

# **JUMPING JIVE WP3:** *New Partnerships*



*Leonid Gurvits*  
Joint Institute for VLBI ERIC



***JUMPING JIVE final meeting***  
12 October 2021

# JIMPING JIVE WP3 scope



- **Main focus – enhancement of JIV-ERIC within EVN**
  - Key words: globalisation [of VLBI], new partnerships & SKA [@VLBI]
- **Incentives for joining the [EVN] VLBI “club” & JIV-ERIC**
  - Involvement in cutting-edge research
  - Direct access to intellectual property of the global science endeavor
  - Joint exploitation of the global VLBI potential for national sci priorities
    - *Plus practical benefits of being ERIC member (e.g., VAT exemption)*
  - Joint exploitation of the educational and PO potential of VLBI
- **Implementation of WP3 in three tiers:**
  - Tier 1 – experienced and active VLBI centres – on the way to JIV-ERIC
  - Tier 2 – “EVN-unaffiliated” user groups and facilities;
  - Tier 3 – ”seed” VLBI activities with new groups (in Europe and beyond)

# WP3 Tier 1 “renovation”



- **NAOC CAS (China), JIVE associate since 2005**

- Participation in JIV-ERIC on the basis of 2-3-year-long MoA's
- The latest MoA for 2019-2021 signed in 2019
- New items of collaboration – “exponential” developments in China



- **Latvia – VUC-VIRAC, JIV-ERIC member**



- New Minister, new management at the Ministry since 2019
- Several changes of administration at VIRAC over the past 6 years
- Need for continuing persistent “coaching”

- *Collaboration with EVN and JIVE – a major “ingredient” for involvement in JIV-ERIC*
- *Participation in BAASP-2019,-21*
- *VIRAC Advisory Board (Gurvits)*
- *Need for a strong case in the national science agenda*
- *Educational component needs further support*



# WP3 Tier 1: JIV-ERIC membership



- **INAF (Italy), founding JIVE partner since 1993**
  - Until 2020: participation in JIV-ERIC on the basis of biennial MoA's
  - Since 2021: Italy – a member of JIV-ERIC
  - New items of collaboration - joint work on advanced projects (e.g., THEZA)



First meeting of the EVN CBD, 1985



Lucia Padrielli, 1990s

*History of radio astronomy in Italy:*

<https://info.ira.inaf.it/wp-content/uploads/2021/07/Storia-IRA-EnglishVersion1.pdf>

# WP3 implementation: Tier 1

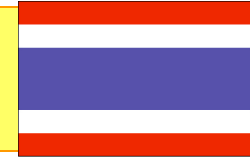


- **Objectives:**
  - Facilitating joint science, R&D, educational and PO activities with organisations/countries already collaborating with EVN and JIVE;
  - preparation for admission of the Tier 1 countries in JIV-ERIC.
- **Partners:** countries and organisations already involved in various ways into EVN, JIVE and/or JIVE-related FP7 or other joint activities
  - *Aalto University and Finnish Geospatial Inst., FI*
    - *Search for a strong sci case; space science applications most attractive*
  - *Center for Astrophysics, N. Copernicus U, Toruń, PL*
    - *New leadership at the TCfA*
  - *Respective ministries in FI and PL approached by NWO, July 2018*
    - *consultations ongoing;*
    - *In both countries, national “road maps” have VLBI as important components (2021)*
  - *Clearly spelled out position of EVN CBD on JIV-ERIC membership is very important!*
  - *Since 2021: representatives of respective organisations are observers at JIVE Council*

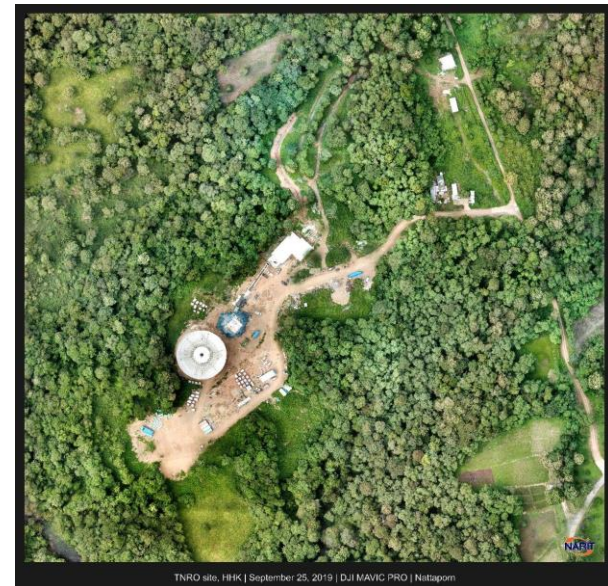




# WP3: “Tier 1.5”, Thailand



- **New radio astronomy facility – a 40-m telescope**
  - Managed by National Astronomical Research Institute of Thailand (NARIT)
  - 40-m radio telescope (a copy of Yebes), TNRT, under construction
    - *Major construction to be completed in 2020*
  - Intention to become an EVN member
  - NARIT & JIVE MoA signed in Nov 2019
  - NARIT association with JIV-RIC to commence once the telescope operates



# WP3 implementation: Tier 2



- **Objectives:**

- ground-work for establishing/broadening of involvement of scientists, engineers and students from Tier 2 countries/organisations in VLBI activities

- **Partners:** organisations involved in VLBI activities consistent with EVN/JIVE mission but not members of either

- Konkoly Observatory, Budapest, HU

- *one of the most active VLBI user groups unaffiliated with EVN*
- *official partner (MoU, 2019) on JUICE VLBI (PRIDE)*



- Institute of Applied Astronomy, St.Petersburg, RU

- *major EVN partner*
- *Intertest in strtengthening VLBI sci collaboration with JIVE*



- Auckland U of Technology, Auckland, NZ

- *JIVE-AUT MoU (2010+) implementation underway*
- *Interest in Global VLBI Alliance (GVA) cooperation*



- University of Tasmania, AU

- *strong interest in GVA*
- *official partner (MoU, 2019) on JUICE VLBI (PRIDE); **very helpful in COVID times***



# WP3 implementation: Tier 3



- **Objectives:**
  - assistance in creating a case for VLBI research and R&D
  - assistance in national educational and PO activities
- **Partners:** countries/organisations with declared interest in radio astronomy and VLBI, but without established facilities and/or sizable user groups. Examples:
  - Santiago University (Aviero) et al., PT
    - *Involvement in SKA, SKA-related technology*
    - *VLBI antenna(s) on Azores*
  - Herouni Centre, ROT-54/2.6 telescope, AM
    - *Assistance in resurrection of the existing 54-m radio telescope*
  - Hellenic radio telescope, Thermopilae, GR
    - *Transfer of the satcomm 32-m antenna initiated/supported*
  - National Space Facilities & Control Center, Kyiv - Zolochiv, UA
    - *operational 32-m deep space comm antenna*
    - *a well-established radio astronomy school in Kharkiv is assisting*





# Tier 3, Herouni radio telescope



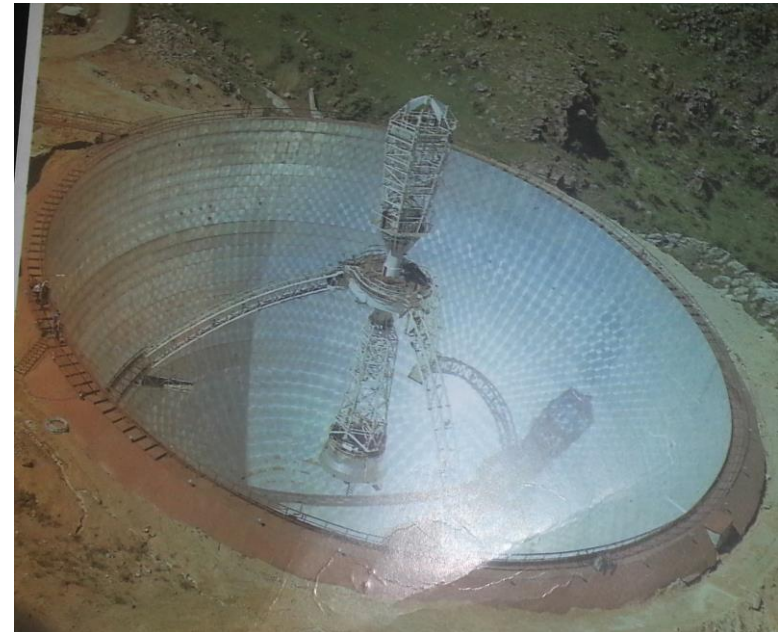
Andranik Keshishyan



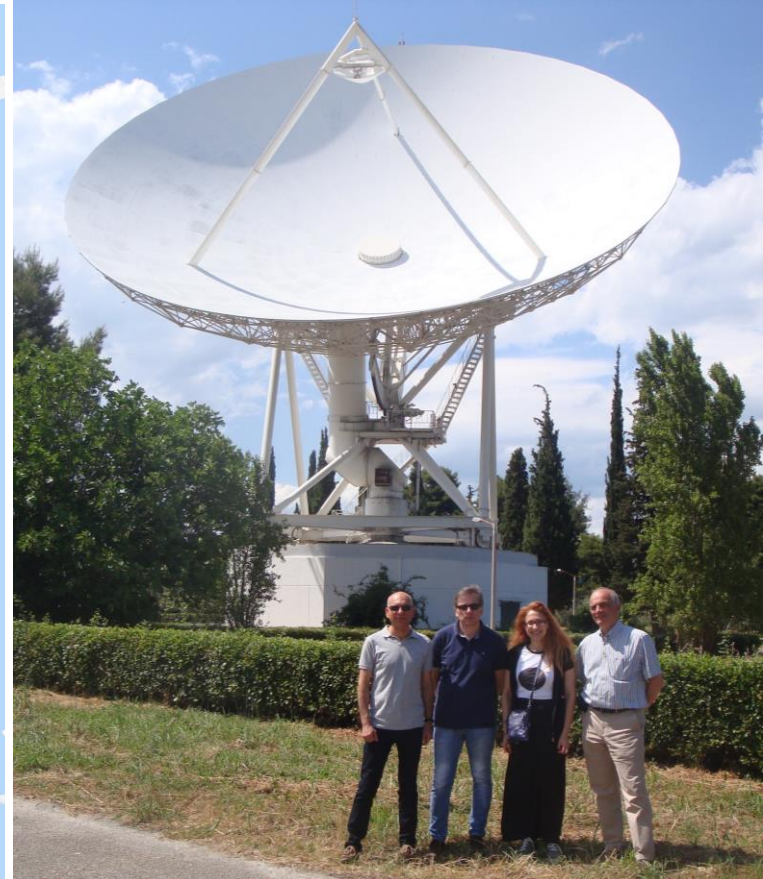
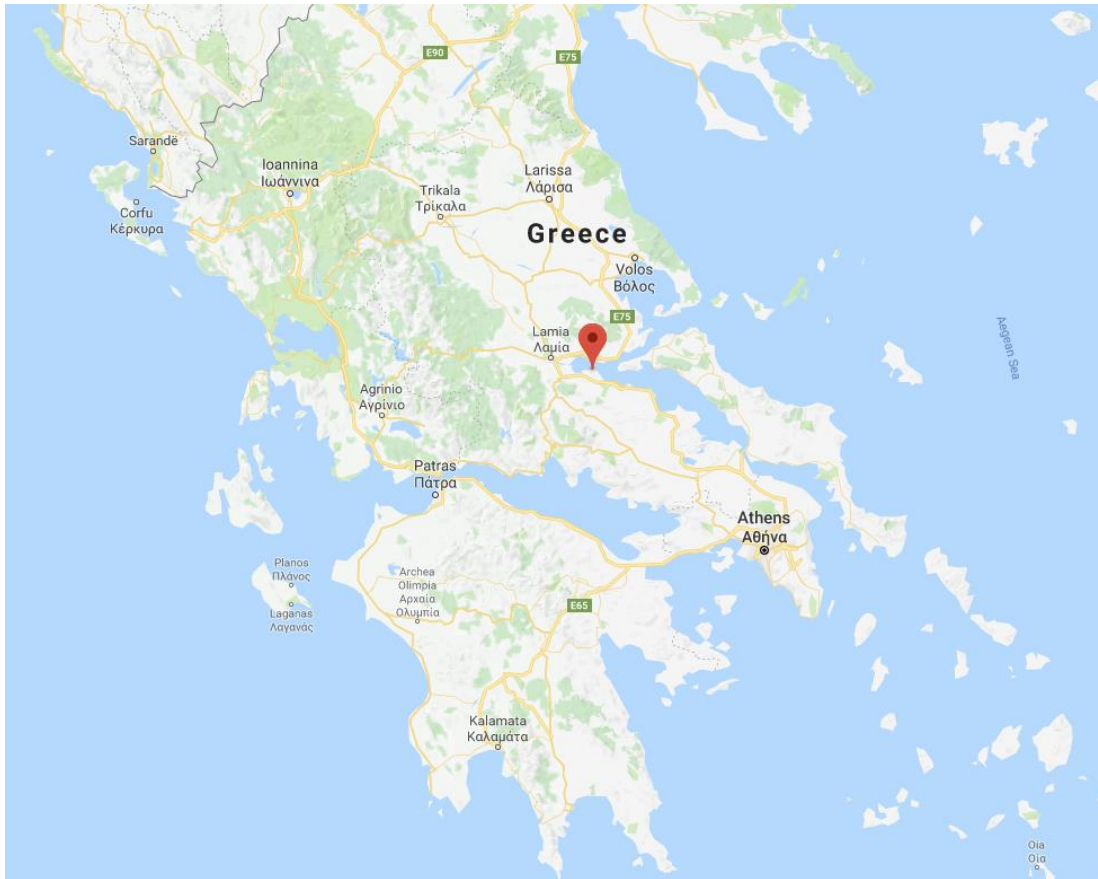
- Joint action of JJ WP3 and WP5 (+ EVN TOG)
- Site visit in March 2018
- International advisory board under formation (Dec 2019)
- 54 m “Arecibo-like” radio reflector for dm-mm wavelengths



EC support for partnership to be invoked



# Tier 3, Hellenic radio telescope



- 32 m Hitachi satcomm antenna
- Joint action by JJ WP5 and WP3
- Site visit in May 2019 by P. de Vicente and L. Gurvits (repor available)
- Formation of a national university alliance underway



# Tier 3, Zolochiv radio telescope



Zolochiv 32-m antenna  
February 2019



Workshop at the Zolochiv site, Oct 2019  
WP3 represented by F. Colomer

- 32 m deep space comm antenna in good electro-mechanical state
- Joint action of JJ WP
- Interest to join EVN, eventually – JIV-ERIC
- Unclear (national) budgetary arrangements
- Important “tutoring” by the Radio Astronomy Institute in Kharkiv (O.Ulyanov et al.)

# JJ WP3 final reflections

- The formal goals of WP3 achieved (albeit with some deviations from the original activities contents)
  - ... a good sign of flexibility!
  - 25 organisations in 23 countries engaged (see D3.3), more than planned
- New partnerships are crucial for development of EVN and JIV-ERIC
  - ... “soft [facilitating] money” come and go, the tasks remain...
- JUMPING JIVE is a good example of supporting the natural tasks
- ERICs should be eligible for continuing support of WP3-style tasks
  - an issue for the ERIC Forum?
- WP3-like activities will continue in synergies with WP7, WP5 and others
- Need for a better and unambiguously formulated administrative requirements:
  - WP3 is essentially about networking; not suitable for working hours accounting
  - Personal contacts are essential