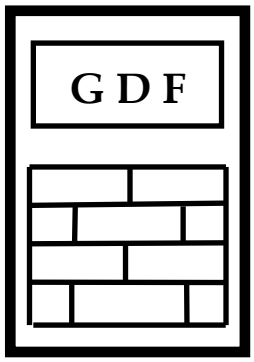
GDF DATA BANKS BULLETIN

THE 20th ANNIVERSARY



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ISSN 1453 - 1674

Content

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Interaction of quartz crystals with bio-fields. II. Differential measurements on pairs of commercial quartz oscillators.

New vision on material science opens a new era in the knowledge of Life.

In the previous note [1] preliminary experiments were carried out on several resonators in view to evidence the influence of daily variations of bio-fields on their dc voltage-current characteristics. The promising results were obtained with differential amplifiers on each resonator by compensating with Uref for output Udc adjusted as close as possible to zero. This maneuver was very difficult and resulted Udc values were affected by great noise even at low amplification (A= 12.2 to 50.2), so the subsequent idea was to consider differential measurements on pairs of resonators at much higher amplification.

Initially, I expected that Udc would be much noisy and without any significances, especially for identical pairs of resonators, but the results were surprisingly positive. In the present note some results are presented on 6 pairs of quartz resonators obtained in the same experimental conditions as the previous ones, but with A=1000, on the period of 35 days of continuous measurements.

Figure 1 shows the map of resonator pairs considered, fixed on a printed circuit board and its orientation in the Earth's magnetic field. Each resonator in the pair was connected to +5 V via a resistor of 200 kOhm at pins marked as – and + and to the differential amplifier as in the Figure 2 ref.[1]. There are also mentioned the channel number of the data logger associated to each pair of resonators. Experiments with different orientations of resonators were performed, but keeping the place of pairs on the board in view to evidence eventual influence of Earth's magnetic field, but majority of experiments were obtained in positions shown in Figure 1.All resonators were of normal size, excepting small and medium watch ones (Q-ws and Q-wm, respectively) as it was shown in Figure 1 ref.[1].

Two pairs of Q-2 MHz resonators considered as identical were tested in view to evidence repeatability and reproducibility of measurements.

Results and discussions. Condensed forms of a small selection of results are presented in the following. Low level of noise allows to consider only raw Udc data, but in the form of

$$Udco = Udc - average(Udc) \quad (1)$$

where average(Udc) is calculated on the overall each 24 hour data in view to compare on the same graph different pairs of resonators. It is important to mention that even for pairs of identical resonators Udc values have different offset values.

Pairs of 2Q-2MHz, 2Q-4MHz and Q-4MHz-Q-ws systematically have the same pattern of daily variation of Udc. Pair 2Q-8MHz shows always a different, lower level and noisy Udc. Pair Q-4MHz-Q-wm frequently shows symmetrically opposite variation as the first mentioned pairs, but sometimes have strange behavior.

The same pattern occurs for all 6 pairs of resonators by changing pins of each or both resonators in the pair, but keeping the same connection polarity to the differential amplifier. To be more exact, for instance for the pair Q-4MHz – Q-wm the pins – and

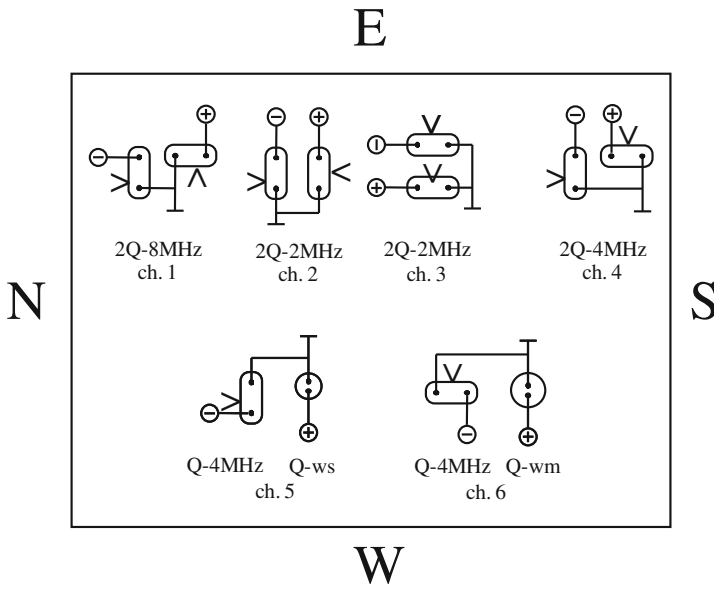


Figure 1. Top view of the map of crystal pairs. Signs – and + mark connections to the differential amplifier inputs (A=1000). Sign ">" marks the side where the label is written on packages.

GND for Q-4MHz are mutually changed and/or also the pins + and GND for Q-wm, the pattern of variation does not change. The pattern keeps if the orientation of resonators is changed.

Figures 2-19 shows daily results for the three pairs of resonators showing the same pattern of variation Udco(HOD). The two pairs of 2Q-2MHz have identical pattern and magnitude for Udco, but with different offset of Udc probably given by amplifier.

Figures 20 and 21 show in more detail variations for the four pairs with the same pattern and for the two pairs with Q-watch, respectively, at the Orthodox Easter Day. For a better comparison the value of <Udc>o(HOD) (see eq. 1, ref.[1]) is considered.

Concluding remarks

The common pattern of daily variation of Udc(HOD) for the 4 pairs of resonators is obviously connected to the variations of environmental bio-fields as it was revealed by previous measurements on water and electrolyte aqueous solutions [2-4].

The pattern is characterized by a main decrease peak of Udc at around HOD = 8 am sometimes followed by other decreasing peaks, no matter the orientation of applied dc electric field on each resonator relative to Earth's magnetic field. This can be associated to the effect of Sun on bio-fields.

References

[1] G. Dragan, Interaction of quartz crystals with bio-fields. I. Preliminary experiments on commercial quartz oscillators, GDF Databanks Bull., 20(6), 2016.

[2] G. Dragan, DTA study of water freezing (I-VII), GDF Databanks Bull., 17(5), 2013.

[3] G. Dragan, Mental field-water interaction as evidenced by Isothermal Convection Flow Calorimetry (ICFC). (I, II), GDF Databanks Bull., 18(2), 2014.

[4] G. Dragan, Evidence of human mental field by ac-electric conductivity in electrolyte solutions. 1. Bio-energy, GDF Databanks Bull., 19(6), 2015.

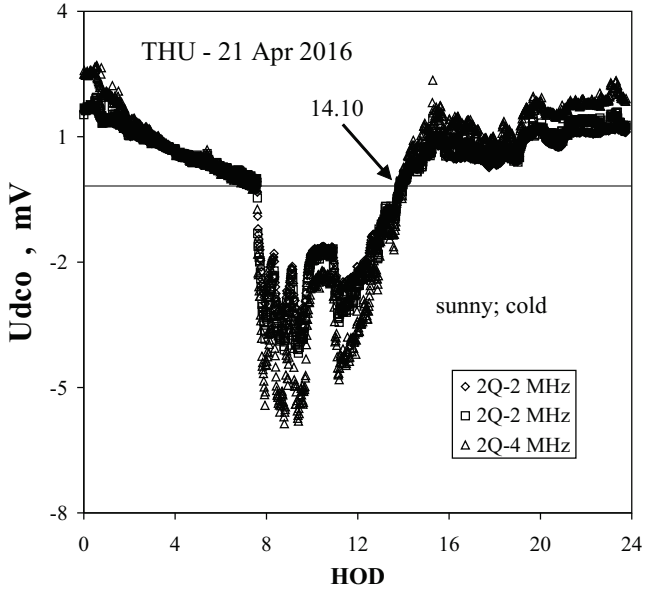


Figure 2.

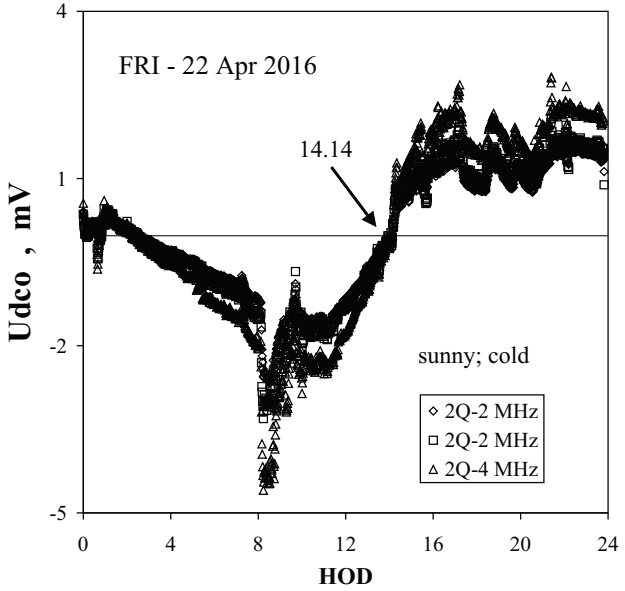
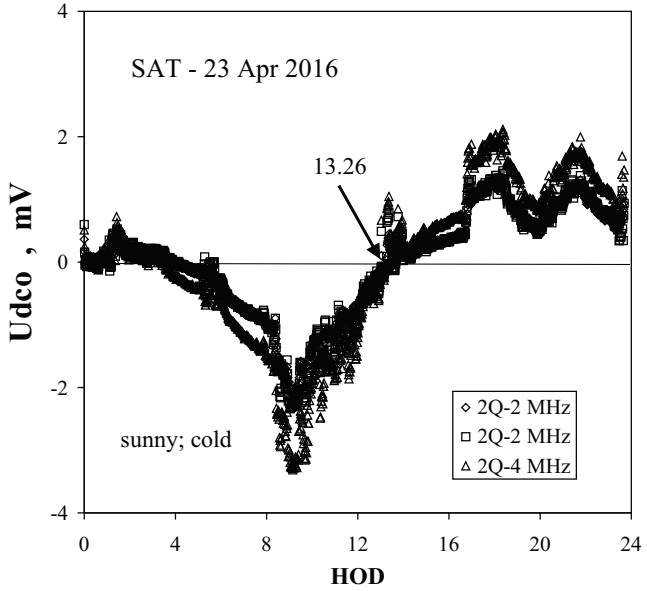


Figure 3.



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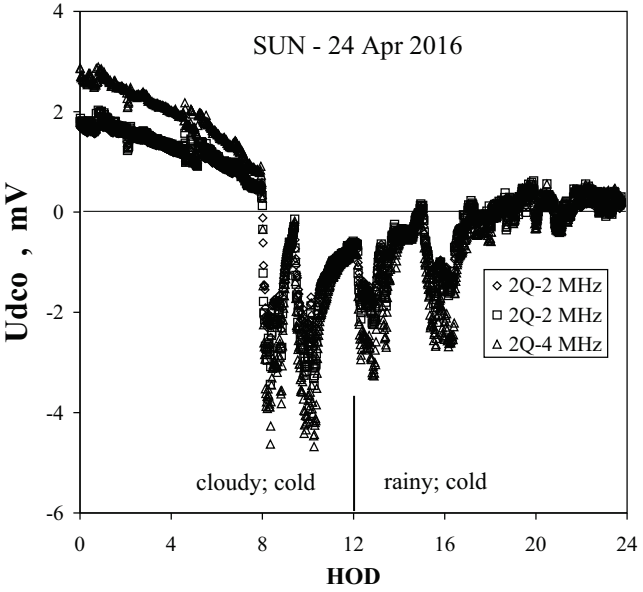
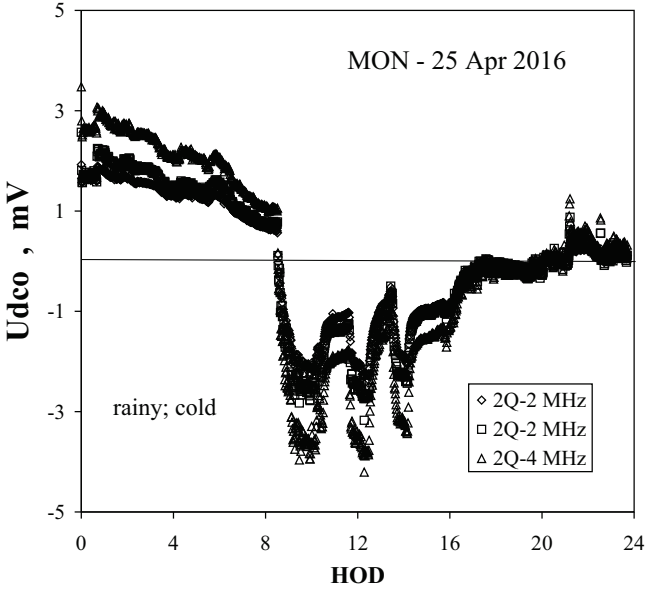


Figure 5.



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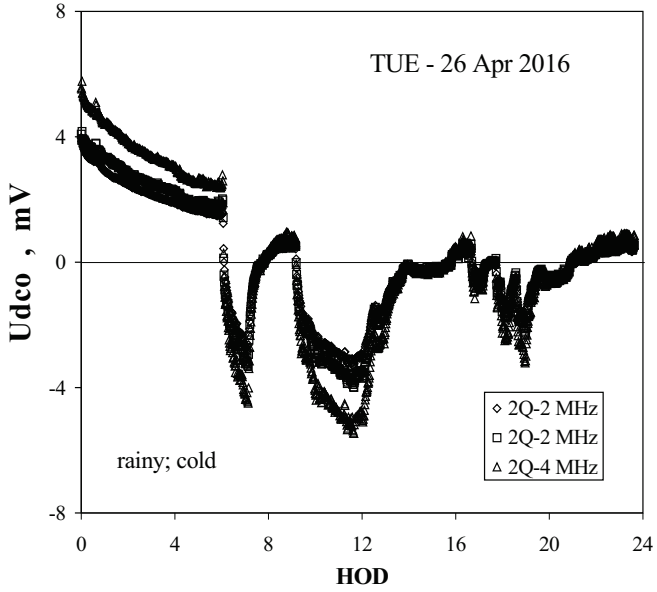

Figure 7.

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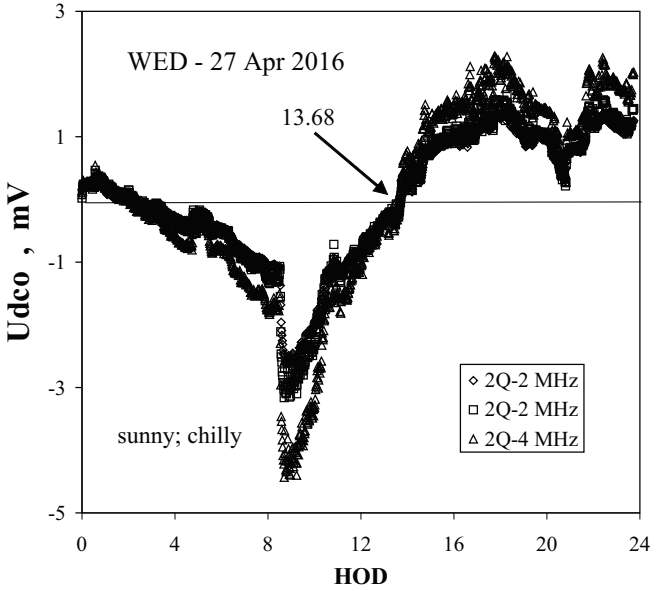

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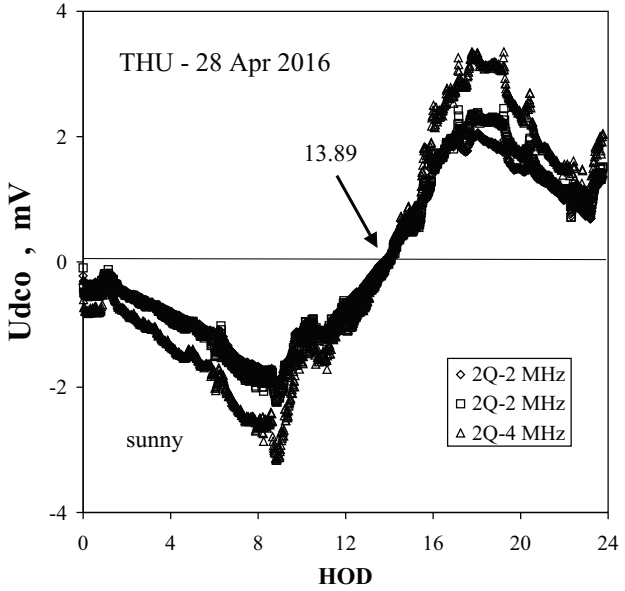

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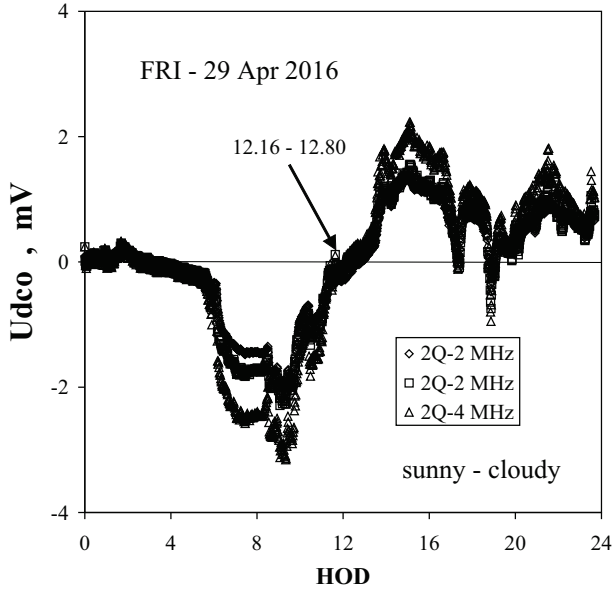

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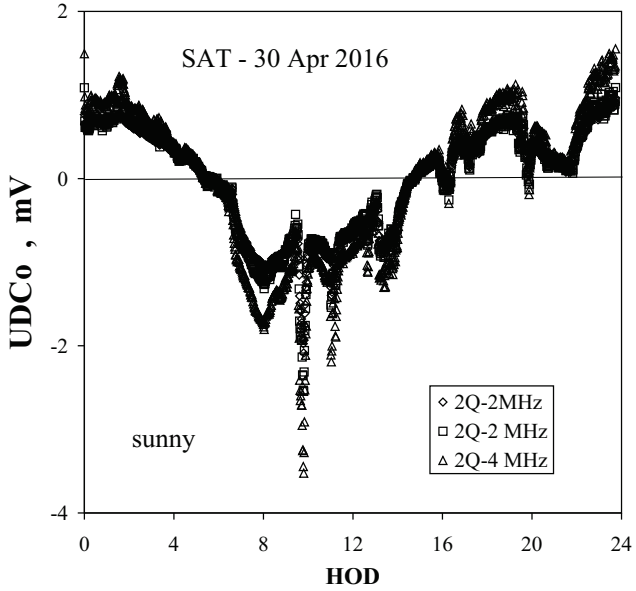

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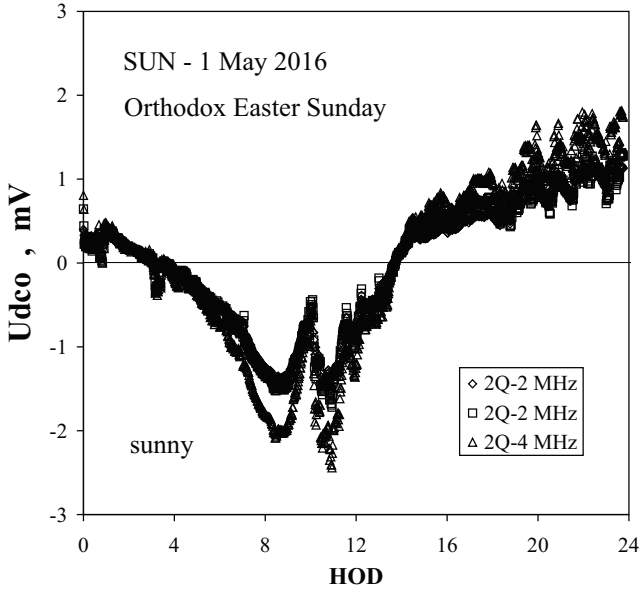

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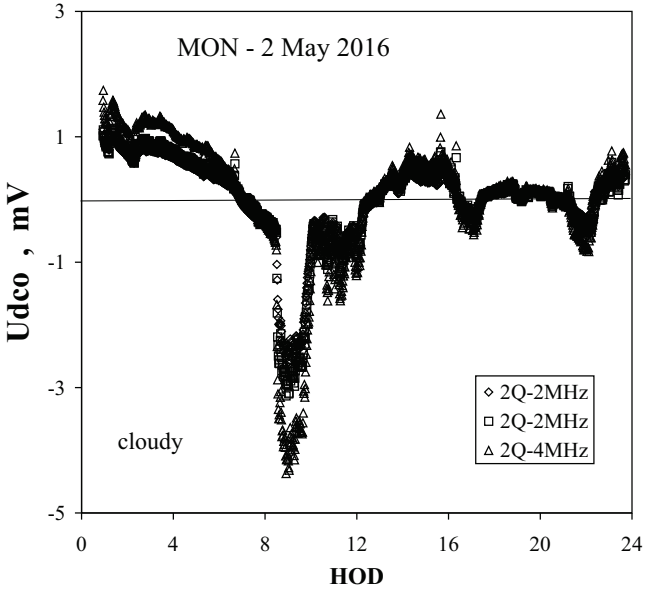

Figure 13.

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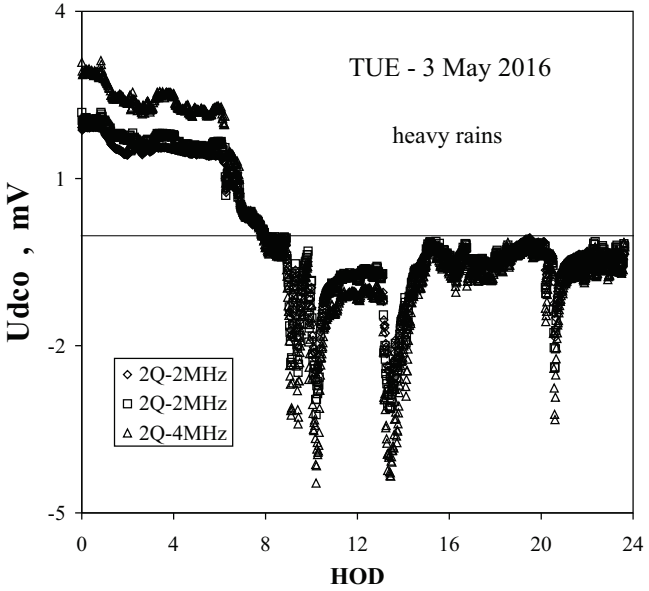
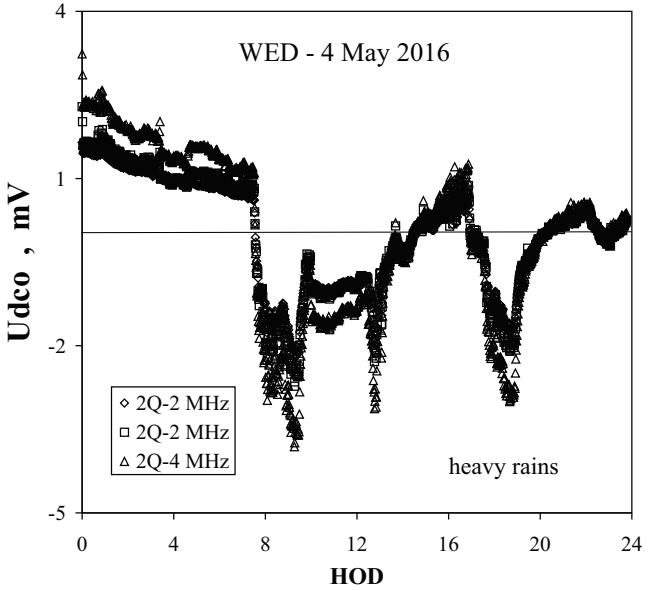


Figure 14.



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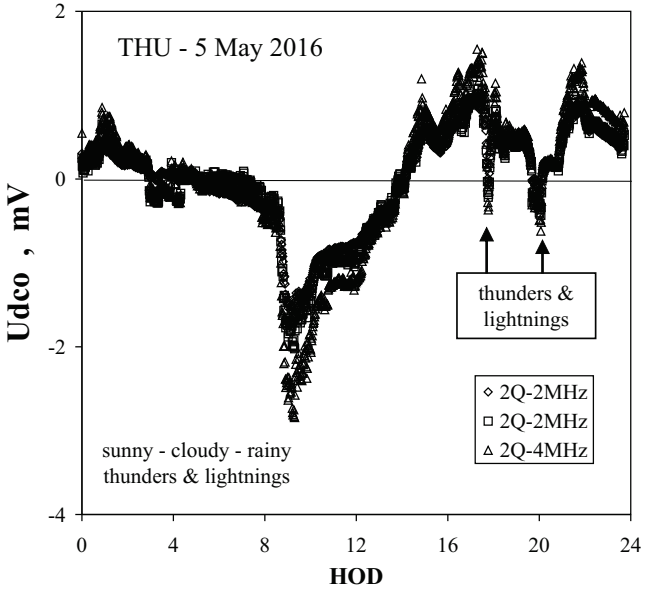

Figure 16.

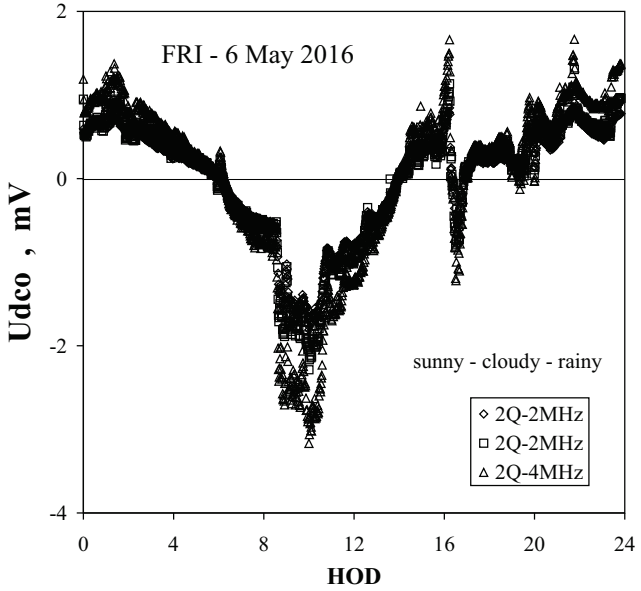

Figure 17.

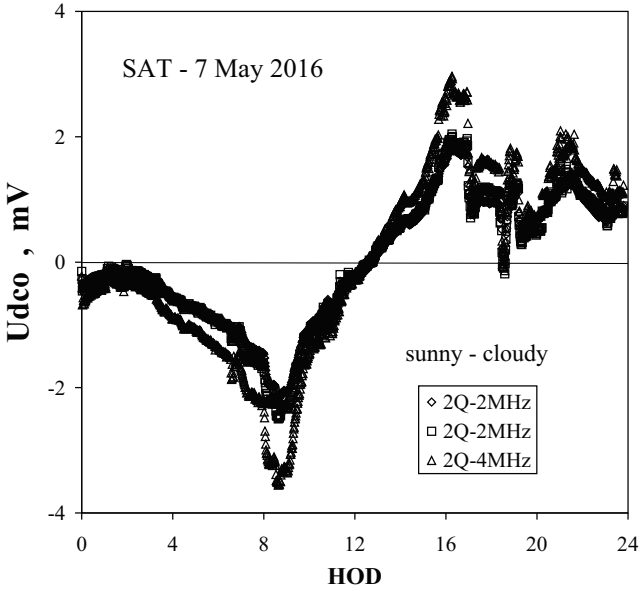

Figure 18.

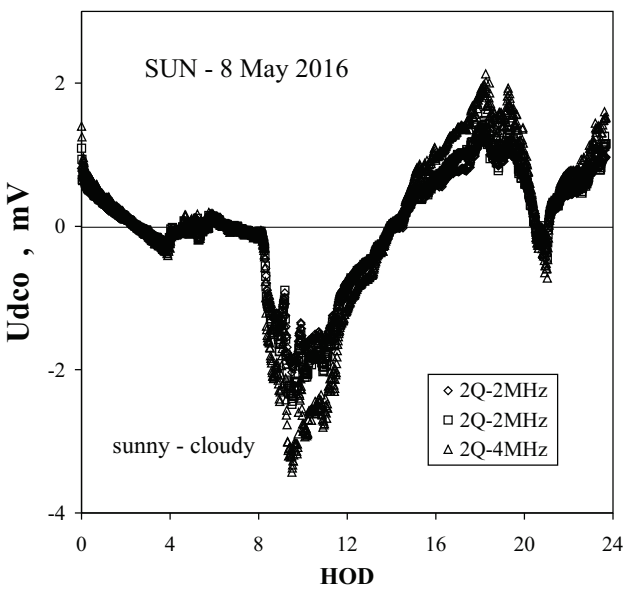

Figure 19.

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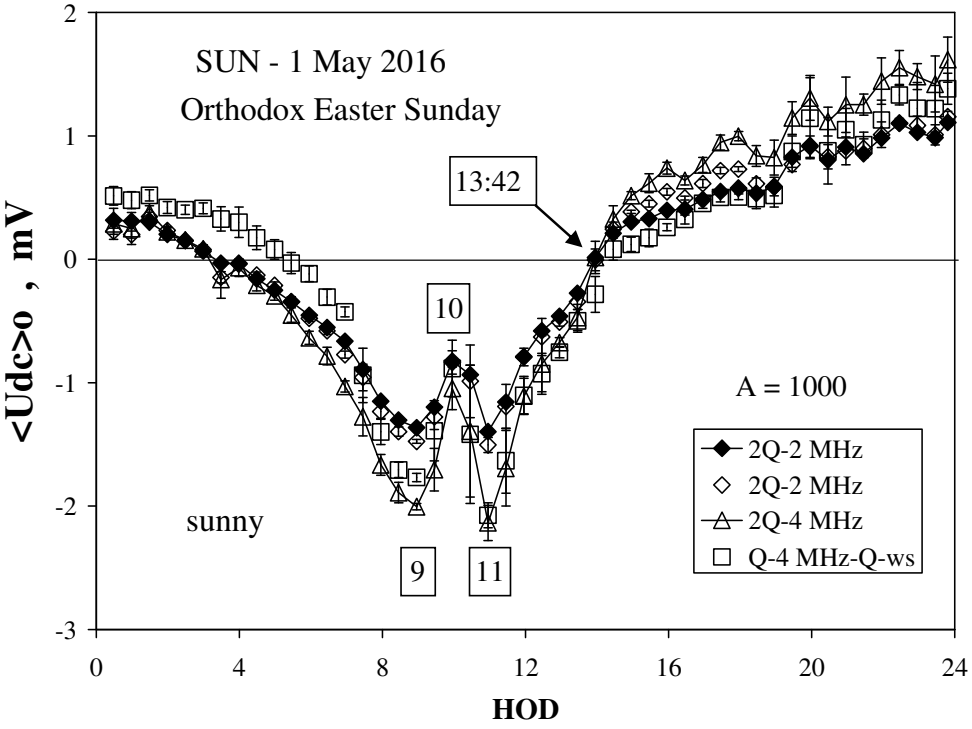

Figure 20.

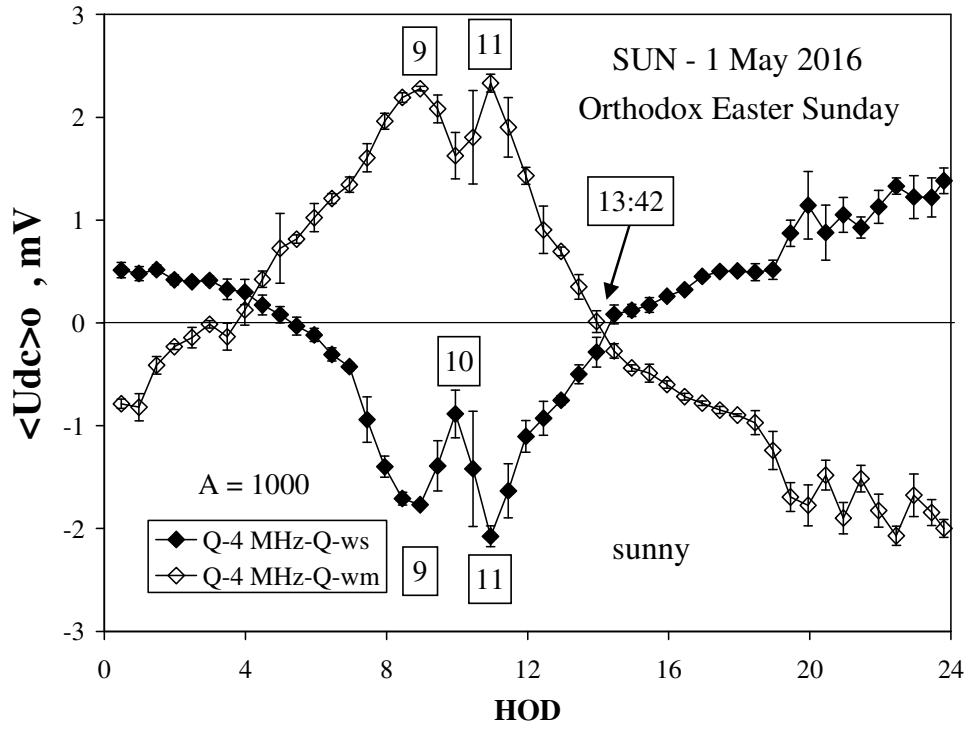

Figure 21.

About the author:

First name	Gheorghe
Last name	DRAGAN
Born	1 September 1945, Ploiesti, Prahova (Romania)
Studies	Faculty of Physics, University of Bucharest, Romania (1963-1968) Ph.D. in Physics, University of Bucharest, Romania (1980)
experience	● Head of material testing laboratory, ICECHIM, Polymer Department, Bucharest (1969-1979); ● Initiator and leader of the research project on new forms and sources of energy; ICECHIM, Center of Physical Chemistry (1979-1988); ● Head of laboratory of analytical devices and measuring instruments, AMCO-SA, Bucharest (1988-1993); ● Founder & owner of GDF-DATA BANKS srl Bucharest (1993-2008); ● Expert metrologist, Romanian Bureau of Legal Metrology, Bucharest, Romania (1997-2000).
publications	● >100 scientific papers ● >70 scientific communications ● 17 patents ● 5 books
Address:	See contact details on website: www.gdfdatabanks.ro gdf.dragan@gmail.com

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Previous issues of GDF DATABANKS BULLETIN

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1997	1	1	Editorial: Databanks – the compulsory language. LOGKOW – a Databank of evaluated octanol-water partition coefficients (James Sangster). Solubility behavior introducing topoenergetic working principles. Comments on 1-octanol-water partition of several n-alkane related series.	F
1997	1	2	Guide of good practice in metrology (Romanian)	AFI
1998	2	1	Editorial: socio-psychological implications in creation and utilization of a databank (Ioan-Bradu Iamandescu); Behavior in vapor-liquid equilibria (VLE): I. Structural aspects; Behavior in vapor-liquid equilibria: II. Several structures in databanks; Symposium on VDC-4 held on 30 October 1997 at Lubrifin-SA, Brasov (Romania).	F
1998	2	2	Practical course of metrology (Romanian)	AFI
1998	2	3	DIFFUTOR-01: Thermally driven diffusion in pure metals	AFI
1998	2	4	VAPORSAT-01: Databanks of thermally driven VLE. The first 100 simple molecules	AFI
1999	3	1	Editorial: New trends in material science: nanostructures (Dan Donescu) DIFFUTOR: Databanks of diffusion kinetics. VAPORSAT: Databanks of vapor-liquid separation kinetics.	F
1999	3	2	Discussions on Applied Metrology	AFI
2000	4	1	Editorial: Laboratory accreditation and inter-laboratory comparisons (Virgil Badescu) Doctoral Theses – important data banks. GDF intends to open new series of experiments on thermo-physical properties. Some comments on uncertainty: global budget and DFT analysis. Events: The 9th International Metrology Congress, Bordeaux, France, 18-21 October 1999.	F
2000	4	2	Measurement and Calibration.	AFI
2001	5	1	Editorial: Metrology ensures moral and technological progress. Topoenergetic aspects of amorphous-crystalline coupling. I. Composite behavior of water and aqueous solutions (paper presented at nanotubes and Nanostructures 2001, LNF, Frascati, Rome Italy, 17-27 October 2001). Events: Nanotubes and nanostructures 2000.School and workshop, 24 September – 4 October 2000, Cagliari, Italy.	F
2001	5	2	Editorial: Viscosity – a symptomatic problem of actual metrology. Visco-Dens Calorimeter: general features on density and viscosity measurements. New vision on the calibration of thermometers: ISOCALT® MOSATOR: Topoenergetic databanks on molten salts properties driven by temperature and composition.	F
2002	6	1	MOSATOR-01: Topoenergetic databanks for one component molten salts; thermally driven viscosity and electrical conductance.	AFI
2002	6	2	Editorial: HuPoTest - Operator calibration or temporal scale psychic test. MOSATOR: topoenergetic databanks of one component molten salts; thermally driven viscosity and electrical conductance.	F
2002	6	3	Editorial: Quo vadis Earth experiment? ISOCALT® : Report on metrological tests	F
2003	7	1	Editorial: Time – an instrument of the selfish thinking. 1st NOTE: Homoeopathy: upon some efficient physical tests revealing structural modifications of water and aqueous solutions. I. Mixing experiments.	F
2004	8	1	Metrological verification and calibration of thermometers using thermostats type ISOCALT® 21/70/2. Metrological verification and calibration of thermometers using thermostats type ISOCALT® 2.2R.	F
2004	8	2	Aspects of correct measurements of temperature. I. measurement of a fixed point according to ITS-90. Physics and Homoeopathy: some physical requirements for homoeopathic	F

			practice.(Plenary lecture at the 19th SRH National Congress, 21-22 September 2004, Bucharest, Romania)	
2005	9	1	AWARD for ISOCALT® at the International Fair TIB-2004, October 2004, Bucharest. ISOCALT® 3/70/21 was awarded in a selection of 20 products by a commission of experts from the Polytechnic University of Bucharest. Upon some aspects of temperature measurements. (12th International Metrology Congress, 20-23 June 2005, Lyon, France)	F
2005	9	2	A new technique for temperature measurement and calibration. National Society of Measurements (NSM). Important warning for T-calibrator users: MSA has chose metrology well calibrators from Fluke (Hart Scientific).	F
2005	9	3	Universal representation of Cancer Diseases. 1. First sight on NSW-2003 report. Universal representation of Cancer Diseases. 2. UK cancer registrations on 1999-2002. Vital Potential can estimate our predisposition for cancer diseases.	F
2006	10	1	NTC – thermistors -1	AFI
2007	11	1	HuPoTest - 40 years of continuous research Basic rules for preventing and vanishing cancer diseases Climate change = change of mentality Hot nuclear fusion – a project of actual mentality	F
2007	11	2	MT – Introduction to Mental Technology HuPoTest – general procedure, assignments of results, specimen of complete test, order and obtain your complete HuPoTest report	F
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2009	13	1	Proposal for interlaboratory comparisons. Calibration of NTC-thermistors (The 14th International Metrology Congress, Paris, France, 22-25 June 2009).	F
2009	13	2	Sudoku – un algoritm de rezolvare. (Sudoku – an algorithm for solution).	AFI
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2013	17	5	DTA study of water freezing. VII. More statistical features on one week of experiments.	F
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2014	18	1	Adiabatic calorimeter as high accuracy T-calibrator	F
2014	18	2	Mental field-water interaction as evidenced by Isothermal Convection Flow Calorimetry (ICFC). II. Effect of convection flow power.	F
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2015	19	4	High Resolution Mixing Calorimetry (HRMC) redivivus. 2. Structure developing of aqueous solutions by mixing experiments.	F
2015	19	5	High Resolution Mixing Calorimetry (HRMC) redivivus. 3. Calibration	F
2015	19	6	Evidence of human mental field by ac-electric conductivity in electrolyte solutions. 1. Bio-energy.	F
2015	19	7	High resolution mixing calorimetry redivivus.IV. Specific heat of crystalline phase of water. WPA2015: International Congress of World Psychiatric Association,Primary care mental health: innovation and transdisciplinarity, Bucharest, 24-27 June 2015, ROMANIA	F
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2016	20	3	Stability of amorphous-crystalline coupling in electrolyte aqueous solutions in relation to interaction with bio-fields	F
2016	20	4	Efficient, simple and cheap outdoor extension of exhausting system using Bernoulli and thermal convection effects applied for air forced boilers on natural gas	F
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2016	20	6	Interaction of quartz crystals with bio-fields. I. Preliminary experiments on commercial quartz oscillators.	F

*) F=free, AFI=ask for invoice.

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VOL	NO	place	was written	must be
15	2	Figure 5	P+	P-
15	3	page 5, row 7 down-to-up	x=2	x=0.2

Readers are encouraged to advice author(s) any observation.

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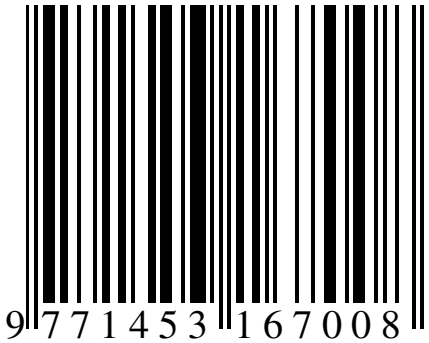

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