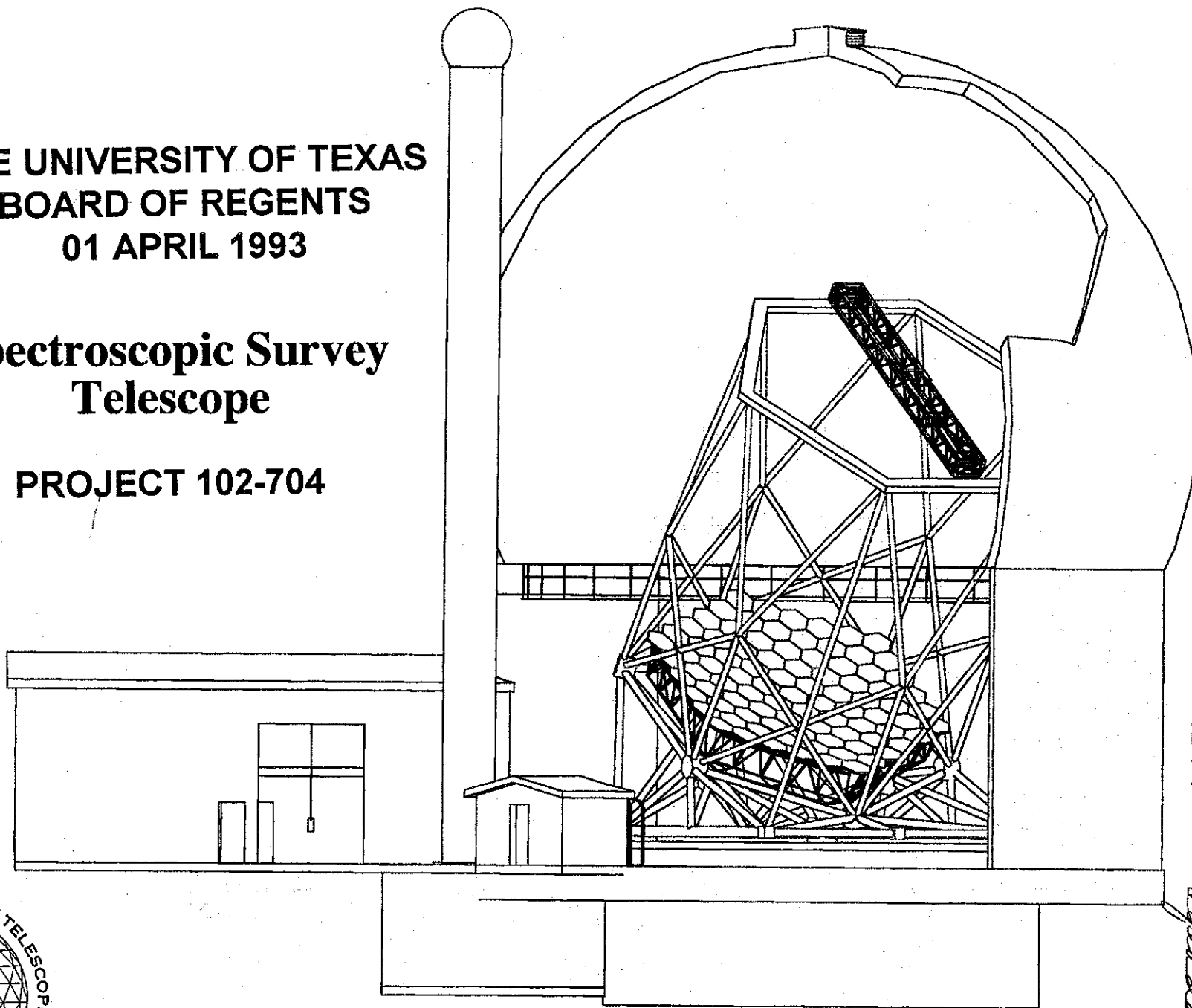


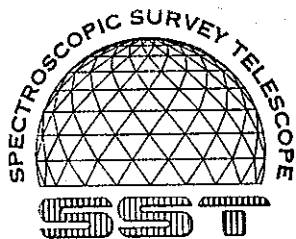
THE UNIVERSITY OF TEXAS
BOARD OF REGENTS
01 APRIL 1993

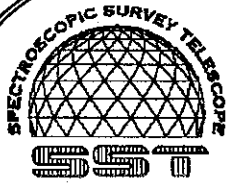
Spectroscopic Survey Telescope

PROJECT 102-704



*Handbook at 4-1-93
Board of Regents'
meeting location /
on FPOe agenda.*





THE SPECTROSCOPIC SURVEY TELESCOPE...PROJECT 102-704

WHY TEXAS NEEDS THE SST

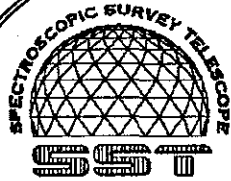
- DEDICATION OF 82 INCH TELESCOPE.....1939
 - THEN 2nd LARGEST IN THE WORLD
- DEDICATION OF 107 INCH TELESCOPE.....1967
 - THEN 3rd LARGEST IN THE WORLD

NOW

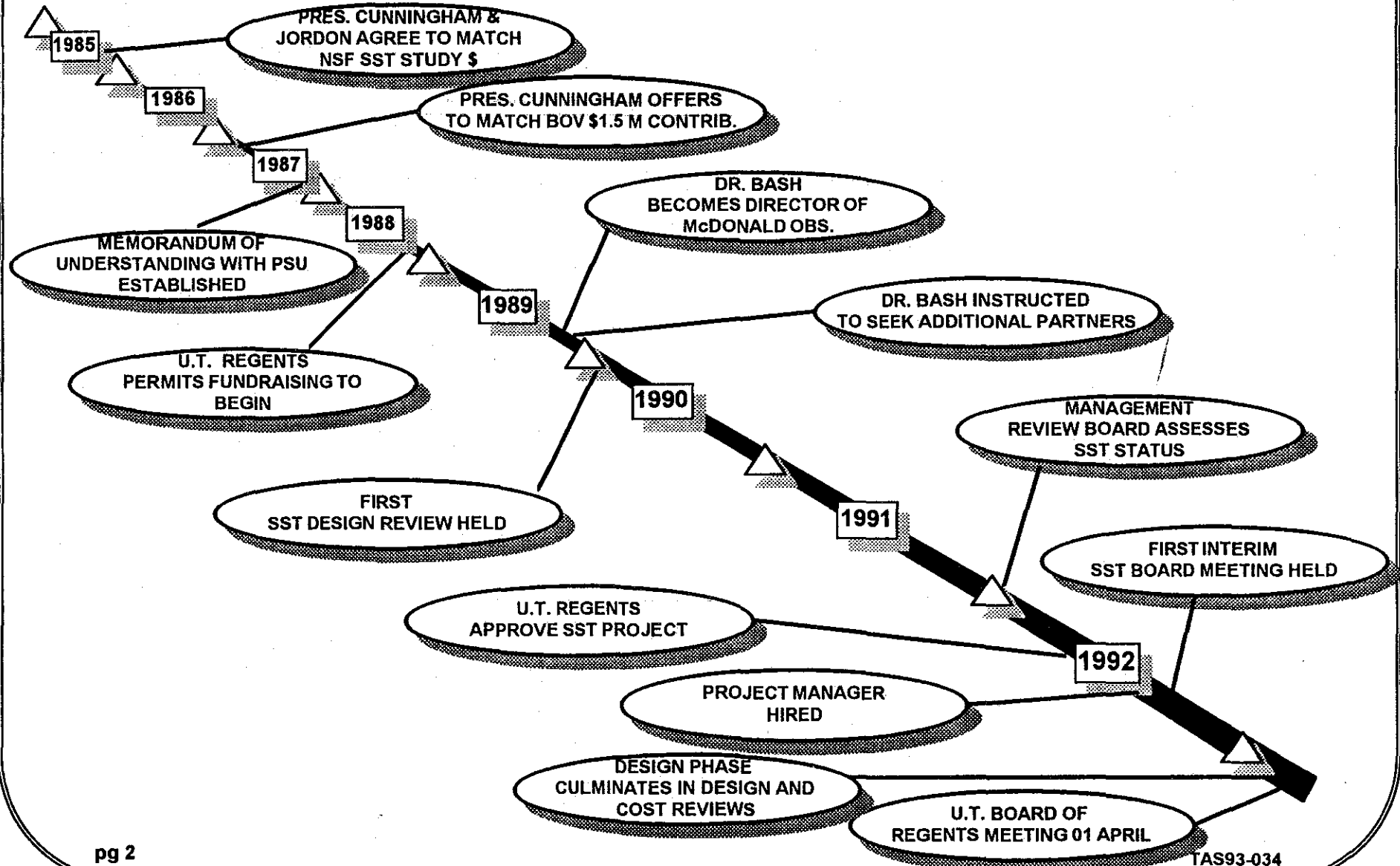
THE 82 INCH TELESCOPE IS 39th LARGEST
THE 107 INCH TELESCOPE IS 20th LARGEST

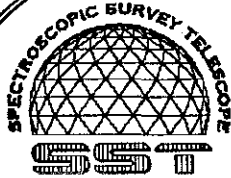
- THE ASTRONOMY DEPARTMENT AT U.T. IS:
 - #1 IN THE NUMBER OF GRADUATE STUDENTS ENROLLED (43)
 - #2 IN THE U.S. IN EXTERNAL RESEARCH GRANTS (74)
 - #2 IN THE U.S. IN PRIZES WON PER FACULTY MEMBER (5/22)
 - #4 IN THE U.S. IN NUMBER OF FACULTY (22)

UT NEEDS THE SST TO MAINTAIN IT'S POSITION
AT THE FOREFRONT OF ASTRONOMY



THE SPECTROSCOPIC SURVEY TELESCOPE...PROJECT 102-704





THE SPECTROSCOPIC SURVEY TELESCOPE...PROJECT 102-704

BOARD OF REGENTS MANDATED DESIGN PHASE

**ACTION BY REGENTS
11 JUNE 1992**

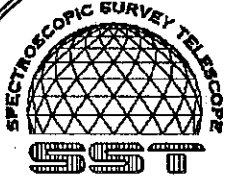


**RESULTS OF DESIGN
PHASE**

**AUTHORIZED PROJECT
@ \$ 12 MILLION
AUTHORIZED HIRING OF
PROJECT MANAGER
APPROPRIATED \$1.1 FOR
TECHNICAL DESIGN**

**OBJECTIVES OF THE TECHNICAL
DESIGN PHASE HAVE BEEN MET**

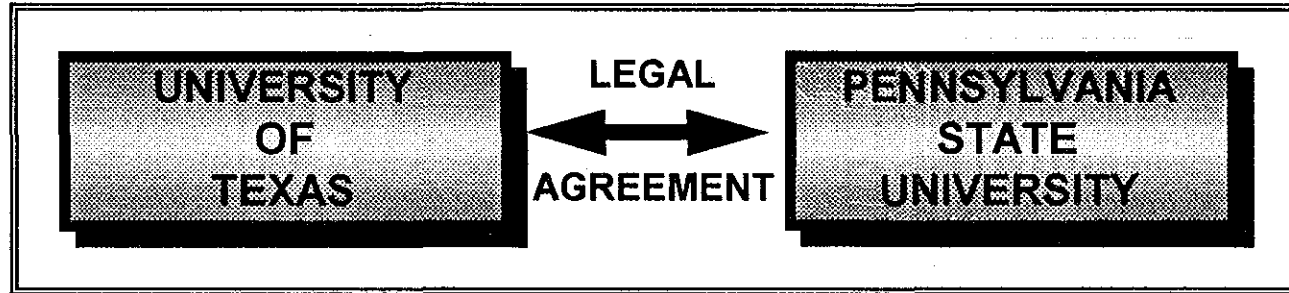
- SIMPLER, MORE COST EFFECTIVE DESIGN
- SUPPORT FROM QUALIFIED CONSULTANTS
- FIRM CAP ON PRICE AT \$12,800,000
- INTEGRATION WITH OFPC AND OTHER UT DEPTS
- LETTERS OF INTENT COMMIT PARTNERS
- COMPREHENSIVE DESIGN AND COST REVIEW HELD
- DESIGN EFFORT COMPLETED ON TIME...UNDER BUDGET



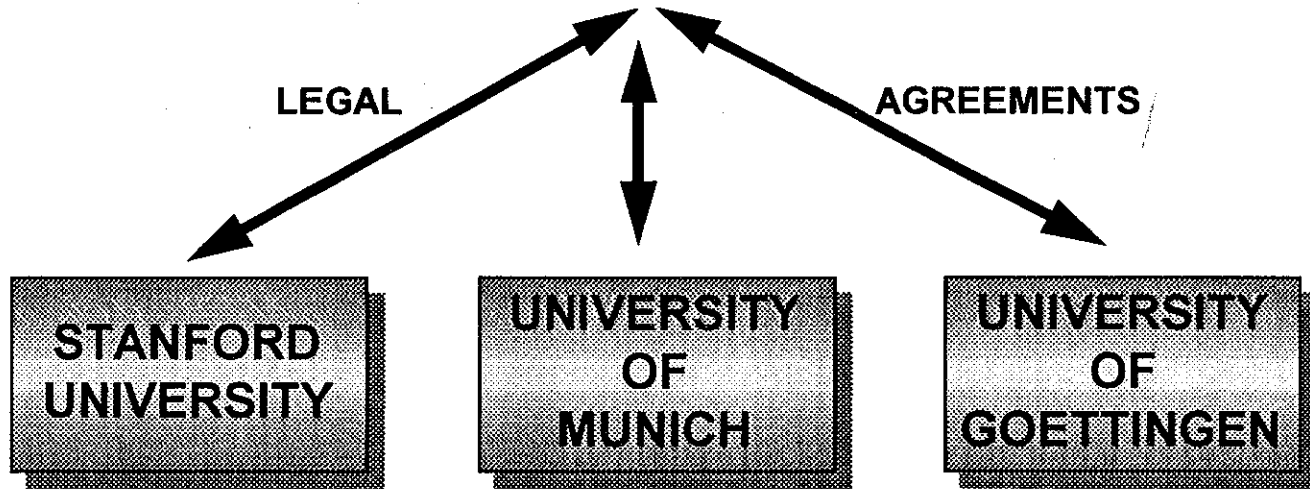
THE SPECTROSCOPIC SURVEY TELESCOPE...PROJECT 102-704

SST PARTNER INSTITUTIONS

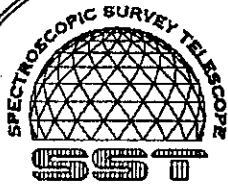
**FOUNDING
PARTNERS**



**SECONDARY
PARTNERS**



**PARTNERSHIP PROVIDES MAXIMUM LEVERAGE
OF UT FUNDING AND SCIENTIFIC COLLABORATION**

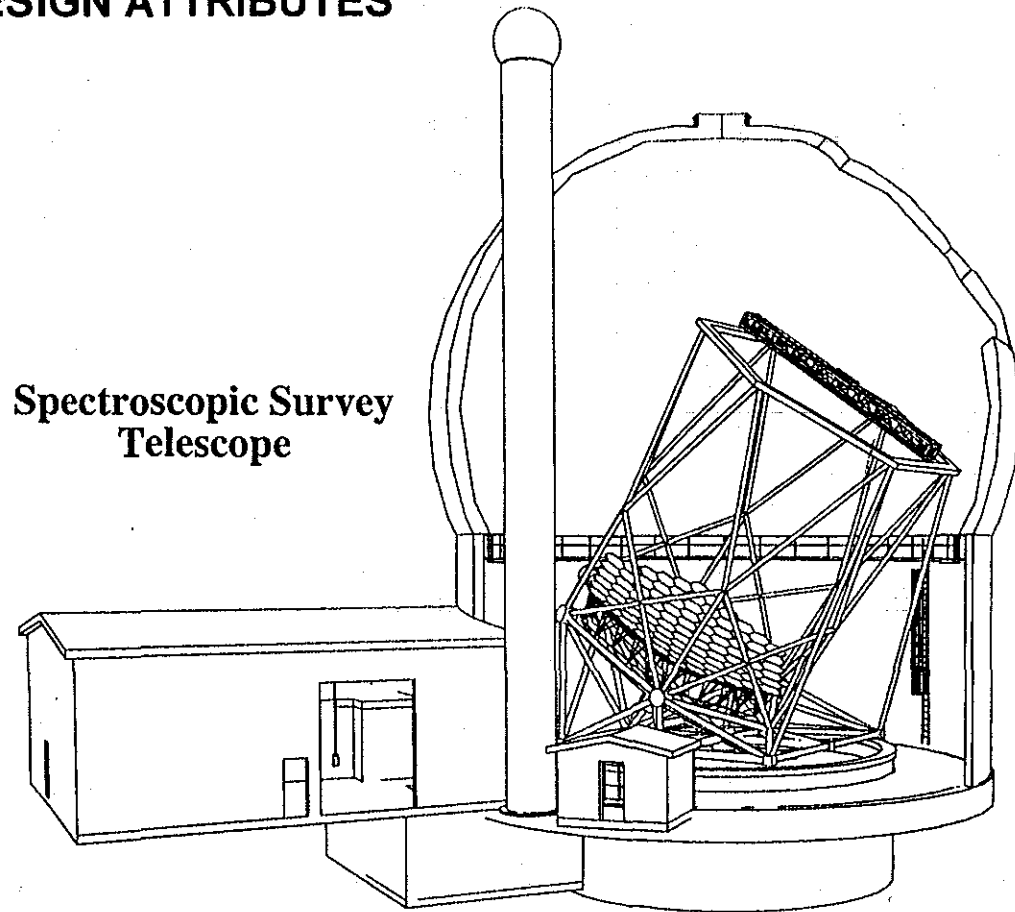


THE SPECTROSCOPIC SURVEY TELESCOPE...PROJECT 102-704

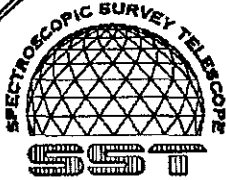
TELESCOPE DESIGN ATTRIBUTES

- 91 1-METER MIRRORS
- LOW EXPANSION GLASS
- MIRRORS COMPUTER CONTROLLED
- 85 FOOT DIAMETER ALUMINUM DOME
- 90 FOOT HIGH MIRROR METROLOGY TOWER
- 2500 SQUARE FOOT CONTROL BUILDING
- 50 FOOT DIAMETER SPECTROMETER ROOM
- VISITOR GALLERY
- 60 TON TELESCOPE

Spectroscopic Survey Telescope



**THE SST FEATURES THE LARGEST
PRIMARY MIRROR IN THE WORLD**



THE SPECTROSCOPIC SURVEY TELESCOPE...PROJECT 102-704

TODAYS REQUESTS TO THE REGENTS

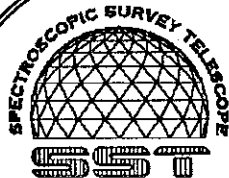
- **APPROVE INCREASE IN SST COST TO \$12.8 M**
 - RESULT OF DESIGN PHASE
 - INCREASED PERFORMANCE
 - FIXED BY DESIGN AND PROJECT PLANS
- **AUTHORIZE COMPLETION OF DESIGN AND CONTRACTS**
 - FEASIBILITY VERIFIED
 - COSTS VERIFIED
 - INTEGRATED INTO UT ORGANIZATIONS
- **AUTHORIZE ENTRY INTO PARTNERSHIPS**
 - LETTERS OF INTENT IN HAND
 - DRAFT AGREEMENTS APPROVED
 - UT LEADERSHIP PRESERVED
- **AUTHORIZE RETAINING A & E CONSULTANTS**
 - MEDWADOWSKI DESIGNED KECK
 - SIMPSON, GUMPERTZ & HEGER DESIGNED MMT
 - SUPPORT TO SPECS AND DESIGNS



THE SPECTROSCOPIC SURVEY TELESCOPE...PROJECT 102-704

REQUESTS TO THE REGENTS

- **AUTHORIZE HIRING LOCAL A & E TO SUPPORT DESIGN**
 - STANDARD UT PRACTICE
 - TO WORK WITH SST PROJECT TEAM & OFPC
 - SELECTED BY OFPC & SST PROJECT TEAM
- **AUTHORIZE OFPC TO ADVERTISE FOR BIDS**
 - FOLLOWING T.H.E.C.B. APPROVAL OF PROJECT
 - STANDARD PROCESS
 - SEVERAL COMPETENT CONTRACTORS EXIST
- **AUTHORIZE SUBMISSION TO TEXAS HIGHER EDUCATION COORDINATING BOARD**
 - APPLICATION MADE BY UT AUSTIN PHYSICAL PLANT
 - SITE VISIT 22 MARCH 93
 - PLANNED FOR APRIL 29,30
- **APPROVE APPROPRIATION OF \$10 M FOR INITIAL CONSTRUCTION**
 - FUNDS IN HAND OR PROMISED VIA LETTERS OF INTENT
 - ADEQUATE FOR FULLY FUNCTIONAL TELESCOPE



THE SPECTROSCOPIC SURVEY TELESCOPE...PROJECT 102-704

REQUESTS TO THE REGENTS

- **AUTHORIZE EXECUTIVE COMMITTEE OF REGENTS TO AWARD CONTRACTS**
 - STANDARD UT PRACTICE
 - TO WORK WITH SST PROJECT TEAM & OFPC
 - SAVES TIME WHEN APPROPRIATE BIDS RECEIVED

- **AUTHORIZE EXECUTIVE COMMITTEE OF REGENTS TO APPROVE ADDITIONAL APPROPRIATIONS TO \$12.8 M**
 - PARTNERS INTEND TO PROVIDE TOTAL \$12.8 M
 - TO BE RAISED BY 01 APRIL 95
 - ENHANCES PERFORMANCE OF SST

**WE THANK THE U.T.
BOARD OF REGENTS FOR
THEIR CONSIDERATION**

**THE SST WILL ENSURE
UT PREEMINENCE IN
ASTRONOMY FOR THE
NEXT DECADE....**

**POINT PAPER
FOR
UT BOARD OF REGENTS
ON THE
SPECTROSCOPIC SURVEY TELESCOPE**

Request: Approve increase in SST Project Total Cost from \$12 m to \$12.8 m.

As a result of successful completion of the Design Phase, the SST has on the whole been simplified and made much more cost effective. The increase in cost of \$.8 m is largely due to implementation of 91 hexagonal mirrors of dimensionally stable glass. This results in greatly reduced risk and over 15% improvement in effective size of the SST. The cost is fixed at \$12.8 m via adequate contingency set aside and a strong program plan.

Request: Authorize UT Austin to enter partnership agreements with other universities.

Draft agreements between UT and Penn State have been developed and approved. Agreements between UT and the other participating universities have been agreed to in principle and details are being negotiated with the support of UT Counsel. Agreements preserve the rights and prerogatives of UT in all regards.

Request: Authorize completion of technical design, bidding, and contract awards for the telescope instrument.

Work performed during the Design Phase, supported by professional consultants, has verified the feasibility of the SST design as currently formulated. Detailed cost analysis shows that the telescope can be constructed within the proposed budget. The SST Project Team, composed of engineers from McDonald Observatory and others hired specifically for the SST Project, along with their consultants, possess all required skills to specify subsystems of the telescope. Working with the correct UT departments (Purchasing, Physical Plant, OFPC), subsystems will be successfully specified and procured.

Request: Authorize UT Austin with OFPC to retain S. Medwadowski and Simpson, Gumpertz & Heger to support design of structure and facility for the SST.

S. Medwadowski designed the Keck Ten Meter Telescope...the nearest existing telescope to the SST. SG & H are well known technical Architecture & Engineering contractors who have successfully designed telescope enclosures. Both were hired to support the SST Design Phase and will be retained to support completion of specifications and designs.

Request: Authorize UT Austin with OFPC to hire a local Architect/Engineer to complete facility specifications.

Discussions between SST Project Office and OFPC concluded that use of a local A & E firm to support completion of final plans and specifications would be desirable from the standpoints of certification in Texas, simple communication, and prior knowledge of capabilities and quality of work. OFPC and the SST Project Office will recommend the A & E contractor to be selected on the basis of relevant skills and quality.

Request: Authorize submission of the SST Project to the Texas Higher Education Coordinating Board.

Application to the Texas Higher Education Coordinating Board to consider approval of the SST at the April 29-30, 1993 meeting has been completed by the UT Austin Physical Plant with support from the SST Project Office. A site visit from a subcommittee of the Board was held at UT Austin on 22 March 1993. The implication of that visit was that they would consider the request should the UT Board of Regents authorize submission.

Request: Authorize OFPC to advertise for bids for construction of the SST Facility upon approval of the Texas Higher Education Coordinating Board.

Construction of the SST Facility will follow standard specification, bid, award, and performance processes established for all UT construction projects. To this end, UT OFPC will perform their traditional role in the bid/award process .

Request: Approve appropriation of \$10 m for initial phase of construction.

Fundraising at UT and the partner institutions has produced a current total available funds of \$10 m. This is sufficient funds to construct a fully functional SST, capable of fulfilling the designated astronomical research objectives. All key elements of the SST are provided for within this funding. All funds included in the UT portion of the total are in hand. Contributions of partners are secured by formal legal letters of intent in hand. Completion of legal agreements committing funds will be achieved as a prerequisite for release of funds.

Request: Authorization of the Board of Regents Executive Committee to award contracts for general construction of the SST Facility.

Upon meeting all requirements stipulated by the Board of Regents we request that the Executive Committee be authorized to award these contracts in the interest of expediting the beginning of construction.

Request: Authorize the Board of Regents Executive Committee to approve additional appropriations to the total SST Project ceiling of \$12.8 m.

Contributions and commitment for contributions from partners and UT are expected to total \$12.8 m by 01 April 1995. We request that the Executive Committee be authorized to release these funds when they become available within the context of the approvals and authorizations established by the Board of Regents associated with this agenda item.