Attendees: SSP Technology Ground (and Ground-Based Flight) Experiments/Demonstrations Working Group– 12 September, 2002

- Frank Little (Co-Chair)
- Joe Howell (Co-Chair)
- Chris Culbert
- Jim Dudenhoefer
- Paul Werbos
- Mark Skinner
- Henry Curtis
- Jim Momoh
- Mark Henley
- Rick Luce
- Jim Dolce
- Jay Penn
- Pat George

Ground-Based WPT

Microwave

- Control of side lobes-non interference with communications
  - Sensitivity to transmitter flatness (Array planarity control)
- Retrodirective control of beam pointing
- Intelligent control- phase lock

Laser

- Prove Back-bone/"Spinal Cord" concept (R.Fork)
  - Continuous Wave & Pulsed
  - Heat pump / thermal control integration
- Maui Laser Rover Demo
- Powered home/car: Sun to electricity (~ 5 kWe: Penn)
- Intelligent- mode lock / Beam control

Inter-related demonstrations

- NASA Dryden Spotlight/Laser-Aircraft
- Unmanned Arial Vehicles (e.g., N Lat.Winter Ops)
  - Laser or microwave @ 70,000 ft
  - Laser Powered UAV Altitude record (>100,000 ft)
- Japanese Micro Arial Vehicle (Laser heating: H2O Jet)
- Japanese Lunar Laser – Lunar rover demo
- Captain Rick Luce: Earth to Satellite Power Beaming
- Lunar large scale Space solar power: Tests on Earth.

Integrated Systems Tech Demos

- PMAD: size,mass, modularity of components , Voltage level, efficiency, etc.
- Structures and Assembly: connectors, mating techniques, materials, assembly planning, etc.
- Robotics: Operations, intelligent control, cooperative systems, human/robot interaction, etc.
- Power Generation: PV (type, etc.) Thermal, Concentrators, Combo receivers: Solar & laser
- System level controls, human automation Beam Pointing , tracking, focus safety, etc