Research with Milagro

- World’s only high duty-factor, large solid-angle TeV γ-ray telescope
  - First TeV all-sky map
  - Observe transient sources such as gamma-ray bursts, flaring active galaxies

- TeV gamma-ray astronomy studies cosmic acceleration processes
  - Jets in active galaxies; gamma-ray bursts
  - Shock acceleration in supernova remnants (source of cosmic rays?)

- Cosmic Ray Physics
  - γ-ray emission from Galactic plane - studies cosmic-ray propagation in Galaxy
  - CR composition with Cherenkov telescopes - an important clue to cosmic ray origin

- Solar Physics
  - High-energy particle emission from solar flares

- Construction of central Milagro detector complete
- Milagro is operating - acquiring 1500 events/sec.
- 150 outrigger detectors to be installed 2000-2001
- Milagrito, a prototype, detected emission from:
  - A gamma-ray burst
  - An active galaxy (Mrk 501)
  - A solar flare

Aerial view of Milagro