

To: VT-2004 National Nodes and all other interested parties
Cc: VT-2004 ISC
From: Richard West (VT-2004 ISC & ESO)
Date: December 21, 2004



Re.: European Astronomy Day in 2006

Dear friends and colleagues,

This is the second communication about the proposed “European Astronomy Day” in 2006, following my introductory letter that was sent on November 17, 2004. The present letter now attempts to summarize the key information received since then from several VT-2004 National Nodes and many individuals. Please accept my sincere thanks for all comments and good ideas that testify to the great interest in seeing such a project materialize and an explicit desire to contribute and participate.

In summary: **There is an overwhelmingly positive attitude and we should definitely work towards a European Astronomy Day 2006.** Weighing carefully the identified pros and cons, it would appear that we may maintain the originally proposed date (**Friday, October 20, 2006**). There are also good ideas for a name of the event. “National Nodes” are available in several countries already, but there is still much work to be done in order to secure such “centers” in all European countries. There are already many good ideas for “local” (small-scale) and “co-operative” (large-scale) activities. A planning schedule is available that includes early announcement of the event all over the continent in order to attract the greatest possible attention and thereby increase the participation, and with sufficient time to approach and hopefully, secure the funding needed.

Before going into more detail, let me state from the outset that **a guiding principle is to create a “frame” within which there is a lot of room for a great variety of interesting and exciting activities.** In other words, the advantage of having a common “day” in many European countries is that national and local programmes may find a place within a larger entity, with the associated, added opportunities to interact across the borders and, equally important, being able to point to a European dimension when dealing with potential sponsors and the authorities. It is indeed, and this is a central consideration, up to each country/region (and hence: National/Regional Node) to establish its own programme preferences according to the tradition and desire in their area – it is certainly not the intention to strive towards or even “force” a uniform programme in all places. In fact, the success of this event will largely depend on the (perceived) association of many different activities that together demonstrate the enormous width of the subject area. It is an important added benefit that there will be an inherent, enormous potential for synergies, e.g., the possibility for “copying” (taking over) particular types of activities invented in some other region and also to join together internationally within larger sub-programmes (joint observing programmes, webcasts, twinning of schools and clubs, etc.).

Thus, **this programme will serve as an umbrella under which national programmes will thrive**, also in those countries where similar events/programmes have already been set up and operated. Equally important, it will help to broaden certain activities so that they will involve participants in many countries/regions and **hence bring geographically separated people with similar interests together within a common activity. This is a clear and desirable European dimension.**

In this connection, it has been noted that other, similar activities are already in place (try to google). It seems that there exists an “International Astronomy Day”, last time on April 24, 2004, which is organized from the RASC in Canada. National “Astronomy Days” happen in France and Germany and possibly elsewhere. It is one of the aims of the present project to discuss with the organizers of these events the possibility of moving together on the same date, so that everybody may profit from the added international opportunities.

In what follows, some of the main points are further discussed: the date, the name of the event, the organisational structure, possible elements of the programme, the planning schedule and finally, the securing of resources. More information is available in the related appendices at the end.

1. The Date (October 20, 2006)

It would appear from the responses that we may maintain the originally proposed date (October 20, 2006). Obviously, no single date will be optimal for everybody, for every region and for all purposes. There will be pros and cons in all places. However, it is important to fix this date as early as possible, in the expectation that efforts can then be made in all regions to shape the event according to the specific, local circumstances.

This date was chosen as a result of an open discussion at the VT-2004 Final Event in Paris in early November 2004, when representatives of more than 20 VT-2004 NN’s met with the ISC members. On the proposed autumn date in 2006, schools in (almost) all European countries are in session, allowing to involve the largest possible number of students directly via their teachers. It is a Friday, making it feasible to organize (late) evening activities for the large public (both observations and TV). It is sufficiently late in the year, that the sky darkens reasonably early at all latitudes. It is not too late in the year, so the chances of good weather conditions for observations are still reasonable in most countries, even in the North.

The conditions for observation of solar system objects, however, are not optimal on this date. The Moon is approaching new in the early morning sky, and the evening sky is dark. Saturn rises late and the other bright planets are low in the horizon. Still, the maximum of the Orionid meteor shower happens on October 20-22 and the autumn evening sky presents many interesting objects of different types to watch.

It should be emphasized in this context that this European event must not be seen as one that is exclusively or dominantly oriented towards direct observations. Although many amateurs will tend to think this way, it was already agreed that, as it will not be possible to “repeat” an observational event with an impact level approaching that of the Venus Transit, the present event must be construed in a much wider sense, including both in- and outdoor activities. In any case, there is of course always the risk of bad weather over a large part of the continent, so also for this reason, the success of the event must not be too dependent on whether or not observations are possible.

None of the cons brought up so far seem so critical and universal that it seems worth the risk to go through the difficult process of trying to agree on another date. **I thus suggest that we now fix Friday, October 20, 2006 as “THE DAY” (from midnight to midnight). You are welcome to propagate this message in your environment.**

2. Name of the Event

Quite a few good ideas for a name of the event were received. Here are some of the more general ones.

“European Astronomy Day” (includes European, is short and clear, but perhaps not very exciting; easy to translate) – this name is preferred by several who responded

“Astronomy Without Borders” (emphasizing the universality of the subject; see the contribution by R. Halas in Appendix 2)

“Catch the Sky”

“Astro-Day 2006” or “Astronomy Day” (with a subtitle that changes each time this event is organised, depending on a particular emphasis in that year’s event)

“Discover Astronomy!”

“Reach for the Stars!” (from D. Filkin, former Head of BBC Science Dept. - will help to achieve media impact)

“EuroAstroDay”

It would seem that a suitable approach is to adopt a title with an explicatory subtitle, e.g. **“European Astronomy Day – Reaching for the Stars!”** or similar. Your comments are very welcome. We should attempt to make a **decision about this issue before the end of January 2005, at the latest.**

3. Organisational Structure and Networking

There seems to be full agreement to rely on a general structure that is similar to the one that has proven itself on several earlier occasions, e.g., for the VT-2004 programme. The main aim is to ensure easy inter-communication among the many participants, leaving a large measure of freedom for the local/regional organizers, but introducing some degree of mutually beneficial co-ordination at the different levels. A central aspect would be the “programme identity” (logos, style) that demonstrates that the local activities are part of a much larger undertaking, as well as the setting up a number of “international” activities that require high-level cooperation. It includes the following elements:

An International Steering Committee (ISC) consisting of active representatives of the main types of participants: professional organizations/institutions and amateur associations/clubs, planetaria and science centers, first- and secondary-level schools, the different kinds of media. This committee will serve as a central clearing-house and will run the information service needed to keep the programme together. It will set up and operate the central website through which the many preparatory activities will become visible; this will include extensive linking to individual sites. It will endeavour to obtain “central” funds, some of which might be passed on as “seed money” to national organisers (i.e., NNs). We thus expect to set up an ISC of not more than 12-15 persons by **February 2005** via a bootstrapping process. Candidatures are welcome – please note that the persons concerned must have a demonstrated experience in the related areas and a clear desire to further the integrating (“European”) aspects of the proposed programme. Until this ISC has been established, the VT-2004 ISC will continue to act in this role.

National and Regional Nodes (NNs) will ensure the organization and co-ordination in the various geographical regions, bringing in sponsors and inviting the media and the public to take part, interacting with the authorities as well as with local organizers of associated events and stimulating and serving as a focal point, especially at the time of the event. As in the past, it is expected that the NNs will crystallize around existing structures. Appendix 1 summarizes the current situation towards the establishment of NNs in the different countries, as reflected in the responses received so far. Please follow this up soonest; **it is a stated goal to have a nucleus NN (i.e., at least one centrally placed contact person with institutional address and email) in place in all countries by March 2005.**

Partner organizations and institutions that participate in the programme at different levels of intensity and are officially identified as supporting entities. They will range from major international ones (ESO, EAAE, EAS, ESA, IAU Comm. 46, etc.) to professional astronomical institutions and observatories all over the continent, amateur associations and clubs, public observatories and planetaria, science centres, teachers’ organisations, etc. Some major media organisations (including EUSJA, etc.) may also become involved at this level. Some of these will play leading roles and will be represented on the ISC and/or the NNs, others will have a more local role by organizing

specific events on the Day. The process to bring together these organisations will likely be a protracted one and is expected to accelerate as the programme gains momentum and becomes more widely known. Still, it will be important to reach out in these directions as early as possible to ensure the broadest possible institutional participation.

4. Possible Programme Contents and Proposed Activities

There are already plenty of good ideas around for the programme. As the weather is unlikely to be ideal in all geographical areas, associated “non-observational” activities will play a very important role. Various comments were received on the particular issue of ensuring “joint” activities across the borders. Appendix 2 contains excerpts from some of the messages received in order to spread these ideas as widely as possible already now. Please provide comments on these and do suggest others!

It is desirable to establish as early as possible the “major”, particularly visible elements of this event, especially those that are linked via multiple sites or in other ways involve extensive planning (e.g., trans-national media events). Such possibilities should be identified and discussed soon. It is important to make all related information and good ideas freely available so that they may be considered elsewhere, wherever there is an interest. Some of the most obvious types of possible activities at the different levels are given below, but this list is surely not exhaustive. Moreover, most activities can be adapted to serve a smaller or wider region, depending on the local circumstances.

a. Possible “Europe-wide” activities in which the ISC would be involved by setting-up the necessary framework and facilities:

- A central website with all relevant information and links to all related websites, in particular those set up by NNs. This website should include a webcast area (like a TV programme), in which different activities in different geographical regions will feature. There should be a “Forum”, FAQs, “Latest News” etc. The site should become very lively all through the “Day”.
- If at all possible, a major (Europe-wide!?) TV-event, that presents elements from many sources around Europe. Much of the programme would have to be prepared in advance, but some elements could be real-time. Will need to be defined very early to have any chance of being realized. A central theme may have to be identified to “glue together” the individual parts.
- A (small) number of “joint projects” that involve participants in several (many?) countries. This may be
 - Observations of the same celestial object from different places (the Sun, counting meteors, light-changes of a variable star, the appearance of some deep-sky object, etc.) with (real-time) exchange of results
 - Measuring some kind of physical phenomenon, not necessarily in the sky, e.g., light pollution, size of the Earth.
 - Direct interaction between two or more schools or astronomy clubs in different countries (twinning), communicating before and during the event, possibly doing co-ordinated activities that involve several “teams”.

- One or more Europe-wide competitions – subjects and levels to be defined. May be on an astronomical, philosophical, possibly political theme. Could be in writing, photos, videos, etc.

b. “National” activities (co-ordinated by the respective NNs)

- Major media events, e.g. at major observatories, planetaria, science centres, etc.
- National TV programme(s), if possible with the participation of decision makers, teachers, scientists, communicators, etc. to discuss and expose themes connected to astronomy, education, culture, etc.
- Exhibitions at central locations – with local/regional/national/international elements, to emphasise the universality of astronomy
- Preparation of educational materials, suitably adapted to national needs; dissemination to the schools and training of teachers to make use of it
- National competition(s) with “final event” on the Day at a central location
- As far as possible, to associate the Day with other cultural activities, e.g. concerts, readings, art shows, etc., wherever an opportunity presents itself

c. “Local” activities (for which the initiative rests with individual organisations/persons)

- Public observing sessions, organized by amateur clubs and associations, public observatories, planetaria, etc.
- “Events” at schools (indoor or outdoor), in many places organized in collaboration between teachers and amateurs
- Planetaria shows, possibly opening of a special programme produced on this occasion (perhaps in collaboration with other planetaria in Europe?)
- Other local activities, possibly arranged in collaboration with local authorities

5. Planning Schedule

A necessary condition for a large project like this one to succeed is to have a firm timeline during the planning phase. This must start now, in order to ensure that the all partners will get together, that the message will be widely spread in time and, not least, that the necessary financial support can be found. The following updated proposal is now made for this timeline:

2004

November 17	First description of the project circulated to VT-2004 NNs and ISC
December 1	Comments and suggestions back to RW from NNs and ISC
--- now ---	
December 21	More detailed version with list of specific suggestions (this letter)
Before the end of December	First approach to possible principal partners – ESO, EAAC, EAS, ESA, some major observatories, organizers of past national “Astronomy Days” – possibly also IAU Comm. 46, etc.

2005

January	Continued set-up of National Nodes and ISC
February 15	Next version of proposal with more details and provisional financial plan circulated to all involved at this stage; larger-scale approach to potential participating institutional partners
March	EAAE General Assembly – session on this programme – special attention to related opportunities at schools
March-April	Completion of proposal; submission to potential sponsors, incl. EC
May - December	Gradual build-up of local programmes; increased involvement of authorities; definition of main cross-border activities, discussion with media representatives; wherever possible, use of the related opportunities that present themselves during the Year of Physics
July 5-8	EAS JENAM meeting in Liege (Belgium)
October 3	Annular solar eclipse visible in Spain – an opportunity for some kind of “test” of the structure?
November	“Science on Stage IV” at CERN

2006

March 29	Total solar eclipse visible in Turkey
August 14-25	IAU General Assembly in Prague (Czech Republic)
from September	Major advertisement effort via the media (and other channels)
October 20	The “Day” – from midnight to midnight?

6. Securing the Necessary Resources

Financial resources will have to be mobilised from a number of sources. It is clear that sponsorships will play a major role. Our ability to win sponsorships will among other things depend on developing proper documentation and giving the programme a clear identity as soon as possible. Potential sponsors include

- Private trusts, charities and foundations (e.g. the Wellcome Trust, Robert Bosch Stiftung, etc.)
- Trade unions and industrial associations and confederations
- Manufacturers and vendors of equipment for amateur astronomers
- Popular science magazines
- Ministries of education
- Regional and local authorities

To underline the European aspect, we should plan for preparing an application to the European Commission for support in the context of the European Science Week 2006/FP-6. The call is expected to be issued in early 2005 with an expected deadline in May. FP-6 calls are highly competitive and subject to a number of conditions, some of which may not be easy to meet for an activity like this one. We therefore need to secure alternative back-up funding scenarios.

In conclusion, the proposed “Astronomy Day 2006” will undoubtedly pose a great challenge to all of us. It is a natural and very desirable extension of the successful VT-2004 programme and could have a major impact on the various target audiences, including the wide public and school students. However, the work needed to prepare such an endeavour is substantial and it will only succeed if approached in a true spirit of collaboration by a large number of dedicated individuals all over Europe.

I hope to hear from you again, with more ideas and comments. I propose to report back to you again towards the end of January 2005 on the current status and with more details, e.g., about the foreseen involvement of some of the above mentioned organizations.

With kind regards, and all good wishes for a happy and healthy New Year!

Yours sincerely

Richard West

Attachments: Appendix 1. List of provisional contacts in different countries (NNs)

Appendix 2. Excerpts from emails with programmatic suggestions

Appendix 1. List of provisional contacts in different countries (NNs)

The following list provides an overview of the status as of December 17, 2004. For countries in which a VT-2004 NN was established, this contact is indicated, unless other information has become available in the meantime.

Everybody is herewith invited to contribute to the important process of establishing NNs, especially with specific suggestions for potential contacts in the countries in which no contact has yet been established. One possibility is to approach members of the VT-2004 Network in these countries (URL-links are provided from the country names).

<i>Albania:</i>	no contact yet – suggestions are invited!
<i>Andorra:</i>	no contact yet – suggestions are invited!
<i>Austria:</i>	Wolfgang Otruba (Kanzelhoehe Observatory – otruba@kso.ac.at)
<i>Belarus:</i>	no contact yet – suggestions are invited!
<i>Belgium</i>	Rodrigo Alvarez (Planetarium of the Royal Observatory – rodrigo.alvarez@oma.be)
<i>Bosnia and Herzegovina:</i>	no contact yet – suggestions are invited!
<i>Bulgaria</i>	Veselka Radevi (Varna Planetarium – radevi@mnet.bg)
<i>Croatia</i>	No information has been received so far from the VT-2004 NN at the Physics Dept. at the Zagreb University – suggestions are invited!
<i>Cyprus</i>	no contact yet – suggestions are invited!
<i>Czech Republic</i>	Pavel Suchan (Astronomical Institute of the Czech Academy of Sciences, Prague - psuchan@asu.cas.cz) and Rostislav Halas (r.halas@post.cz)
<i>Denmark</i>	Michael Linden-Voernle (Tycho Brahe Planetarium – mykal@tycho.dk)
<i>Estonia</i>	Mihkel Kama (Ridamus Association – mkama@ut.ee)
<i>Finland</i>	Arja Hokkanen (URSA – arja.hokkanen@ursa.fi)
<i>France</i>	To be further explored, also because of the annual “Nuits des Etoiles” event. For the time being, the contact is the VT-2004 NN, represented by Jean-Eudes Arlot (IMCCE/Obs. de Paris – jean-eudes.arlot@imcce.fr)

<i>Germany</i>	<p>There is a special situation in Germany due to its size and federal structure with 16 Laender. The VT-2004 NN will not be involved, but interest in serving as (regional) NN has been expressed from several sides (see below). Richard West has spoken to Frank Plumer of the news magazine “Stern” who organized the 2004 “Lange Nacht der Sterne” and who has expressed interest in discussing possible involvement in the 2006 event. There is thus a need to further clarify the structure and responsibilities in Germany.</p> <p>Cecilia Appl (on behalf of the Landessternwarte Heidelberg – cecilia.appl@astaria.de)</p> <p>Hans-Georg Schmidt (Volksternwarte Muenchen – ncc1023@hgs.web.de)</p> <p>Dieter Herrmann (Archenhold Sternwarte Berlin – dbherrmann@astw.de)</p> <p>Frank Plumer - STERN</p>
<i>Greece</i>	Margarita Metaxa (EAAE – m-metaxa@otenet.gr)
<i>Hungary</i>	Andras Ludmany (Observatory Debrecen – ludmany@tigris.unideb.hu)
<i>Iceland</i>	no contact yet – suggestions are invited!
<i>Ireland</i>	Ian Elliott (National University of Ireland – ie@dunsink.dias.ie)
<i>Italy</i>	Mauro Messerotti (INAF – Trieste Observatory – messerotti@ts.astro.it)
<i>Latvia</i>	Ilgonis Vilks (Astronomical Institute – vilks@latnet.lv)
<i>Liechtenstein</i>	no contact yet – suggestions are invited!
<i>Lithuania</i>	Gediminas Beresnevicius (Astronomy Club Vilnius – gedber@takas.lt)
<i>Luxembourg</i>	Eric Buttini (Musee National d’Histoire Naturelle Luxembourg – ebuttini@mnhn.lu)
<i>Macedonia, FYR</i>	no contact yet – suggestions are invited!
<i>Malta</i>	Edwin Camillieri (astronomical Society of Malta – edwinc@maltanet.net)
<i>Moldova</i>	no contact yet – suggestions are invited!
<i>Monaco</i>	no contact yet – suggestions are invited!
<i>Netherlands</i>	Robert Wielinga (Museum Sterrenwacht Sonnenborgh Utrecht – r.p.wielinga@sonnenborgh.nl)
<i>Norway</i>	Knut Joergen Roed Odegaard (Institute of Theoretical Astrophysics Oslo – k.j.r.odegaard@astro.uoi.no)
<i>Poland</i>	Pawel Rudawy and Barbara Cader-Sroka (Astronomical Institute Wroclaw – vt-2004@astro.uni.wroc.pl)

<i>Portugal</i>	Rui Agostinho (Astronomical Observatory Lisbon – rui.agostinho@oal.ul.pt)
<i>Romania</i>	Magda Stavinschi (Institute of Astronomy of the Romanian Academy of Sciences Bucurest – magda@aira.astro.ro)
<i>Russia</i>	no contact yet – suggestions are invited!
<i>San Marino</i>	no contact yet – suggestions are invited!
<i>Slovakia</i>	Ales Kucera (Astronomical Insitute of the Slovakian Academy of Sciences at Tatranska Lomnica – akucera@astro.sk)
<i>Slovenia</i>	Sonja Jecic (University of Ljubljana – sonja.jecic@guest.arnes.si)
<i>Spain</i>	Discussions are ongoing about the structural set-up. Until further notice, the VT-2004 NN will serve, also for this programme: Javier Armentia (Planetario de Pamplona – jvarm@pamplonetario.org)
<i>Sweden</i>	Anders Vaesterberg (EAAE – anders.vasterberg@nacka.se)
<i>Switzerland</i>	strangely, no contact via VT-2004 – suggestions are invited!
<i>Turkey</i>	no contact yet – suggestions are invited!
<i>Ukraine</i>	no contact yet – suggestions are invited!
<i>United Kingdom</i>	The structure has yet to be discussed – the VT-2004 NN is: Robert W. Walsh (University of Central Lancashire rwwalsh@uclan.ac.uk)
<i>Vatican City</i>	no contact yet – suggestions are invited!
<i>Yugoslavia (Serbia and Montenegro)</i>	No contact yet - Slovenian NN will try to establish one.

Appendix 2. Excerpts from emails with programmatic suggestions

In what follows, I have extracted parts of the emails received (mostly) in response to my letter of November 17, 2004, which concern the various possibilities for exciting activities and provides other advice in connection with the proposed “European Astronomy Day”. These texts will serve to stimulate ideas for the programme:

A. From Arto Oksanen (Jyväskylä, Finland) – November 24, 2004

I thought that a very simple future project could be measuring the radius of Earth. Every participant could make a very simple sundial and measure its shadow length on local midday. Now as we know that Sun is a distant object (the result from VT-2004!) it is simple trigonometry to measure the radius. Also the rotation of Earth can be observed and maybe the longitude (assumed time is known) and latitude can be estimated. An optional extension of this would be plotting the path of the shadow through a year.

Too simple? When I have given astronomy classes at schools it is evident that even the most simple astronomical concepts like that Earth is a round planet and what causes the phases of the moon are not very well known.

In my opinion, the suggested exoplanet program is too difficult. Measuring all the way through hours long transit with the accuracy of 10 mmag is very difficult task for even experienced amateur CCD photometrist. It can be done (I have done it), but is difficult. Maybe in 2007-2009 when Kepler-mission has found dozens earth-like planets and hundreds of hot jupiters it will be easier task. Also then the media coverage should be pretty good.

B. From Rostislav Halas (Prague, Czech Republic) – November 24, 2004

My proposal for name of the project is "Astronomy Without Borders" and I'm going to explain why.

First, it is close to the TV programme which used to be broadcast at the beginning of 90s on European TV channels, named “Games without Borders”.

I think it was successful and it brought groups of young people from all of Europe to the common competition.

What I mean by the expression "Without Borders" in the context of astronomy:

- literarily without borders between countries
- without language borders
- without religious borders
- without borders between scientists and politicians
- without cultural borders
- without whatever-more things will have to be found indeed

And the connecting medium which doesn't know the border is science, Astronomy in the front line!

If the proposed name is accepted then there is only one further step to set up a literary Astronomy Without Borders Competition among European students. I propose the National Nodes to arrange local and national rounds and the winners could compete in an international round.

The topic of the competition could be based on:

- astronomy
- astronomical equipment
- physics background
- cope with astronomical terms in the English language
- creativity and problems solving
- technical/manual skills (construction of a simple telescope, .)

Maybe the name "Astronomy Without Borders" could have a subtitle "Cracking myths and bringing science closer to the public"

C. From Veselka Radeva (Varna, Bulgaria) – November 26, 2004

4. Preliminary program for Bulgaria – proposals who are probably useful for others countries :

- For the public:
 1. During the 2005 Year and 2006 Year: in June and July – 2 or 3 nights after first quarter of the Moon: “Lunar walk” (observation of the Moon surface and finding of the Places where spaceships Apollo have landed.)
 2. In June and July during full Moon – planet observations(Jupiter and Saturn and the satellites)
 3. In August “Nigh of the shooting stars” (observations of the meteor storm Perseids)
 4. The Solar week (in August or September- observations of the sun spots, possibly magnetic storms, Aurora Borealis)
 5. The October – culmination of the public observational programs

For the schools:

1. Together with the schools from other countries to be prepared and performed some of the Projects 1.Solar challenger (sun patrol – school observations of the Sun using the same methods and exercises; 2.Moon observers (moon patrol – observations of active luminous places of the Moon - using the same methods and exercises; 3 Star detectives (star patrol – school observation of variable stars with the same methods and exercises; 4. The comet discovers (comet patrol – for school observations using the same methods and exercises;
2. National contest for Best school astrophotography – observations of Deep Sky Objects;
3. National school project “Light Sky Pollution” – Aim – to prepare a map of Bulgarian Light Sky Pollutions

4. National Astronomical Educational Program in Internet “Sky treasures Hunters” (we have been organizing this program each Year since 2002)
5. National school astronomical conferences (April 2005 and April 2006)
6. National summer astronomical schools for students in the National astronomical observatory –Rozhen in 2005 and 2006 (August 2005 and August 2006)
7. National summer astronomical school for teachers (July 2005 and July 2006)

For the amateur –astronomers:

1. National Astro parties – in August 2005 and August 2006
2. National contest for Astrophotography
3. National exhibition of Astrophotography
4. Expedition in Antalia (Turkey) for observation of the Total Solar Eclipse on 29 March 2006

The Bulgarian National Program will be organized with the support of a large number of Institutions: Ministry of Education, National Astronomical Observatory-Rozhen, Public Astronomical Observatories, Universities in Sofia and Shumen and others...

The Budget for the Bulgarian national program will include support from national sponsors and from European program. The first proposal for the Budget is: about 2 500 Euro from the Bulgarian sponsors and about 3 000 Euro from European program. The financial support may be changed when the National program is made in its last version.

Others proposals:

1.International educational project for students and teachers “School virtual observatory - Rozhen ”

Aim: Introduction of professional telescopes, professionals observations; the project includes astronomical problems and exercises in physics and astronomy education

Activities: The school teams will study the construction of the 50/70 cm Schmidt telescope in National astronomical observatory-Rozhen, Bulgaria; they will prepare astronomical observational projects, which will be places in the special for the project web-page. The students observational projects must contains: the object, whose images the students want to obtain, short description of the problems and analysis. A team of astronomers will choose the best projects, they will observe the objects that have been asked for in the Students projects, and they will send back the images to the students.

Duration of the project: 12 months – from October 2005 to October 2006.

Finance of the project: For the preparation and active support of the web-page (12 months)– about 800 Euro; For the Observation during the each month (the observational time and technical needs) – 7 000 Euro; For Internet connection for transfer the observations – 2 000 Euro.

We will expect financial support from Bulgarian organizations and from the European program.

Final event (if financial support is available): All projects will participate in the Contest: the 3 best teams will be able to spend 3 observational nights in the 2-m telescope and 50/70 cm Schmidt telescope. Financial support: for 9 participants; 300 Euro for each participant for full accommodation and observations.

If it is not possible, the best teams can participate in: International astronomical school conference – November 2006

2. International astronomical school conference – 7-8 November 2006

Participants are from each country – 5 students from each country.

The conference can take place in Varna – in the National Astronomical Observatory and Planetarium, Varna, Bulgaria

Full accommodation, transportation from Sofia to Varna – 200 Euro for participant.

3. International astronomical summer school for students and teachers in the National Astronomical Observatory-Rozhen – August 2005 and August 2006

D. From **Cecilia de Appl** (Heidelberg, Germany) – November 28, 2004

4. Contents of the programme

We agree that no astronomical event of the near future can achieve the importance of the Venus transit 2004. However, we think that there should be a central subject (and not a wide spectra of themes) covered during a “European Astronomy Day”.

This is very important, because:

- a. It allows to **share** the same experience Europe wide (like in the VT-2004) and offers a common exchange basis for pupils, amateurs and professionals of different regions and countries.
- b. It makes possible to develop and prepare specific material suitable to be translated into several languages.
- c. Most important: we can choose a subject and develop at all levels of complexity, with connections to other associated areas (including Biology and Geography).

Example:

“Planets of the solar system and around other stars”

- The Earth as a planet (measurements of the circumference of the Earth (Arto Oksanen’s proposal), comparing Earth properties with those of other planets, including pollution, ecological strategies).
- The planets of the solar system (the new planets - Quaoar, Sedna - ...what is a planet?)
- Missions sent to explore planets (the big scientific collaborations, Mars-Express/Cassini)
- The formation of the solar system

- Life in space (can life develop in space? In collaboration with biologists)
- Searching for planets around other stars (techniques and achievements)
- The SETI programme: are we alone?

During each EAD people should be informed about instrumental developments and joint projects of big European collaborations (Telescopes, Satellites, Space crafts, etc). In this way, **people should become acquainted with the fact that they actually finance Astronomy programmes through their taxes and that they have the right to be informed.**

Other possible subjects of future EADs could be:

- “The sun among other stars” (all about the sun, stellar types, spectral classification, evolution, black holes, distances to the stars, etc).
- “Our home the Milky Way” (and galaxy classification, clustering, large scale structure, galaxy formation, etc).

We can cover systematically in such a way during several EAD many topics of astronomy, taking into account that in order to learn, people need structured information. We would have reached a lot when people become capable of correctly placing astronomical objects both in space and time. We think that a mixture of topics in a single day is not didactical at all.

5. Useful previous activities for the implementation of the programme

- Look after “main national support points”**, like observatories (scientific and public), astronomy institutes, planetariums, amateur groups, physics teachers (primary and secondary school), pedagogical schools which are currently teaching astronomy or offering astronomy programmes.
- Contact them and help them to build a network of multipliers** via astronomy courses and workshops to be attended by students, pupils and teachers who in turn will develop projects at their schools and organize public expositions.
A set of computer presentations (Power point presentations) could be developed and made available to these “main support points”. The existence of a unique subject in the EAD would facilitate the preparation of these materials.
- “Children teach children” should be another important task of the EAD project:**
 - high school students teach primary school pupils
 - primary school pupils teach Kindergarten children
 - and help each other organizing activities (exposition) and games.

This would require to coordinate activities between high schools, schools and Kindergarten. But (locally) children themselves could contact their own former educational centres and offer their activities.

- d. Many cities in Europe have “**partner cities**” (for instance, Heidelberg has Montpellier and Cambridge as partner cities, all having astronomy institutes). There are already opened communication channels between these cities that could be used for contact and exchange purposes in astronomy. Many students come and go to learn languages, why not “sharing” astronomy?
- e. Other activities to reach the general public:
 - organize talks and open expositions (at central points in the streets) and in city and institute buildings. Live transmissions of the events from other European countries should be projected with beamers.
- f. Many newspapers in Germany have a section devoted to “the sky of the month”. Contact the persons responsible and ask them to announce the event (in the September and October 2006 issues).

E. From **Jean-Eudes Arlot** (IMCCE, France) – December 2, 2004

I contacted several persons and organizations in France concerning the project of an European Astronomical Day. Everyone likes the idea but we wonder how to organize it. The media should be very involved in the project since they will reach more people than any astronomical organization or institution. Amateur, professional, teachers should be involved in the project. In order to mobilize the general public, we must be able to announce that on that day, all the domes will be open, all the astronomical observatories (either professional or amateurs) will be open to the public and exhibits or small telescopes must be present "in the streets". So the most important is to find partners finding their own interest in that project. Do we plan to have some Internet activities? (questions/answers, observations,...). The project to succeed in having some cities turn off the lights in some areas on that day is also interesting (we asked the Mayor of Paris who is not against the idea!) The transit of Venus was sufficiently meaningful to federate all the participants. During an Astronomy Day, each organizing partner will have its own idea of what is the goal to reach...

F. From **Martina Haustgen-Wagner** (Luxembourg) – November 29, 2004

Please find below two ideas which could help the project enter the world of the Primary School.

To help the teachers, it could be interesting to create a database containing lists of books treating Astronomy as well as interesting internet sites or other media. If it is possible, this list could also contain a summary of the books or a small review. To make this database as attractive as possible for many European countries, everything should be classified by its language. There could also be a subdivision for the different groups of ages concerned by the book.

In a second time, a site containing propositions of subjects or experiences and children-adapted explanations (like the “Kids Corner” for the Venus Transit) could be created. This site could also act as an exchange-platform for everybody who has done Astronomy with children.

I personally think that these two things could already motivate many teachers because the most important and difficult thing in Primary School is to find appropriate material to treat a subject.

G. From **Julius Koza** and **Ales Kucera** (Slovakia) – November 30, 2004

Considering specific activities related to the project we would like to point at the following facts:

- The next solar minimum is expected just in 2006. So any Sun-oriented activities should count with low sunspot numbers.
- The maximum of meteor shower of Orionids usually takes place between October 20 and 22. Although this shower is not very reach, it provides a number of topics especially interesting for pupils and public, namely:
 - The parent comet of the Orionids, which is 1P Halley, is known to the public. This comet has specific position in history of astronomy and science generally and there are reach information resources of all kind. Finally, in 2006 it will be 20 years from the last apparition of 1P Halley.
 - The radiant of the shower is close to the known and attractive constellation with easy observed deep-sky object supplying lots of topics for promotion of astronomy.
- The minimum of prototypical eclipsing binary star Algol (Beta Per) will happen in the night between October 19 and 20 at about 21 h 27 min UT.

Finally, we would like to turn your attention on the Total Lunar Eclipse in March 3, 2007 visible throughout all Europe around midnight between Saturday and Sunday, March 3-4. If there will be necessary to shift the date of the event, this eclipse is another possible target.

H. From **Ian Elliott** (Ireland) – December 1, 2004

Quoting an unnamed very experienced amateur astronomer:

"None of the major planets is well placed for observing at that time. Venus & Mars are in conjunction with the Sun. Jupiter is almost in conjunction, appearing low down in the W twilight, barely observable. Mercury is also very low, below Jupiter. Saturn rises about 01.20 local time, and doesn't get high enough to be easily observable until about 03.00 local time – not ideal (even later for us in Ireland)! The Moon will be barely visible in the morning twilight, phase 0.035, Elongation 21 degrees; visible at about 06.30 local time. But with such a small phase, no detail would be visible. Uranus & Neptune are quite well placed, but not suitable for public observing as the discs are small & featureless."

"This leaves deep sky objects which are just 'faint fuzzy blobs' in most telescopes..... Yes, I DO KNOW that CCDs can bring out quite a lot of detail in such objects, and the planets, but it's still not really impressive, and anyway, nothing beats an actual view through an eyepiece compared with that of a computer screen."

"So, from the purely observational point of view, that date (20 October) is far from ideal! (.....)"

Here is a view from an academic:

"I think it's a very good idea. Close enough to Science Week in Ireland (2nd week in November). I think the idea of selling it on the basis of lectures, demos etc. that will take place regardless of weather is important. Observing will be a bonus. We ran two observing nights as part of Science week here & very few people will bother traveling if the event is not guaranteed. On the second night we opened the labs at the same time for some fun experiments and then people could come up to the telescopes as well if the weather allowed. That night was packed out and even though conditions weren't great, people were happy to have a look at Andromeda and get shown the radio telescopes etc. We felt that people came out because they knew there would be something on regardless of the weather."

Other ideas which have been suggested include:

1. A Europe-wide study of light pollution. For instance, this might involve observing the Pleiades with the naked eye and counting how many stars are visible. The results could be compared with satellite observations of the Earth at night.
2. Co-ordinated observations of Earth satellites to determine their orbits.
3. Marking the 350th anniversary of the birth of Edmond Halley. All we need is a comet!
4. The Irish Federation of Astronomical Societies (IFAS) has recently launched some astronomical challenges. See <http://www.irishastronomy.org/observers/challenges/index.php>. It has been suggested that some of these might be used in a classroom environment, and perhaps a special

booklet for schools could be created. If physics teachers could provide some guidance, it might be possible to obtain sponsorship to publish the booklets and distribute them to schools.

I. From **Margareta Metaxa** (Greece) – December 6, 2004

Some remarks about the possible content:

1. the activities should be simple in order to be widely implemented
2. it may be good to divide the activities into categories i.e.: observations, cultural events, web-based, etc., and to propose within each category 3-4 activities so the participants can choose concerning their facilities/abilities to enter.

J. From **Veikko Mäkelä** (Finland) – December 12, 2004

I just got one possible event idea for Astronomy Day 2006.

I followed last week 6th worldwide videoconference, so called Megaconference (<http://www.megaconference.org>), arranged by many universities all around the world.. There I got idea that it would nice perhaps to arrange some kind of variations of that during The Astronomy Day. That could be scheduled webcasts around Europe from different events or/and places, associations or so. Or there could parallel webcasts available from Internet, which are listed in the common website. There was already webcam broadcasts during the Venus Transit day. It is possible to develop the ideas more further.

Webcasting needs of course resources and capable people to arrange both technical and organizational arrangements.

K. From **Ian Elliott** (Ireland) – December 13, 2004

This is the result of a brainstorming session of a group of amateurs. I can see difficulties in applying their ideas on a European scale but maybe there is something of general interest: Some suggestions for European Astronomy Day by a group of Irish amateur astronomers, December 2004.

Summary by John Flannery:

It might sound a crackpot idea but the more I thought about it, the more it could really work. What I am talking about? Basically, to inject a bit of fun and fundraising for charity into the proposed European Astronomy Day.

You all may be aware of the charity fundraising events that occur each year where teams have to climb/scramble to the top of the highest peak in each of the provinces in Ireland within 24 hours or, in another guise, the highest peak in each country of the British Isles (Ben Nevis,

Snowdon, Carrauntoohill, etc.) Each team has to raise money to enter the event and many go well beyond the minimum amount.

So, we thought why not have something similar where teams have to visit each of the Solar System planets within a certain time?

We could ask schools to adopt a Solar System body (planets plus the Sun and Moon) so that in say, Leinster for example, each of the Solar System bodies is located in schools scattered around the province.

The idea would consist of teams of "astronauts" visiting each of the planets throughout the day and doing a "live" webcast from the "surface" of each planet. There is a Dept of Education commitment to have broadband access in every school by March 2005.

A webcast might take the form of the visiting astronauts describing what they find at each planet. The school could have a room set aside and decorated to look like the surface of the particular planet (getting local businesses involved); some suggestions I had were, say, a beach party on Mercury but an icy landscape with igloos on Pluto! The kids in the school could dress up in fancy dress, nominate "tour guides" for the visiting astronauts, produce holiday brochures, etc - a chance to learn about the conditions on the planets in a fun way. Local business could sponsor party stuff for the day such as minerals, crisps, etc. Schools in the same locality could band together to help construct their planet.

The teams would travel by car/people carriers which we could try and get someone to sponsor (space wagons perhaps?). The participating teams would have to get a Solar System passport stamped at each planetary stop-over. Each team could fundraise for their favourite charity as well.

The webcasts would enable schools to tune into the fun going on throughout the day and even schools not involved might participate by having their own Solar System "party", etc.

Is it a hair-brained idea? Maybe, but I think it would be a great way with the advance notice we have of really creating an Astronomy Day in Ireland with a difference (not sure if it could be extended Europe-wide but Richard West might have some thoughts on that Ian). We could certainly meet up to have a chat about the feasibility of such an event; from being involved with the volunteer management side of the Special Olympics the last couple of years in the prep for the World Games in 2003, I know that many towns poured extraordinary resources into creating a fantastic event and there are lots of talented people who would might their time to set up the above idea.

Some extra thoughts:

With the many IFAS* clubs around the country, there are already local resources in place to guide schools on sourcing information, etc. on the Solar System.

We could try to get sponsorship for prizes for the teams that raise the most money for charity.

Each team would bring back a "sample" from each Solar System body (as well as getting the passport stamped). The sample could be something jokey -- maybe even something donated

where we could do a charity auction at the end of the Day, or donate all the returned "samples" to a local Hospice/School.

* Irish Federation of Astronomical Societies (www.irishastronomy.org)

Reaction of Sean Morris:

You have given this a lot of thought John! Your hair-brained ideas are not bad at all!

I think it's a great idea. It can be done easily. We all (on this list) know someone somewhere who would be more than willing to help in some way e.g. prizes, driver, minicab hire etc.

If the schools were on track for that March 2005 broadband deadline, then we could have live pictures on the net, live interviews on Radio, and maybe RTE would have a cameraman to record events for the news that evening?
