



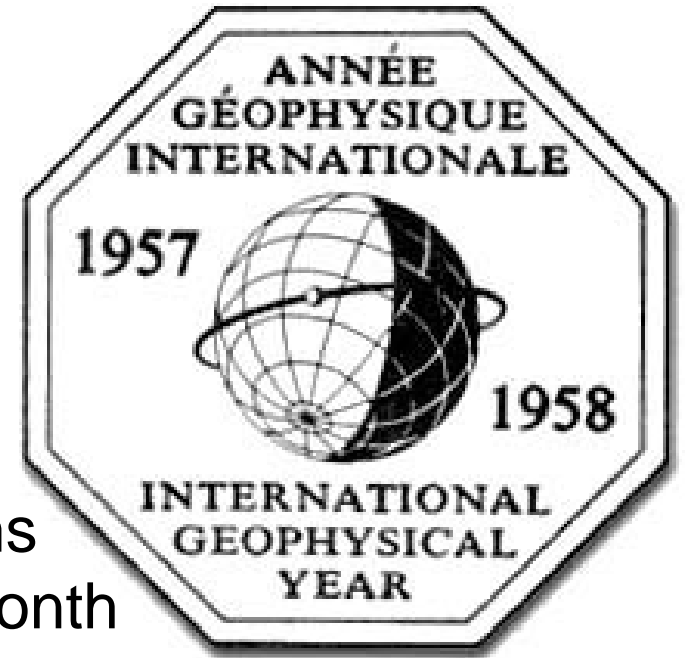
Antarctic Science Support

A Historical Perspective



USAP began with IGY

- IGY proposed in 1950 by eminent physicists Lloyd Berkner (BAE I), Sydney Chapman, and James Van Allen in 1950 to supplant the 1982-83 “Third Polar Year”
- State Department “National Program” proposed to put forward national claims 1957-58 time of peak sunspots (18 month “year” 1 July 1957- 31 Dec. 1958)
- International “CSAGI” established
- NAS -> US National Committee for IGY -> NSF funding
- Most early participation was US government agencies
- Larry Gould head of committee in 1953
- Harry Wexler (USWB) chief scientist (no ice experience)



Six IGY Research Stations

Eisenhower officially
Announced US role
in March 1955

- Little America V
- Byrd
- Ellsworth
- Wilkes
- Hallett
- South Pole

(and a support facility
at the south end of
Ross Island)



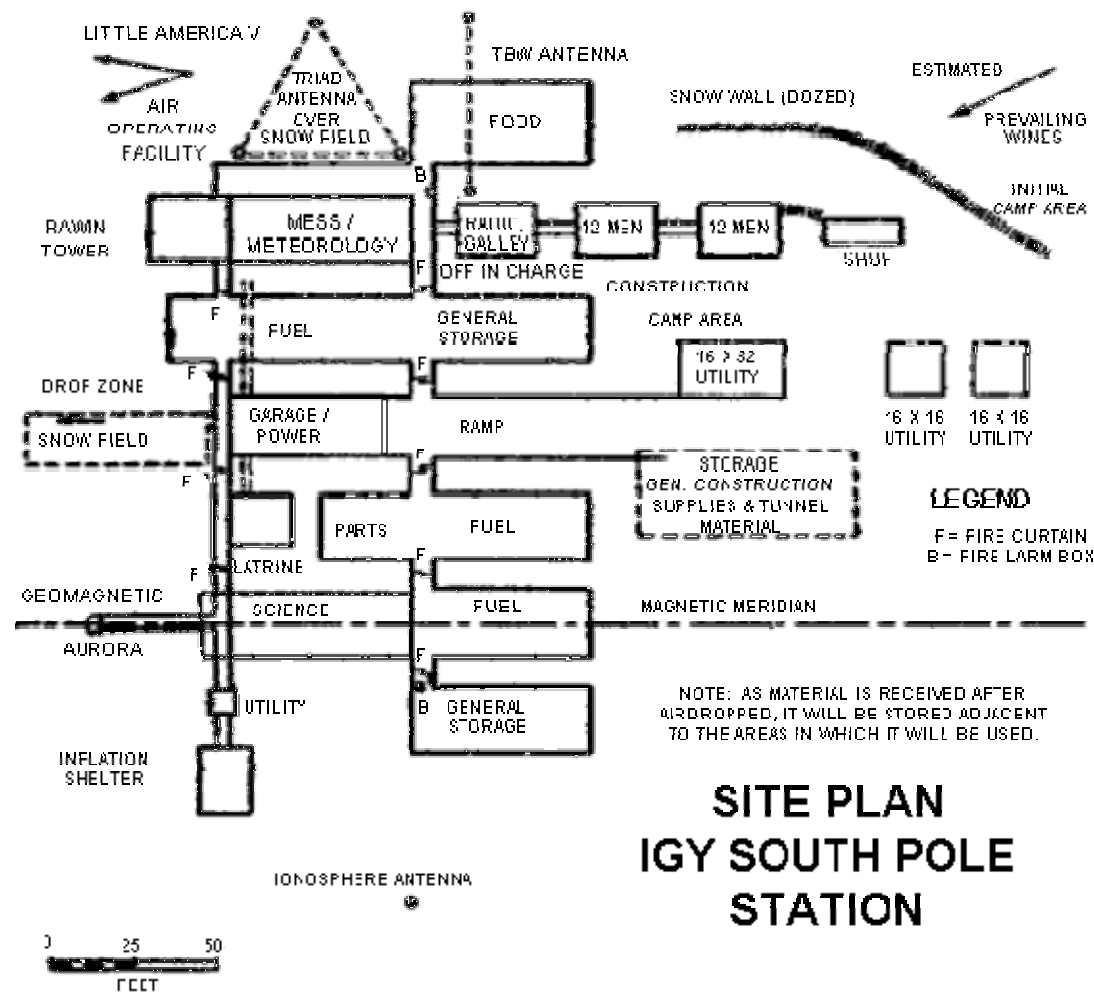
...and Operation Deep Freeze

A four-year program:

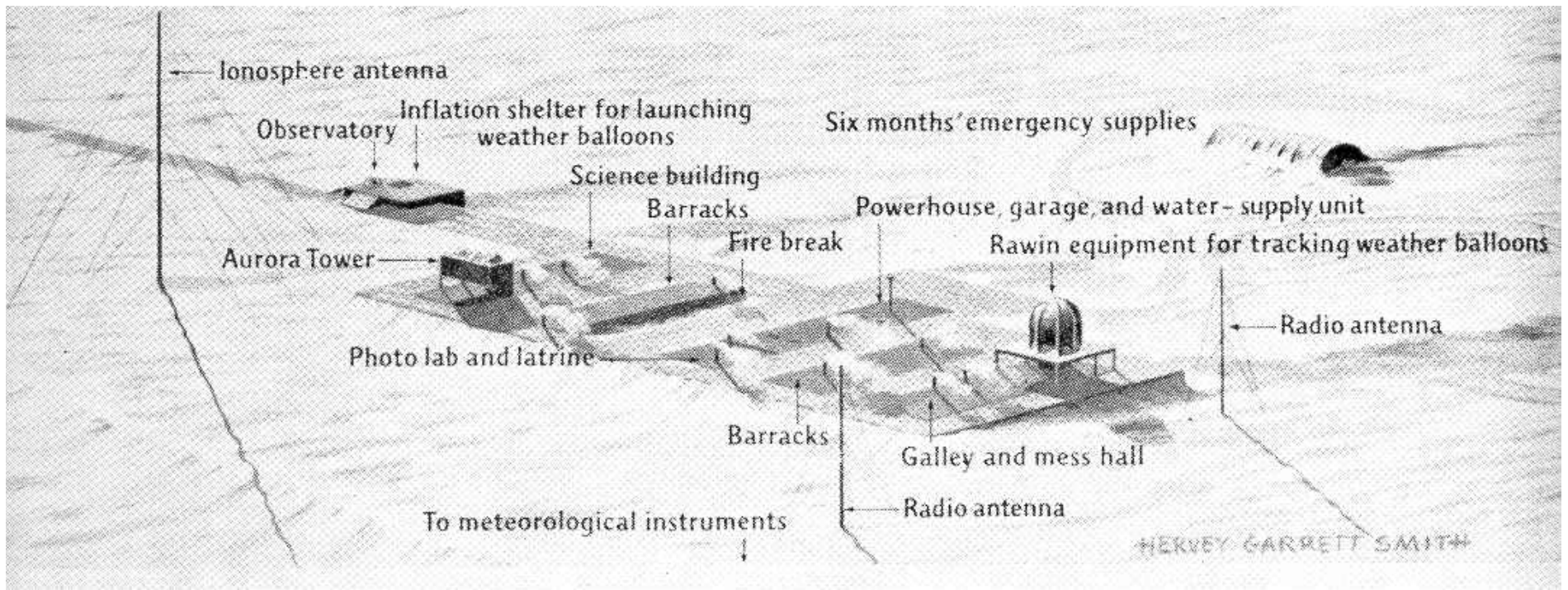
- DF I 1955-56: initial survey, establish LAV, traverse route to Byrd, air support base for Pole
- DF II 1956-57: establish the other stations
- DF III 1957-58: IGY begins (1 July)
- DF IV 1958-59: End of IGY, everyone goes home

Originally named “Project Longhaul,” and later “Operation Deepfreeze”

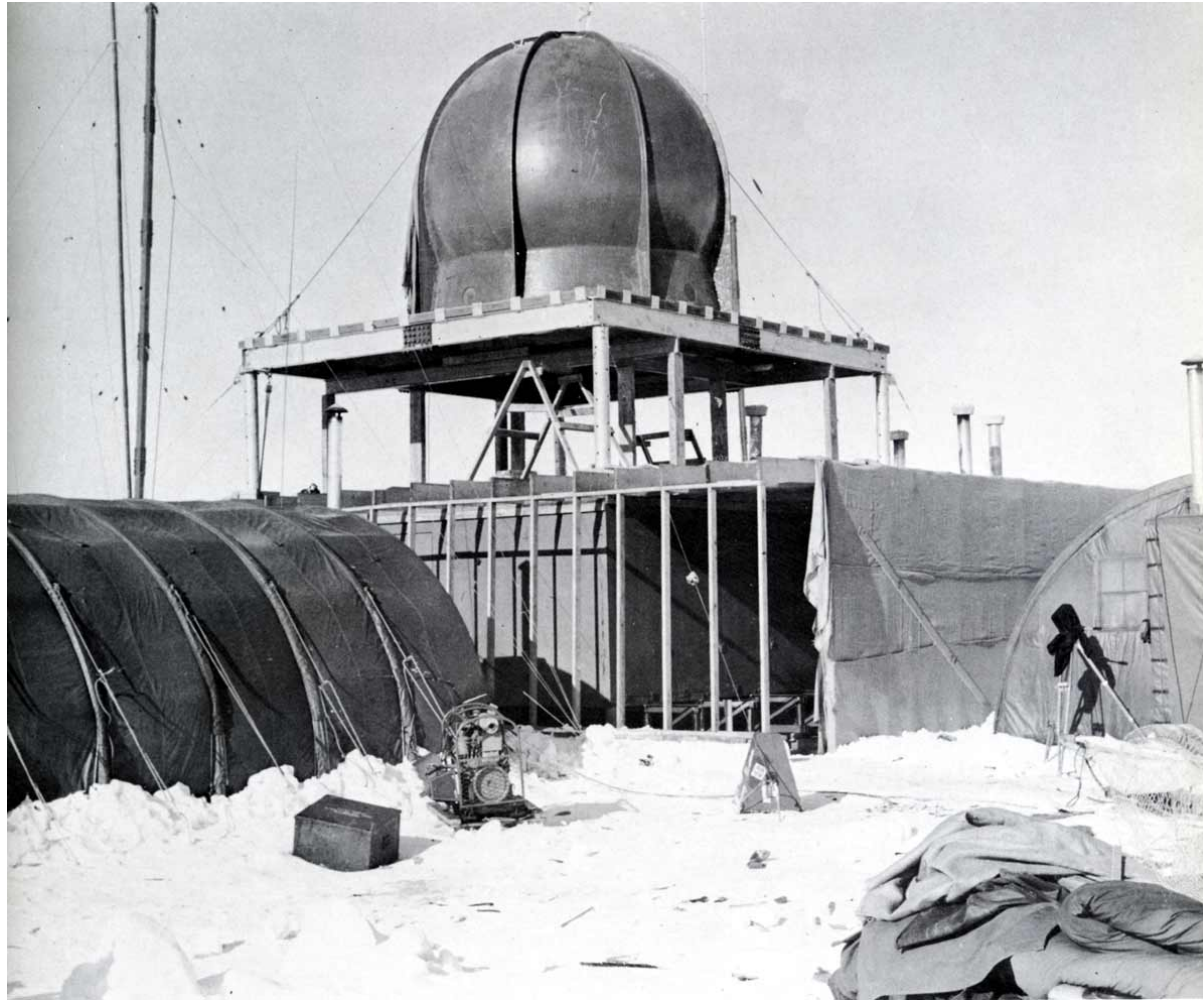
South Pole Station...the plan...



The Reality



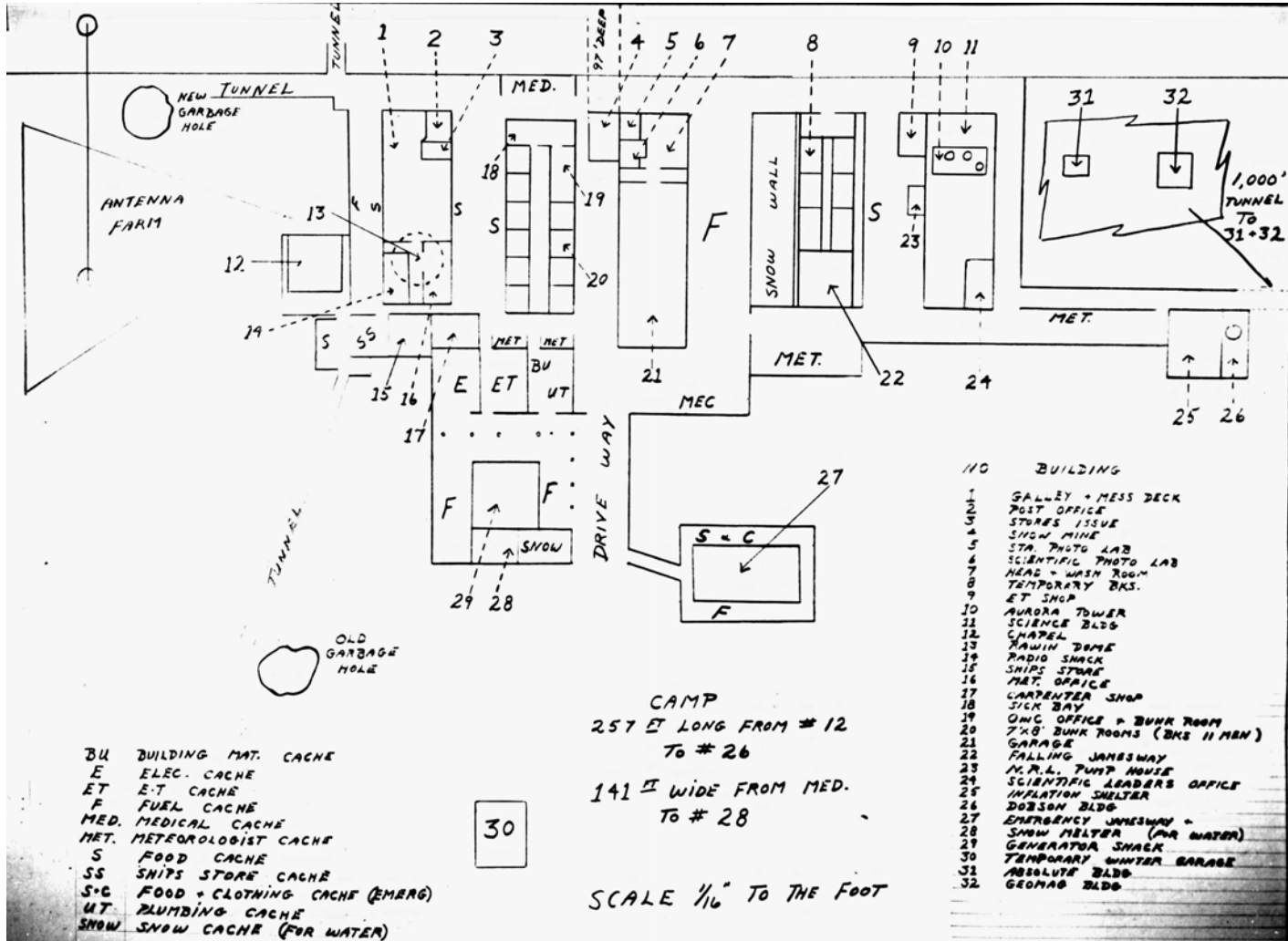
Finishing the Galley



Closing In



A Closer Look







IGY PERSONNEL

Robert F. Benson, seismology (22)
Edwin C. Flowers, meteorology (30)
John F. Guerrero, meteorology (22)
Herbert L. Hansen, meteorology (29)
William S. Hough, ionosphere (32)
William F. Johnson, meteorology (34)
Arlo U. Landholt, aurora (21)
Edward W. Remington, glaciology (36)
Paul A. Siple, scientific leader (48)

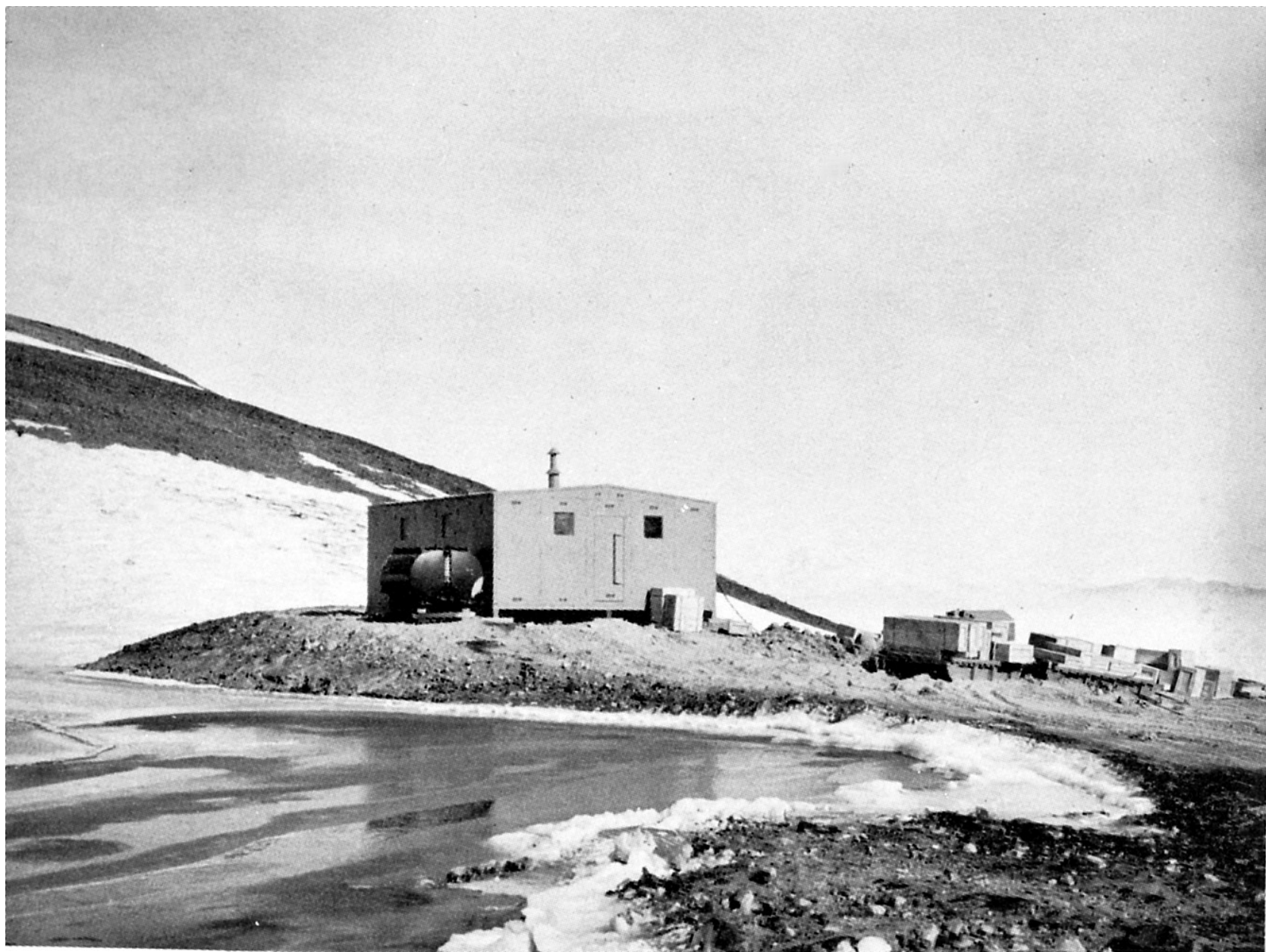
NAVY SUPPORT

Clifford R. Dickey, Jr., ET1 (28)
Melvin C. Havener, CM2 (20)
Earl F. Johnson, UT1 (23)
William C. McPherson, Jr., RM1 (27)
Thomas M. Osborne, BU1 (23)
Chester W. Segers, CS1 (30)
Howard C. Taylor, III, LT (MC) (27)
John Tuck, Jr., LTJG (CEC) (24)
Kenneth L. Waldron, CE2 (21)

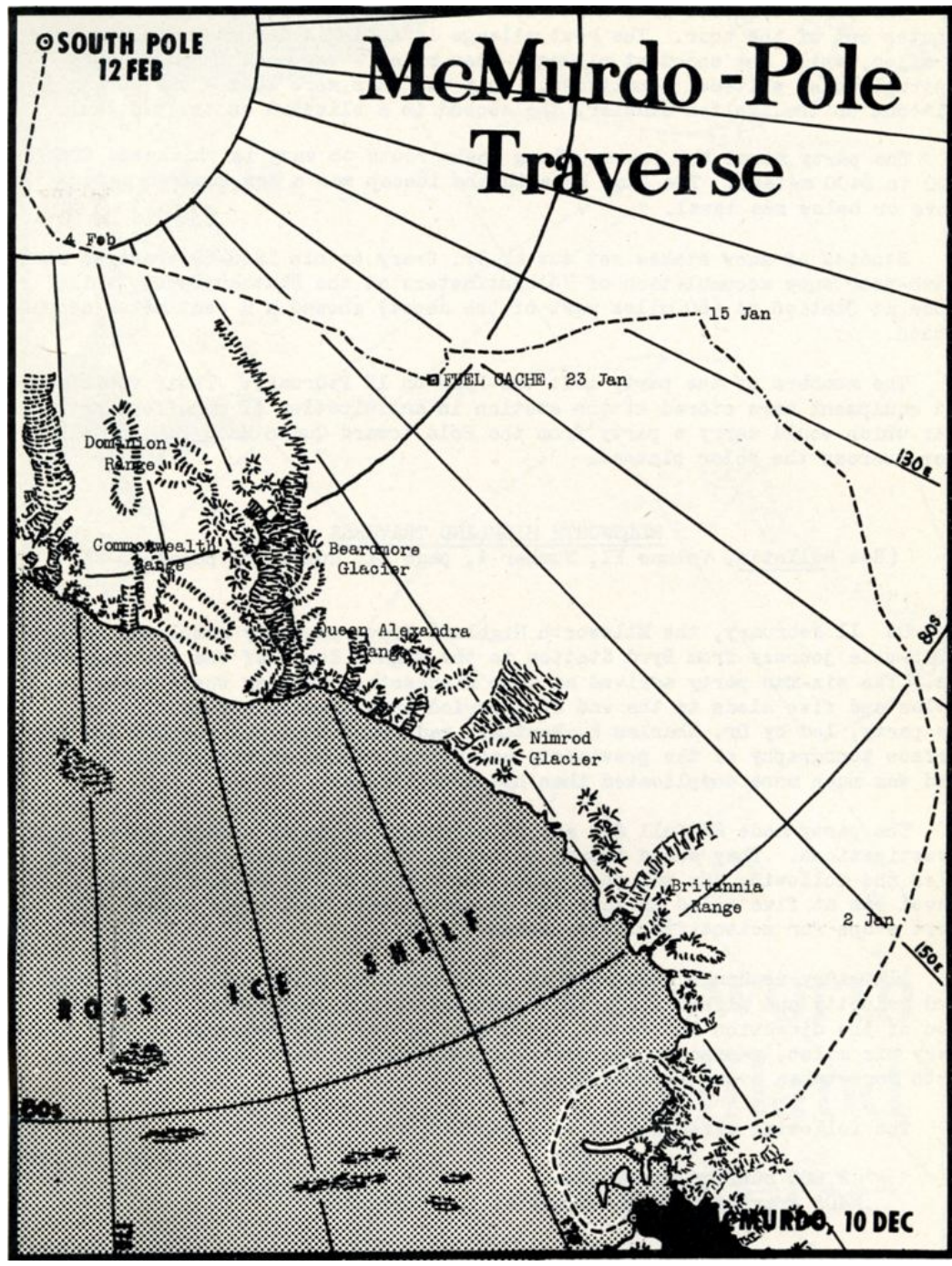
Science

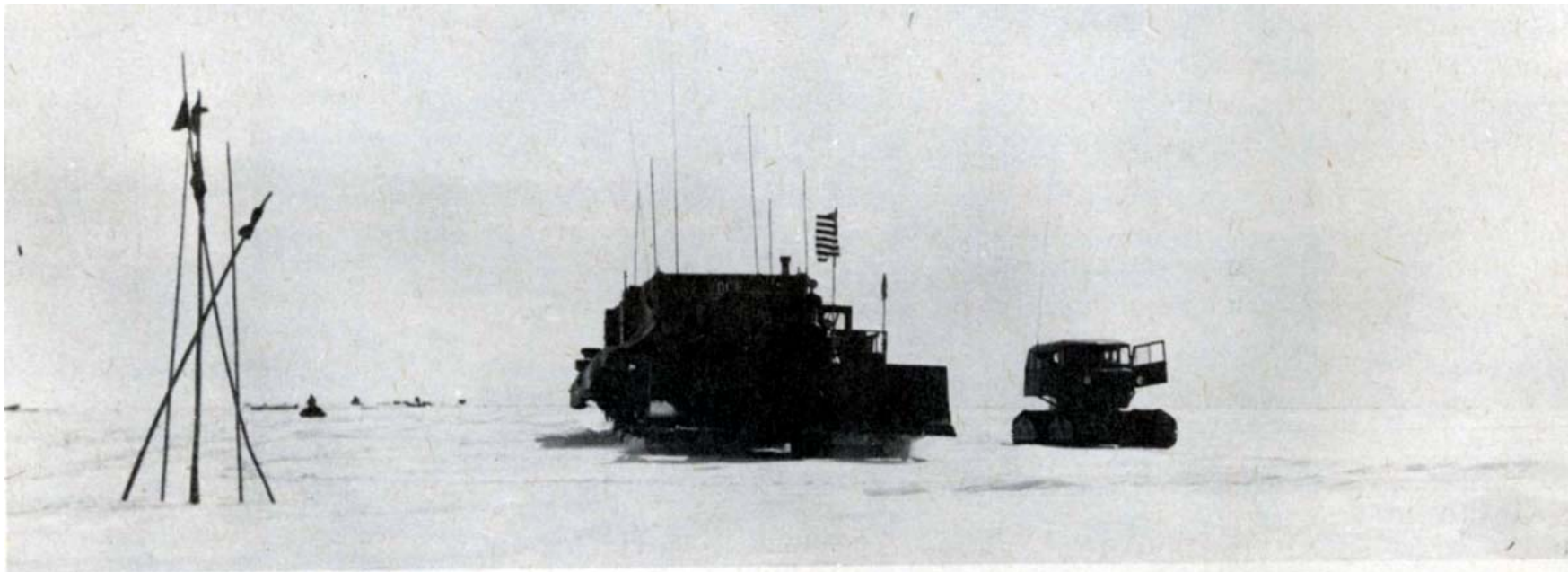
- Does the ionosphere disappear? 120-tube recorder
- What is “snow down”
- How cold will it get? (-102.1°)
- 2 balloons/day-first sonde 27 March—probably same GMD as used in 1977
- Can earthquakes be recorded and plotted?
- Auroras...visual obs and pics
- CO₂ content of air
- Climate from glaciology pits
- “Insomniometer”
- Psych/isolation/toastiness











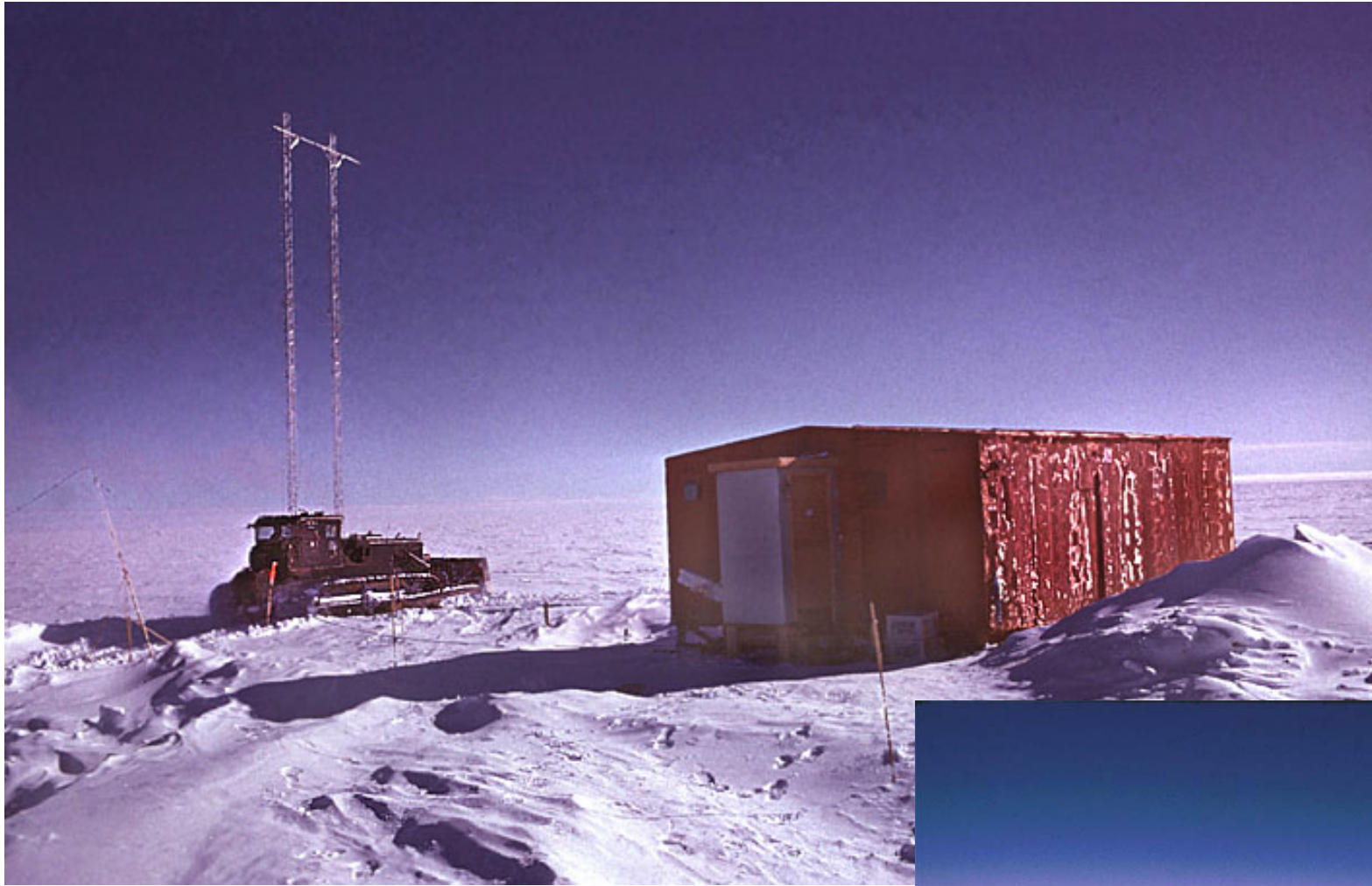




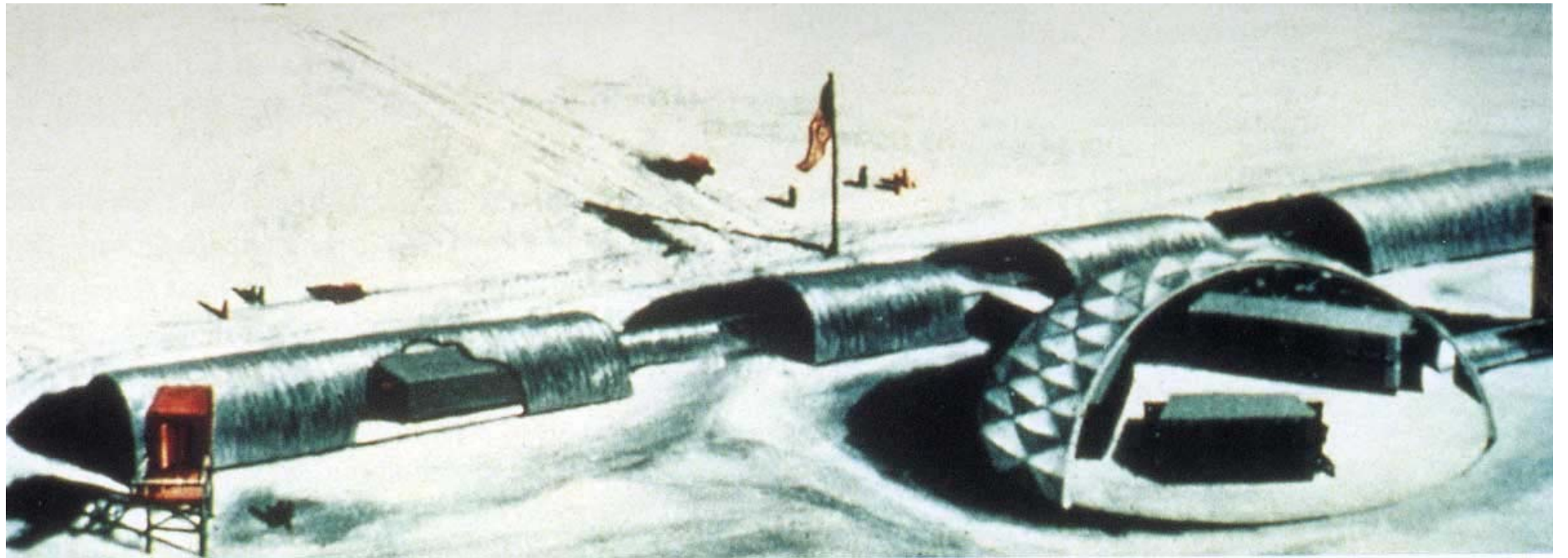


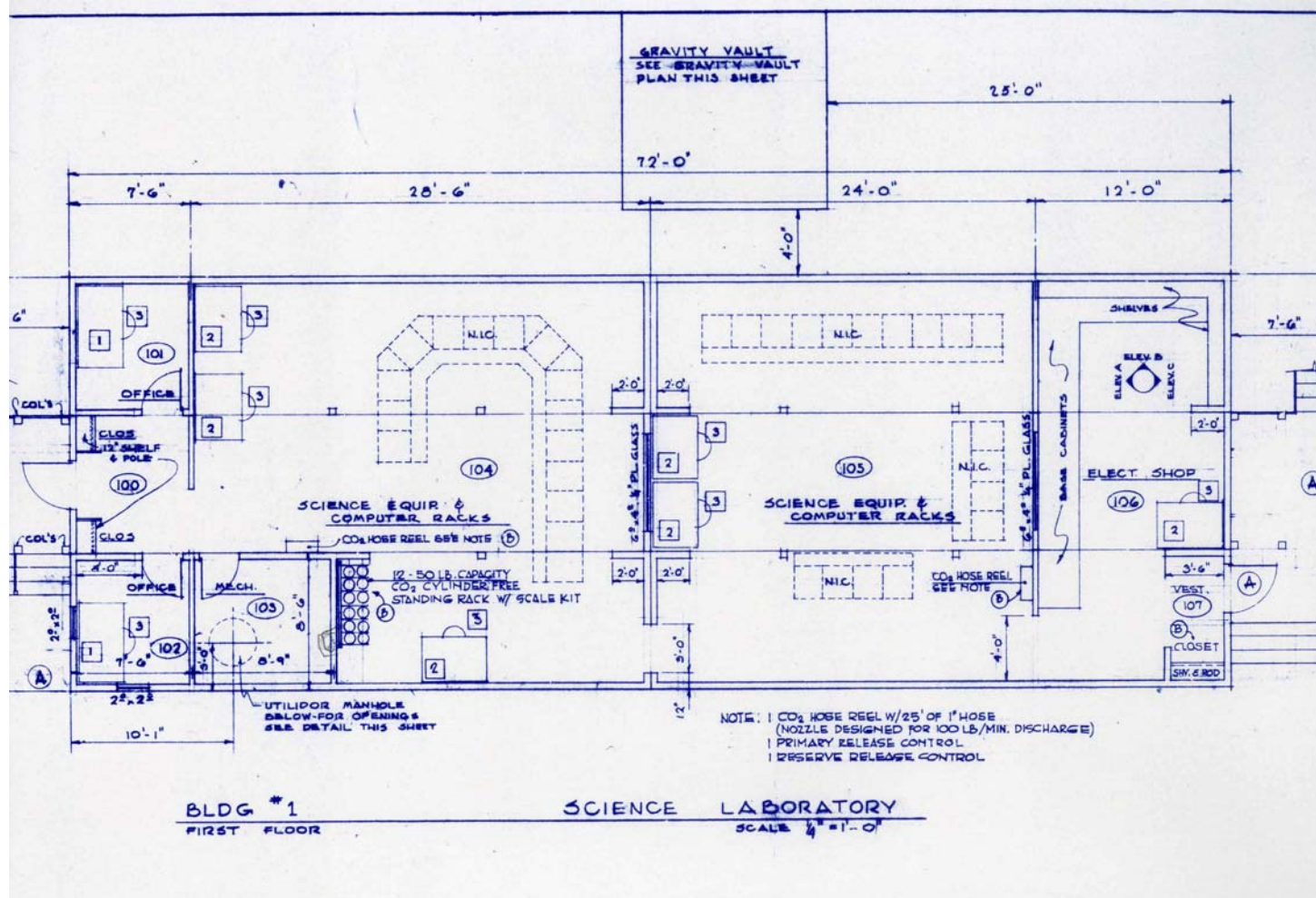


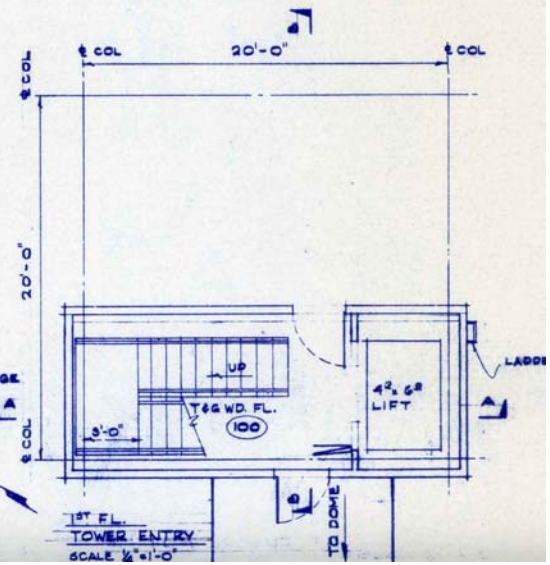
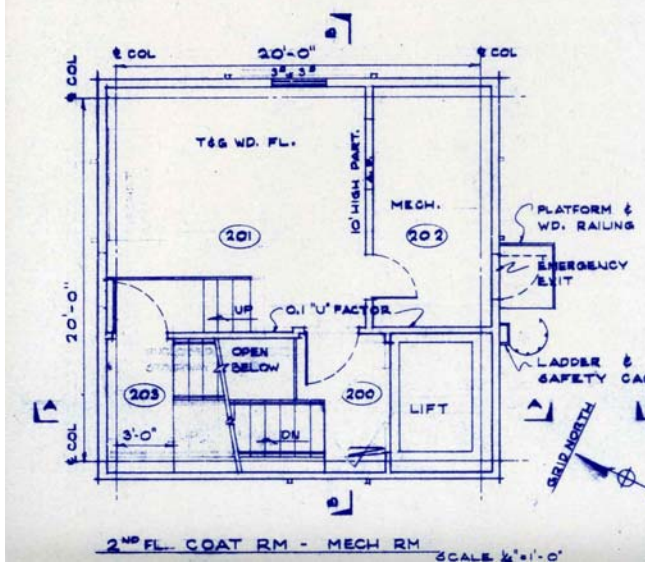
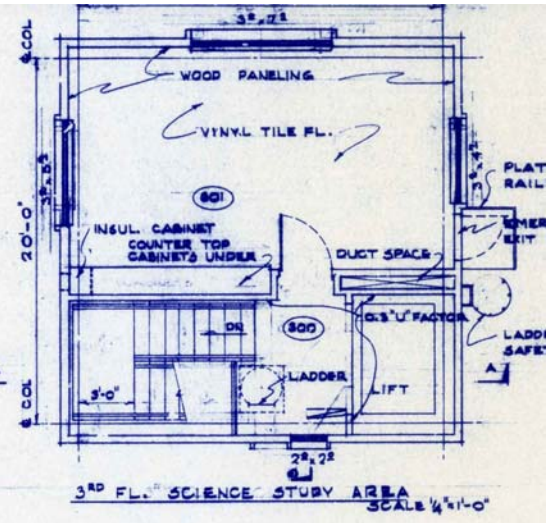
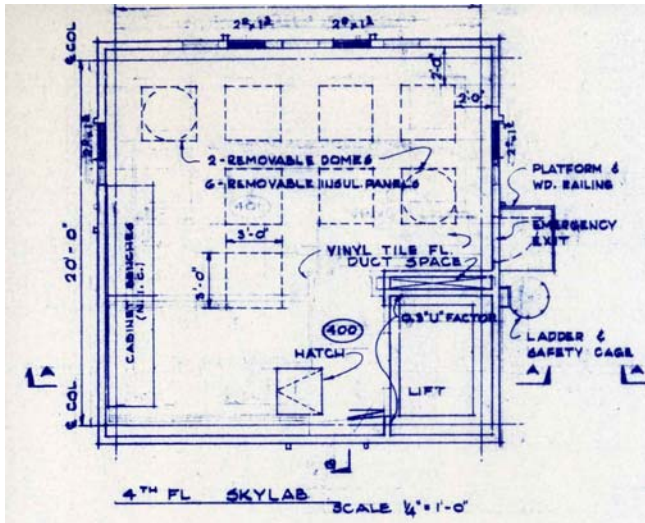






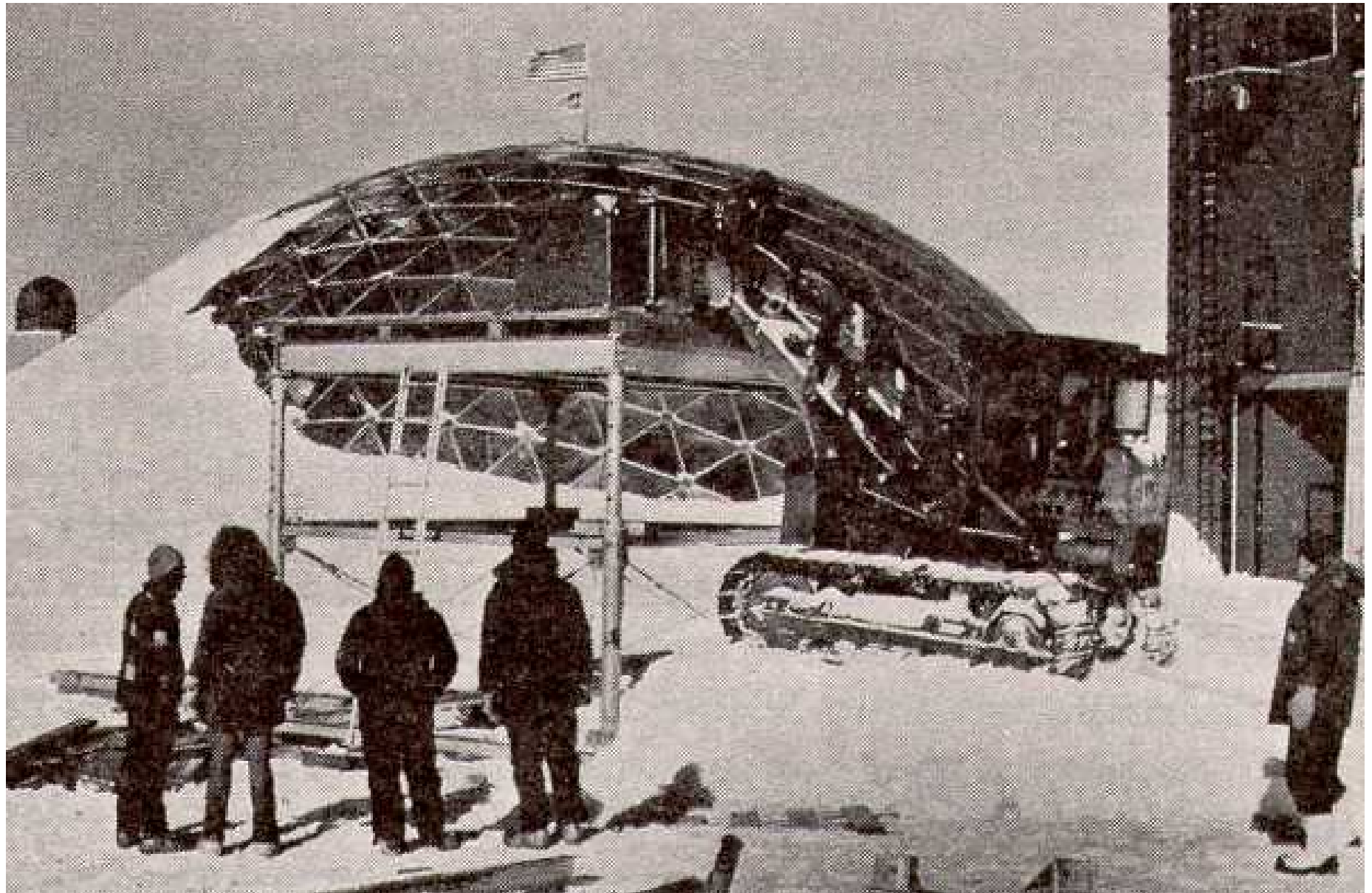












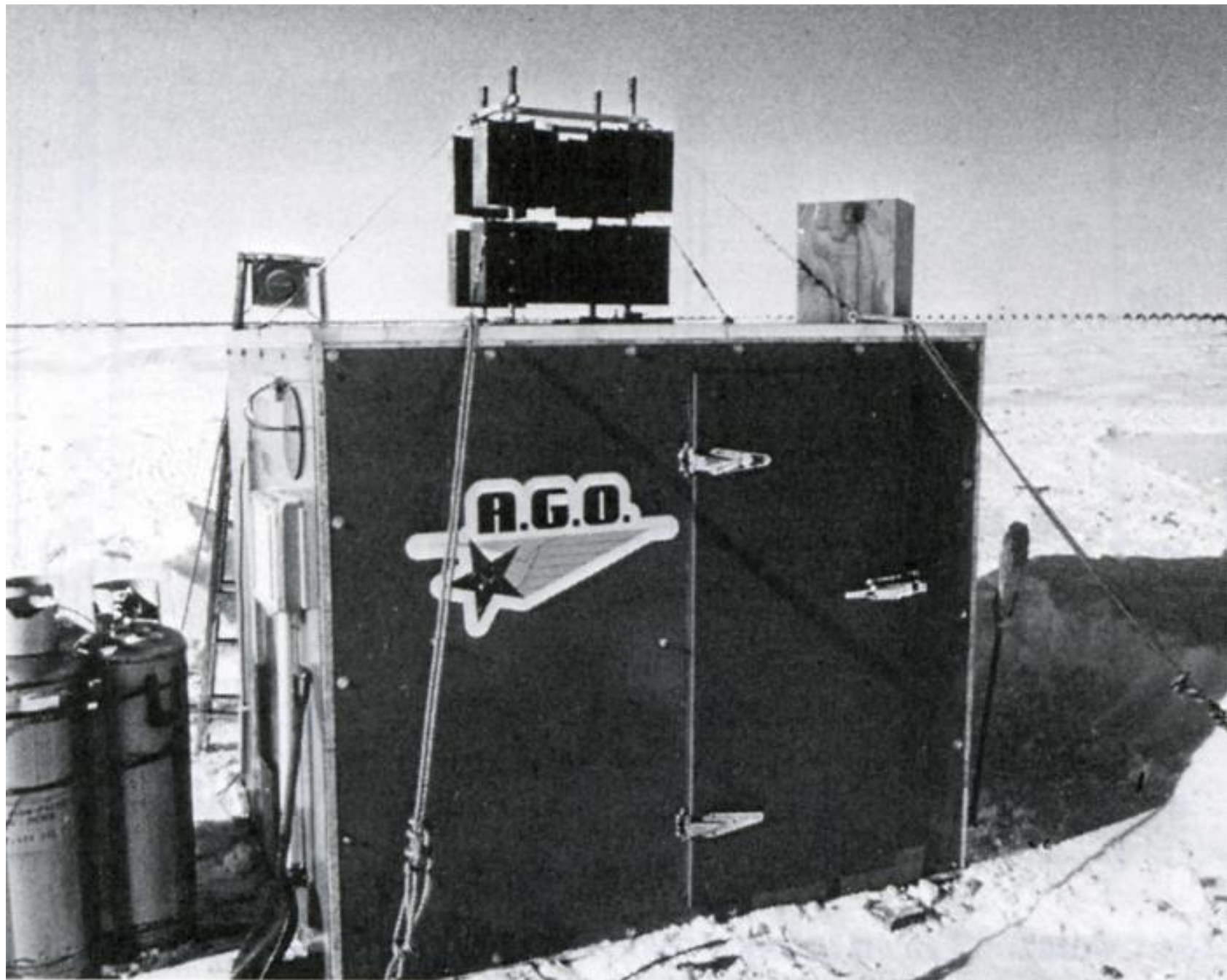












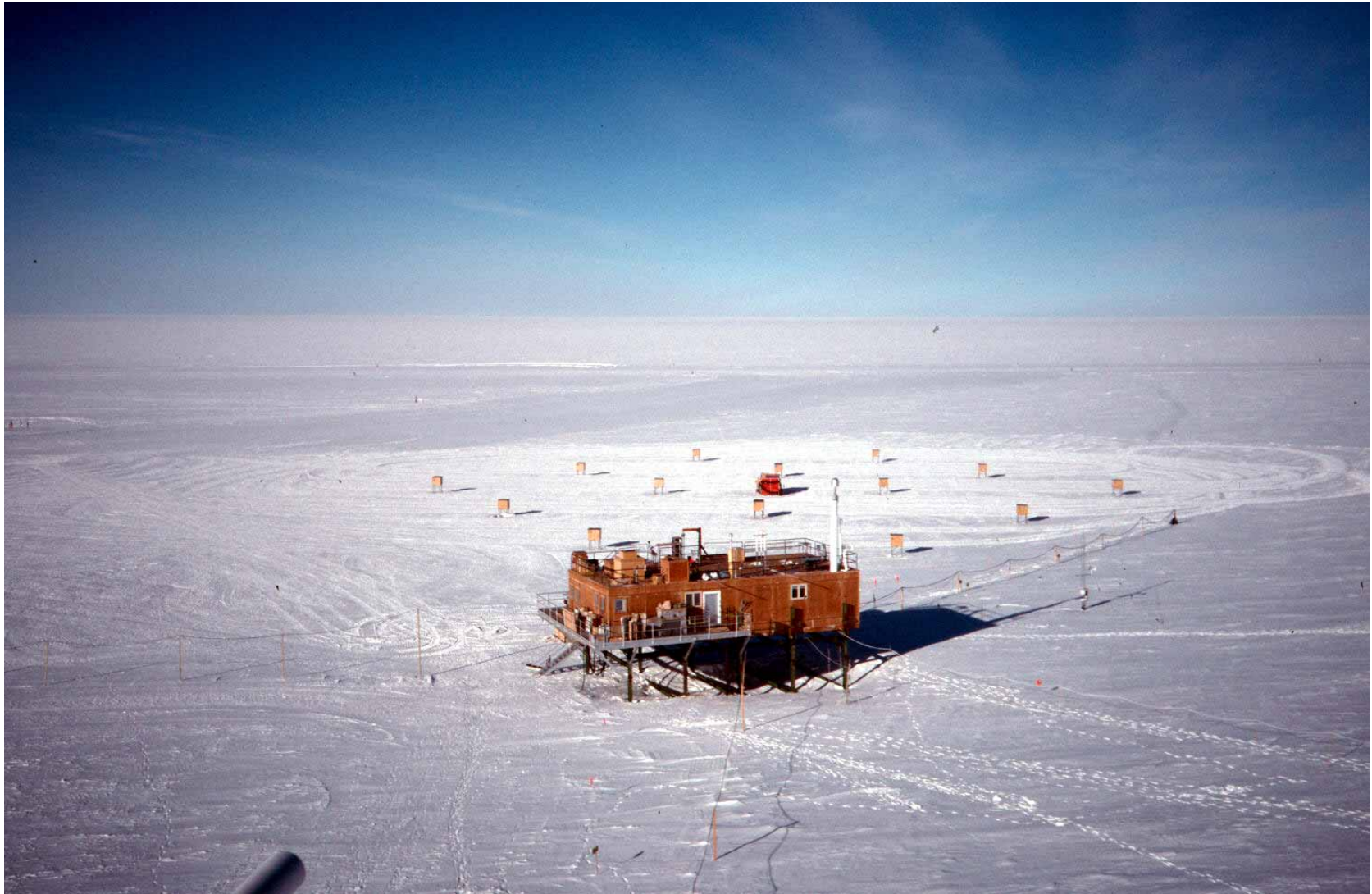


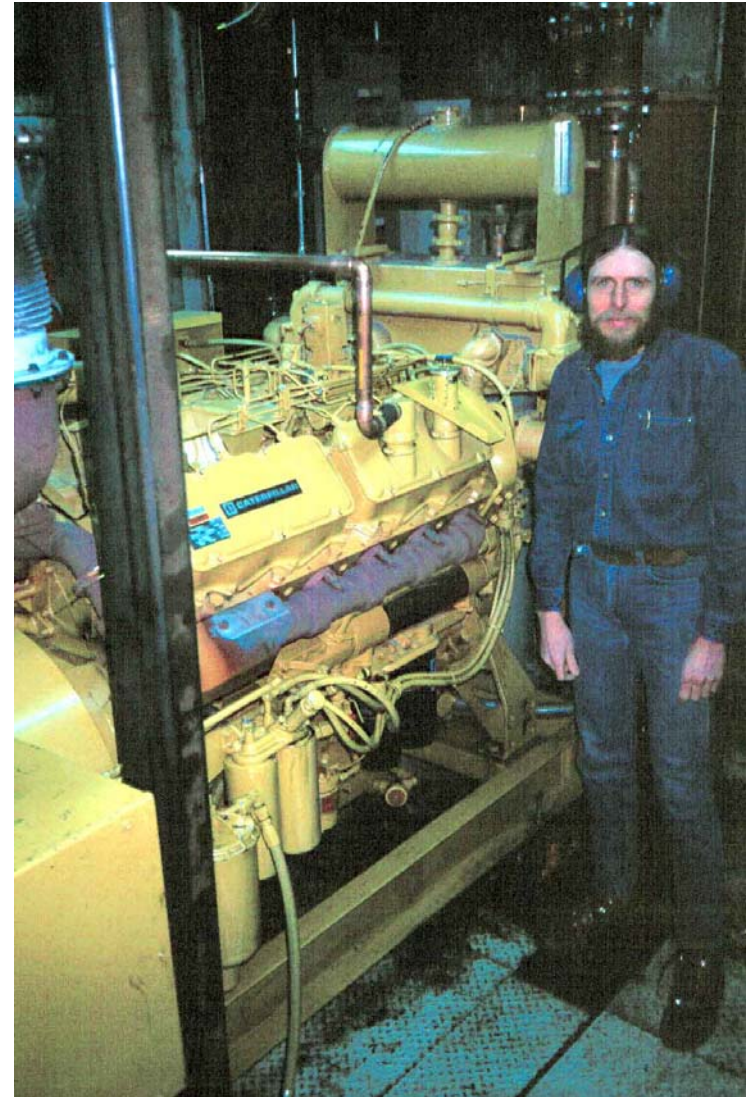




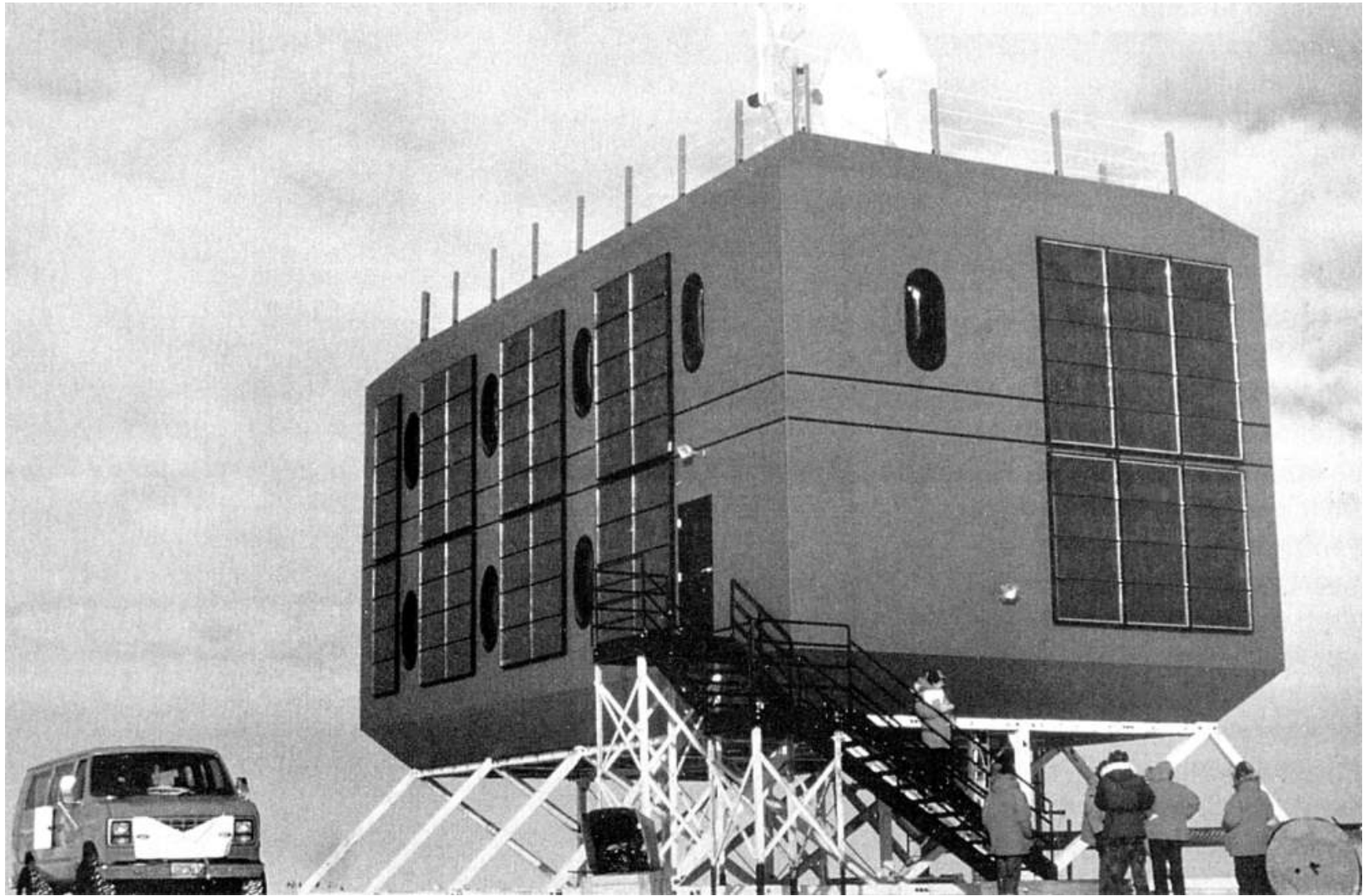


















What's next?

Questions??



