Recent (more or less) Government Sonic Boom Programs

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Government Programs

- X-1 started it all in 1947
- USAF, NASA studies in 1950s
- NSBEO in 1960s supporting the SST
- NASA programs in 1970s, 1980s
- USAF NSBIT in 1980s, 1990s
- NASA HSCT 1988-1995
- USAF PCBoom4

Summary of U.S. Sonic Boom Flight Programs

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Classic Sonic Boom Studies (1960s)

- National Sonic Boom Evaluation Office
- USAF, NASA, FAA projects
- Oklahoma City, St. Louis experiments
- 100,000 plus sonic boom recordings
- Physiological studies
- Psychoacoustic studies
- Structural studies
- Animal effects

The Gap: 1970s to mid-1980s

- Ongoing NASA supersonic studies
 - Boom minimization
 - Evaluation of technology
- Space shuttle launch and entry sonic boom
- NEPA-driven studies for military supersonic airspace

NASA HSR/HSCT

- Late 1980s: technology ripening, SST appeared feasible
- Technology/design effort for 300 passenger SST
- Supporting research in sonic boom effects, particularly human acceptability of booms
- Substantial research in sonic boom propagation
- Ultimately (mid-90s) concluded an 300 passenger SST was not yet attainable boundaries

Military NEPA Studies: NSBIT

- Noise and Sonic Boom Impact Technology
 - Began in 1984, to answer noise unknowns that arose in environmental assessments of airspaces
 - Continued through mid-1990s
- Studies of boom effects on people, domestic animals, wildlife, structures
- Improved sonic boom prediction models

Recent/Ongoing Studies

- QSP and NASA studies (but you knew that)
- "Commercial Supersonic Technology: The Way Ahead" – National Research Council, 2003
 - Large (300 passenger) SST far in future
 - Technology for SSBJ within reach
- Continued DoD effects studies, as needed
- Updates of sonic boom models, e.g. USAF sponsorship of Windows GUI "PCBoom4"