ESTANCIA LOS MELLIZOS: A POTENTIAL IMPACT STRUCTURE IN SANTA CRUZ, PATAGONIA, ARGENTINA, SOUTH AMERICA.

M. C. L. Rocca, Mendoza 2779-16A, Ciudad de Buenos Aires, Argentina, (1428DKU), maxrocca@hotmail.com.
This work was funded by The Planetary Society, CA, USA.

Introduction: The Southern part of Argentina has a total surface of 786,112 square kilometers. It is composed of five Provinces: Neuquen, Rio Negro, Chubut, Santa Cruz and Tierra del Fuego.
So far no impact sites has been reported in this wide zone.
As a part of an on-going project to discover meteorite impacts, this area was investigated by the author through the examination of 76 color LANDSAT satellite images (1:250,000 - resolution = 250 meters) at the Instituto Geografico Militar (=Military Geographic Institute) of Buenos Aires city.
When a potential candidate was found a more detailed study of images was done. LANDSAT color images; scale 1:100,000 (IGM), and aerial photographs; scale 1:60,000 (IGM), were then consulted.
One promising site to be a complex impact structure was identified in Santa Cruz.
The co-ordinates given below are those of the two corners of a rectangle enclosing the site: the upper left and the lower right points. That is the system used at IGM to obtain the data. Further evaluation of this site is in progress.

Estancia Los Mellizos, Ruta Provincial Nº 39.
Area: W 70º 10’ S 47º 15’ / W 69º 50’ S 47º 28’
Possible eroded and covered complex structure.
In this site there is a circular feature of ridges and low hills. Diameter: 15 km.
The DLR’s X-SAR images q1 10028 (La Española) and q1 10029 (Cerro Cojudo Blanco) also show this circular structure.
The geology of this entire area is not very well known. Apparently, it is composed of degraded volcanic (ignimbrite and piroclastic rocks) of Chon Aike Fm. of Jurassic age, (170 - 140 Ma). (geologic map 4769-III, 1:250,000, SEGEMAR (=Geological Survey of Argentina), 1998), [1].