

**NANAKSHAHI CALENDAR – A BOON, NOT BANE**  
**[A REJOINDER TO: NANAKSHAHI CALENDAR – BOON OR BANE]**

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*The recent reversing [in January 2010] of the reforms introduced in the Nanakshahi Calendar in 2003, and the manner in which this has been done is, indeed, unfortunate and regrettable. A common Sikh is pained and ashamed for the way his / her affairs are being handled at the highest level. The world watches every event these days, and one shudders to think of what impression the Sikhs as a community are giving to others!*

*The lay man is confused about the Nanakshahi Calendar issue. And, understandably so, as calendars is not every person's subject.<sup>1</sup> The calendar is one of humankind's earliest and most useful inventions, ranking up there with fire and the wheel. Like any amazing invention, calendar has improved with time. A lot of scientific effort has gone in to create the calendar that we now take for granted.*

*I came across an article titled 'Nanakshahi Calendar – Boon or Bane. This Article is written in the spirit of a well-wisher of the Panth, as it concludes that the calendar issue 'should not become an issue to make a vertical split in the Panth.' But, based on certain ambiguous information about this issue, the author, however, brings out the reforms introduced in the Nanakshahi Calendar as a bane, and not a boon, for the Sikh community. And, unfortunately, the progressive reforms have been projected as retrogressive.*

*Calendars is not my field either, but with an introductory knowledge of Science, I have attempted to explain some misconceptions related to this topic, by taking this Article as a base, so as to be able to address specific points which are of concern to the Sikh masses. The text in italics is my explanation to the points raised by the author of 'Nanakshahi Calendar – Boon or Bane.' The original text of the Article*

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*is also being reproduced along with, in “inverted commas.”*

“Nanakshahi Jantri Sammat 531 corresponding to the year 1999-2000 published by the SGPC spells out briefly the salient features of the Nanakshahi Calendar. But in doing so it gives rise to more questions than clarifying the issue or satisfactorily answering to the points at issue.”

Let us take up the points at issue, one by one.

“The opening lines of the Jantri start with a question, “ਨਾਨਕਸ਼ਾਹੀ ਕੈਲੰਡਰ - ਸਮੇਂ ਦੀ ਮੰਗ। ਨਾਨਕਸ਼ਾਹੀ ਕੈਲੰਡਰ ਨੂੰ ਲਾਗੂ ਕਰਨ ਦੀ ਲੋੜ ਹੈ?” And then it goes on to explain that every Nation has its own calendar. Muslims have Hijri, Christians have Isavi (eIsvI), Hindus have Bikrami, and so on. The Sikh Nation did not have its own calendar. The Nanakshahi Samvat which was given in the Jantris was in fact the copy of the Bikrami Sammat and it had only the name Nanakshahi.”

The years of the Nanakshahi Sikh Calendar start from the birth of Guru Nanak in 1469. The Nanakshahi Samvat would remain the same, as it indicates the number of years since the birth of Guru Nanak.

The Nanakshahi Calendar is not new; earlier it was linked to Bikrami calendar. The reform worked upon and struggled for adoption was simply to shift the ‘existing’ Nanakshahi Calendar to a more accurate solar calendar, being based on calculations of latest studies.

“One of the reasons which is being given in favour of the Nanakshahi Jantri is that it will help establish the Sikhs their individual entity. If this be real intention then this is not going to help at all. Because the Hindu terminology like Har ki Pauri, Har Mandir, Athsath Tirath etc. and the extensive usage of Hindu reference were adopted by Guruji. Then are we going to omit all these. In fact these references were used as a carrier and medium and not an end. In fact the issues which are really going to help establish the Sikhs’ separate identity like Article 25 of the Constitution, the separate personal law for the Sikhs, the Hindu Marriage Act, forcing the Sikhs to declare them as Hindus under the Indian law etc. etc. have been dumped deep in the archives. May be to retrieve the issues, as always, to be utilised when being out of power?”

*It is correct that ‘Hindu terminology and reference adopted by Guruji like Har ki Pauri, Har Mandir, Athsath Tirath, etc., were used as a carrier and medium, and not an end.’ First of all, shifting the Nanakshahi Calendar to a more progressive calendar of the day is not comparable to ‘omitting of Hindu terminologies’ used by the Guru. As*

*it is, the question of omitting even a letter of the Guru's word does not arise. Because if the Guru's own son cannot be pardoned for it, how can any one else even dare it?*

*Moreover, the terminology 'Nanakshahi' was not given by the Guru; the Guru's followers have coined this term.*

*The terminology 'Bikrami' was replaced by 'Nanakshahi' centuries ago. Presently, there should be nothing objectionable to merely shifting from a less accurate calendar to a more accurate solar calendar. Such an objection can only arise either out of ignorance about the subject, or from some vested interest. This move is comparable to shifting from carts to cars. Has this shift to faster means of transport affected history / ideology of Sikhi in any manner? Or should we give these up in favour of the means used in the Guru-period, to demonstrate our commitment to Sikhi?*

*And, as for 'Sikhs' independent identity' - no doubt, addressing Article 25 of the Indian Constitution, Sikh Personal Law, the Hindu Marriage Act forcing the Sikhs to declare them as Hindus under the Indian law, etc., are indispensable for establishing separate identity of Sikhs. But these shall address the issue at the national level, whereas the Nanakshahi Calendar gives the Sikhs an independent identity at the global level.*

*Here is a quote from 'Mapping Time - The Calendar and Its History' by E G Richards (Oxford University Press):*

*Today each of the major religions has its own calendar which is used to programme its religious ceremonies, and it is almost as true to say that each calendar has its religion. The Christians, the Moslems, the Jews, the Buddhists, the Jains, the Hindus, the Zoroastrians, and, more recently, the Bahai, all have their calendars.*

#### *Distinctive Features of Religious Calendars*

*[Appendix 1, page 27]*

*All religions design their religious calendars to conform to their scriptures and/or beliefs. Most are reforming or have already reformed their calendars to retain their distinctive features as well as match the latest calculations available, by following extremely tedious procedure(s). The features of the reformed Nanakshahi Calendar are the simplest and most accurate, as there is no contradiction between the Sikh scriptural beliefs regarding the structure and functioning of the universe and the findings of the scientists of the day. Rather, the*

*Bikrami Samvat<sup>2</sup> does not conform to the Guru's observation of 'suraj eko rut anek,' on which the calendar of the day, the Common Era Calendar is, in fact, based.*

“In fact what has been done in the name of the Nanakshahi Calendar is that instead of following the Bikrami Calendar it has simply adopted the Christian Calendar, but of course the name Nanakshahi has been given to it.”

*First of all, there is nothing like a Christian Calendar, in the sense it is being used here. A calendar is a system designed by man to name time, and organize days for social, religious, commercial, or administrative purposes. The Almighty has only made days and nights, and seasons. And, broadly speaking, a calendar is either lunar<sup>3</sup> or solar<sup>4</sup> or luni-solar.<sup>5</sup> If any of these carries Christian information, it is referred to as Christian Calendar. In other words, a Christian Calendar can be either lunar or solar or luni-solar, depending upon which system of calendars the Christians want to display their information on. Similarly, a calendar that gives information about Sikhs has been given the name Nanakshahi, after the founder of the religion – Guru Nanak. The terminologies Bikrami and/or Christian have absolutely nothing to do with it. It is wrong to say that the Christian Calendar has been adopted. The major differences between the two, which have escaped the notice of the author, are tabulated below:*

|                | Nanakshahi                                     | Gregorian                         |
|----------------|--|-----------------------------------|
| Days in Months | 30 or 31                                       | 28,29,30 31                       |
| Leap Day       | Last day of the year                           | Last day of February <sup>6</sup> |
| Month Length   | Summer months longer,<br>Winter months shorter | No such rule                      |

“It is pertinent to note that any era starts with some event of history. Christian era starts from the birth of Christ, Hijri Calendar dates from the Hijrat (migration) of Mohammed from Mecca to Madina and so on. In the middle of the 18th century when the Sikhs had avenged and reversed the Moghul onslaughts, contemporary writer Dil Mohammed Pasruri had even suggested that a new era be started from this day naming it ਜਗਨੇ ਖਰਾਬ Sud, means the world has been ransacked. But in the case of Nanakshahi Calendar it has no relevance with any date from the life of Guru Nanak Dev ji. It is thus a Christian calendar with the name Nanakshahi.”

*Nanakshahi Calendar starts with the year of birth of Guru Nanak.*

*Christ was not born on January 1, but the Gregorian Calendar begins on January 1. Hazrat Muhammad's Hijrat did not take place on 1 Muharram, yet the Hijri year begins on 1 Muharram. There is no unanimity amongst the historians on the Parkash date of Guru Nanak Dev. Should the year have been started in the middle of Katak ('very laughable' according to Dr Ganda Singh), or on 19 Vaisakh, or on 1 Vaisakh (Vaisakhi day)? The best course has been adopted and, therefore, the first day of the first month of Baramaha banis, i.e., 1 Chet, has been taken as the New Year Day.*

“The Christian Era started with the advent of Christ and came with it the Julian Calendar. This Calendar was modified by Pope Gregory the IIIrd vide his ecclesiastical edict. This Christian Era calendar was adopted by the British Parliament and was imposed upon its subjects. Even though, like the English language this AD Calendar is prevalent all over the world, but the Nations having any sense of pride and consideration of heritage have not discarded their own calendars for their National days.”

*The Facts First: The Julian Calendar<sup>7</sup> did not come with 'the advent of Christ.' In 46 BC, i.e., even before Christ, Emperor Julius Caesar replaced the Roman lunar calendar with a solar calendar modeled after the Egyptian calendar, and called it the Julian Calendar. In 1582, in spite of being the Head of the Catholic Church, Pope Gregory XIII [not Pope Gregory the IIIrd] proposed further changes / reforms.<sup>8</sup> The changes which Pope Gregory was proposing were changes to the civil calendar over which he had no authority. The changes required adoption by the civil authorities in each country to have legal effect. Most countries were reluctant. But, slowly and steadily, over the centuries, every state has adopted or has had to adopt the same. For example, the reformed Gregorian calendar was adopted in England and its colonies, including America, only in September 1752, almost two centuries later. And, China adopted this Calendar only as recently as in 1949. Currently, the Gregorian Calendar is the internationally-accepted civil calendar, and is referred to as the Common Era Calendar.*

*Calendar Timeline [Appendix 2, page 30]*

*The Gurus used the language, the means, and media of the day to propagate and preserve for posterity, their message to humanity. Sense has prevailed, and we too are using the language, the means, and the media of the day for the same purpose. Now coming to the Nations*

*'that have not discarded their own calendars for their National days,' on account of 'having some sense of pride and consideration of heritage': The Jews believe that Jehovah fashioned the various components of the creation on weak days, and rested on Sunday. Time is said to be created on Thursday. If time was created on fourth day, how did the days precede the creation of time? The Muslim belief holds that the earth is flat, and there is a heaven in the sky. As per Christian belief, the sun goes round the earth, and also that the earth is flat. When Galileo discovered that the earth is round and that it is the earth that goes around the sun, he was found vehemently suspect of heresy, forced to recant, and put under house arrest for life, for saying this by the clergy of the day, as recently as in 1632. Do 'the nations having any sense of pride and consideration of heritage,' still adhere / believe that sun goes around the earth, or that the earth is flat, or that there is a heaven in the [seventh?] sky, or that time was created on a Thursday? Or that the earth in space is supported by a bull?*

*The question of 'sense of pride and consideration of heritage' in shifting to a more accurate solar calendar of the day does not even arise in our case, for we are the followers of a progressive prophet, whose vision no science has contradicted. Moreover, where had gone our 'sense of pride and consideration of heritage' when we gave up using ratis, sers, mans, yojan, gaj, kos, tank, gharhi, pal, muhurat, visuay, chasuay - all used by the Gurus, and mentioned in Gurbani?*

*"Even this Christian calendar which is being called a common or current calendar is not without defects. Reforms to this calendar are being suggested in the form of International Fixed Calendar and the World Calendar to fix the days of festivals and rest as was in the original Julian calendar besides fixing the length of the months. So much so that even the length of a week of seven days is also being given a thought. It may not be surprising that this whole calendar is further reformed. In that case it will be again adjusting our calendar to the reformed Christian calendar."*

*Hopefully, by now, the author's term 'Christian Calendar' is seen in a different light. And also, that the future reforms will not be based on 'original Julian Calendar,' as it has already been replaced by the more accurate Gregorian Calendar [Common Era Calendar]. By any criterion, the Gregorian Calendar is substantially more accurate, as it accumulates an error of one day in 3,336 years, as compared to the*

*Julian Calendar, which accumulates an error of one day in just 128 years.*

*The Nanakshahi [NS] month, Magh currently corresponds to 13<sup>th</sup> January to 11<sup>th</sup> of February of the Common Era Calendar. If months are done away with, then Magh will correspond to Day 13 to Day 42 of the year of 365 / 366 days. The same information can also be depicted in terms of weeks. The week number is described by counting the Thursdays: for example, week 12 contains the 12th Thursday of the year. If the international week / month get shorter / longer, then Magh can still be represented / depicted accordingly. Thus the use of different parameters may yield different digits, but the period referred to remains the same. Also, like 8.30 p.m. and 2030 correspond to the same minute of the day. Different methods of naming time do not, therefore, change the moment / period in time, in any manner and, therefore, do not alter history of any nation or the occurrence of any event.*

*As it is, even if the calendar is very accurate, its accuracy diminishes slowly over time, owing to changes in Earth's rotation. This limits the lifetime of an accurate arithmetic calendar to a few thousand years. After then, the rules would need to be modified from observations made since the invention of the calendar. It is obvious that these changes would be very, very minute. But, whatever the observations / proposals, the length of the year shall ever be based on the precise time taken for one revolution of the earth around the sun in that particular millennium, i.e., ever on the basis of 'suraj eko rut anek.'*

*It must be remembered that, historically, most calendar reforms<sup>9</sup> of the past have been made in order to synchronize the calendar in use with the solar year (tropical or sidereal).<sup>10</sup> That is, most of these reforms have been introduced to make the calendars more accurate, in a bid to keep aligned the seasons and the time taken for one complete revolution of the earth around the sun.*

*But in this day, from the astronomy point of view, the Common Era Calendar calls for no further improvement, as the error that now remains is only of one day in around thirty-three hundred years. It is the seven-day week and the different lengths of months, or some such criteria that are objectionable to some. But, the proposed International Fixed Calendar and the World Calendar are still not completely satisfactory to all.*

*The reforms being currently proposed / worked out by the*

*international community<sup>11</sup> are only on how to represent time from the practical point of view. International Organization for Standardization ISO 8601 specifies numeric representations of date and time. This standard notation helps to avoid confusion in international communication, computation, etc., caused by the many different national notations and increases the portability of computer user interfaces. The purpose of this International Standard is also to eliminate the risk of misinterpretation where numeric representation<sup>12</sup> of dates and times are interchanged across national boundaries, and to avoid the confusion and other consequential errors or losses. [9/11 in America conveys 11<sup>th</sup> of September, and in India, the same would be taken as 9<sup>th</sup> of November.]*

*Thus, whatever the future reforms, the length of the year and days will not change. And, we do not have to change ever the 12-month year, so it may ever correspond to the Baramahas. And, for the same reason, we also need to observe the month of Chet as the first month of the Nanakshahi year, because it is Chet with which begin the compositions, Baramahas of both the Gurus, Guru Nanak Dev as well as Guru Arjun Dev. On the other hand, as per the Bikrami Calendar, the New Year begins in Vaisakh, and this makes the first month of Baramahas, Chet, as the last month of the Bikrami Samvat.*

*And, whatever the internationally-accepted notations to represent the standard year will be formulated, [i] these could be simultaneously presented on the Nanakshahi Calendar – just as we now combine the Nanakshahi as well as the Common Era information on the same calendar; [ii] and these would be easily convertible from one format to the other, by specific softwares / calendar calculators, at the click of a mouse – thus always referring to the same period in time, irrespective of the type of calendar used.*

*Softwares are currently available which can convert any date of a calendar to the corresponding date of another calendar. For example, the 26<sup>th</sup> January, 2010, corresponds to the following in some of the calendar systems, at the click of a mouse:*

|                           |                              |
|---------------------------|------------------------------|
| <b>Gregorian calendar</b> | <b>26 January 2010</b>       |
| Julian calendar           | 13 January 2010              |
| Roman (Julian) calendar   | ID. IAN. MMDCCLXIII A. V. C. |
| Jewish calendar           | 11 Shevat 5770               |
| Islamic calendar          | 10 Safar 1431                |

|                                      |  |
|--------------------------------------|--|
| <i>Coptic calendar</i>               | 18 Tobe 1726   |
| <i>Julian Day number (12h UT)</i>    | 2455223  |
| <i>French Revolutionary calendar</i> | not in supported range   |
| <i>Mayan calendar</i>                | 0 Pictun 12 Baktun 19 Katun 17<br>Tun 1 Uinal 0 Kin (10 Ahau; 18 Muun) |
| <i>Ancient Egyptian calendar</i>     | 11 Payni (2nd month of Summer)   |
| <i>OF calendar</i>                   | 18 Trott 34 (8 Osman)  |
| <i>Day of week</i>                   | Tuesday  |

*The laws and phenomena of nature are being unraveled by scientists every day. The speed of light, the distances of stars from the earth, whose light is yet to reach the earth, are now being calculated with precision beyond the comprehension of a common man. A second is split into the following progressively smaller fractions, i.e., milliseconds, microseconds, nanoseconds, picoseconds, femtoseconds, attoseconds, zeptoseconds, and yectoseconds. A nanosecond is one-billionth of a second.*

“Although this [Christian] calendar is being called the common calendar but the Muslims, Hindus, Budhists, Jains, Jews or even certain orthodox sects of Christians like Ukranian Christians have not disowned their traditional calendars for their national days. It is thus seen that the reason and purpose for which the Nanakshahi Calendar was sought to be introduced gets defeated because the Sikhs will be subjected to the yoke of Christianity. Is it not a fact then that the Christian Calendar has been made a standard and the Sikhs and their traditions have been asked to adjust according to it?”

*Once again, the Christian Calendar and the Common Era calendar is not one and the same thing. It has been mentioned earlier that the author’s ‘Christian Calendar,’ which, as per the author, ‘came with the advent of Christ’ is, in fact, the calendar adopted by Julius Caesar in 46 BC, i.e., before Christ. Thus the ‘Christian Calendar’ of the author has nothing to do with Christ, other than that the Christians used this Julian Calendar to depict the birth of Christ and their history on it. It is true that ‘Muslims, Hindus, Budhists, Jains, Jews or even certain orthodox sects of Christians have not disowned their traditional calendars for their national days,’ but is this reason enough for Sikhs to do the same, copy them blindly?*

*Rather, it is in this reformed Nanakshahi Calendar that we now have, for the first time, a truly Sikh Calendar conforming to Sikh*

*Scripture and Sikh beliefs. It is now free of any influence of any other religion or religious beliefs. This should, rather, be our 'traditional calendar,' which we must not 'disown for our national days.'*

*Unlike the 'Christian Calendar,' the Common Era Calendar is silent on when Christians should celebrate Easter,<sup>13</sup> just as it is about Parkash Utsav of Guru Nanak Dev. It is up to Christians / Sikhs to make use of it or not. Thus, by not adopting the Common Era Calendar in as far as its accuracy is concerned, we are rather 'subjecting' ourselves 'to the yolk of Christianity.' [The major differences between the 'Christian' and Nanakshahi Calendars have been tabulated previously.]*

*Just like Hindus frequently have two Dushehras, Diwalis, Holis, etc., it is not unusual at all amongst the Christians to have two Easters. The Western Churches, which adopted the Gregorian Calendar, celebrate Easter on the first Sunday after the full moon that occurs next after the vernal equinox (first day of spring). In 1582, the Orthodox Churches decided to keep following the Julian calendar, developed by Julius Caesar. Consequently, Orthodox Easter Sunday dates are identical with Western dates up to 1582. Then from 1583 onwards, their Easter Sunday dates often differ from those of Western churches. In most years, Orthodox Easter follows Western Easter by one or more weeks.*

*Thus, the date for Easter is still being decided by the Orthodox and Western Churches separately, and by focusing on the moon, in spite of celebrating Christmas on a fixed date every year - Just like we celebrated Parkash Utsav of Guru Nanak Dev as per lunar calculations [Katak Puranmashi], and all other Purabs as per Common Era calendar, after the [partial] reforms introduced in 2003. But, unfortunately, instead of reforming further to celebrating Parkash Utsav of Guru Nanak Dev also as per the solar calendar, we have reversed again.*

*People who have understood Sikhism and its founder, say that Sikhism is a religion of the 3<sup>rd</sup> millennium. But we, the Sikhs, want to blindly copy what others [Muslims, Hindus, Budhists, Jains, Jews or certain orthodox Christians] do. If we simply make*

*decisions by copying other religions, or simply copy them as in the case of the Calendar, how will the 'niarapan' of the Guru's system get projected to the world? Do we not want to grow out of blind beliefs as per the Guru's teachings / expectations? As mentioned earlier, the*

*commonality in Nanakshahi Calendar and the Gregorian Calendar is that both are based on the length of the tropical solar year. And, that this length is not a patent of any nation. It is a natural phenomenon, very accurately observed and measured by scientists. Many other calendars, such as, Iranian and Thai solar calendars use the same length. The Bahai faith, too, uses the same length, even as its year is made up of 19 months of 19 days each (361 days) plus an extra period [4-5 days] as Intercalary Days.*

“Whereas the English Calendar in vogue is undoubtedly a Christian Calendar because it was corrected and imposed by an edict of the Pope. On the other hand, the Bikrami Calendar is not a Hindu Calendar as the genesis of this Calendar is not from any scripture like Vedas, Puranas or like. This era started by Bikramaditya, who happened to be a Hindu king, after he attained victory over Shak. However, this calendar is based on the law of nature as has been noted in Guru Granth Sahib at so many places. This has been adopted by the Guru Sahibs and has its roots in Gurbani. Discarding the Bikrami Calendar thus will be an act against the Gurbani.”

*If ‘the Bikrami Calendar is not a Hindu Calendar as the genesis of this Calendar is not from any scripture like Vedas, Puranas or like,’ then the ‘English Calendar in vogue’ cannot be a ‘Christian Calendar,’ because, as per the logic of the author, ‘the genesis of this Calendar is not from any scripture’ like Bible or Torah.*

*If the Bikrami Calendar is not a Hindu Calendar, because it started with the King Vikramaditya, then too the ‘English Calendar in vogue’ is not a Christian Calendar, because it started with Emperor Julius Caesar, even before Christ was born. Both these calendars have been reformed over time, although the name was changed at the time of reform in the case of the Julian Calendar only. This has misled the author to make confusing, contradictory assumptions.*

*The Common Era Calendar is also ‘based on the laws of nature as has been noted in Guru Granth Sahib at so many places.’ Can one think of any law of nature noted in Guru Granth Sahib that the reformed Nanakshahi Calendar violates? The terminologies used by the Gurus, like vadi, sudi, puranmasi, amavasya, etc., were ‘used as a carrier and medium’ to address the masses of the day. As for the names of the months, had the Common Era Calendar been the calendar of the day, the Gurus would have used the terminologies of this calendar.*

*'Discarding the Bikrami Calendar' thus can not be 'an act against the Gurbani.'* Is discarding the use of gharhi, pal, muhurat, man, ser, gaj, yojan, tank, rati, etc., 'an act against the Gurbani,' because all these units are mentioned in Gurbani? If the Bikrami Calendar was that accurate, then why did the Pundits of Punjab give up the calculations on which it was based and calculated during the Guru-period and up to the 1960s? Why did they adopt the formulas of the 'Christians' to calculate their Jantris?

*If a person in power / position possessed the wisdom to understand the error that the Julian Calendar had accumulated as per the findings of experts, and introduced and proposed to the States as well for legal adoption, then being a religious head can not be held against him. Rather it is remarkable that a sixteenth century Pope, committed to Christian beliefs, could grasp this issue, but it is most unfortunate that even the twenty first century jathedar(s), committed to Sikh beliefs, are at a loss to grasp the same!*<sup>14</sup>

*Vadi, sudi, puranmasi, and amavasya are simply terms coined by man to refer to the phases of the moon, resulting from a combination of its own motion around the earth, that of the earth around its own axis [rotation], and that of the earth around the sun [revolution]. No calendar has yet denied / changed any of these, nor will ever be able to. The corresponding terminologies in the English language are the waning and the waxing moon, and the full moon night or the moonless night. It is like - Can any calendar deny day and night, which are due to rotation of the earth?*

*Let us remember that the moon remains of the same size, be it day / night, or vadi / sudi / puranmasi / amavasya. Can there ever be a moonless night in nature? In fact, the casual expressions like 'the sun moves,' 'the sun rises,' 'the sun sets,' and 'the moonless night,' 'the full moon night,' etc., have ingrained misleading impressions about some of nature's phenomena on our minds.*

“Broadly speaking the proponents of this Christian Nanakshahi Calendar openly admit that they are not all bothered and concerned about the science of calendar or anything else but they have been allured and feel excited by one single point that the dates of the Gurpurabs will be fixed as per the English Calendar. This exactly is the reason which has been given in the Jantri for adopting it. It promises, ਹੁਣ ਇਹ ਸਮੱਸਿਆ ਨਹੀਂ ਹੋਵੇਗੀ।“

*I only hope that terms like ‘Christian Nanakshahi Calendar’ and ‘English Calendar’ are understood to be wrong / confusing terminologies. Moreover, the Nanakshahi calendar is not Christian. If anything, it is Hebrew for using the week’s cycle, and Gregorian for using the concept of ‘suraj eko rut anek.’*

*The Reform in 2003 fixed the anniversaries of Gurus and Sikh historical events so these fell on same dates every year, just like our birth, wedding anniversaries do. This made it convenient to popularize the dates of Sikh importance so that it became easy for one and all to memorize these events - just like even Sikh children know that the 25<sup>th</sup> of December is Jesus Christ’s birthday; but they know not the date(s) of birth of the Gurus.*

*What is the idea in having gurpurbs on different dates every year, anyway? The ‘proponents of the Nanakshahi Calendar’ understand that the Sikh historical dates have been fixed as per the tropical solar calendar, and not as per any other religious / national calendar. They are neither ‘allured’ nor ‘feel excited’ by anything simply because it is English / Christian / Hindu; they are the followers of Truth. If they are ‘not at all bothered and concerned about the science of calendars,’ it is because they know that it is not a common man’s field; only experts of this field can explain. Just like patients are not bothered about the functioning of kidney / heart, but definitely know that Nephrologists / Cardiologists know best, and follow their advice. Do we not consult specialists over quacks?*

*The Government of India too celebrates the Republic Day and the Independence Day of India on the 26<sup>th</sup> of January and the 15<sup>th</sup> of August, respectively, every year. The Republic Day and the Independence Day can still be calculated as per the apparent size of the moon on those days in the years 1950 and 1947, respectively. But has the history of the Indian State got changed by fixing these dates?*

*If at least four reforms of the luni-solar version of the Hindu calendar have been introduced earlier, and the Hindu-majority India adopted reforms in its National Calendar, as recently as in 1957,<sup>15</sup> without causing any rift among any religious communities, then why would the reforms by Sikhs in their own calendar ‘create a vertical split’ amongst themselves or with other religious communities? The author himself observed earlier that ‘Bikrami Calendar is not a Hindu Calendar.’ Why then this move by Sikhs is being projected as affecting*

*the unity amongst Sikhs or with other communities?*

*Does the author of the article know that when the Bikrami Calendar was reformed during the 1960s, the changes were implemented without consulting the Sikhs? Or is it that if Hindus alter the Bikrami Samvat, then it is not to be taken as 'an act against Gurbani' by the Sikhs?*

*And, by the way, what would we have done if the Brahmins had further reformed to the current solar calendar before we did?! May be the Hindus will do it one day. What shall we do that day?*

*The author has failed to read or knowingly ignored the most important part of the Nanakshahi Calendar, which is, that the relationship of seasons with the months in the Nanakshahi Calendar shall remain the same as mentioned in Gurbani, while months of the Bikrami Calendar are drifting in seasons. Vaisakhi in 2999 CE shall be on 27 April of Bikrami Calendar, but shall still be on 14<sup>th</sup> April as per the reformed Nanakshahi Calendar. This is because the Nanakshahi Calendar is now based on the length of the tropical solar year, but Bikrami Calendar is not.*

*"But in reality what we have seen is that the Sikhs have entered new millennium with intense confusion and contradictions. The birth day of Guru Gobind Singh ji is been celebrated by the SGPC and different organisations on different dates. The common Sikh is baffled and feels ridiculed even."*

*If those, who are in a position to reach the masses, become vocal about an issue prior to thoroughly grasping the same, 'confusions and contradictions' are sure to set in. Common Sikh may 'be baffled and even feel ridiculed,' but only for a short initial period of changeover. Just like the common man was baffled when annas were replaced by new paisas, etc. After 7 years of use of Nanakshahi Calendar, the dust had settled, except in the backyards of Sant Samaj, and the vast majority of the Sikhs had come to like the simplicity of the Calendar. If we use Bikrami Calendar, then we should be prepared to wait for Jantris from Pundits to find the Gurburb dates of Guru Sahiban, every year, year after year...*

*"The calendar instead of solving the problem has helped divide the Sikhs."*

*Not the calendar, but we, the Sikhs, are responsible for this division amongst ourselves, as we are no better than the Christians of yore, who*

*refused to accept that the earth is round and not flat, and that it goes around the sun, instead of the sun around it.*

*The Gurus used Bikrami dates in their Hukamnamahs. Do we not use the 'Christian Calendar' dates in our correspondence, etc.? Why do we not use only the means of transport, media of communication, medical treatments and surgeries, grammar / vocabulary of language, etc., of the Gurus? We can not interpret Sikhi as per our whims and fancies - to become rigid when we want to, and flexible when it suits us. Only ignorance and/or ulterior motives can explain such behavior.*

*The Sant Samaj has not accepted the Rahit Maryada approved by the Akal Takht. Who, then, is responsible for this division?*

*"In the light of this it can be asked, was this exercise needed at this particular juncture. Or should it have priority over the more compelling and serious problem of apostasy, which is damaging and cutting the roots of Sikhism? It is no denial that the roots of this apostasy are in the houses of the Panthik leaders and Sikh intellectuals who do not want to address this problem. Or is it that to divert the attention of the Sikhs from this real danger they have subjected the Qaum to this avoidable problem."*

*We must address the issue of apostasy, but not at the cost of other issues that we owe to our faith. We have to project our faith as the most unique that it actually is. Let the world see its 'niarapan'; only then can we hope for some genuine converts to our faith, not only from those born into it but also from those born outside it. Remember it is a message for mankind.*

*Guru Nanak did not wait for his sons to adopt his thinking; he reached out to the world, irrespective of that. If he had waited, we would have been deprived of the Word of the Almighty. We all know that Guru Nanak's message and the manner of imparting the same were purely based on logic. We owe it to the Guru to reach out to the world, but we have to set our house in order simultaneously, if not first, for we can not preach logic, unless it shows in our actions / decisions.*

*"Another argument is given that if we adopt the modern calendar to celebrate our birth days then why to adopt an obsolete system for Gurburabs. If this really is the reason for discarding, then why to give even an obsolete name of Nanakshahi to it?"*

*There is logic in the argument. Are we, the followers, more*

*advanced than our Gurus? As for the name 'Nanakshahi,' it can never become obsolete; it is eternal, as it reminds us of the one who led us to the Ultimate Eternity, 'Akal.' Moreover, there is a huge difference between altering a system and altering a name. When we seek amendments to the Indian Constitution, is it that we seek change in its name? Is there no difference between changing the Constitution and changing its name 'Indian'? Will the opponents of the reforms to the Nanakshahi Calendar get satisfied, if the name 'Nanakshahi' is changed?*

“It is said in the Nanakshahi Jantry that the present form to the Nanakshahi Jantri has been given by the Institute of Sikh Studies, Chandigarh after many meetings of the intellectuals. But,

- The names of the intellectuals have not been given.
- It is not known whether any of them was an expert in the field of the astronomy or calendar making.
- The proceedings or recommendations of the meetings were never made public.”

*Kindly contact the Institute of Sikh Studies or visit its Office personally for the information sought. The details of meetings and participants were published in The Abstract of Sikh Studies. By the way, the author of the article has not spelt out his expertise on the science of calendars. But he should know that Mr Pal Singh Purewal is the first Sikh ever who calculated 500-Year Jantri on the basis of Surya Siddhanta, which was published in 1994 CE.*

“The Nanakshahi Calendar is not according to the Gurbani and the Sikh traditions. There is no denial that as per Gurbani no particular day is auspicious or inauspicious.

“Twelve months, the seasons, the thitis, the days are all good if these help in meeting with the Lord:

ਬੇ ਦਸ ਮਾਹ ਰੁਤੀ ਥਿਤੀ ਵਾਰ ਭਲੇ॥ ਘੜੀ ਮੂਰਤ ਪਲ ਸਾਚੇ ਆਏ ਸਹਜਿ ਮਿਲੇ॥

(ਗੁਰੂ ਗ੍ਰੰਥ ਸਾਹਿਬ, ਪੰਨਾ: ੧੧੦੯)

“The months, seasons etc. are created by Him. These are for practical convenience. But by mere calculation of these one will gain nothing. Rather these changes of nature should be used to gather for His praise:

ਮਾਹਾ ਰੁਤੀ ਸਭ ਤੂੰ ਘੜੀ ਮੂਰਤ ਵੀਚਾਰਾ॥ ਤੂੰ ਗਣਤੈ ਕਿਨੈ ਨ ਪਾਇਓ ਸਚੈ ਅਲਖ ਅਪਾਰਾ॥

ਪੜਿਆ ਮੂਰਖੁ ਆਖੀਐ ਜਿਸੁ ਲਬੁ ਲੋਭੁ ਅਹੰਕਾਰਾ॥

(ਗੁਰੂ ਗ੍ਰੰਥ ਸਾਹਿਬ, ਪੰਨਾ: ੧੪੦)

“This phenomenon of nature is an unending process. The fifteen thitis, seven vars, the rutis, the days, nights and the months come again and again:

ਪੰਦ੍ਰ ਬਿਤੰਤੀ ਤੈ ਸਤ ਵਾਰ ॥ ਮਾਹਾ ਰੁਤੀ ਆਵਹਿ ਵਾਰ ਵਾਰ ॥  
 ਦਿਨਸੁ ਰੈਣਿ ਤਿਵੈ ਸੰਸਾਰੁ ॥ ਆਵਾ ਗਉਣੁ ਕੀਆ ਕਰਤਾਰਿ ॥  
 ਨਿਹਚਲੁ ਸਾਚੁ ਰਹਿਆ ਕਲ ਧਾਰਿ ॥ ਨਾਨਕ ਗੁਰਮੁਖਿ ਬੂਝੈ ਕੋ ਸਬਦੁ ਵੀਚਾਰਿ ॥੧੦॥੧॥  
 (ਗੁਰੂ ਗ੍ਰੰਥ ਸਾਹਿਬ, ਪੰਨਾ: ੮੪੨)”

*All these hymns referred to above, by the author, are rather confirming and conforming to the fact that all the moments of time are awe-inspiring and occur cyclically, but no one has obtained Thee, the ever-stable One, without meditation on Him. If we go by the author’s interpretation, do these not apply to the Bikrami Calendar?*

“However, it was seen that people on the days when the nature’s phenomenon was visible to them i.e. full moon day or the day of the eclipse of the moon i.e. Purnima and Amavasya used to run to the ponds, rivers and reservoirs to take a dip. Guruji used this occasion as a medium to arrange special gathering to propagate the Gurbani.”

*The Puranmashi and Amavasya are, and ever shall be, on the same days, irrespective of the type of the calendar, i.e., be it lunar / luni-solar / solar calendar, or of the name of the calendar, i.e., be it Bikrami / Nanakshahi / Julian / Gregorian. So, Puranmashi and Amavasya occasions of Nanakshahi and Bikrami calendars shall ever be on the same days, and these can, therefore, always be used ‘as a medium to arrange special gathering to propagate Gurbani’ to people who ‘run to the ponds, rivers and reservoirs to take a dip’ on these occasions.*

“Bhai Nand Lal says about this,

ਰੂਜਿ ਜੁਮਆ ਮੋਮਨਾਨਿ ਪਾਕਬਾਜ਼ ਗਿਰਦ ਮੀ ਆਇੰਦ ਅਜ ਬਹਿਹਿ ਨਿਮਾਜ਼॥੧੯॥ ਹਮਚੁਨਾਂ ਦਰ ਮਜ਼ਹਬਿ ਮਾ ਸਾਧਿ ਸੰਗਿ ਕਜ ਮੁਹਬਤ ਬਾ-ਖੁਦਾ ਦਾਰੰਦ ਰੰਗ॥੨੦॥ ਗਿਰਦ ਮੀ ਆਇੰਦ ਦਰ ਮਾਹੇ ਦੋ ਬਾਰ ਬਹਿਹਿ ਜ਼ਿਕਰਿ ਖ਼ਾਸਾਇ ਪਰਵਰਦਗਾਰ॥੨੧॥

ਸ਼ੁਕਰਵਾਰ ਵਾਲੇ ਦਿਨ ਪਾਕ ਪਰਹੇਜ਼ਗਾਰ ਮੁਸਲਮਾਨ, ਰੱਬ ਦੀ ਨਮਾਜ਼ ਲਈ ਇਕੱਠੇ ਹੁੰਦੇ ਹਨ। ਇਸੇ ਤਰ੍ਹਾਂ ਸਾਡੇ ਧਰਮ ਵਿਚ ਸਾਧ ਸੰਗਤਿ ਵਿਚ ਰੱਬ ਦੇ ਪਿਆਰੇ ਜੁੜਦੇ ਹਨ ਅਤੇ ਵਾਹਿਗੁਰੂ ਦੇ ਪ੍ਰੇਮ ਵਿਚ ਰੰਗ ਮਾਣਦੇ ਹਨ। ਮਹੀਨੇ ਵਿਚ ਦੋ ਵਾਰ ਉਸ ਪਰਵਰਦਗਾਰ ਦੀ ਉਚੇਚੀ ਯਾਦ ਲਈ ਇਕੱਠੇ ਹੁੰਦੇ ਹਨ।“

*The above text is not from Gurbani. And the two occasions are not specified. Moreover, we can still meet twice in a month, say on Puranmashi & Amavasya, or any other two days as convenient, say 2<sup>nd</sup> & 4<sup>th</sup> Sunday, or even more frequently. As per Gurbani, we are to*

*remember the Almighty with every breath.*

“SANGRAND

“Now a word about Sangrand. The Nanakshahi Jantri has very honestly detailed the purpose and modus of observing Sangrand in the Gurdwaras. It says,

ਸੰਗ੍ਰਾਂਦ ਦੇ ਕੀ ਅਰਥ ਹੈ ਅਤੇ ਇਹ ਗੁਰਦੁਆਰਿਆਂ ਵਿੱਚ ਕਿਉਂ ਮਨਾਈ ਜਾਂਦੀ ਹੈ?

ਬਿਕ੍ਰਮੀ ਕੈਲੰਡਰ ਵਿੱਚ ਸੰਗ੍ਰਾਂਦਾਂ ਦਾ ਸੰਬੰਧ ਰਾਸ਼ੀਆਂ ਨਾਲ ਹੈ। ਜਿਸ ਦਿਨ ਸੂਰਜ ਇਕ ਰਾਸ਼ੀ 'ਚੋਂ ਨਿਕਲ ਕੇ ਅਗਲੀ ਰਾਸ਼ੀ ਵਿੱਚ ਪ੍ਰਵੇਸ਼ ਕਰਦਾ ਹੈ ਉਸ ਦਿਨ ਸੰਗ੍ਰਾਂਦ ਹੁੰਦੀ ਹੈ। ਨਾਨਕਸ਼ਾਹੀ ਕੈਲੰਡਰ ਵਿੱਚ ਮਾਹ ਅਰੰਭਤਾ ਦਾ ਰਾਸ਼ੀਆਂ ਨਾਲ ਕੋਈ ਸੰਬੰਧ ਨਹੀਂ ਹੈ। ...ਜਿਸ ਸਮੇਂ ਅੰਗ੍ਰੇਜ਼ੀ ਕੈਲੰਡਰ ਬਹੁਤ ਪ੍ਰਚਲਤ ਨਹੀਂ ਸੀ, ਤਾਰੀਖਾਂ ਸੰਗ੍ਰਾਂਦ ਦੇ ਦਿਨ ਤੋਂ ਗਿਣੀਆਂ ਜਾਣ ਕਾਰਨ ਅਤੇ ਸੰਗ੍ਰਾਂਦ ਗੁਰਦੁਆਰਿਆਂ ਵਿੱਚ ਮਨਾਉਣ ਕਾਰਨ, ਆਮ ਲੋਕਾਂ ਨੂੰ ਵੀ ਪਤਾ ਰਹਿੰਦਾ ਸੀ ਕਿ ਮਹੀਨਾ ਕਿੰਨੇ ਦਿਨ ਗਿਆ ਹੈ ਅਤੇ ਨਾਲ ਹੀ ਘੱਟੋ-ਘੱਟ ਇਕ ਦਿਨ ਗੁਰੂ-ਘਰ ਹਾਜ਼ਰੀ ਵੀ ਲੱਗ ਜਾਂਦੀ ਸੀ।

“Now the above statement is true and the following points emerge from this explanation.

“That Sangrand is not observed arbitrarily but it is based on the law of nature that when the Sun moves from one house to another. And it had a purpose by which the people used to know the days of the month and gave an occasion for the gathering of the Sangat. In fact the word Sankrant itself mean ‘to depart’.”

*Foremost of all, the sun does not move in our solar system; it is stationary. Further, there are no ‘houses’ in the sky that the sun ‘moves from one into the other.’ It is the planets that move around the sun. And, again there are no houses along their path either. Does Gurbani authenticate anything to that effect? What is there to celebrate if clergy of another religion says that ‘sun has moved from this house to that,’ or by justifying the meaning of the word ‘sankrant’ to mean ‘to depart,’ when nothing of the sort actually happens? Occurrence of Sangrand is a mere Brahminical supposition, done for the purpose of calculations.<sup>16</sup>*

“The Nanakshahi Jantri has no mention of Sangrand in it. Does it mean that in the name of giving a new calendar the decision to do away with Sangrand has been taken. This is a major deviation from the tradition. If at all it is to be decided to stop the special congregations on the day of Sangrand then it should not be done in a clandestine manner but must be clearly told as such.”

*In the Nanakshahi Calendar, the Sangrand, as a day, has been retained so the sangats may continue to gather, but not in the belief, nor because of that, that today the sun has ‘moved from one house to*

*another.’ It was these kinds of ‘traditions’ linked to Brahminical beliefs that the Guru wanted his followers to ‘deviate from.’ Thus, freeing the first of every month from the day of so-believed ‘transition of sun from one house to the other’ is only closer to Sikh beliefs, which must find ready acceptance by the Sikhs. Such an observable change can, by no means, be said to be ‘done in a clandestine manner.’*

“It is said that in the Nanakshahi calendar the beginning of the month has got nothing to do with the transition of the Sun. If this be the case then how can the Sangrand be observed when there is no Sangrand, i.e. transition of Sun from one house or the other. By this constant process after day of the Amavasya, the day of the eclipse of the moon, it comes out again on the first day with a very thin line. This is known as the Vadi First. On the fifteenth day it is full moon’s day. Thereafter it starts receding and it is known as the Sudi first, second and so on. Again on the last day it hides itself. This process goes on uninterruptedly. By this the tithis, vaars, months are created. There is nothing Hindu, Muslim or any such thing in it. This is purely the nature’s law. This has been used by Guruji to write Ruti Saloks, Baramahes, Vars etc. The pioneer work of Guru Nanak Dev ji to write Baramah Tukhari was followed by Guru Arjan Dev ji who wrote another Baramah in Raag Majh. After this, Punjabi literature saw more than 300 Baramahes. So this calculation of months is based on Gurbani, Punjabi literature and the folk lore, which are very strong ingredients for the growth of any community.”

*The ‘transition of sun from one house or the other’ has been addressed above. And as explained earlier, and also observed by the author, the apparent waning and waxing of the moon are recurring in nature, as per laws of nature. But, a solar calendar does not deny these, i.e., ‘vadis, sudis, tithis, vaars, months;’ it rather indicates these. ‘Sudis and Vadis’ are the waning and waxing moon, and the ‘tithis, vaars, mahas’ are the dates, days, and months. Purnamashi and Amavasya are also indicated as Full Moon Night and Moonless Night, as they occur in nature. All such natural phenomena are indicated on the day of their occurrence, on every type of calendar – be it lunar / solar / luni-solar, or, in other words, be it Nanakshahi / Bikrami / Indian National / Christian / Islamic / Jewish, or so on.*

*Kindly grasp the difference between Purnamashi & Amavasya, Sudi, Vadi, on the one hand, and Sangrand, on the other. The former*

*two are as per laws of Nature, and the last is as per laws of Brahmins. Punjabi literature is free even now and in a position to 'see as many Baramahes' as it possibly can. Calculation of months is not 'based on Gurbani, Punabi literature and the folk lore,' rather these ['very strong ingredients for the growth of a community'] have used the months calculated by Jantri makers of the day, in the literary works, and also that their calculation had been done before the time of the Gurus. Does the author know that dates of Sangrands given by the followers of Surya Siddhanta (which was used in Guru Period) differ in 4 / 5 cases in each year from those given by the followers of modern astronomical methods in Punjab? Whose rashis are correct then? Since, both schools claim sankranti as rashi pravesha of the sun.*

“This phenomenon is noted by Guru Nanak Dev ji in Raag Bilawal in his composition *Thiti*, that on the day of Amavasia the moon hides itself. The seeker has to get a message from this phenomenon of the Creator that this is the cycle of creativity of the Lord:

ਅਮਾਵਸਿਆ ਚੰਦੁ ਗੁਪਤੁ ਗੈਣਾਰਿ ॥ ਬੁਝਹੁ ਗਿਆਨੀ ਸਬਦੁ ਬੀਚਾਰਿ ॥  
ਸਸੀਅਰੁ ਗਗਨਿ ਜੋਤਿ ਤਿਹੁ ਲੋਈ ॥ ਕਰਿ ਕਰਿ ਵੇਖੈ ਕਰਤਾ ਸੋਈ ॥

(ਗੁਰੂ ਗ੍ਰੰਥ ਸਾਹਿਬ, ਪੰਨਾ: ੮੪੦)

“This is the process of calculation of the months and years:

ਵਿਸੁਏ ਚਸਿਆ ਘੜੀਆ ਪਹਰਾ ਬਿਤੀ ਵਾਰੀ ਮਾਹੁ ਹੋਆ ॥ ਸੂਰਜੁ ਏਕੋ ਰੂਤਿ ਅਨੇਕ ॥  
ਨਾਨਕ ਕਰਤੇ ਕੇ ਕੇਤੇ ਵੇਸ ॥

(ਗੁਰੂ ਗ੍ਰੰਥ ਸਾਹਿਬ, ਪੰਨਾ: ੧੩)

“Now to discard *Thitis*, *Vaars*, *Baramahes* is nothing but giving a back to the *Gurbani*, Sikh literature and heritage. It would prove to be disastrous for the Sikhs.”

*As pointed out earlier, not only that the reformed Nanakshahi Calendar, but even all the other calendars do not deny any 'phenomenon of the Creator' or 'the cycle of creativity of the Lord.'*

*As pointed out earlier, the Nanakshahi Calendar is, in fact, based on 'suraj eko rut anek.' And that the terms mentioned in the hymns above, as mentioned earlier, 'are used as a carrier and medium, and not an end.' Since 'Thitis, Vaars, Baramahes' is nothing but dates, days and 12 months, respectively, how have these been 'discarded?' It is beyond imagination as to how this is 'giving a back to Gurbani, Sikh literature and heritage.' How 'it would prove to be disastrous for the Sikhs'?*

*Rather, it is the addition of a 'malmas' [extra month]<sup>17</sup> in the*

*Bikrami Samvat every few years that results in thirteen months to some years, on a regular basis. Reverting to such a system of calendar would be, indeed, ‘giving a back to Gurbani, Sikh literature and heritage,’ and ‘would prove to be disastrous for the Sikhs.’ Not only is an extra month added to some years, there is also a lost month<sup>18</sup> sometimes. Further, even tithis [dates] may sometimes be Adhika [two days with same date] or Kshay [a day with no date].<sup>19</sup> But, we would rather follow this system over the one without any repetitions and deletions, and that too in the name of Gurbani!*

*What ‘process of calculation of the months and years’ is given in the mentioned lines? Can the author calculate the dates and times of tithis using these lines? The lines merely state the relationship between various units of time, a relationship developed and existed before Gurus’ times.*

“The basic point which much be answered is that the Nanakshahi calendar by not mentioning of the Sangrand wants the practice of gathering on the days of the Sangrand to be stopped arbitrarily and without taking the community in confidence. By this it even exceeds the purpose for which it is being said to be brought about.”

*As mentioned earlier, because the Sikhs do not believe that the sun ‘departs’ from one house in space to enter another, the Nanakshahi Calendar does not mention these days. But for the purpose of gathering of sangats, the 1<sup>st</sup> of every Nanakshahi month can be used. We should be laying more stress on moving away from ritualism, promoted through Brahminical suppositions, in our lives, rather than get stuck to the day on which we are to do this. This was not done ‘arbitrarily,’ but logically, and for the benefit of the community at large. And if the doing away with Brahminical Sangrands has ‘exceeded the purpose for which it [Nanakshahi Calendar] is being said to be brought about,’ then it can only be better.*

“Contrary to this, if it is decided to observe the Sangrand on the First day of the new Christian Nanakshahi Calendar by calling it Pravishte, then undoubtedly this is not Sangrand.

ਮਾਹਾ ਮਾਹ ਮੁਮਾਰਖੀ ਚੜਿਆ ਸਦਾ ਬਸੰਤ॥  
ਪਰਫਤ ਚਿਤ ਸਮਾਲਿ ਸੋਇ ਸਦਾ ਸਦਾ ਗੋਬਿੰਦ॥

(ਗੁਰੂ ਗ੍ਰੰਥ ਸਾਹਿਬ, ਪੰਨਾ: ੧੧੬੮)

*[Trans: Among months, auspicious is the month, when the spring season ever begins. Ever, ever bloom thou, O my soul, by remembering*

*that Lord of the world.]*

“And reciting of the Shabads as above and Barahmah on such days is nothing but deceitful. Hence the new proposed calendar is anti gurbani.

*Unable to understand the derivation of the hymn as brought out by the author. However, it would be extremely ‘deceitful’ to recite these shabads when it would be summer in the month of Bikrami Chet, because of shift of months in seasons in distant future, but it would be appropriate to sing those shabads in the Chet of Nanakshahi Calendar because it would still be spring in that month of the Nanakshahi Calendar, even in the distant future.*

“The stars and planets thus create the Pakh (half month) and the month. By this it should be understood that the truth also never gets obsolete. So the talk of modernisation is nothing but against this basic principle of nature.

ਮਾਹੁ ਪਖੁ ਕਿਹੁ ਚਲੈ ਨਾਹੀ ਘੜੀ ਮੁਹਤੁ ਕਿਛੁ ਹੰਢੈ॥  
ਸਚੁ ਪੁਰਾਣਾ ਹੋਵੈ ਨਾਹੀ ਸੀਤਾ ਕਦੇ ਨ ਪਾਟੈ॥  
ਨਾਨਕ ਸਾਹਿਬੁ ਸਚੇ ਸਚਾ ਤਿਚਰੁ ਜਾਪੀ ਜਾਹੈ॥

(ਗੁਰੂ ਗ੍ਰੰਥ ਸਾਹਿਬ, ਪੰਨਾ: ੯੫੬)

“To sum up, Guruji used Sangrand to detach the Sikhs from Hindu ritualism and bring them in Sadh Sangat. Freeing them on the days of the Sangrand by adopting the Nanakshahi calendar will give them an opportunity to relapse back into the sea of ritualism.”

*As explained earlier, Sangrand is no phenomenon of nature, and is a mere supposition / calculation as per the Brahminical concept of houses / rashis and the movement of the sun from one to the next. It is important that Sikhs free themselves from such a concept of an illusionary Sangrand.*

*[Earlier in the Article, the gatherings of people were implied to be on Puranmashi and Amavasya, by quoting Bhai Nand Lal, where he wrote that the Sikhs gathered twice a month. But later, gatherings on Sangrand have been projected as all important. That should make it three times a month; Bhai Nand Lal, evidently, was not aware of this.]*

*Many Sikhs have not quit ritualism, in spite of having followed the Bikrami Samvat for centuries now. If the Guru’s message has not sunk in even yet, then opportunities do not even have to exist for those*

*who want 'to relapse back into the sea of ritualism.'*

*Before summing up the issue of Sangrand, which the author is extremely sensitive / touchy about, it must be pointed out that the word 'sangrand' does not even find mention in Guru Granth Sahib.*

### **GURPURABS**

“The Gurpurabs at present are being celebrated according to Sudi and Wadis, like Poh Sudi Sapatmi and Katak Purnima. It is on the basis of the situation of the sky and the moon on the night of the Parkash of Guru Nank Dev ji and Guru Gobind Singh ji, It will remain so for the time to come. However, if this system is dicarded the situation of the sky will be different. The birth day of Guru Nanak Dev ji which was on full moon day may be on the day of even the Amavasias. In this situation can one recite the Bani,

ਕਾਰਤਕ ਮਾਸ ਰੁਤਿ ਸਰਦ ਪੂਰਨਮਾਸੀ  
ਆਠ ਜਾਮ ਸਾਠਿ ਘਰੀ ਆਜੁ ਤੇਰੀ ਬਾਰੀ ਹੈ ।

*Does the moon alone define the 'situation of the sky'? Yes, for those of us who know not much about the sky.*

*No reference to the lines above is given; it is not Gurbani. The current solar calendar in vogue rather ensures the concurrent occurrence of the Katak month and the cold weather. Quite frequently, lunar Katak Pooranmashi falls in the month of solar Maghar. And in a few thousand years, there will be no 'sard-rut' in Katak. How would one interpret Bhai Gurdas Ji's lines then?*

“Moreover, the Poh Sudi Satami, Katak Purnima will never be a Katak Purnima and Poh Sudi Satmi. This is thus against Gurbani, Traditions and heritage.”

Katak Purnima and Poh Sudi Satmi is simply referring to days of a lunar month, as per the appearance of the moon. The same day in the year 1469 can also be expressed as per the sun, which is the only stationary object of our solar system. It's just that in the first method, the moon [purnima] is the focus, and in the latter, it would be the sun. The day one is born in a particular year was, say, Tuesday. Should one change one's date of birth every year so that it must be a Tuesday? No harm though, if it serves any purpose. Whereas, on the contrary, we shall have to apply to various government departments, embassies, etc., every year to seek this change, year after year.

*If we still believe that full moon is all-important for this Purab, we*

*should know for sure that the full moon is very much in the sky every day as well as every night, not only in Katak, but throughout the year. Further, we know that a particular distance whether expressed in yards or in meters, remains the same; only the digits change. For example, the distance between Delhi and Chandigarh can be expressed as 250 kilometers or 156 miles; the two cities do not get farther apart or closer on that account; the distance remains the same. Similarly, the Parkash Utsav of Guru Gobind Singh as per Bikrami Samvat, [23<sup>rd</sup> Poh] corresponds to 5<sup>th</sup> January of the Common Era Calendar; only the digits have changed, the day has remained the same. What when Katak Pooranmashi occurs on two consecutive days? Which day the Gurburb be celebrated? And why? What when the Pooranmashi becomes kshya tithi, i.e., it is not current at any sunrise?*

#### **DIWALI**

“Another contentious point in the Nanakshahi Jantri is the Diwali. It says that the Diwali day in the form of Bandi Chhorh Diwas [bMdl CoV idvs] according to the Nanakshahi calendar will some time be on the day of the Diwali or sometime it may be a month later.

“This will create nothing but a ridiculous situation for the Sikhs. A Sikh who lights candles on the Diwali day do so because of the ਬੰਦੀ ਚੌਰ ਚਿਵਸ. Now de-linking it from the Diwali day in reality will push them back into the purely Hindu festival of Diwali. Hence, this is nothing but a very retrogressive act.”

*Rather, is this not ‘ridiculous’ that a Sikh who wants to celebrate Bandi Chhorh Diwas, lights candles on the Diwali day? Will the Hindus, who want to celebrate Diwali, ever light candles on the Bandi Chhorh Diwas for their Diwali celebration? Do the Sikhs lack the confidence / strength to be on their own? Thus, ‘retrogressive’ is not the act [of reforming the Nanakshahi Calendar], but ‘retrogressive’ are the Sikhs who are ever on the brink of being ‘pushed back’ into the ‘purely Hindu ritualism,’ at the slightest instance.*

*Moreover, where is the need to light candles, crackers, be it Diwali or Bandi Chhorh Diwas? Even school kids now march the roads to highlight the pollution(s) caused by the nature of celebrations of this festival. But we excel in following; we have even introduced crackers to the Parbhat Pheris. All we can do is simply follow other religions blindly, in the manner of the sheep. We have forgotten the meanings of*

*‘Singh’ and ‘Kaur’*

*The Hindus celebrate the arrival of King Rama in Ayodhya, and the release of Hindu Rajas from prison on this day by Guru Hargobind. Why do Sikhs want to celebrate only the Bandi Chhorh Diwas, when Sikh History is full of days of victory / courage? If they want to light candles on Diwali, they are free to participate in the festivities of their Hindu friends, just as they can / do participate in Christmas. Thank God, we have not attached a day from Sikh History to Christmas, to justify [avoidable] celebrations!*

“Diwali and Baisakhi got added significance for the reason that the Sikhs used to assemble at Sri Akal Takhat Sahib as Khalsa commonwealth to take stock of the past decide about the future.”

*Who is stopping the Sikhs from assembling at Sri Akal Takht Sahib on Diwali and Baisakhi, even after the Nanakshahi Calendar reforms of 2003? We never heard anyway that ‘Sikhs used to assemble on Bandi Chhorh Diwas.’ The Sikhs should rather fix the date for Bandi Chhorh Diwas, and begin to assemble on that same date every year, so we would not have to consult Brahmins to fix the ‘Khalsa Commonwealth,’ the Sarbat Khalsa for us.*

## **HOLI**

“There is no denial that the Sikhs have got nothing to do from Holi but here again the occasion was used by Guru Gobind Singh ji to inculcate the martial spirit in the Sikhs. In the Christian Nanakshahi Jantri this too has been de-linked from Holi. Thus the basic purpose of Holi gets defeated.”

*Surely, the Guru would want us to inculcate the martial spirit on more days than one. We can still do it on the day following Holi, as per the Bikrami Samvat. As it is, during the celebrations of Holi, what one gets to see is the Sikhs dyed in all colours! The new Holi can be reserved for purely martial activities.*

*We do not get bothered when the martial activity is de-linked from Holi, but the ‘basic purpose of Holi gets defeated,’ if Holi is merely de-linked from Holi. Again, some Sikhs must be waiting to get ‘pushed back into the purely Hindu ritualism’ on account of this de-link too!*

“In the light of this if any adjustments are made by way of compromise on certain dates, it will then neither be a Nanakshahi as is being proposed nor the traditional calendar.”

*Exactly. The reform that remained to be done was to fix dates for Parkash Utsav of Guru Nanak Dev, Bandi Chhorh Diwas, and HOLA. That is what should have been done, rather than reversing the earlier reforms, to make it a truly Nanakshahi Calendar.*

“As such if at all any change is required to be made, it should be done only after releasing the draft calendar to the sangat seeking its opinion. Then only anything should be done. Otherwise we have seen, it would create un-necessary dissensions in the Sikhs and will do more harm than any good.”

*No doubt, every Panthic issue must be open to sangat. But, regarding an issue of the nature of Nanakshahi Calendar, guidance has to be sought from the experts of this field. Rather, the decision makers, too, must first meet some requirements to be in a position to decide upon a particular issue of interest to the Panth. The sangat should then be educated about the issue.*

*In every interview of Sardar Pal Singh Purewal that I came across in the recent past, he reiterated over and over again that he is available to discuss / explain each and every point related to the Nanakshahi Calendar. But it all fell on deaf ears. Will such modus operandi not ‘create un-necessary dissensions in the Sikhs’ and ‘do more harm than any good’?*

*In this day and age of technology, why can we not have open discussion(s) by the divided groups on TV, like the prospective Presidents of America do, so that the sangat can get educated as well as have firsthand information about the decision-making criteria / process? Panthic issues are not to be decided by majority, but by Gurmat, if Sikhi is to be preserved / projected in its pristine form. We need to have vision, and be ever vigilant.*

“In the end, a word of caution from Dr Balbir Singh ji,

“ਬਾਵਜੂਦ ਉਸ ਸਾਰੀ ਖੋਜ ਦੇ ਜਿਸਨੇ ਵੈਸਾਖ ਹੀ ਗੁਰੂ ਨਾਨਕ ਦਾ ਜਨਮ ਦਿਨ ਸਿਧ ਕੀਤਾ; ਕੋਈ ਵੀ ਗੁਰਪੁਰਬ ਮੰਨਾਉਣ ਦੀ ਬਿੰਤ ਨਹੀਂ ਬਦਲ ਸਕਿਆ। ਭਾਵੇਂ ਨਨਕਾਣਾ ਵੀ ਹਥੋਂ ਚਲਾ ਗਿਆ ਹੈ ਪਰ ਇਹ ਵਾਕ ਅਟਲ ਹੈ:- ‘ਕਤਕ ਕੀ ਪੂਰਣਮਾਸੀ ਮੇਲਾ ਨਨਕਾਣੇ ਹੋ।’ ਸਾਰੇ “ਗੁਰਦਵਾਰੇ, ਸਾਰੀਆਂ ਸੰਸਥਾਵਾਂ, ਸਕੂਲ, ਕਾਲਜ, ਯੂਨੀਵਰਸਟੀਆਂ ਅਤੇ ਸਾਰੇ ਖੋਜੀ ਗੁਰੂ ਨਾਨਕ ਸਾਹਿਬ ਦੀ ਪੰਜ ਸੌ ਸਾਲਾ ਜਨਮ ਸ਼ਤਾਬਦੀ ਕਤਕ ਦੀ ਪੂਰਣਮਾਸੀ ਨੂੰ ਹੀ ਮੁੱਖ ਰੱਖਕੇ ਮੰਨਾ ਰਹੇ ਹਨ। “ਇਤਹਾਸਕਾਰਾਂ ਨੂੰ ਵੀ ਹੁਣ ਇਹ ਸਮਝ ਪੈ ਰਹੀ ਹੈ ਕਿ ਉਹ ਮਨੋਤਾਂ ਜੋ ਇਕ ਕੌਮ ਦੇ ਰਗ ਰੇਸ਼ੇ ਵਿਚ ਰਚ ਗਈਆਂ ਹਨ ਤੇ ਉਸਦੀ ਜਿੰਦ ਨਾਲ ਰਸ ਰੂਪ ਹੋ ਗਈਆਂ ਹਨ ਉਨ੍ਹਾਂ ਨੂੰ ਪੜਚੋਲ ਦੀ ਨਜ਼ਰ ਬਦਲ ਨਹੀਂ ਸਕਦੀ। “ਉਨ੍ਹਾਂ ਨੂੰ ਬਦਲਣ ਲਈ ਕਿਸੇ ਕ੍ਰਾਂਤੀਕਾਰੀ ਤਾਕਤ ਦੀ ਲੋੜ ਹੈ। ਉਨ੍ਹਾਂ ਨੂੰ ਬਦਲਣ ਲਈ ਕਿਸੇ ਗੁਰੂ ਪੀਰ ਦੀ ਕੁਰਬਾਨੀ ਦੇ ਖੂਨ ਦੀ ਲੋੜ ਹੁੰਦੀ ਹੈ।”

*The Gurus sacrificed their all to erase thousands of years old*

*traditions to put mankind on the path of humanity. But, now, are we saying that some gurus / pirs have to repeat those lessons, ‘spill their blood,’ because the Sikhs have still not grasped their message or they cannot give up five-hundred-years-old mere ‘manautaan’ [Lit., something assumed without proof; postulate; axiom]?! We want to remain ‘atal on vaak – katak ki puranmashi, mela nankaney ho,’ but not on what the Guru preached. Did the Guru not tell us to follow the Guru’s word, and not the physical body? We want to express our religious fervor by stressing on the place of birth, as well as the full-moon situation / syndrome. Those who are unable to make it to Nanakana Sahib on Katak Puranmashi are in no way lesser followers of the Guru.*

*As pointed out earlier, the size of the moon ever remains the same, be it any vadi or any sudi; it’s just what portion of it is visible from the earth. And also, Amavasya is not the no-moon night; the moon is still very much in the sky, and of the same size as that on the Pooranmashi.*

*It’s the rays of the sun that make the moon visible, and it is the light of the sun that the moon reflects. So, every Puranmashi, including Katak Puranmashi, is subject to the sun. And, because the Guru was born on a Puranmashi, the view of the moon becomes all-important, ‘atal,’ but we have not the vision to see its cause. How will we ever understand the Cause of the universe? How much longer before the followers of the Guru will comprehend His Word in totality?*

“In the light of the above it can be derived that the calendar which is being projected as Nanakshahi is in fact a Christian Calendar. However, the larger interest of the Panth demand that let this Calendar should not become an issue to make a vertical split in the Panth. The gains and losses from this contentious issue must be weighed. The Calendar has to be adopted and not imposed on the Panth.”

*Absolutely right about that the calendar should not be imposed on the Panth, but dubbing the Nanakshahi Calendar as Christian Nanakshahi Calendar is totally uncalled for and is misconstruing the facts by the author of the article.*

*The Akal Takht Sahib is Supreme. As the Guru is not amidst us in person, we are to base Panthic Decisions in the light of Gurmat.*

*A great responsibility devolves upon the SGPC to steer the Panth*

*towards it destined glory. Its role and thrust should be on educating the Sikh masses on Panthic issues, ensure unity amongst them, and base their actions / decisions accordingly. At this juncture, the SGPC should refer the issue to the Institute of Sikh Studies, a Body that initially worked on the Reforms, or itself hold consultations to the satisfaction of all, in a transparent manner. Hasty decisions are unjustifiable and do more harm than good.*

*The need of the hour is that the SGPC evolve a fool-proof, transparent system to handle our Panthic Affairs. An elaborate, intricate process must be in place to handle [especially controversial] issues. This must be followed before any decision that affects the Panth, is arrived at. Decisions should not be made with the view to satisfying one group over another; what is right must prevail. Or else, the hope of a united, glorious Panth would ever be a far cry. If an issue has been rigorously debated / deliberated at the Panthic level, whatever the decision, it would definitely be acceptable to one and all alike. After all, we are all the followers of the same Guru, the One and the Only. Parmatma saanu smatt bakshey!*

#### **A LINE OF ACTION**

*If you are of the view that the Nanakshahi Calendar reformed in 2003 is an asset and a necessity for the Panth, then let us seek wider consultations and discussions, involving experts, and the two group holding differing opinions, from the Akal Takht Sahib, so as to reach a consensus to the satisfaction of the Panth. Let us all send the following email/letter/fax, or something to that effect, to the SGPC:*

*Respected Jathedar Sahibaan jio,*

*In the interest of the charhdi kala of the Panth, and its glorious future, kindly hold wider consultations with calendar experts, and open discussions amongst the groups holding differing views on the Nanakshahi Calendar issue, so that a consensus may be reached to the satisfaction of all.*

*In the absence of any such move, we shall be left with no choice but to continue to observe the days of Sikh importance as per your decision in 2003CE.*

*Hurried decisions are unwarranted, and serve no purpose. These rather prove detrimental to unity of the Panth. A great responsibility*

*devolves upon you to steer the Panth towards its destined glory. Hoping for a rational, responsible move from your end, as you are blessed to be in a position to serve the cause of the Guru.*

*Yours truly,*

*(A Well-wisher of the Panth)*

*A Line of Thought*

*As long as Panthic issues will be decided by a political power of the day, be it any, there is very little likelihood of Panthic decisions being arrived at in the light of Gurmat, as respective vote banks' will(s) shall definitely cast an influence.*

*Therefore, Sikhs / Sikh Organisations worldwide must come together, irrespective of their political, regional affiliations, on one non-political platform, in one non-political Body, which shall enjoy the confidence of the Panth, and, therefore, be in a position to delve upon Panthic issues, and decide these as per the Gurbani mandate, and not a majority mandate, peculiar to Democracy.*

*Fortunately, many organizations have already come together under the banner of International Sikh Confederation, which is, as such, evolving slowly and steadily along these lines, in the service of the Panth. Let us all join it, strengthen it, and together realize our aspirations of an 'Uttam Panth.'*

*Aapan hathin aapna aapey hi kaaj swaariye. Or else watch the past glory of the Panth fade before our very eyes. But remember, history will never forgive us, nor should our conscience spare us. Let us contribute our bit; we owe it to our martyrs.*

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Detailed Explanations Related to the Reformed Nanakshahi Calendar can be Viewed At: [www.nanakshahi.net](http://www.nanakshahi.net); [www.purewal.org](http://www.purewal.org)  
Information for Nanakshahi Calendar Corresponding to the Year 2010,

As per the Reforms Introduced in 2003, can be Accessed At:  
<http://drkharaksingh.org/nanakshahi-cal.html>

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## **Appendix 1**

## **DISTINCTIVE FEATURES OF SOME RELIGIOUS CALENDARS**

### ***Jewish Calendar***

*The Jewish Calendar or the Hebrew Calendar is a luni-solar calendar used to mark the events of the Jewish year, dating the creation of the world at 3761 BC. The principles of the Hebrew Calendar are found in the Torah, which contains several calendar-related commandments, including God's commandment during the Exodus from Egypt to fix the month of Nisan as the first month of the year. The Babylonian Exile in the 6th century BCE influenced the calendar, including the adoption of Babylonian names for the months.*

*The year has 12 lunar months plus approximately 11 days (or 353, 354, or 355 days). In order to bring the calendar in line with the annual solar cycle, a 13th month of 30 days is added in the 3rd, 6th, 8th, 11th, 14th, 17th, and 19th years of a 19-year cycle. Therefore, a leap year may have from 383 to 385 days.*

*The Hebrew Calendar's year is longer by about 6 minutes and  $25 + \frac{25}{57}$  seconds than the present-day mean solar year, so that every 224 years, the Hebrew Calendar will fall a full day behind the modern fixed solar year, and about every 231 years it will fall a full day behind the Gregorian Calendar year.*

### ***Bahá'í Calendar***

*The Bahá'í calendar, also called the Badí Calendar, used by the Baha'i, is a solar calendar with regular years of 365 days, and leap years of 366 days. Years are composed of 19 months of 19 days each (361 days) plus an extra period of "Intercalary Days" (4 in regular and 5 in leap years). Years in the calendar begin at the vernal, and are counted with the date notation of BE (Bahá'í Era), with March 21, 1844 CE being the first day of the first year. The period from March 21, 2009 to March 20, 2010 is the year 166 BE. At present, the Bahá'í Calendar is synchronized to the Gregorian, meaning that the extra day of a leap year occurs simultaneously in both calendars.*

### ***Buddhist Calendar***

*The Buddhist Calendar is used on mainland Southeast Asian, the countries of Cambodia, Laos, Thailand, Myanmar and Sri Lanka in several related forms. It is a luni-solar calendar having months that*

are alternately 29 and 30 days, with an intercalated day and a 30-day month added at regular intervals.

*Its luni-solar intercalation system generally adds seven extra months (adhikamasa) every 19 years and 11 extra days (adhikavara) every 57 years, but this is only a rough guide to the results of the actual calculations. The average year is 365.25875 days reckoned from the mahayuga of 4,320,000 years, simplified to 292,207 days every 800 years by removing a common factor of 5400 from the total days and years. This year is slightly longer than the modern sidereal year and is substantially longer than the modern tropical year. The Hindu version adds extra months and days (or removes months and days) as soon as the astronomical formulae require, whereas the Southeast Asian versions delay their addition. The Thai / Lao / Cambodian version does not permit an extra day to occur within years having an extra month, whereas the Burmese / Sri Lankan version permits an extra day only in years having an extra month. Thus there are four types of luni-solar years, of 354, 355, 384, or 385 days. Even though the intercalation cycles imply a tropical year, the sidereal year that is actually used causes the 'cycles' to gradually shift throughout history.*

#### **Jain Calendar**

*The Jain calendar (Vir Samvat) are based on the Indian lunisolar calendar (Bikrami calendar or Vikram Samvat). The Jain year Vira-Nirvana Samvat is obtained by adding 470 years to the Kartikadi Vikram. Vikrama Samvat: Kartikadi VS 2060 started on Kartika S 1 after Diwali 02, Chaitradi VS 2061 started on Chaitra S 1 (Yugadi/Vasanta Navaratri April 9, 2005). Jain Year Vira Nirvana Samvat31 started on Diwali 2004.*

*In Amanta calendar, the Krishna Paksha is included in the previous month. An average tithi is 1/30 of a lunar month (29.53059 days), thus shorter than 24 hours. The New Year begins the next day of Diwali.*

*[Vir Nirvan Samvat: 2531-2532 / Vikram Samvat: 2061-2062 / Year 2005 CE.]*

#### **Zoroastrian Calendar**

*The religious calendar is a matter of some controversy among Zoroastrians. There are currently three main calendars in use: Fasli, Shahanshahi, and Qadami. The oldest Zoroastrian calendar ('Old Avestan') was evidently a seasonal one, but it is not clear how it was kept in harmony with the seasons. In later years ('Younger Avesta' and*

*Sasanian times) the prescribed method was to add a month every 120 years, but none of the three modern calendars follow this tradition. In the Shenshai calendar, a year consists of 12 months, or mahs, and each month has 30 days. Each of these days is known as a roj, and each roj has a name. As 30 days x 12 months = 360 days, there are an additional 5 days (gathas) added to the 12th month to make a 365 day year.*

*Shenshai Calendar: solar calendar s around 365 1/4 days, which the Gregorian Calendar accommodates by adding a day every four years (leap day). Because of this difference, the Zoroastrian Calendar and solar year began to diverge. In 1006 C.E. the Zoroastrian calendar and solar year once again aligned, resulting in Navroze occurring on the Vernal Equinox. It was then decided that an extra month was to be added every 120 years to accommodate for the difference between the solar year and the Zoroastrian calendar year.*

*The Zoroastrians in India (Parsis) last remembered to add this extra month in 1129 CE. Consequently, New Year, which originally correlated with the vernal equinox on March 21st, has since fallen earlier in the Gregorian Calendar year such that it now occurs in August.*

*Qadami Calendar: While the Zoroastrians in India intercalated an extra month to the calendar around 1129 C.E., the Zoroastrians in Iran did not, causing the calendar used by the Iranian Zoroastrians to be ahead by a month.*

*Fasli Calendar: In the beginning of the 20th century, Khurshedji Cama devised the Fasli Calendar, which maintained alignment with the seasons such that New Year's Day coincides with the vernal equinox. Similar to the Shenshai and Qadami calendars, it consists of 12 months of 30 days with an additional 5 days (gathas), but intercalates a leap day called Avardad-sal-Gah every four years (patterned after the Gregorian Calendar's leap day).*

### ***Islamic Calendar***

*The Islamic calendar or Muslim calendar or Hijri calendar is a lunar calendar based on 12 lunar months in a year of 354 or 355 days, used to date events in many Muslim countries (concurrently with the Gregorian calendar), and used by Muslims everywhere to determine the proper day on which to celebrate Islamic holy days and festivals. The first year was the year during which the emigration of the Islamic prophet Muhammad from Mecca to Medina, known as the Hijra,*

occurred. Each numbered year is designated either *H* for Hijra or *AH* for the Latin - Anno Hegirae (in the year of the Hijra).

The Islamic calendar, however, is based on a different set of conventions. Each month has either 29 or 30 days, but usually in no discernible order. Traditionally, the first day of each month is the day (beginning at sunset) of the first sighting of the hilal shortly after sunset. If the hilal is not observed immediately after the 29th day of a month (either because clouds block its view or because the western sky is still too bright when the moon sets.), then the day that begins at that sunset is the 30th. Such a sighting has to be made by one or more trustworthy men testifying before a committee of Muslim leaders.

Other scholars, both Muslim and Western, concur that it was originally a lunar calendar, but about 200 years before the Hijra it was transformed into a luni-solar calendar containing an intercalary month added from time to time to keep the pilgrimage within the specific season of the year.

A majority of theologians oppose the use of calculations on the grounds that the Qur'an requires direct sighting in Surah al-Baqarah 2:185 and that calculations would not conform to Muhammad's recommendation to observe the new moon of Ramadan and Shawal in order to determine the beginning of these months.

Some jurists, however, see no contradiction between Muhammad's teachings and the use of calculations to determine the beginnings of lunar months. They consider that Muhammad's recommendation was adapted to the culture of the times, and should not be confused with the acts of worship.

### **Fiscal Year**

Calendars are also designed to suit specific purposes, as per need. For example, a Fiscal Year has more to do with accounting than the calendar. Also known as the "financial year" or the "budget year," it spans whatever 12-month period its creator happens to decide upon. In India, for example, the fiscal year starts from 1st of April to 31st March. The US government observes its fiscal year from 1 October through 30 September. In the United Kingdom, it goes from 6 April to 5 April of the following year.

Further, an individual business enterprise, especially traders may follow a different accounting year, based, say, on the sales of their

*products during particular period(s) of the year. For example, Christians may relate to Christmas celebrations period, whereas Indian merchants may do so with respect to Diwali celebrations, and so on.*

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### **Appendix 2**

#### **CALENDAR TIMELINE**

|         |                                                                                                      |
|---------|------------------------------------------------------------------------------------------------------|
| 3761 BC | Jewish calendar starts                                                                               |
| 2637 BC | Original Chinese calendar starts                                                                     |
| 46 BC   | Julian calendar adopted by Roman Empire                                                              |
| 1 AD    | Christian calendar starts                                                                            |
| 79 AD   | Hindu calendar starts                                                                                |
| 597 AD  | Julian calendar adopted in Britain                                                                   |
| 622 AD  | Islamic Calendar starts                                                                              |
| 1469 AD | Nanakshahi calendar starts                                                                           |
| 1582 AD | Gregorian calendar introduces in Catholic countries                                                  |
| 1752 AD | Julian calendar abandoned, Gregorian calendar adopted in Britain and its colonies, including America |
| 1873 AD | Japan adopts the Gregorian calendar                                                                  |
| 1949 AD | China adopts the Gregorian calendar                                                                  |
| 2003 AD | Nanakshahi calendar linked to the Gregorian Calendar                                                 |

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#### **MEASURING TIME**

All Timekeeping Devices depend on counting a regularly-repeated phenomenon. The earliest Timekeeping Devices were based on daily, monthly, or yearly cycles of the sun or the moon. In the 16<sup>th</sup> Century, the Italian scientist Galileo Galilei used the regular swing of a pendulum to measure periods of time. Most modern clocks are based on mechanical or electronic oscillations (vibrations). The more frequent the vibrations, the greater the potential accuracy of the clock. The crystal in a quartz watch typically vibrates at 32,768 hertz (32,768 times a second), so it keeps better time than a pendulum clock, whose pendulum typically swings twice a second.

In the early 1990s, NIST-7 Atomic Clock was developed by the US National Institute of Standards and Technology. At that time, this clock

was the most accurate timekeeping device in the world, precise to within one billionth of a second per day (one second in three million years). In this, the laser ‘excites’ the Cesium atoms, which then oscillate between two energy states, and the clock counts the oscillations. Global communication technologies, such as computer networks and broadcasting, rely on the world using one accurate time standard. This is called UCT (Universal Coordinated Time), and is based on the average time signal received from over 200 atomic clocks worldwide.

At present, the most accurate timekeeping devices are Atomic Fountains, which are also based on oscillations of Cesium atoms. The Atomic Fountain allows measuring of time with greater accuracy, mainly because it uses cooler, slower-moving atoms than an atomic clock. The Atomic Fountain was developed by Nobel prize-winning scientists and is far more accurate than a standard atomic clock. Atomic Fountain devices are accurate to within one ten-billionth of a second per day.

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#### REFERENCES

1. *As an example, can a lay person grasp information(s) / fact(s) like the following:*

*The tropical solar year differs from the Bikrami (sidereal) solar year by one part in 26,000, since this is the period of the Earth’s precession about its rotational axis combined with precession of the perihelion of the Earth’s orbit. However, the interval from a particular vernal equinox to the next may vary from the mean by several minutes. In 1994-98, the tropical year was 365.242190 days long. An expression based on the orbital elements of Laskar (1986) for calculating the length of the tropical year is given by:*

*Where*  $T$  *and*  $JD$  *is the Julian day (Doggett 1992)*

2. *The Bikrami Sambat [Vikrama Samvat] was founded by an Indian King Vikramaditya of Ujjain, following his victory over the Sakas in 56 BCE. The Vikram Samvat calendar is 56.7 years ahead (in count) of the solar Gregorian Calendar. For example,  $365.2421896698 - 0.00000615359T - 7.29 \times 10^{-10}T^2 + 2.64 \times 10^{-10}T^3$  days. Actually, the years of the Vikram Samvat are elapsed years. So, in reality in 1999 CE, 2056 BK (elapsed designation) or 2057 BK*

(current '  $\dot{J}D - 2451545$  'egan.

3. A lunar  $T \equiv \frac{JD - 2451545}{36525}$  sed on elongation of the Moon from the Sun, in which days are numbered within each lunar phase. Because the length of the lunar month is not an even fraction of the length of the tropical year, a purely lunar calendar drifts against the seasons.
4. A solar calendar is synchronized to the 'apparent motion' of the Sun. Solar calendars assign a date to each solar day. A day may consist of the period between sunrise and sunset, with a following period of night, or it may be a period between successive events such as two sunsets.
5. A luni-solar calendar is synchronized both to the motion of the moon and to the apparent motion of the sun. It is a lunar calendar that compensates by adding an extra month as needed to realign the months with the seasons. An example is the Hebrew Calendar, which uses a 19-year cycle with 7 extra lunar months, so that 228 solar months contain 235 lunar months.  
 Many calendars incorporate simpler calendars as elements. For example, the rules of the Hebrew calendar depend on the seven-day week cycle (a very simple calendar), so the week is one of the cycles of the Hebrew calendar. The Gregorian calendar has no inherent dependence on the seven-day week, but the two are used together, and calendar tools indicate both the Gregorian date & the Hebrew day of week.
6. February is allotted lesser days [28 days] on account of religious significance related to Easter. Nanakshahi Calendar is independent of this.
7. At the time when Julius Caesar took power in Rome, the Roman calendar had ceased to reflect the year accurately. The provision of adding an intercalary month to the year when needed had not been applied consistently, because it affected the length of terms of office. The Julian Reform lengthened the months, and provided for an intercalary day to be added every four years to February, creating a leap year. This produced a noticeably more accurate calendar, but it was based on the calculation of a year as 365 days and 6 hours (365.25 d). In fact, the year is 11 minutes and 14 seconds less than that. This had the effect of adding three-quarters of an hour to a year, and the effect accumulated.

*The Gregorian Calendar, improves the approximation made by the Julian calendar by skipping three Julian leap days in every 400 years. Thus, under Pope Gregory XIII, the leap rule was altered: century years, which are divisible by four, would not be leap years unless they are also divisible by 400. This makes the mean year 365.2425 days (365 d, 5 h, 49 min, 12 s) long. While this does not synchronize the years entirely, it would require around 32/33 centuries to accumulate a day. This new calendar was synchronized with the traditional seasons again and was not applied to dates in the past, which caused a leap of at least ten days from the final day the Julian calendar was in effect. In the present century, the difference between the Gregorian and Julian dates is 13.*

8. *The Julian Calendar and the Gregorian Calendar are both solar calendars. The reform introduced in the Gregorian Calendar was that the 10 dates of October 5 to 14 were removed in 1582, as the Julian Calendar had accumulated this error over time. Thus, the Julian Calendar date of Oct. 4, 1582 was followed by the Gregorian Calendar date of Oct. 15, 1582.*
9. *The Hindu calendar used in ancient times has undergone many changes in the process of regionalization, and today there are several regional Indian calendars, as well as an Indian national calendar. Most of the Indian regional calendars are inherited from a system first enunciated in Vedanga Jyotisha of Lagadha, a late BCE adjunct to the Vedas, standardized in the Surya Siddhanta (3rd century CE) and subsequently reformed by astronomers such as Aryabhata (499 CE), Varahamihira (6th c. CE), and Bhaskara (12th c. CE). There are, differences among these, and regional variations abound in these computations.*

*There have been 50 to 100 reforms of the traditional Chinese calendar over 2500 years, most of which were intended to better fit the calendar months to astronomical lunations and to more accurately add the extra month so that the regular months maintain their proper seasonal positions. There have been at least four similar reforms of the luni-solar version of the Hindu calendar, all intended to make the month a better match to the lunation and to make the year a better fit to the sidereal year. There have been reforms of the 'solar' version of the Hindu calendar which changed*

*the distribution of the days in each month to better match the length of time that the Sun spends in each sidereal zodiacal sign. The same applies to the Buddhist calendar. The first millennium reform of the Hebrew calendar changed it from an observational calendar into a calculated calendar. The Islamic calendar was a reform of the preceding luni-solar calendar which utterly divorced it from the solar year.*

10. *There are two types of solar years: [i] Sidereal Year: The sidereal year is the time for the Sun to return to the same position in respect to the stars of the celestial sphere. The sidereal year is the orbital period of Earth. A sidereal year equals 365.2564 mean solar days. The sidereal year is 20 minutes and 24 seconds longer than the tropical year [ii] Tropical Year: In the tropical year, dates determine the season. Whenever the mean Sun crosses the spring equinoctical point, a new tropical year begins. The tropical year is shorter than the sidereal year.*

*In a solar calendar a year approximates Earth's tropical year (that is, the time it takes for a complete cycle of seasons). The Gregorian calendar is a solar, arithmetical calendar. It counts days as the basic unit of time, grouping them into years of 365 or 366 days; and repeats completely every 146,097 days, which fill 400 years, and which also happens to be 20,871 seven-day weeks. Of these 400 years, 303 (the "common years") have 365 days, and 97 (the "leap years") have 366 days. This gives an average year length of exactly 365.2425 days, or 365 days, 5 hours, 49 minutes and 12 seconds.*

- 11 *Since the Gregorian Reform, several proposals have been offered to make the calendar more useful or regular.*

*The Abysmal Calendar was designed anonymously to replace the Gregorian Calendar solely in its function as the World's standard for day-keeping. It is a calendar with a perpetual annual structure that preserves the 7-Day Market Week in such a manner that there will be no disruption in implementing it beginning December 22nd 2012 CE. Every Week, Month, Quarter and Year begin on a Saturday and end on Friday.*

*With the exception of Weekdays, each time period is determined numerically, such that each community of calendar users can choose to name the months, years and so on, in keeping with each*

*distinct cosmology.*

*WHO have suggested, more generally, reusing an existing 13 × 4 naming system. The one found is playing cards. Thus either months are numbered Ace, Two through Ten, Jack, Queen and King with four weeks each, named after the four suits (????); or the roles are reversed if the calendar has four quarters with thirteen weeks each. Leap days or weeks are assigned the Joker. This system has internationalisation problems, though, because even where the 52-card deck is known, the order of suits may vary. Also the contemporary Roman alphabet has 26 letters, which could be used, together with a further binary indicator, as keys for 52 weeks.*

12. *An ordinal date is a calendar date consisting of a year and a day of year ranging between 1 and 366 (starting on January 1). The two numbers can be formatted as YYYY-DDD to comply with the ISO 8601 ordinal date format. For example, “1981-04-05” is also “1981-095” or “1981095”.*

*In some applications, a date notation is preferred that uses the year, the month, and the day of the year, and is formatted as YYYY-MM-DD. The standard notation for this variant representing the “4<sup>th</sup> February, 1995” would be “1995-02-04” or “19950204”.*

*The week notation can also be extended by a number indicating the day of the week. For example, the day 1996-12-31, which is the Tuesday (day 2) of the first week of 1997, can also be written as 1997-W01-2 or 1997W012. This is preferable for applications in situations like, industrial planning, where many things like shift rotations are organized per week and knowing the week number and the day of the week is handier than knowing the day of the month.*

13. *Amongst the Christians, there were long drawn-out discussions for centuries about when to celebrate Easter. Easter is the most important religious feast in the Christian year. It celebrates the resurrection of Jesus, which Christians believe occurred on the 3<sup>rd</sup> day after his crucifixion, about 33 AD.*
14. *Although, in 1999, the complete reforms in the Nanakshahi Calendar were accepted and adopted in principle by the then President, SGPC. But, in order to satisfy some sections of Sikhs, the fixing of dates of three occasions - Parkash Utsav of Guru Nanak, Bandi Chhorh Diwas, and Hola Mohalla, was postponed, to be done at a later date.*

15. *The Indian National Calendar is used in India besides the Gregorian calendar by the Gazette of India, news broadcasts by All India Radio, calendars and communication documents issued by control of Government of India. It is often called the “Saka Samvat” and is based on both lunar & solar years, and was adopted in 1957 by the Calendar Reform Committee after rectification of some local errors. It was adopted so as to synchronize the usage of 30 different kinds of Calendar used in India at that time.*

*The Indian National Calendar is now similar to the Gregorian calendar on the terms that even the Saka calendar has a normal year of 365 days and a leap year has 366 days. It came into usage from March 22, 1957 according to the Gregorian calendar which was actually Saka Era, Chaitra 1, 1879 according to the Saka Samvat. It is used as the official civil calendar in the country. The Bikrami Samvat calendar is 56.7 years ahead (in count) of the solar Gregorian calendar. For example, the year 2056 BS began in AD 1999 and ended in AD 2000. The calendar starts with the first day of the month Baisakh, which usually falls on the 13th or 14th of April in the Gregorian calendar.*

*Both the Bikrami and the Saka eras are luni-solar calendars. The names of the 12 months, as also their sequence, are the same in both calendars; however, the new year and the “year zero” for the two calendars is different. In the Bikrami calendar, the zero year corresponds to 58 BCE, while in the Saka / Shalivahana calendar, it corresponds to 78 CE.*

16. *As per the broad structure of the Hindu solar calendar: Calculation of Date: The (anticlockwise) angular distance between the sun and moon as measured from the earth along the elliptic (circle on the sky in which the sun, moon and planets seem to move) can vary between 0° and 360°. This is divided into 30 parts. Each part ends at 12°, 24° etc. The time spent by the moon in each of these parts (i.e. the time taken for the angular distance to increase in steps of 12° starting from 0°) is called one tithi [date].*

*Calculation of Month: As has been previously noted, the sun is observed to travel along the elliptic. For calculation of months, the elliptic is now divided into twelve parts called rāshis of 30 degrees each. The day on which the sun transits into each rāshi, it is*

- taken to be the first day of the month. Thus we get twelve months with varying lengths of 29 to 32 days. This variation in length occurs because the earth's orbit around the sun is an ellipse. The New Year day is the first day of the month of Mesha [Vasant, spring season]. Currently, it occurs around April 13/14 on the Gregorian calendar.
- 17 Extra months: When the sun does not at all transit into any rāshi but simply keeps moving within a rāshi in a lunar month (i.e. before a new moon), then that lunar month will be named according to the first upcoming transit. It will also take the epithet of adhik or “extra”. For example, if a lunar month elapsed without a solar transit and the next transit is into Mesha, then this month without transit is labeled adhik Chaitra. The next month will be labeled according to its transit as usual and will get the epithet nija (“original”) or shuddha (“clean”). Extra Month, or adhik mas mâsa (mas = lunar month) falls every 32.5 months. Thus 12 Hindu mas (mâsa) is equal to approximate 356 days, while solar year have 365 or 366 (in leap year) which create difference of 9 to 10 days, which is subset every 3rd year.
- 18 Lost months: If the sun transits into two rāshis within a lunar month, then the month will have to be labeled by both transits and will take the epithet kshay or “loss”. There is considered to be a “loss” because in this case, there is only one month labeled by both transits. If the sun had transited into only one rashi in a lunar month as is usual, there would have been two separate months labeled by the two transits in question. For example, if the sun transits into Mesh and Vrishabh in a lunar month, then it will be called Chaitra-Vaishaakh kshaya. There will be no separate months labeled Chaitra and Vaishâkh. A kshay mâsa occurs very rarely. Known gaps between occurrences of kshaya mâsas are 19 and 141 years. The last was in 1983. January 15 through February 12 were Pausha-Mâgha kshay. February 13 onwards was (adhik) Phâlguna.
- 19 Extra & Lost Dates: Sometimes two successive days have the same tithi. In such a case, the latter is called an adhika tithi where adhika means “extra”. Sometimes, one tithi may never touch a sunrise, and hence no day will be labeled by that tithi. It is then said to be a tithi kshaya where kshaya means “loss”.