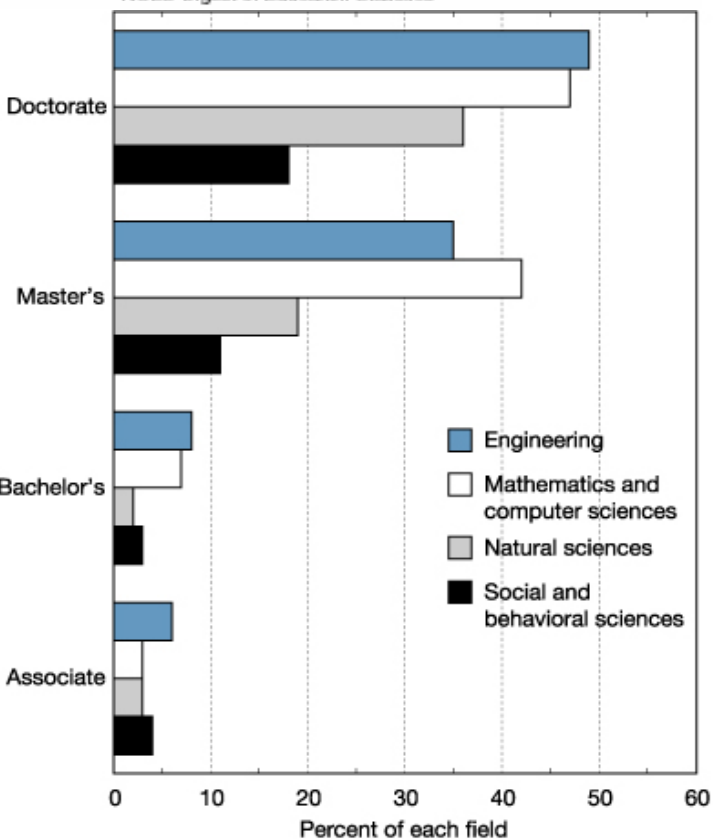
Why U.S. Leadership Will Be Challenged

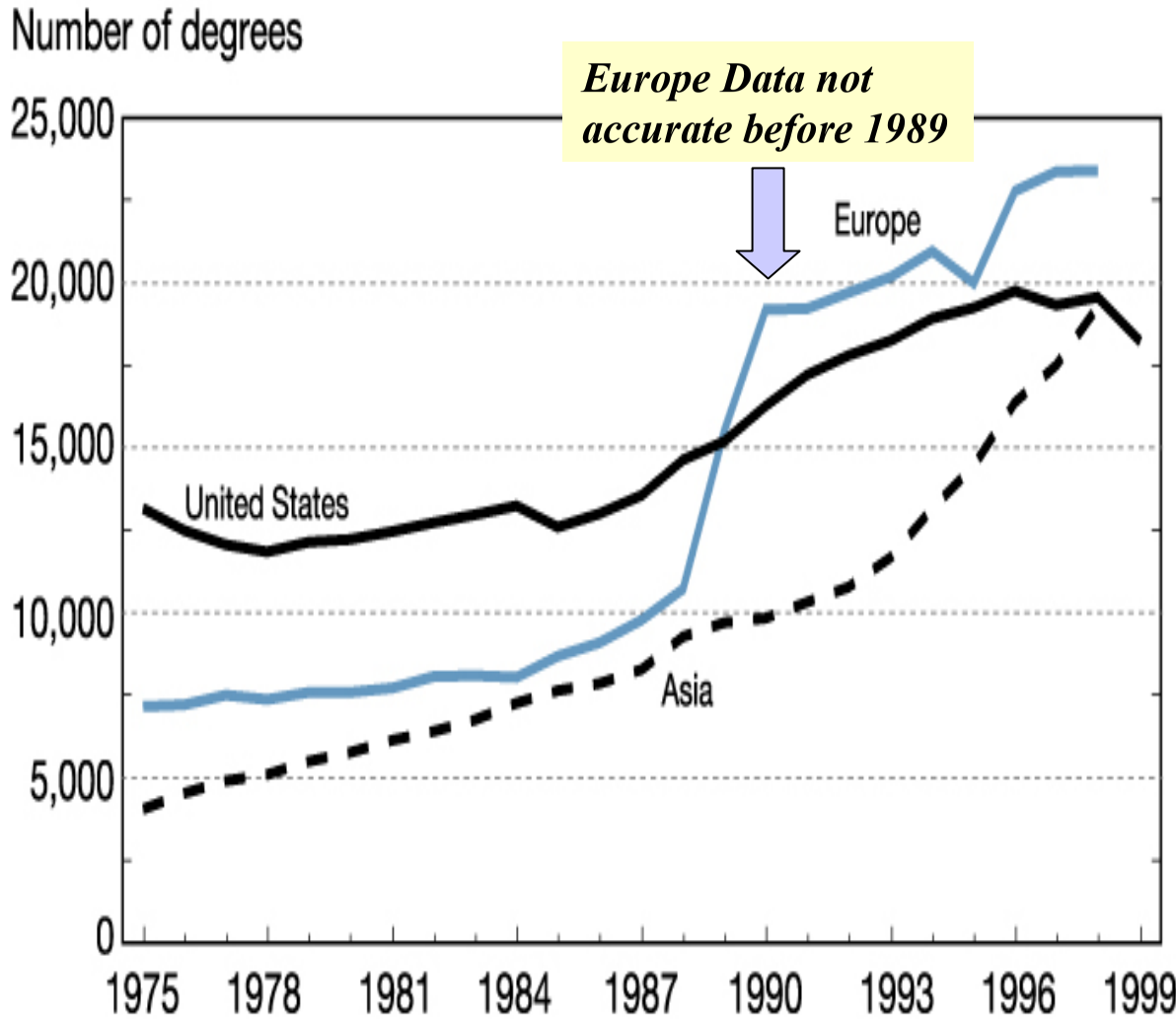
- ***More nations are acquiring high-end innovation capabilities with concerted investment in research and development (R&D) and technical talent.*** ***Other nations are acquiring fast-follower capabilities to rapidly commercialize innovation originating elsewhere.***
- ***The supply of scientists, engineers and technicians is growing substantially faster abroad than in the United States.***
- ***The U.S. first-mover advantage in information technology (IT) is diminishing with aggressive IT investment and deployment overseas.***

Natural sciences and engineering doctoral degrees



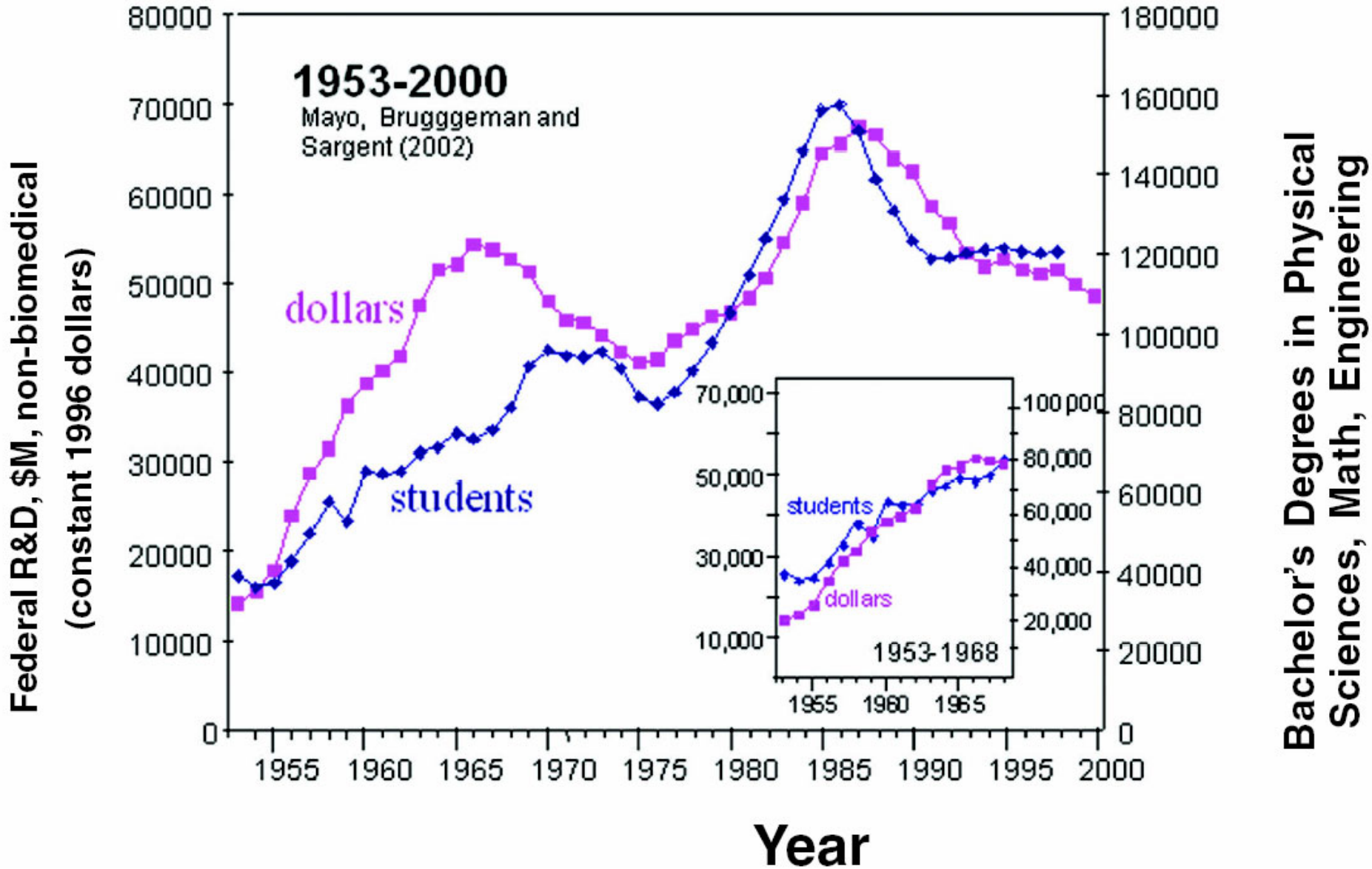
AIP Statistical Research Center, Roster of Physics Departments, and
* NCES Digest of Education Statistics



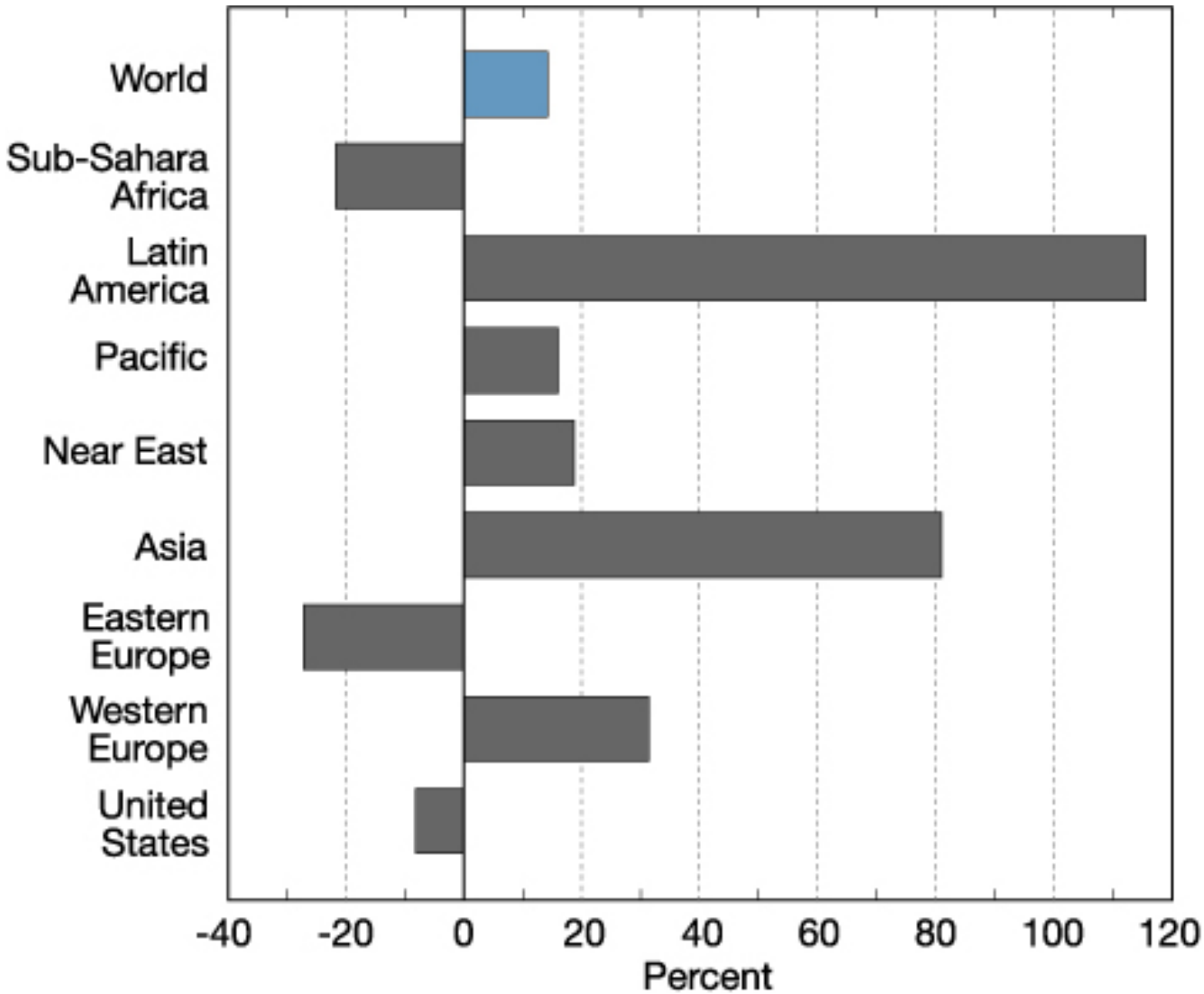


NOTE: Europe includes France, Germany, and the United Kingdom. Asia includes China, India, Japan, South Korea, and Taiwan.

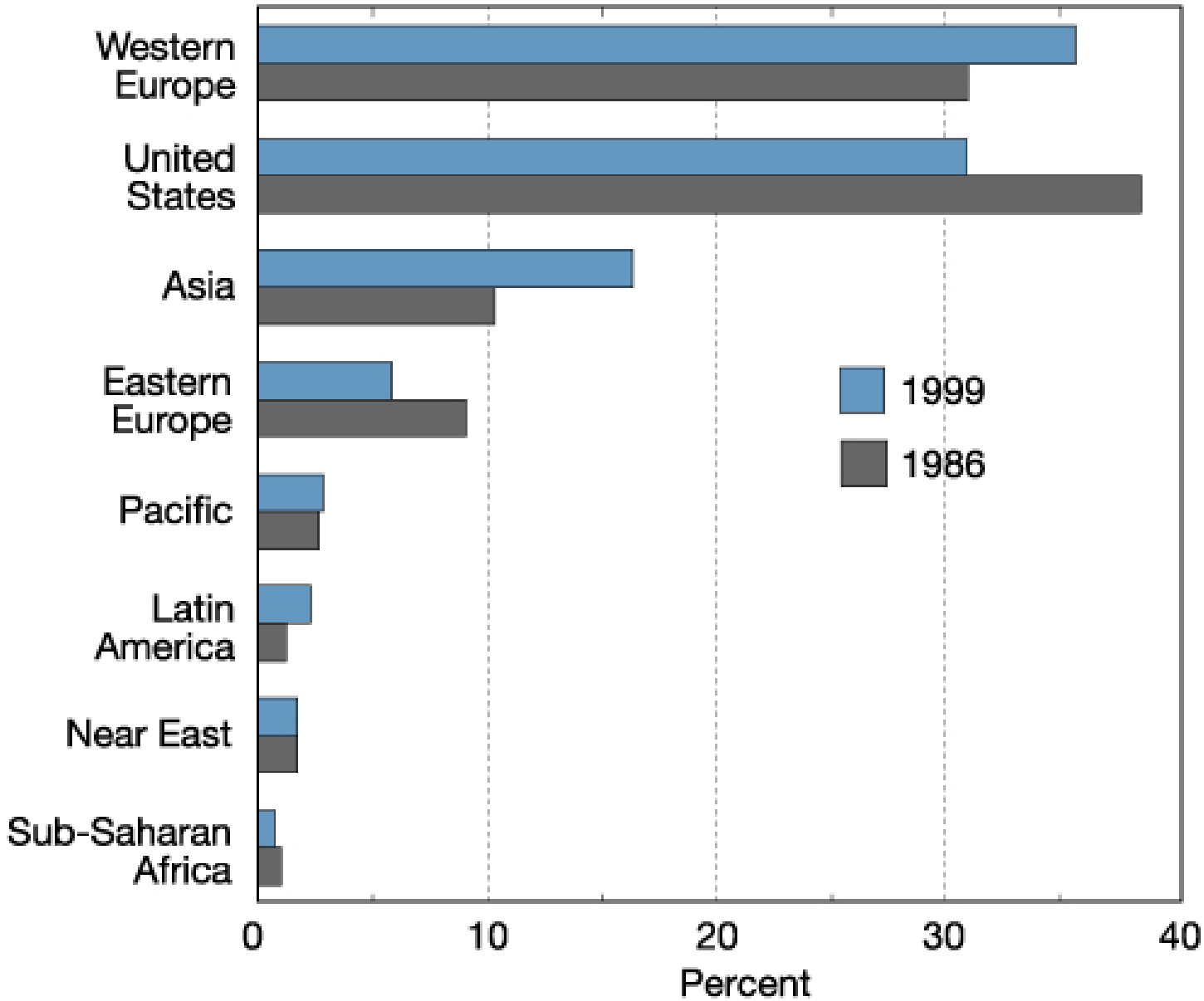
Correlation between Federal R&D expenditures and bachelors' student production in the physical sciences, math, and engineering 1953 to 2000



Growth trends in scientific and technical publications by region: 1986–99



Scientific publications: regional share of world output



The Dangers to the National Interest

- **Stifle vital international exchange**
  - ***non-defense research***
  - ***defense-related research***
  - ***visitors programs***
- **Impair University and lab productivity and morale**
  - ***create suspicion and resentment***
  - ***institutionalize racism***
- **Impose cosmetic solutions while ignoring the real threat**
  - ***focus on ethnicity rather than deed***
  - ***failure to implement meaningful reform***
- **Denigrate standards of justice and equal protection**
- **Sacrifice the future**
  - ***recruitment***
  - ***loss of experienced researchers***
  - ***declines in appointments and visitors***