

VT-2004 in Portugal – Putting efforts together

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As an amateur astronomer I've been collaborating with the Astronomical Observatory of Lisbon (www.oal.ul.pt) for about one year and a half, working in the context of its Outreach Office.

This office promotes several activities to schools and the public. Here are a few examples:

- Edition of a monthly outreach newsletter;
- Monthly talks on astronomical subjects which are broadcast live on the Internet and complemented with astronomical observations (through small telescopes and binoculars)
- Sessions of astronomical observation in schools;
- Guided tours to the main building of the Observatory (a XIX century one, where visitors can view a splendid collection of astronomical instruments including several Repsold transit instruments and a Repsold-Merz 38 cm refractor, all of them very well preserved).

I've been working in these activities along with a group of amateur astronomers, most of them degree students (in Physics as well in other scientific areas) in the Faculty of Sciences of the University of Lisbon.

Facing the upcoming Venus Transit, we intend to promote, in a straight collaboration with the national node of the VT2004 Program (a partnership between ASTRO – Portuguese Association for the Teaching of Astronomy - and the Observatory of Lisbon; national node website: <http://lynx.oal.ul.pt/vt2004>), a major involvement of the Portuguese amateur community in the VT2004 Observing Campaign.

As a kind of national follow-up of this European amateur meeting, a Portuguese amateur meeting will be held at the Observatory of Lisbon next May 14th. We're counting on an attendance composed of elements representative from the major Portuguese amateur associations as well from other several small groups and clubs. I will report on the European meeting and, along with national node elements, focus on how amateur astronomers and groups can get involved in the Observing Campaign of the VT2004 Program.

This meeting will also be useful to inform the amateurs about the facilities provided by the Observatory of Lisbon in order to support their involvement in that campaign. The Observatory will provide a GPS device for all amateurs that intend to accurately determine the geographical coordinates of the chosen observation sites. They will just have to apply and register to use the equipment. Besides that, since the Observatory is, by law, the national institution to keep Legal Time, the Coordinator of the Legal Time Service will explain the amateur community how to use synchronizing

software (available for download at <http://www.oal.ul.pt/index.php?link=acerto>) in order to synchronize their PCs internal clocks and improve the accuracy of transit contacts measurements.

Although the most exciting feature of the VT2004 for amateurs is for sure the involvement in the solar parallax calculations, in this meeting we will also challenge the amateur community to promote local information and observation sessions. Once these are booked, they must inform the national node about it in order to make a schedule of national public activities available on the node's website. I will offer myself, along with national node elements, to conduct, if needed, local information sessions for less experienced groups that intend to get involved in the Observing Campaign and/or to promote local observations for the public.

In order to keep the amateur community in touch with the national node after this May 14th meeting, the node's website special amateur pages (<http://lynx.oal.ul.pt/vt2004/Venus%20Transit%202004%20-%20Amateurs.htm>) will be maintained and updated, providing amateurs specially relevant information and allowing them to send any questions, suggestions, comments and reports on their local activities.

Besides the national node - amateur community agenda, I'm currently coordinating, along with the amateur group that usually collaborates in the activities mentioned in the beginning of this communication, the preparation of a public observation session at the Observatory of Lisbon. Past events like last year's Mars Opposition and 1999 August Solar Eclipse brought to the Observatory hundreds of curious people eager for a glimpse through a telescope and for more information on these phenomena. Predicting a similar affluence of public in the morning of the Venus transit, we are preparing an observation program using several *solarscopes*, two 10x80 binoculars and four telescopes (125 mm and 200 mm), which will be used in the application of the projection method and, in the case of the telescopes, with the adequate filters.

Simultaneously with these public observations, a non-stop program of free public lectures on the Venus transit, conducted by professional astronomers, will be held on June 8th morning, in the main building of the Observatory. The above-mentioned amateur group will be collaborating on the live webcast of these lectures, which will include transit images obtained with a CCD camera coupled to an 80 mm telescope. We are currently arranging with FCCN – Portuguese National Foundation for Scientific Computation, a webcast display that will allow users to watch the lectures webcast side by side with updated transit images obtained with the CCD camera, and pose questions to the lecturers in real time (the questions will be sent by e-mail; one element of the amateur group will be reading and selecting the incoming questions to be answered during the lectures).