Aurora
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Chinese Solar Terms by Henry Lee

Note: The chart on page 3 of Solar Terms and Dates will be helpful in following this article.

I showed in a previous article in Aurora how the lunar calendar meshed with the solar calendar by means of the Solar Terms. There were six main reference Terms, being the Vernal Equinox, the Autumnal Equinox, the Commencement of Spring, the Commencement of Summer, the Commencement of Fall and the Commencement of Winter.

In between these main Terms were interjected eighteen more Terms depicting temperature, agricultural and biological environments. This article will be mainly devoted to the folklore associated with these picturesque Terms.

The Chinese Lunar Calendar and Almanacs start their New Year at the Winter Solstice. Approximately December 21 in the Julian Calendar. Starting a New Year is a very auspicious occasion for the Chinese who celebrate the event with sumptuous feasts as described in my earlier article. Featured among the gustatory delights are the delicious steaming hot wontons and dumplings in soup.

In accordance with the principles of Universal Harmony of Yin and Yang, the declining Yin energy of the Winter Solstice gives way to the rising Yang energy of the Sun as it passes through the Lesser Cold and the Great Cold, the harsher of the seasons.

Following on the heels of the Lesser Cold and the Great Cold, the Commencement of Spring heralds the ceremony in early February of the Julian Calendar by the farmers of China "beating the cow". This was done symbolically to encourage the cow not to be lazy after the long winter of relative ease and forget the upcoming spring chores. By mid February, Rain Water period approaches and The Awakening of Insects pervade the land by Julian Calendar March. The Solar Term marker of spring is the Vernal Equinox on our March 21st with which we are so familiar.

Of more familiarity to the Chinese, is the Clear and Bright Solar Term of April. It is observed in Windsor and in other cities throughout Canada by marching (now driving) to the grave sites of our ancestors with chicken, barbeque pork, fruit and incense. After cleaning up these sites, the food and incense are placed on top of the ground and prayers are offered. Having dutifully shown our respect at "Ching Ming" (Clear and Bright), we would all meet at the Community Hall to savour the food which have been brought back, and to enjoy our fellowship. Quite often, the food would have been contributed by the business community for the occasion.

The Grain Rains of late April remind the Chinese farmers and wives that the various planted grain will soon be nourished by the needed warm moisture and that silk worms will need tending by offerings of many mulberry tree branches. Apparently in Windsor we have not yet developed a strain of silk worms to withstand our climate, even though we are considered to be in the favoured banana belt of Canada. It's not to far fetched that this could be accomplished in light of the established fact that a type of course silk is produced in north-

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Calendar of Events

Our next meeting…

Tuesday, January 16, 2001
8:00 p.m.
at
St. Stephen's Church
Howard Road, 1.4 kms. south of
Hwy # 3

Main Speaker…

Susan Sawyer-Beaulieu

Topic...

"Backyard Observatory Designs"

Activities...

Partial Solar Eclipse - On Christmas Day a partial solar eclipse will be visible from 11:00 a.m. to 2:00 p.m. with maximum eclipse occurring at 12:30 p.m.

Meteor Showers - Ursids are due to peak on the night of December 21 - 22 and the Quadrantids peak on the night of January 2 - 3.

Double Shadow Transit - On the night of January 7 from 10:13 - 11:26 p.m. watch the shadows of Ganymede and Io cross the disk of Jupiter.

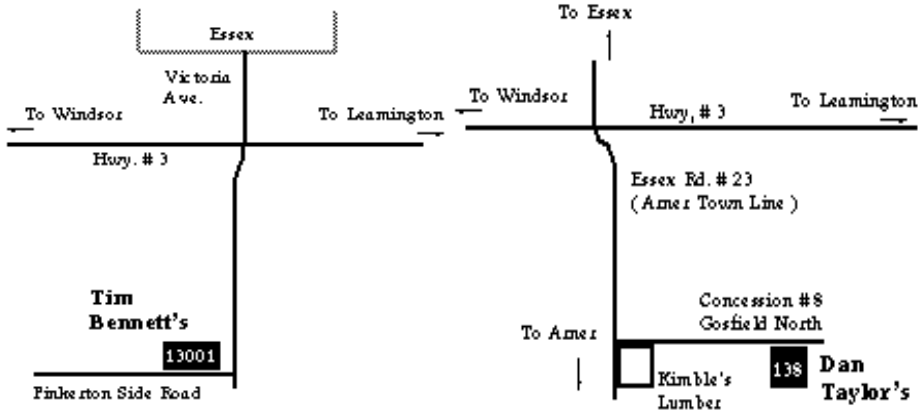
Council Meeting - Tuesday February 6, 2001 at Steve Mastellotto's house. Meeting begins at 7:29 p.m.

Observing Nights

Frank Shepley's.....Last Quarter Moon
Dan Taylor's.....New Moon

(please call before showing up)

Maps



Tim's House (776-8901) Dan's House (776-4493)

Calendars

Windsor Centre members who wish to purchase the 2001 RASC calendar should buy it through Frank Shepley for $12.00. Not only will you save a couple of dollars but the Windsor Centre will also get a portion of the proceeds. See Frank at any meeting to get your copy.

Submissions

Aurora is published monthly except for August. The September, November, January, March, May and July issues are full newsletters (usually 6 pages) with a number of member submitted articles. The October, December, February, April and June issues are short flyers (2 pages) with one short article. Submitted articles can be of any length from a paragraph to multiple pages. I can scan pictures and/or diagrams (both prints and film) to support your article and the originals will be returned to you.

Submission deadline is the 1st of the month. I will accept Emails at the address below, floppy disks, or written submissions.

Editor: Steve Mastellotto Email: mastels@towers.com

Membership

The Windsor Centre of The Royal Astronomical Society of Canada meets on the 3rd Tuesday of every month (except July and August) at St. Stephan's church. In addition to regular meetings the centre hosts a number of observing nights, a picnic and a December social. Members receive a copy of the Observer's Handbook, the RASC Journal, a subscription to SkyNews magazine and access to the Centre's library and telescopes.

Membership is $40.00 - 1 year, $80.00 - 2 years and $120.00 - 3 years. Life memberships are also available.

Contact Frank Shepley at (519) 839-5934 or visit our website at: www.mnsi.net/~rasc for more information.

Chinese Solar Terms

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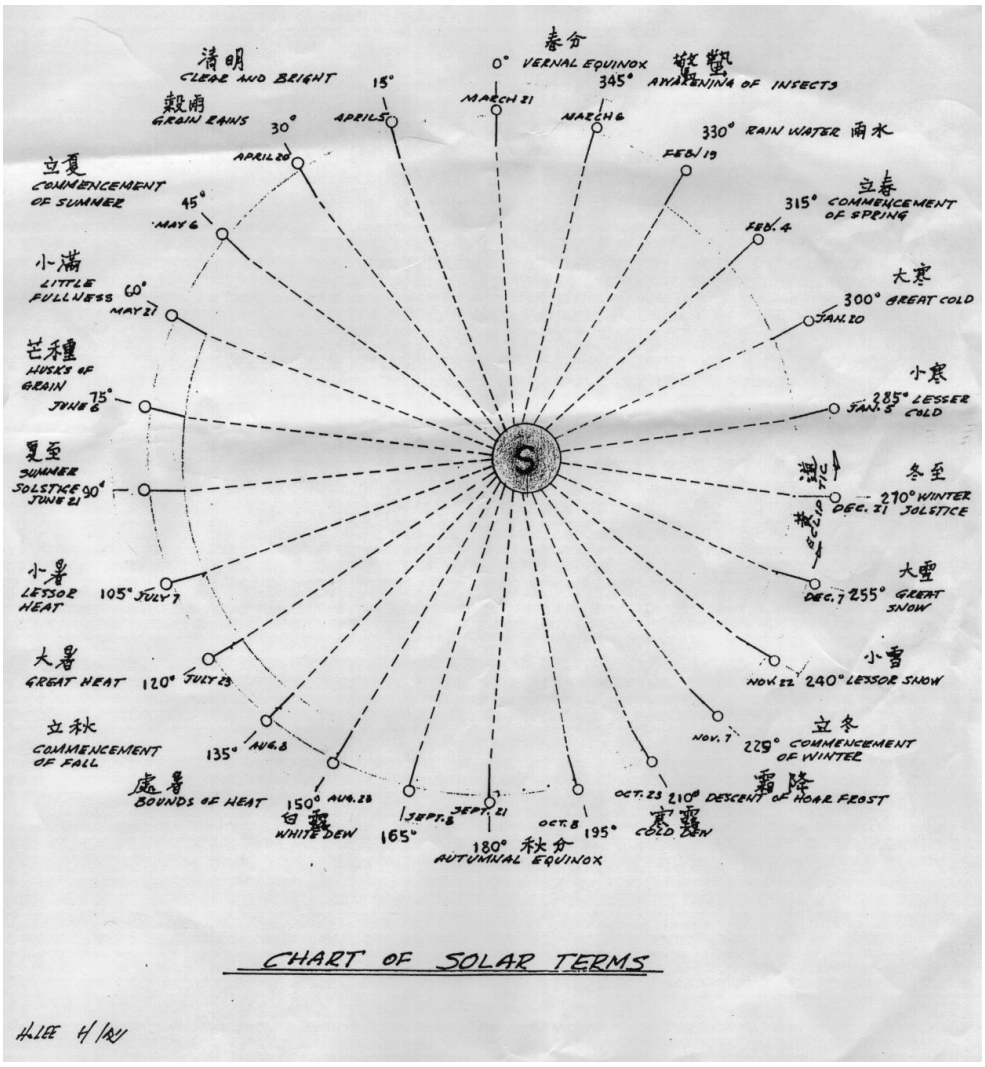
ern China known as Tulsa Silk by a large and hardy species of silk worm.

In a few short weeks, around May 20th, Commencement of Summer brings increasing warm weather and draw people to more outdoor activities. The Solar Term Little Fullness indicates the period when the silk worms have completed their cocoon spinning and the cocoons are then ready to be boiled, their drawn silk ready to be spun, and perhaps the pupae deep fried – yum! Grain now planted, are beginning to fill out and by the first week of June, under the Solar Term Husks of Grain, the crops are ready to be harvested and work in the fields begin in earnest.



Of course, the Fall Solar Term goal post is the Autumnal Equinox, around September 21st, when the night greets the day on equal terms.

Following in October, Cold Dew Solar Term silences the insects and bugs and turtle songs. Ah! Caught your attention – turtle songs indeed! Anyway, quiet settles over the land with the Descent of Hoar Frost. Reverting back to the Lunar Calendar again, on October 10, the "Double Ten" holiday, a huge parade takes place celebrating a successful harvest season, not unlike our Thanksgiving.

Early November starts the Commencement of Winter when now the Cold Dew nourishing the winter wheat is about to be covered by Lesser Snow, and finally the Great Snow in December will initiate yet another cycle of Solar Terms with its promise of brighter days and greater crops.

The mid-year Solar Term marker Summer Solstice is the day of longest sunlight and shortest night. The sun has reached its zenith of its Yang cycle and the Yin cycle will increase in proportion to the decrease in Yang. This, as we all know, occurs on our June 21st. The torrid stages of summer carry us through the Solar Term Lesser Heat, July 7th – Girls Holiday when the young ladies have their festive get together. Legend has it that in the old days, a young village couple, whose parents did not approve of their union, had drowned themselves in the local river. Every year at this time, the village belles would hold a special remembrance day in their honour on the "Double Seven" (actually on the Lunar Calendar). On this same day, the elders would cook huge vats of food, which were offered to the departed souls, chanting for them to appear. Finally the balance of July carries us through the Great Heat of high temperature and high humidity into the Solar Term marker Commencement of Fall around August 8th.

With the arrival of Bounds of Heat Solar Term, summer loosens its grip and gives us relief by the end of August. On August 15th of the Lunar Calendar, the Chinese have their Thanksgiving Day, honouring ones parents and grandparents with Red Bean Cakes and praying for better life and prosperity. September brings the White Dew, welcoming the Fall. On September 9th, "Double Nine" (actually on the Lunar Calendar), kite flying takes wondrous creatures to the sky. However, this is not an auspicious time for would be brides to wed because sometimes kite strings would snap letting the straining silk and rice paper creations soaring to Heaven, not quite the right omen for a long and blissful life.

Email Addresses by Steve Mastellotto

As part of my new role as 1st Vice-President I am now responsible for the phone committee. As a member of the phone committee for the last 5 years I know how much time it takes to call everyone on the list and also how much that list has changed since we have grown so quickly. Each person is responsible for calling 8 - 12 members before each meeting and any special events. In order to reduce the number of calls each person needs to make I would like to initiate an Email notification function to the phone committee. Since many people now have Email addresses I would like to collect as many addresses as possible from the membership. This should be an address that you check regularly, not necessarily daily, but one that you check every few days and can receive personal messages.

An Email will be sent to this address on the Friday prior to any meeting or a few days before any special event instead of receiving a phone call. This should help reduce the load on the phone committee.

I will manage the list and send all the notices. So if you would like to be part of this new process please send me an Email from the address you wish to use so that I can just capture the "from field" to my address book. That way we won't create any typos between you typing it and when I type it into my address book. Send a message to:

smastell@wincom.net

P.S. - Everyone should do this (including Randy, Frank, Susan, etc..) so that I have a correct current address.

St. Clair College Observatory Update

As I reported in the November 2000 issue of Aurora the Windsor Centre has made an offer to purchase the St. Clair College Observatory. In case you were not at the November meeting Susan reported that the College has accepted our offer. At the time of this writing (December 12) we have paid the College the agreed upon amount and it is now officially ours. I am making arrangements this week for Randy to get access to the observatory so that he can remove the telescope. So what did we get? We have 70's vintage Celestron 8 with wedge and pier and a 10 foot Ashe - Dome with observatory walls. You can see the structure in the photo at left.

Our next steps are to find a permanent home for the structure and an official Windsor Centre observatory site. If you want to participate in this process please see me or Randy Groundwater at any meeting or give us a call.

Steve Mastellotto

2001 Council of the RASC - Windsor Centre

Elected Officers

President	Randy Groundwater
1st Vice-President	Steve Mastellotto
2nd Vice-President	Robin Smallwood
Treasurer	Frank J. Shepley
Secretary	Joady Ulrich
National Council Rep.	Frank J. Shepley

Councilors

Tim Bennett	Susan Sawyer-Beaulieu
Henry Lee	Tom Sharron
Robert Hastings-Trew	Paul Preney
Steve Pellarin	Larry Burgess
Rev. Harry Brydon	V. John Beaudoin
Ken Roung	Lindsy Fish

Appointed Officers

Honorary President	Dr. William Baylis
Past-President	Susan Sawyer-Beaulieu
Librarian	Tom Sharron
Recording Secretary	V. John Beaudoin
Public Education Director	Randy Groundwater
Public Relations Director	Robin Smallwood
Newsletter Editor	Steve Mastellotto
Director of Observing	Robin Smallwood
Assistant D. of O.	Steve Pellarin
Assistant Treasurer	Tim Bennett
Alternate Council Rep.	Tim Bennett

The Old and The New by Dave Panton

Why do we tend to stick with the old when the new is so much superior? Being guilty of this myself I feel qualified to comment. Astronomy has been a very long time interest since first marveling at the Great Spiral Nebula in Andromeda. The place was near the Vanderhoof B.C. airport in the summer of 1959. The view was via both naked eye and a pair of 7x35 binoculars. Aviation was also a strong interest. It would take precedence until time and circumstances allowed my interest in the sky to soar from thousands of feet to millions of light years.

First I learned to fly sailplanes and then powered aircraft. Sailplane pilots look on people who "screw their way through the air" with a bit of disdain. Among powered aircraft owners there are those who believe only "real men" fly aircraft built the old fashioned way with a little tail wheel dragging along behind. No matter, all have to find their way in the sky just like we do with our telescopes.

An amateur can find his way around in the air quite well in good visibility. Merely head out in the right direction and look for big obvious sights like lakes, railroads and towns on the ground as guides along the way. If they match the map all is well. If the visibility is poor it is easy to become disoriented and then lost.

There are bits and pieces of electronic navigational equipment which can keep one on course and help save the day. If in genuine doubt a radio call for help from an Air Traffic Controller can generally save much needless embarrassment. A better way is to use a modern GPS navigation system and know exactly where you are from take-off to touchdown.

In amateur astronomy, we can find our way around in good conditions in much the same way as the amateur aviator. Start from a known big bright star and move from known point to known point until the final objective is found. If conditions are poor or the final object very faint, this can be very challenging. For some reason, this is widely known as part of the joy of observing. That may be so for those lucky souls who live under clear dark skies. The rest of us are like the little guy in aviation trying to find his way around on a cruddy day. I used to say, "If we don't swim in septic tanks, why go out and fly in the aerial equivalent?"

There are few differences, the "big obvious sights" are stars but other than naked eye brightness, they all look pretty much the same. They make confusing patterns and move with rotation hour by hour in the night sky. The seasons change and an object that was over the barn in Summer may be hidden behind in Winter. What if you are nowhere near that familiar old barn? What if it is a bit hazy or you live in or near a city with lots of light pollution? Factor in age, dimming the eye's sensitivity to light. Now add mosquitoes or freezing cold to the aggravations. Why not stay home and enjoy those gorgeous photographs in

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The Old and The New

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Sky and Telescope?

Like the little aviator we can be a bit more technical with the right equipment. Using a basic equatorially mounted telescope lined up on true North near the North Star and finding one other star to set the correct right ascension, the clock drive can be started. Now setting circles can be used to navigate fairly close to one's target if it's location is known from a reference table or map. The procedure is painstaking to say the least. If you get lost among the stars the evening may be a loss but unlike the flyer you can go home to a nice warm bed. But what about those who say you should know your way around the night sky so well that setting circles should not be needed?

Having owned a four inch reflecting telescope on a light equatorial mount for many years time I found it difficult to locate the things I wanted to see in the night sky. Was the scope aimed at the right spot? Why was the object not visible? Was it too dim or located somewhere else? As the years went by aviation went by the wayside via a medical problem. Now it was possible to really dig into astronomy. Having subscribed to Sky and Telescope for many years I knew about new telescopes coming on the scene. They were marvels of technology that could eliminate the problem of finding objects in the night sky.

There was and is a bias toward doing it the hard way. "If you really know the night sky you can find anything". You must also have the time and patience to navigate from known to unknown objects. What if you can't find the known objects? In light polluted skies like ours the constellations barely show on a good night. Aging further reduces light sensitivity in our eyes. Time and again, trying to find easy objects resulted in far too many failures. Adding a Rigel sight and a big 10x50 finder helped a little but finding the correct nearby stars was still a problem. "What to do?", to quote a former math lecturer on encountering insoluble deadlocks in his chalkboard sessions.

The book "Star Ware" provided several hundred pages of useful telescope information but there was still a problem. Which one would be best? Maybe a better mount with more accurate setting circles and a good clock drive would help. What about inverted views, mirrored views or horror of horrors, both combined? No one writes much about the need to be a contortionist, immune to pain to look through some telescopes. Nor do they mention being a capable weight lifter. Some telescopes are heavy and also have big counter weights. How can any one short of a Sumo wrestler with the night vision of an owl move and set one of these up in the dark?

Windsor Centre member Robin Smallwood was consulted at his "Universal Science" store. Robin was familiar with my telescope and soon made aware of all I had learned to date. I loved the neat look of his various classic (and reasonably priced) telescopes and looked askance at this strange appearing new Celestron "Goto" design. It looked weird and didn't even have any neat black knobs, screws and sector gears or even nice big setting circles. It didn't even have a spotting telescope. Even worse, it couldn't even be operated without stuffing it full of expensive AA batteries.

The idea of finding and seeing the many exciting things I had always wanted to see in the night sky was too much. I yielded after a trial or two under a night sky. Go ahead, point at me and laugh. I now have an 8 inch NexStar Celestron "Goto" telescope and I am very proud of it. The game is all different, thank goodness. Now I really enjoy going out under the night sky. I can "goto", find and enjoy the same object several times in the same evening. It is possible to see dozens of objects through an evening.

The need for a map is just as great but in a different way. Now I want to be certain I really am where the telescope is pointed. Often I printout mirror image (to match the eyepiece view) map sections on my home computer and take them along in the dark to double check locations. It is possible to use data from old maps and go directly to the area of interest in just moments by entering the coordinates and pushing a button or two.

Yes, there were some problems. I had to buy a rechargeable 12 volt battery pack. The total investment on a retired income was a bit heavy but a bargain in the circumstances. The first telescope developed some problems but the replacement has operated perfectly. The 8 inch telescope is mounted on a drive which seems a bit light. I was bugged by some small hardware and programming glitches. They seem normal in a new model of any product. These are no longer any difficulty.

Would I buy another goto telescope? Absolutely yes. I found the real enjoyment is looking at the truly amazing variety of objects in the night sky. In the first season I saw far more than I ever did in many years hunting around lost most of the time. A nice thing about any telescope, the operating cost is nearly zero. Ask an aircraft (or boat owner) about operating costs! Was I ever lost in an aircraft? Pride will only allow me to admit to being "temporarily unsure of my position".