

Protocol of the 1st Occultation Meeting, October 27, 2018

Meeting place: Liceo cantonale di Bellinzona

Participants: Total 16 persons:
Alberto Latini, Fausto Delucchi, Thomas Erzinger, Peter Hirt, Marco Iten, Stefano Klett, Peter Kocher, Andrea Manna, Beat Meier, Stefan Meister, Alberto Ossola, Christof Sauter, Jonas Schenker, Joe Schibli, Andreas Schweizer, Stefano Sposetti.

Program:

10:00	"Development of a new Camera with Digital Video Time Insertion"	(Andreas Schweizer)
12:00	Lunch	
14:30	"Prepointing method and time analysis" - demonstrated on the example of occultation by (130) Elektra from April 21, 2018	(Stefano Sposetti)
15:30	"Die positiven Sternbedeckungen in der Schweiz von 1997 bis 2017" (and earlier)	(Stefano Sposetti)
16:30	Review of the ESOP 37 Meeting in Rokycany, Czech Republic, August 24 - 29 2018	(Stefan Meister)
17:10	Ende	

Notes:

1.) Welcome

After arrival, Stefano Sposetti invited the participants to coffee and croissants in the Liceo Cantonale di Bellinzona. Many thanks to the Società Astronomica Ticinese for offering the welcome breakfast and to Stefano for the perfect arrangement.

2.) General information

Jonas Schenker informed about the website of the Swiss Astronomical Society. For the working group SOTAS, a forum was opened. After a unique registration procedure, everybody is able to read or to write some postings. The forum is an alternative way to the communication by e-mail. It is possible to subscribe for automatic advice, if new postings were deposited.

Link to the SAG website: www.sag-sas.ch

Link to the forums: <https://forum.sag-sas.ch/index.php>

IOTA-ES is the European section of the International Occultation Timing Association. The website is very informative and there are good contacts to numerous members of this association. A membership is highly recommended, which costs EUR 20.- per year. All members get access to the latest "Journal of Occultation Astronomy (JOA)", a very practical and useful (electronic) magazine, containing reports, predictions and calls for observation of past and future occultations.

Link to the IOTA-ES website: <http://www.iota-es.de>

3.) New Camera with Digital Video Time Insertion

Andreas Schweizer presented the prototype of a new digital camera with digital video time insertion. The prototype bases on a ZWO ASI120MM cam with CMOS chip (1280x960 px, 3.75 my, 12 bit). Andreas equipped the cam with a GPS receiver for precise time and place. These data will be digitally stamped onto every single video frame. Video grabbers (analog/digital converters) are no more necessary. After some successful tests and experiences, the project shall enter the phase two: A pre-serial device shall prove the fulfilling of the requirements concerning time stamp against the well-known VTI from IOTA. Then, a crowd funding shall secure the manufacturing of a first serie of the new cam. We wish the project a great success!

4.) Prepointing method and time analysis

After having fine lunch in the near Pizzeria, Stefano Sposetti explained step-by-step the observation and recording of a stellar occultation by applying the method of prepointing. Therefore, the add-in "C2A" for the Occult Watcher software is very useful. It allows to prepoint and to start the recording of a star hours before the occultation occurs.

Link to Occult Watcher: <http://www.occultwatcher.net>

Link to C2A add-in: <http://www.occultwatcher.net/C2A-Addin.html>

Then, Stefano demonstrated the analysis of the light curve, using the original video (recorded with VirtualDub) and the analysing software Tangra. The time of occultation is defined, when the intensity of the brightness is half of the sum of the intensities "high" and "low" ($I_{occ} = (I_1 + I_2) / 2$).

Further, it is mandatory to consider the "Dangl-Corrections" for all times of disappearance and reappearance, as well as for all tolerances of times.

Link to VirtualDub 32: <http://www.computerbild.de/download/VirtualDub-32-Bit-8957804.html>

Link to VirtualDub 64: <http://www.computerbild.de/download/VirtualDub-64-Bit-1172118.html>

Link to Tangra: <http://www.hristopavlov.net/Tangra3/>

Link to "Dangl-Corrections": http://www.dangl.at/ausruest/vid_tim/vid_tim1.htm

5.) History of the positive observations of star occultations by asteroids in Switzerland

Stefano investigated for the past observing activities in Switzerland. As he demonstrated, there is existing a long tradition in this work, covering a significant part of the European activities. During the last years, many (positive) observations were made in Ticino. Today's meeting shall motivate to intense the observations in Switzerland to become an important amateur group for this scientific valuable work.

6.) Review of the ESOP 37

Stefan Meister participated to the ESOP 37 Meeting, which was held in Rokycany, Czech Republic, August 24 - 29, 2018. During three days, numerous lectures were presented and experiences were exchanged. After the official meeting part, additional days for some site seeing were organized. Stefan strongly recommend the participation to the next ESOP meeting.

7.) End of meeting

Jonas thanks to the lecturers for their impressive presentations and to the participants for their coming. Special thank goes to Stefano Sposetti for the organization of the locals. Before leaving, Stefano gifts fine "Amaretti Bianchi", a dolce specialty from Ticino. Thank you!

Oberentfelden, October 28, 2018, Jonas Schenker

The following pages show some impressions of the successful meeting: (Fotos by Stefano and Jonas)









