Start of construction:
Ben checking building construction progress. (1961)

Early planning:
Ken Bowles and colleagues before the antenna was built.

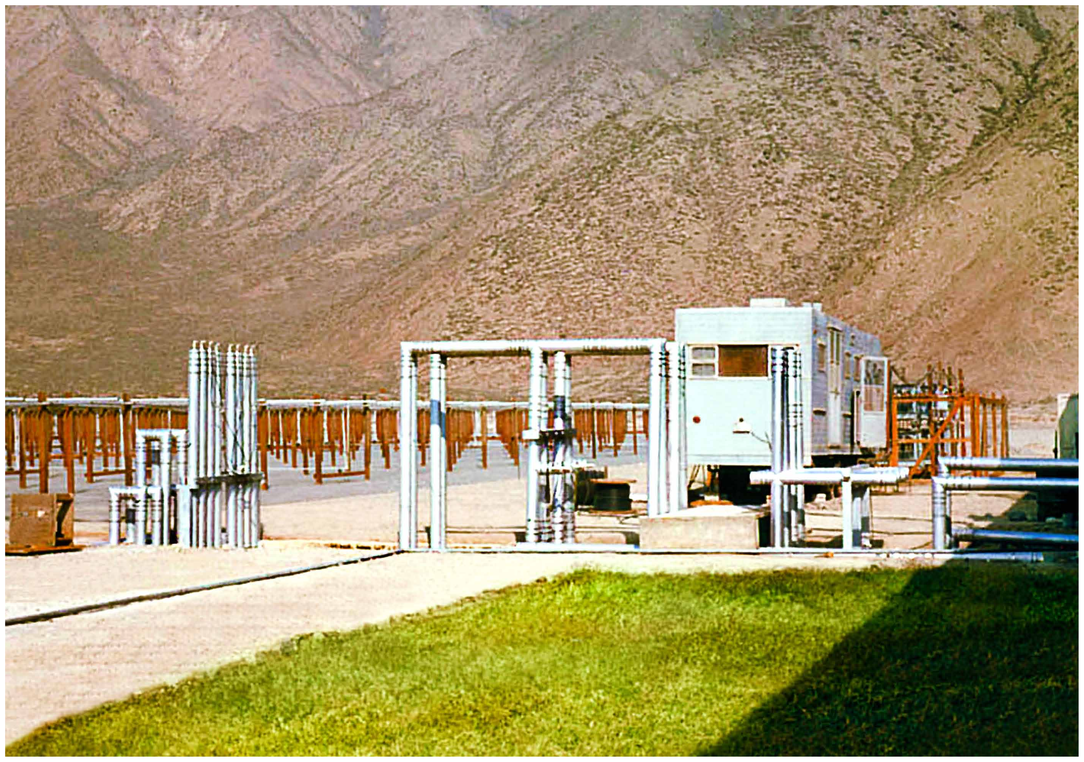
Construction continued: The site of the main lab building is just to the left of this view. The North Hill is in the distance across the valley. Posts in the southeast quad, on the right here, have already been set in concrete. Posts in the south west quad, on the left, are waiting to be set in concrete. (March, 1961)

Early construction of the antenna: Hector Cabada and workers placing the posts. (November, 1961)

Miller pachamanca:
Glen Miller had a big influence on engineering and construction of the JRO antenna array. This photo is the best record we have from the early days at JRO showing both staff members and their families together.
Some names are:
(Left to right) Glen, Bob Cohen, Armin Hoempler.
(November, 1961)

Operations start:
Installation of the last ceremonial golden array element.
(April, 1962)

Photo by Gerry Ochs



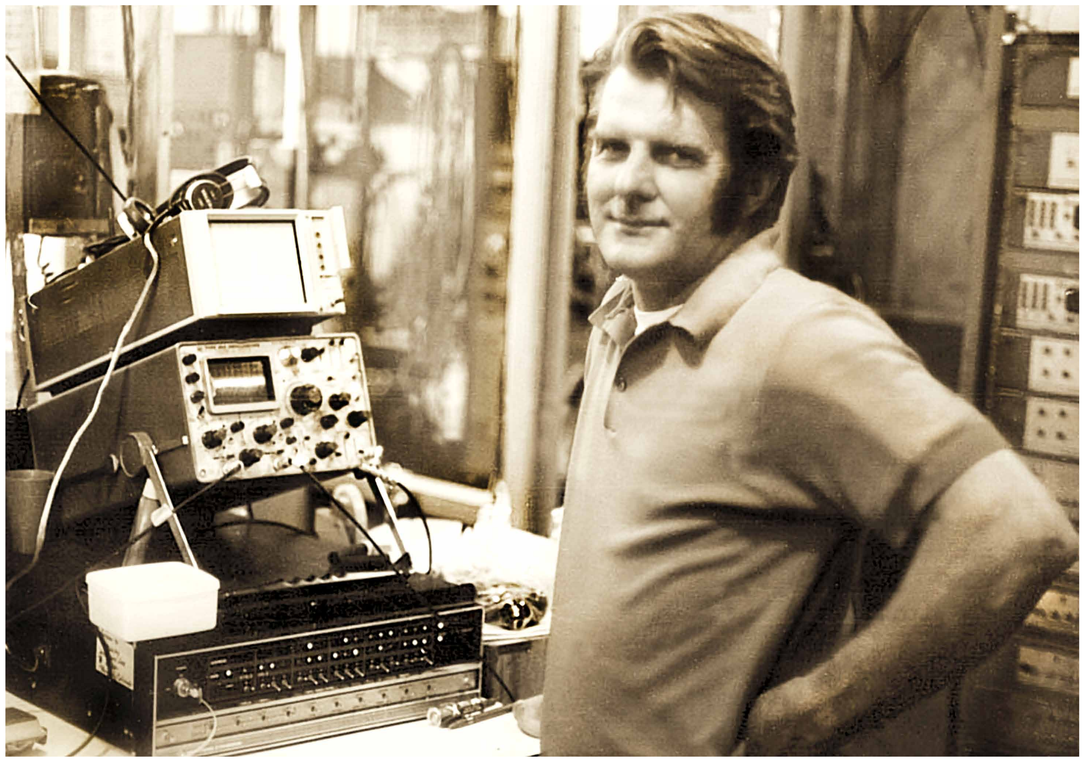
The Switch Yard:
The Switch Yard on April 1962.

Douglas Llense in the
transmitter electronics room.

Photo by Granger Morgan during
a visit to JRO in January 1966.

Huaychulo Conference (ISEA1):
By early 1962, we at JRO and IGP at Huancayo had been in contact with other research groups involved in Aeronomy (geophysics of the atmosphere) at many equatorial locations around the world. With encouragement from Ray Wright (Kenya), Dennis Osborne (Ghana), plus a few others, we decided to hold a world conference on research in Equatorial Aeronomy. In this photo, the conference drew many more prestigious participants than originally anticipated.
The location was a small conference center located near the town of Huaychulo (which is not far north of Huancayo in the high central valley of Peru).

Staff members:
This photo was provided by Ben Balsley. Most likely he was the photographer (since he's not in the picture). The occasion was probably close to the time when I left JRO to return to the Boulder Labs. The name labels seen here are a merge of recollections from Gerardo Vera, Don Farley, Ben Balsley, and myself. We believe that the fellow just above and left of Will Klemperer, and between Jose Mechato and Sixto Pinto, was the staff gardener at that time.

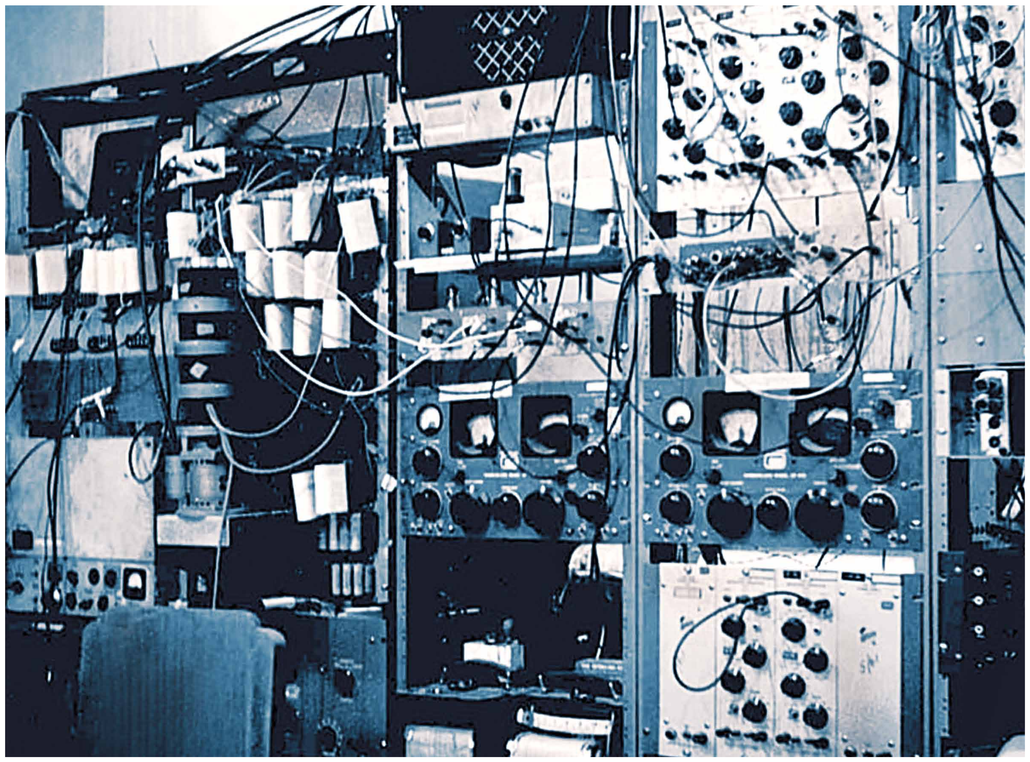


1970’s:
Ben marked this photo with the 1971 date. His change in hair style helps to place approximate dates on some of the other photos that are not marked with dates.

Photo by Ben Balsley.

Electronics:
This bank of high voltage (25 KV) capacitors stored enough energy to permit transmitting 5 megawatt pulses up to several milliseconds long, at a rate of roughly 100 per second. Though we had tried to provide barriers adequate to keep staff members a safe distance from the high voltage, near disaster struck one day. Quirico Sibille was hit by a spark reaching out from the capacitors, and effectively electrocuted. All staff had been asked to take instruction on mouth-to-mouth resuscitation. Fortunately, quick application of that technique revived Quirico!! After that incident, we learned it was possible for amazingly long sudden sparks to reach out from the seemingly shielded areas of the capacitor bank (even between pairs of those grounded angle-irons seen in this photo).

Photo by Ben Balsley.

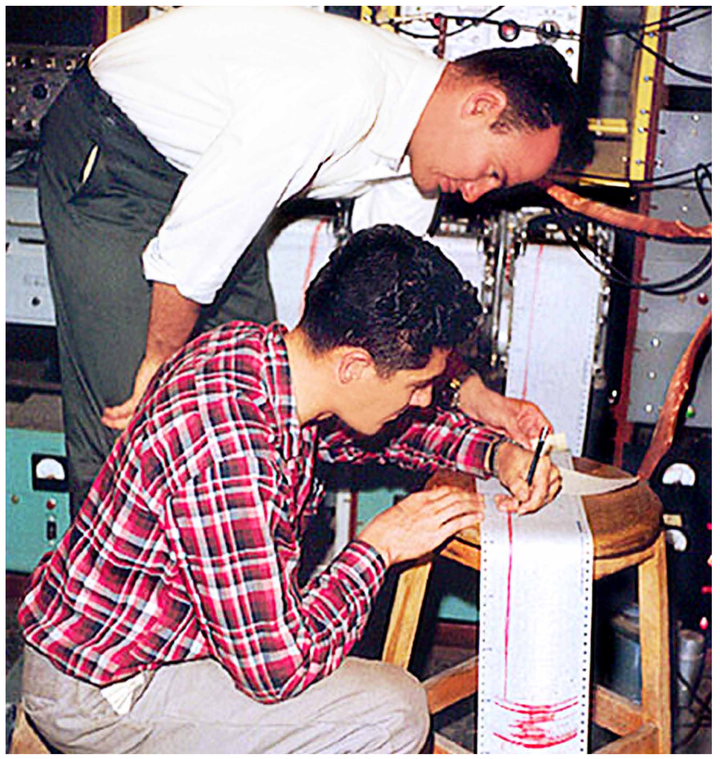


This is a remarkable picture taken in the very early days! I see the old mercury jet commutator used for the original F-region profile measurements. The mercury-jet can be seen as the 5-6 cylinders mounted vertically in front of the rack 25% of the way from the left hand edge of the picture. The large white “cubes” are the large capacitors Ken Bowles borrowed from the old electronic “integrator” that I spent a couple of years of effort on about that time. I also can see two original commercial Collins receivers we used, along with the front end (the small chassis above the right hand receiver). The two EA strip chart recorders (bottom center) could be records of sky noise Gerry Ochs was making using a portion of the big array as an interferometer. Not sure.

Photo by Jorge Heraud.

Individual staff members:
Ochs and Klemperer.

Photo by Granger Morgan



Main array:
This view included here as an artistic contribution.

Staff in action:
In 1966 at UCSD we were preparing to build three widely separated array antennas for use in measuring drift characteristics of the Solar Wind using signals from radio stars.

Huayco:
When we first considered installing the radar in the Jicamarca Quebrada, Dr. Jorge Broggi (elderly geophysicist of the Instituto Geofisico del Peru) warned of the danger of “Huaycos”. During the phenomenon we now know as “El Nino”, some rain falls along the coastal strip near Lima, but intense electric storms occur higher in the mountains along the western slope during the summer months of December thru March. This photo was taken from the point where our informal graded road from JRO to Lima crossed over the wash where the huayco flow concentrated (at least at that time). (February, 1961).

Air pollution and Bromeliads:
Enormous carpets of Bromeliads grow all along the coastal valleys from Ica north to Ecuador. Air pollution in the JRO valley was one very significant aspect not touched on at all in the photos I had included previously. The picture shows an example from JRO in 1959. The width of the bromeliad flower show in the inset is about an inch. This inset picture was taken on a Sacio farm not far from the Caral ruins near Huaral. In 2002, during the 40th anniversary meeting, I had the technology needed for good closeups, but the pollution had taken its toll throughout the JRO valley, and no sample flowers were available.

Classical Jicamarca view:
The main laboratory building is (roughly) at the west edge of the antenna array. For convenience, I have called the hill on the far side of the valley the “North Hill”. I took this photo from a point near the top of the “South Hill”, and situated roughly straight south from the center of the array. The occasion was a visit that I made in early 1966 for the purpose of estimating the magnitude of radio star scintillations along paths passing near the Sun (1966).

Photo by Ken Bowles

View from MeriHill:
The mountains around Jicamarca protect it from electromagnetic interference (2011).

Photo by Oscar Veliz