



Space Technology Carrier Study

Dick Turner

California Institute of Technology, JPL

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STC Study Rationale

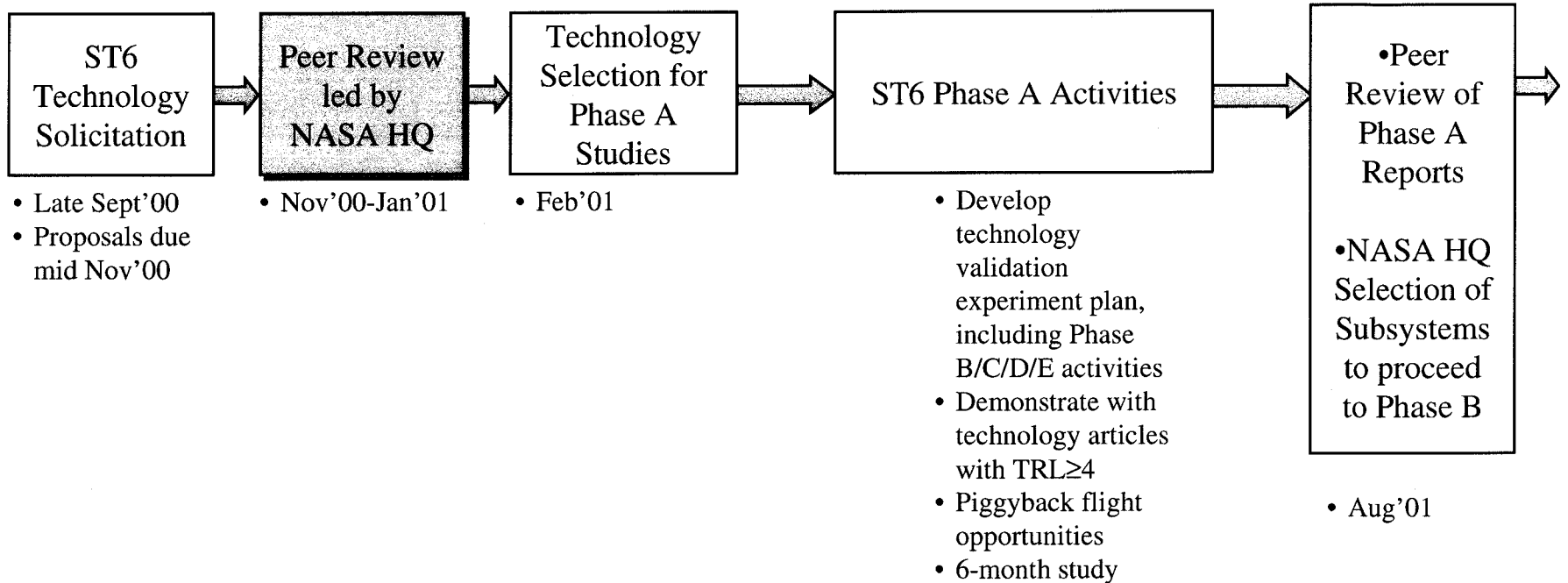
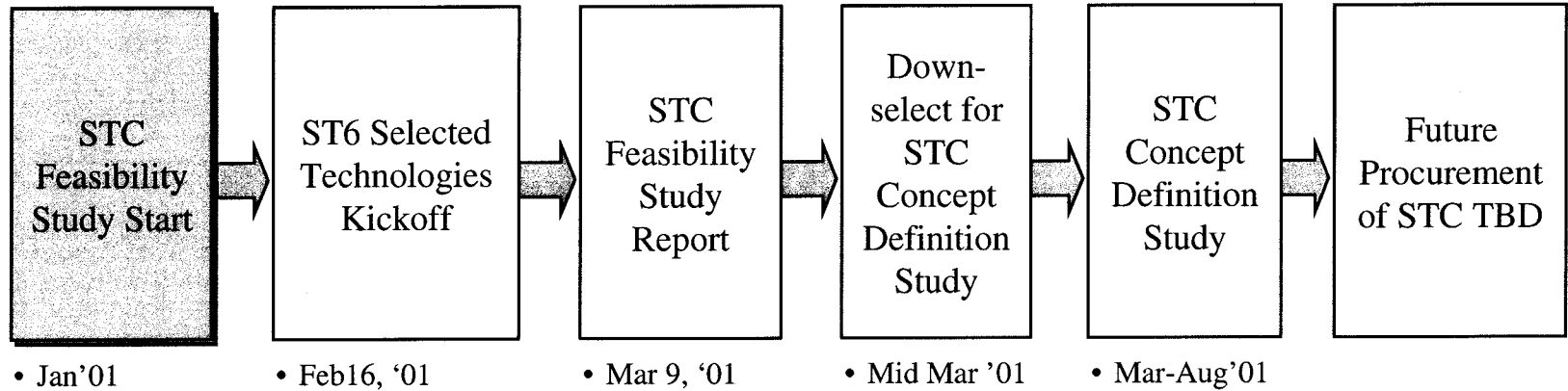
- Goal: Evaluate feasible, low cost options for implementing Subsystem-level projects
- Examine a range of accommodation approaches studied through Concept Definition Phase (Phase A)
- Allow potential industry providers to suggest innovative, low cost solutions for a wide range of potential technology flight validation projects
- Establish a potential supplier base for future NMP open calls for technologies without a defined implementation or “ride”



Space Technology Carrier Feasibility Study Kickoff



STC Study Process





Feasibility Study Report Content

- Viewgraph presentation ~ \leq 30 pages
- 5 Topical Sections:
 - A. Summary of options studied and rationale for feasibility
 - B. Descriptive detail for each concept
 - Technical approach description and heritage
 - Technology payload accommodation capability
 - Applicability to ST6 Candidate technology projects
 - Cost and schedule issues
 - C. Applicable access to space options
 - D. Management/teaming requirements
 - E. Proposed work for Concept Definition Study



Space Technology Carrier Feasibility Study Kickoff
Downselect Process/Criteria



- Downselect for up to 3 Concept Definition Studies based on Feasibility Study reports

- The degree to which the concepts of the Feasibility Study Report fit NMP's flight experiment budget, schedule, access to space, and technical performance needs for ST6 and/or future subsystem-level validation experiments, The following factors for consideration are of equal importance:
 - Factor A Unique capabilities to accommodate a range of technology validation experiments.

 - Factor B Degree of innovation of the technical design of the STC.

 - Factor C Feasibility of the design and implementation of the STC.



Concept Definition Phase Study

- STC study in parallel with ST6 Concept Definition (Phase A) Study
 - Detailed technology mission definitions provide examples for STC concepts
 - Additional prospective technology mission requirements will be available as developed
- Concept Definition will be requested for 3 examples
 - Two ST6-related technologies will be addressed for applicable STC concept/s
 - One technology opportunity to be proposed by the study
- Detailed mission, hardware design information for each example
 - Mission definition, including orbit, access to space, ground support, etc.
 - STC flight system hardware description and heritage
 - Management and organizational structure assumed
 - Proposed schedule and lead times for deliverables
 - ROM cost estimate for STC and estimate for other parts of the project (other than technology payload)



Future STC Mission Options



- ST6 is first opportunity for a possible STC flight opportunity
- Current candidates are a good example of possible future STx projects
 - NMP will be identifying other future candidates in the period of the Concept Definition Study
- Should NMP select an ST6 or future STx project which could utilize an STC concept, NMP would issue an open solicitation for an STC for that flight validation opportunity