

## Prof. Arnon Karnieli

The Remote Sensing Laboratory  
Jacob Blaustein Institutes for Desert Research  
Ben-Gurion University of the Negev  
Sede-Boker Campus 84990, ISRAEL  
Tel: +972-8-6596855 Mobile: +972-52-8795925  
Fax: +972-8-6596805  
E-mail: [karnieli@bgu.ac.il](mailto:karnieli@bgu.ac.il)



## פרופ' ארנון קרניאלי

המעבדה לחישה מרחוק  
המכונים לחקר המדבר ע"ש יעקב בלאושוטין  
אוניברסיטת בן-גוריון בנגב  
קמפוס שדה-בוקר 84990  
טלפון: 08-6596855 נייד: 052-8795925  
פקס: 08-6596805

<http://www.bgu.ac.il/BIDR/research/phys/remote>

*Science from Above*

February 18, 2020

Dear colleagues,

### Re: VEN $\mu$ S periodic news – February 18, 2020

#### 1 VEN $\mu$ S mission updates

In the last VEN $\mu$ S Joint steering committee, ISA and CNES agreed on a new mission profile, adapting the duration of the already decided phases, and adding new phases:

- The scientific mission (VM1) at 720 km will be extended until the end October 2020.
- The technological mission comprising the orbit lowering phase (VM2) with a duration of 6 months, followed by a phase (VM3) at 410 km using the Israel Hall Effect Thrusters (IHET) demonstrating the mission enhancement capabilities for 3 months and a new phase (VM4) with a duration of 3 months to raise the orbit at 560 km.
- Israel will be observed in VM3 in revised strips according to the VEN $\mu$ S maneuver capabilities.
- A new scientific mission (VM5) is then introduced at 560 km, with a one-day revisit, for a minimum of one year that could be extended depending on the fuel budget and ISA and CNES needs.

The table below summarizes the main characteristics of each phase:

	Missions	Latitude (km)	Swath (km)	Spatial resolution (m)	Revisit time (days)	Phase duration (month)
VM1	S+T	720	27	5	2	36
VM2	T	720 to 410		no imaging		6
VM3	S+T	410	15	2	2	6
VM4	T	410 to 560		no imaging		3
VM5	S	560	21	4	1	12-24 ?
S = Scientific mission						
T= Technological mission						

## 2 Technological mission month

The dates of the technological mission were changed to Jan. 8 – Feb. 8, 2020. The scientific mission was resumed on Feb. 9, 2020.

## 3 Special issue in Remote Sensing – call for papers



*remote sensing*

an Open Access Journal by MDPI

Consider submitting an article to the special issue of the Remote Sensing journal: "[VENUS Image Processing Techniques and Applications](https://www.mdpi.com/journal/remotesensing/special_issues/Venus)".

[https://www.mdpi.com/journal/remotesensing/special\\_issues/Venus](https://www.mdpi.com/journal/remotesensing/special_issues/Venus)

Deadline for manuscript submissions: 31 December 2020

Accepted papers will be published continuously in the journal (as soon as accepted) and will be listed together on the special issue website.

## 4 The Alexander River chances its colors



- On 05 May 2019, the Alexander River looks green due to high chlorophyll content. The river's outflow to the Mediterranean, which is managed by the Drainage Authority, is blocked.
- On 23 August 2019, the river's water looks blue and clear. The outflow is closed.
- On 23 November 2019, the river's water is black due to olive oil production pollution flowing from the West Bank. The outlet is open and a high concentration of various pollutants continues to the sea.
- On 06 January 2020 river's water looks brown since sediments are washed from the surrounding areas and drained to the sea through the river.

For more information: Arnon Karnieli ([karneili@bgu.ac.il](mailto:karneili@bgu.ac.il))



## 5 Multiangular views

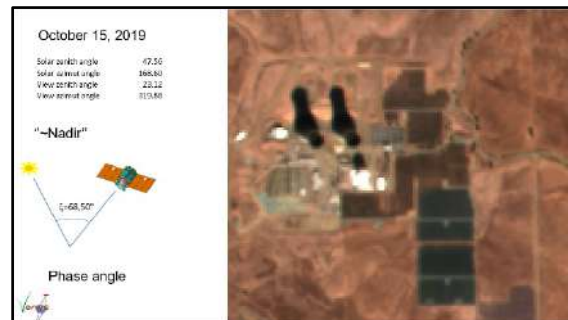
Acquisitions under 3 different view angles from the same orbit are available for one site in California, USA, close to Sacramento.

You will find the data under the site names Gallo, GalloM30, GalloP30:

<https://theia.cnes.fr/atdistrib/rocket/#/search?page=1&collection=VENUS&location=GALLO>

<https://theia.cnes.fr/atdistrib/rocket/#/search?page=1&collection=VENUS&location=GALLOM30>

<https://theia.cnes.fr/atdistrib/rocket/#/search?page=1&collection=VENUS&location=GALLOP30>



For more details contact: Gerard Dedieu ([Gerard.Dedieu@cnes.fr](mailto:Gerard.Dedieu@cnes.fr))



## 6 Previous VEN $\mu$ S Newsletters

Previous VEN $\mu$ S Newsletters along with more information about VEN $\mu$ S can be read in the following link:

<https://karnieli-rsl.com/newsletters>

Best wishes,

Manuel and Arnon

Ben Gurion University

