

ROT-54/2.6 CURRENT STATUS

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Herouni United Space Center Project, Armenia

EVN Technical and Operations Group Meeting, Bonn (Germany- on line)

May 5, 2020





Andranik Keshishyan

Radio Optical Telescope ROT-54/2.6

The Latitude : 40.3508609°

The Longitude: 44.2417924°

The Altitude: 1711 m

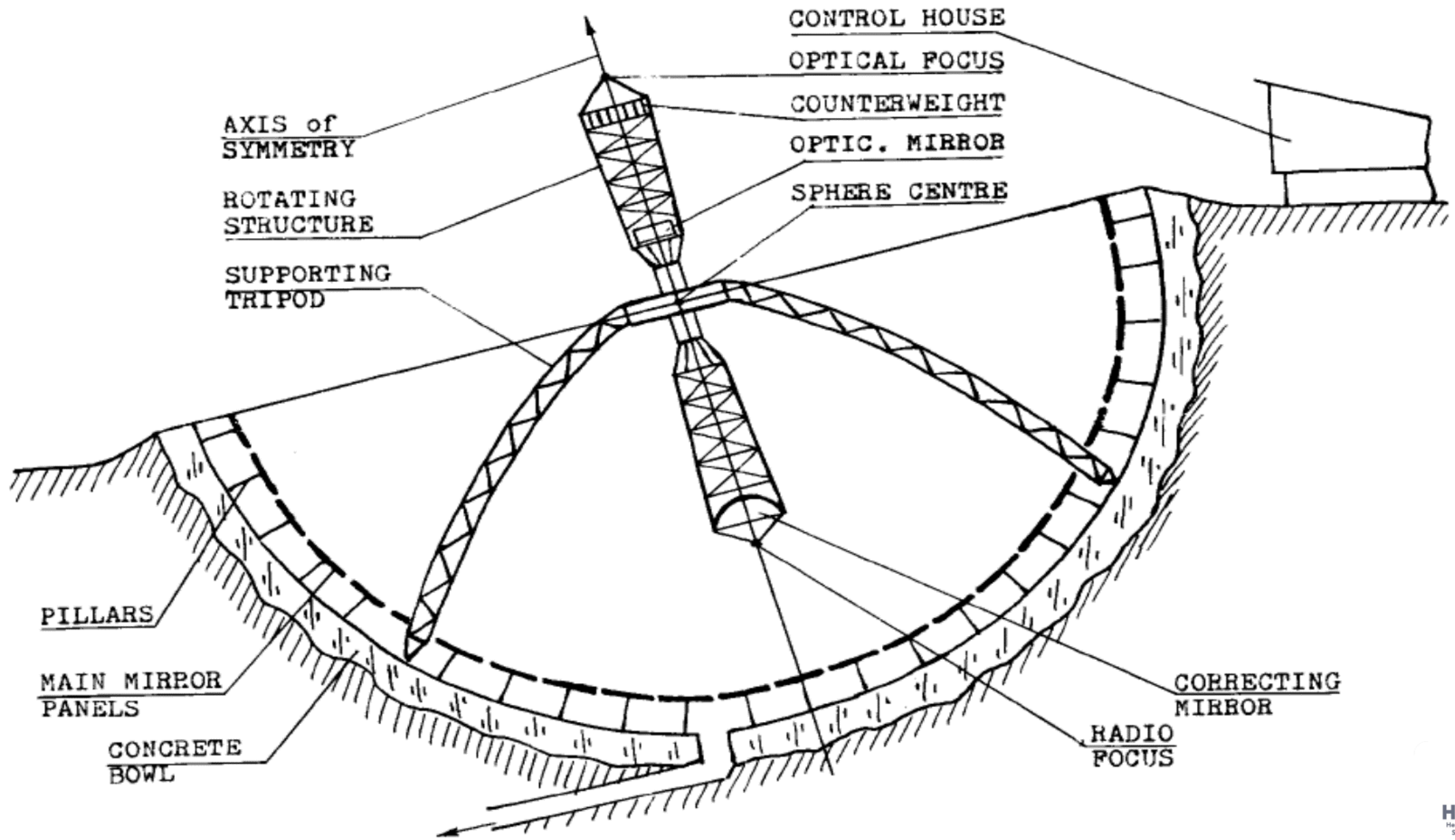




Professor Paris Herouni

The ROT-54/2.6 includes the Radio Telescope with Double Reflector Spherical Antenna with the main reflector 54m in diameter (an effective diameter is 32m) and secondary reflector of 5m aperture diameter, and the Optical Telescope with diameter of mirror 2.6m and focus distance of 10m.

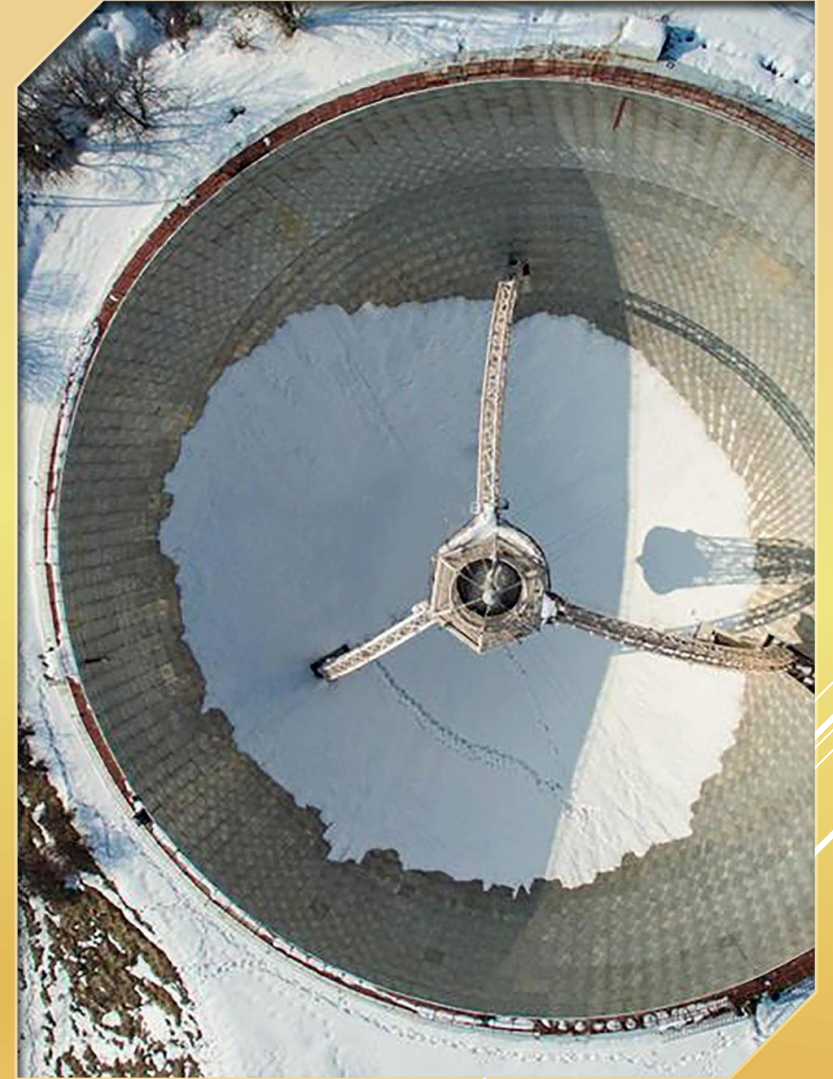


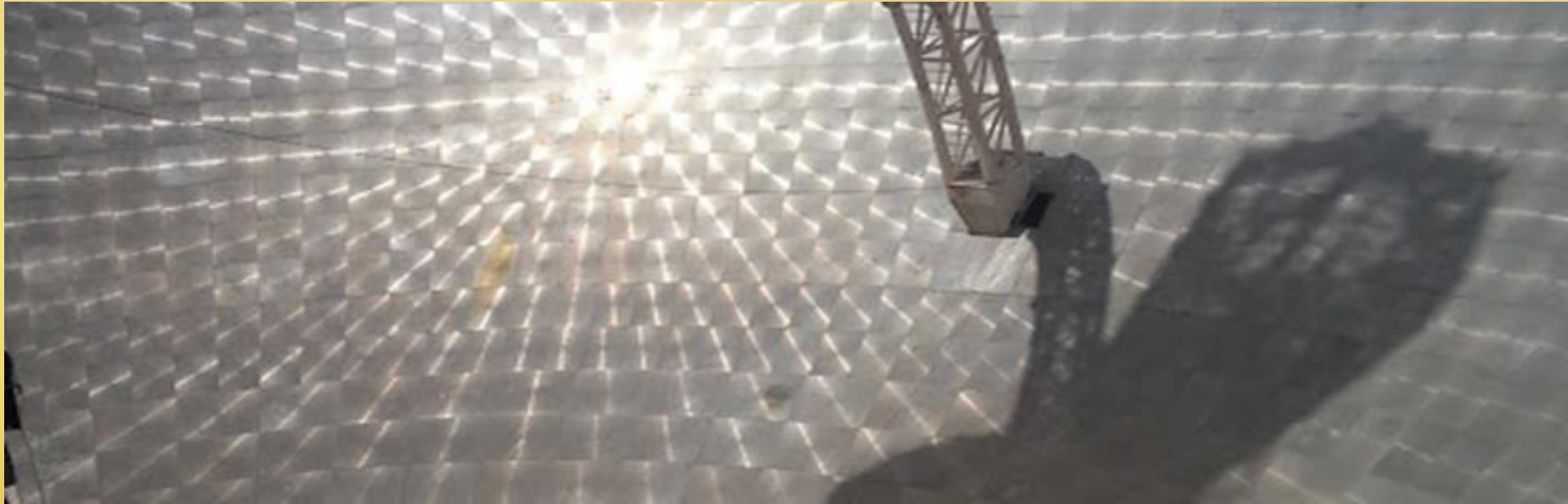


Schematic view East - West (ICAP 1989, P.M. Herouni "The First Radio Optical Telescope")

The theoretical and experimental studies on the Antenna (mainly, measuring the antenna parameters, and in small amounts – radio-astronomical observations) during the past 30 years have been carried out under the conditions of very limited funding, mainly due to the enthusiasm of scientists and the staff.

Since 2012 the unique tool ROT-54/2.6 was not used as intended because of the lack of financial means.





The Sun reflected from the main spherical mirror

“Reflection varies gradually from panel to panel and is a reasonable indication that even today the panel setting might well be acceptable for operation in the centimeter wavelength regime.”

Ir. MSc. C.G.M. van 't Klooster

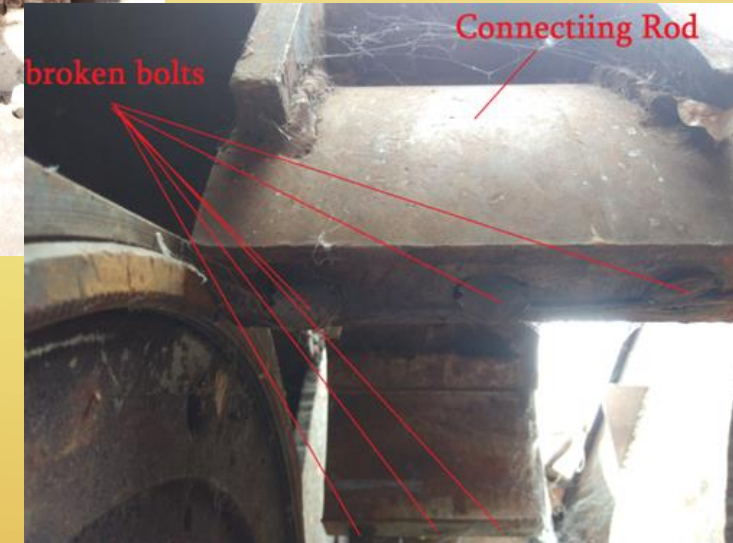
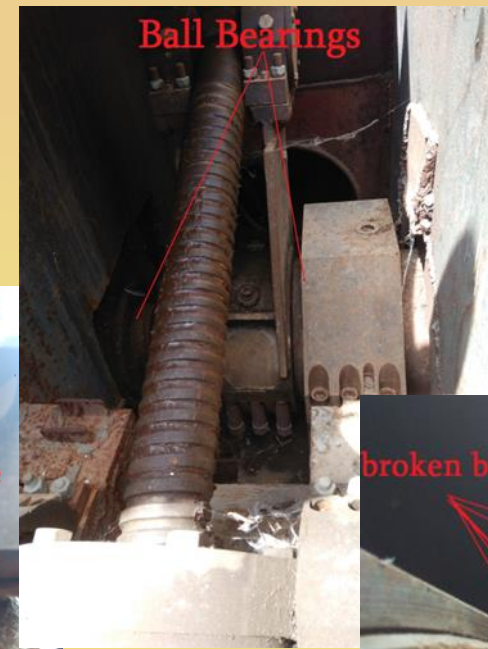
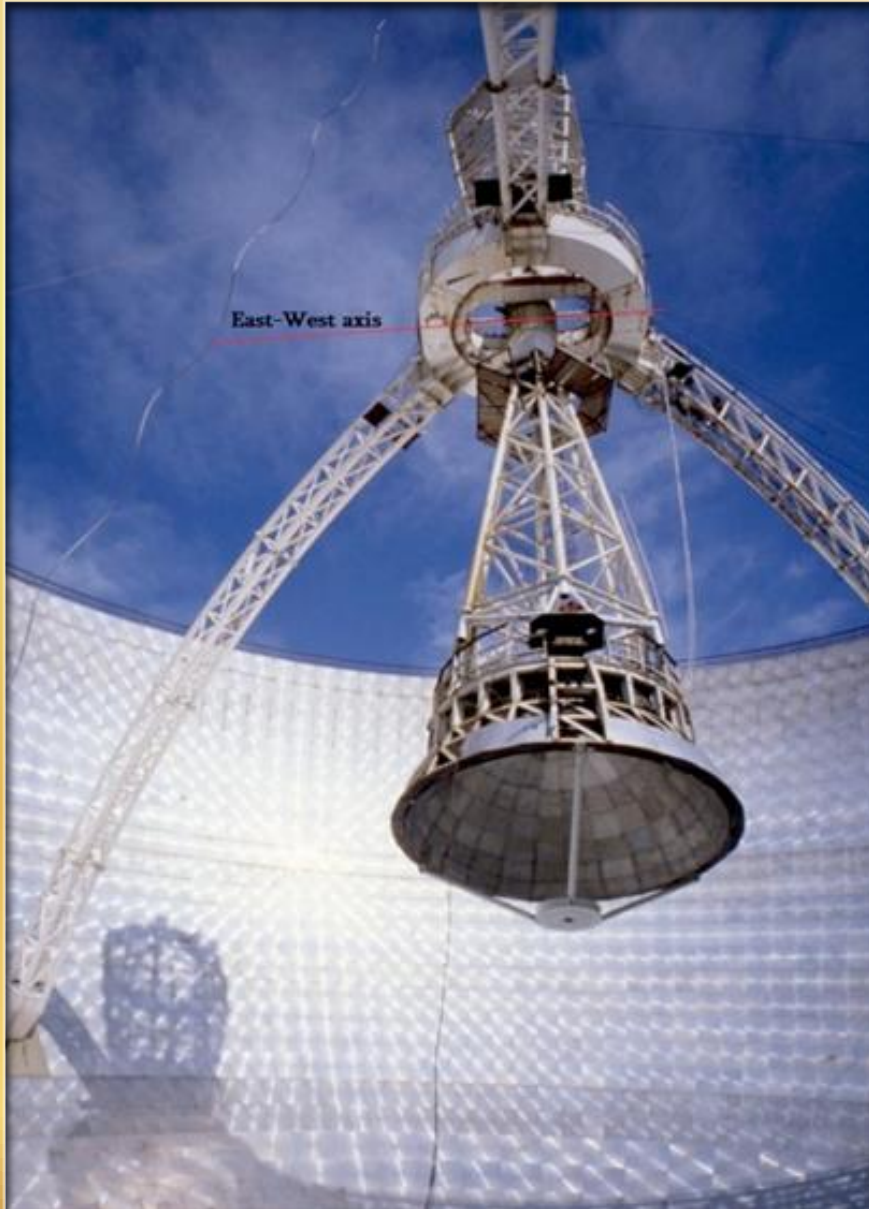
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Orbital radar image of ROT taken in C band

Image provided by Kees van 't Klooster <kvtklooster@gmail.com>



Currently the East-West axis is blocked on purpose with welded brackets. The East – West axis is not damaged: it is only fixed by welding. It will function after repairing of the Connecting Rod (Brackett).

Revitalization of the ROT-54/2.6 is a subject of the **Herouni United Space Center (HUSC) Project** now.

The new Control System should be designed and installed.
The RF equipment as well as hard and soft for data collection and processing is necessary to obtain.

A careful inspection is needed.

We applied to the **EVN JIVE** for conducting scientific-technical expertise of the ROT-54/2.6 radio-optical telescope.

The formation of an international advisory group is ongoing procedure for now.





Each year from 1968 till 1990 the All-union Conference on Radio Telescopes and Radio Interferometers held in Yerevan, Armenia (that time a part of the USSR).

After 30 years of the gap in the scientific activities field in our country, we try to revive the scientific heritage of Professor Paris Herouni in Armenia.

We will keep the tradition. Please, look at the link www.herouni.am

I am inviting you to the XXIIIrd International Conference on Radio Telescopes and Radio Interferometers (RR2020) to be held in Yerevan, Armenia 17-18, September 2020.

This year the main issue will be:

Engineering and Scientific aspects of the revitalizing and modernization of the ROT-54/2.6 Radio Telescope

Thank you for attention

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HUSC
Herouni United
Space Centre

