

South Pole 1500 meter Ice Core Project

(SPIcecore <http://spicecore.org>)

UC-Irvine (Saltzman-Lead PI, Aydin), U Washington (Steig), UNH (Twickler, Souney),
NASA-Goddard (Neumann)

Rationale for 1500 meter ice core at South Pole

- Cold and clean ice good for trace gas stability
- Interpretable stratigraphy (Icecube dust logging)
- Highest resolution of East Antarctic ice core
- Hi-quality firn/air record from previous studies
- 40ka record
- Climate sensitivity
 - IndoPacific vs. Atlantic
 - Southern Ocean vs. low latitude
 - Strong El Nino signal
- **Support infrastructure and logistical hub**



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Intermediate Depth Drill (IDD) Drill Test in Greenland

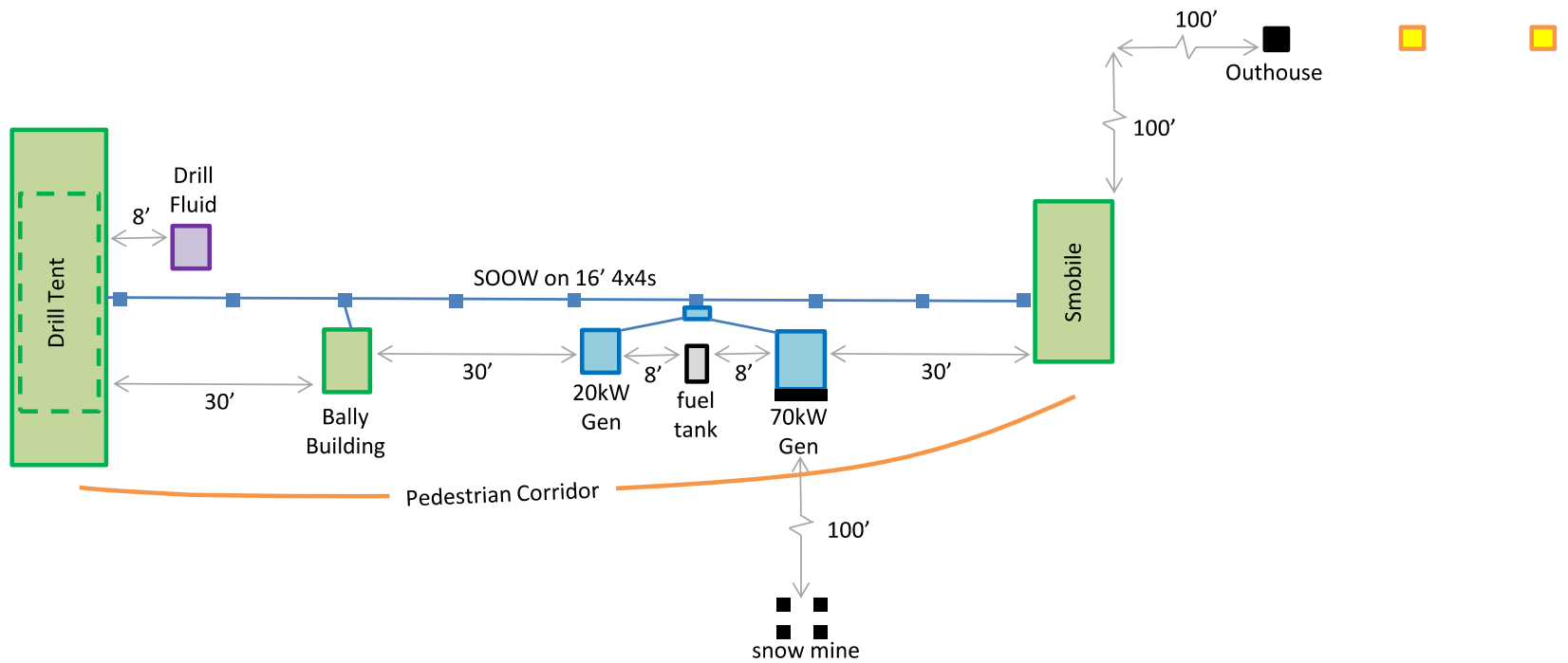
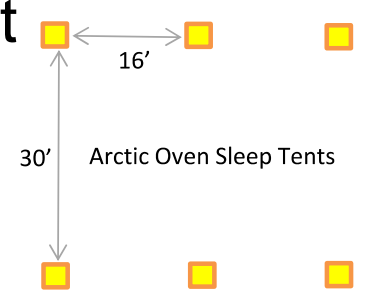
- IDD drill is based off the proven Danish Hans-Tausen drill with modifications
- Testing required for optimal operation of entire system prior to SP deployment
- Drill team depart CONUS 4/24; return 6/11
- Camp at “Isi” location, using Smobile as camp central, Bally as driller changing room
- IDDO drill team consists of 6-7 people, working 2 shifts after setup/testing
- Visit by SP Icecore science team (3-4) mid-May ANG flight window
- Cargo:
 - GRIT to deliver drill fluid and casing (~22,000 lb, 1000 cu ft)
 - LC-130 to deliver drill and pax (~20,000 lb, 1400 cu ft)
- CPS to provide generator, camp manager and trench excavation



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Isi Camp IDD Test Camp Layout

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N
IDD Test Camp Layout
3 Miles North of Summit Station
Not Drawn to Scale



SOUTH POLE

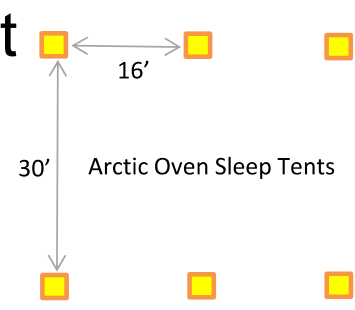
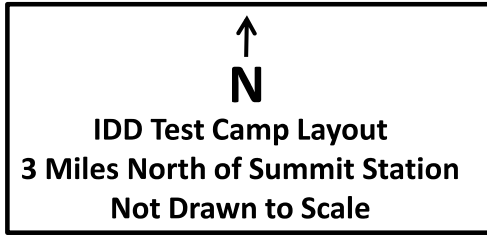
1500 meter

ICE CORE



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Isi Camp IDD Test Camp Layout



QUESTIONS?

