On Astronomical References in *Vyāsa-Dhṛtarāṣṭra-Sanīvāda* in the *Bhiṣmaparvan* of *Mahābhārata*

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Abstract

Contrary to the general belief that the references to astronomical phenomena alluded to during the conversation between *Vyāsa* and *Dhṛtarāṣṭra* in the *Bhiṣmaparvan* of the epic *Mahābhārata*, are confusing and contradictory, it is clearly demonstrated that the description is very systematic and that the references to astronomical phenomena are quite consistent in the context of ill omens within the *parvan* and that the only true references to planetary positions are consistent with those in the *udyogaparvan* also.

Key words: Astronomy in *Mahābhārata*
I. Introduction

It has been well known that the epic *Mahābhārata*[1] contains over one hundred and fifty references to astronomical events [2] scattered throughout the text and a majority of these references occur in the *Bhiṣmaparvan*. These references are contained mainly in chapters 2 and 3, and occur in the context of *Vyūsa* ‘s description of ill omens on the eve of the war to *Dhṛtarāṣṭra*. Practically every scholar [3] has criticized these references as confusing and being contradictory. It is thought that every planet is described as being at least at two different positions at the same time. While most scholars have criticized the apparent contradiction, the opinions vary from just plain criticism [4], to ridicule [5], to utter condemnation [6]. Only a few scholars have considered the references in this *parvan* to be of any real value [7]. Some have considered only the references to eclipses [8], others have considered selected planetary positions [9]. Very few of them have considered all the astronomical references in the *parvan*. Even those who consider all of the references in these two chapters, recognize the apparent inconsistency and try to explain them [10] in terms of astrological terminology such as *vedhā* and *piṭā* etc. Others have tried to reinterpret the references by introducing additional hypotheses. Daftari [11] introduced the idea that there are two sets of astronomical data and then tried to rearrange the original text by switching the stated positions of *nakṣatras puṣya* and *śravaṇa*. Sharma [12] advanced the hypothesis that *Vyūsa* met *Dhṛtarāṣṭra* on more than one occasion and that the astronomical references actually correspond to different times, but have been compiled together at one place. There is no evidence textual or otherwise for such hypotheses and in any case, these attempts have not been successful in accounting for all planetary positions.

The purpose of this note is to show that (i) the criticisms directed against these descriptions are unwarranted, (ii) *Vyūsa* is very systematic in his descriptions of the ill omens and (iii) that when understood in their proper context, there is no contradiction in the astronomical references and that they constitute a coherent unit.
Astronomical References from Bhishmaparvan

As is well known, Vyāsa meets with Dhṛtarāṣṭra on the eve of the war and describes to him a whole set of ill omens he has seen. These descriptions of ill omens run over two chapters in the Bhishmaparvana, and the astronomical references occur in four separate sections: ślokas (20-23) and śloka (32) in chapter 2, and ślokas (11-17) and ślokas (24-29) in chapter 3. The scholars who have studied these astronomical references have only seen the apparent contradictions, but have not appreciated how systematic Vyāsa is in his description. Just because the descriptions appear in four different sections, some [13] have suggested that they belong to different times. Or, what is worse, some scholars [14] have suggested that some of the śloka s belong to sabhāparvan! However, the true situation is quite different. The astronomical references can be grouped in four different segments because they pertain to four different aspects of the ill omens as will be shown below. The tradition of recognizing astronomical ill omens can be traced to Atharvaveda [15] and its Pariśīṭas [16] and the ill omens described in the epic are consistent with the tradition.

The First segment

śloka s (20-23) of chapter 2 constitute the first segment. Here Vyāsa describes the omens foretelling the imminent war. Before describing the ill omens, he makes it clear that a great disaster is bound to occur just as indicated by the ill omens:

\[
\text{iha yuddhe mahārāja bhaviṣyati mahāṅkṣayaḥ}
\]
\[
yathemāni nimitāni bhayāyadyopalakṣyate// MB (VI. 2. 16)
\]

“Oh King, a great destruction will occur in this war just as it is indicated by these omens, which are harbingers of great calamity.”

The ill omens

(i)ubhe pūrvāpare sandhye nityāṁ paśyāmi bhārata//
udayāstaname sūryāṁ kabandhaiḥ parivāritaṁ// MB(VI. 2. 20)

“Oh Bhārata, I observe the sun every day both morning at sunrise and in the evening at sunset and have seen him as if encircled by long arms (i.e., encircled by a comet).”

(ii)śvetalohita paryantāḥ kṛṣṇagrivāḥ savidyutaḥ/
trivarṇāḥ parighāḥ sandhau bhānu māvārayantyuta// MB(VI. 2. 21)
“I see the sun surrounded by halos on all sides, halos which are tricolored, dark in the middle and white and red towards the edges and accompanied by lightning.”

(iii) jvalitärkendu nakṣatraṁ nirviśeṣa dinakṣapaṁ

ahorātraṁ mayā Ṗṛṣṭaṅkatākṣayā bhaviṣyati// MB(VI. 2. 22)

“I have been watching days and nights the fierce sun, the moon and the stars shining incessantly and have been unable to distinguish between day and night. This surely forebodes utter destruction.”

(iv) alaṅkṣyāḥ prabhayāhinaḥ paurvamāṃsiika kārtikīnī
candrobhūdagnivarṇaśca samavarṇē naṃbhaṣṭhale// MB(VI. 2. 23)

“On the full moon night of kārtika, the moon with fiery tinge was hardly visible, devoid of glory, and the horizons were also of the same hue.”

It is clear that the intent of Vyāsa is to impress upon Dṛṣṭarāṣṭra that there is an imminent war, the armies are standing facing each other ready to fight and that war will bring about utter destruction. This has also been indicated by the ill omens.

Vyāsa begins by saying that he observes the Sun every day both in the morning at sunrise and in the evening at sunset. He has noted the appearance of halos and some comets, which appear to enclose the Sun as if with long arms. The moon had become lusterless on the lunar eclipse day of kārtika pūrṇima. The class of omens thought to indicate an imminent war is quite consistent with the tradition going back to Atharva veda-Pariśiṣṭa

Consistency with tradition

The verses quoted above can be compared with similar verses (given below with a free flowing translation) from Atharvaveda-Pariśiṣṭa describing yuddhalakṣaṇa, omens indicative of war.

(a) arkebhra parighādināṁ pariveṣorka candrayoh
(b) lākṣālohita varṇatvaṁ sarveṣaṅca vicāraṇaṁ// AP (64. 5. 7)

“One should always consider the line of clouds and halos around the sun and the moon and observe whether they appear red or not in color.”

(c) nilalohita paryantaṁ kṛṣṇagrīvaṁ savidyutanī// AP (61. 1. 4)
“which are blue and red towards the edges and dark in the middle and accompanied by lightning”

(d)trivarṇe parighevāpi trivarṇairvā balāhakaiḥ
udayāstamayamiyādyad sūryaḥ kadācanai // AP (61. 1. 15)

(c)prthivyāṁ rājavaiśyānāṁ mahad bhayam upasthitam// AP (61. 1. 15)
“Whenever the sun is surrounded at sunrise or sunset by tri-colored clouds, (the balahaka clouds), it indicates great calamity to the earth and royal families.”

(f)tamro bhavati śastraṇya………..
dhūmravarṇo gnivarṇo vā grāmeṣu nagareṣu vā// AP (53. 5. 1-2)
“the color of the moon (at the time of eclipse) indicates a battle if it is red and disaster to cities and villages if it is smoky or fiery.”

The omens described by Vyāsa are entirely consistent with the description in Atharvaveda-Pariśiṣṭa.

The second segment

In the second segment, consisting of two śloka s, Vyāsa considers the ill omens foretelling the great harm to the kuru dynasty and refers to the lunar eclipse, which occurred on the Full moon day at kṛttika, followed by a solar eclipse. The earth experiences constant tremors. He also refers to Saturn afflicting rohiṇi (Aldeberan) and śvetagraha transgressing citrā, which indicates the selective destruction of the kuru clan.

(i)rohoṇiṁ piḍayanneṣa stitho rājaṁśanaiścaraḥ/
yvāṛttaṁ lakṣma somasya bhaviṣyati mahadbhayah// MB(VI. 2. 32)
“Oh King, Saturn is harassing Aldeberan and the spot on the Moon has shifted from its position. Something terrible will happen.”

(ii)abhikṣṇaṁ kampate bhūmirarkaṁ rāhustathāgrasat/
śveto grahastathā citrāṁ samatikramya tiṣṭati// MB(VI. 3. 11)
“The Earth is experiencing tremors intermittently and Rahu has seized the Sun. śvetagraha has transgressed citrā.”

Consistency with the references in Udyogaparvan
These are almost identical to the omens described by Karṇa earlier in Udyogaparvan (Karṇa includes in addition the retrograde motion of Mars) at the time of his riding with Kṛṣṇa:

(a) prājāpatyaṁ hi nakṣatram grahas tīkṣṇo mahādyutiḥ/ śanaścarāḥ piḍayati piḍayan prāṇinodhikam/ MB(V.141. 7)

“The noxious and much lustrous graha Saturn, which always harasses people extremely, is harassing the nakṣatra presided by prajāpati.”

(b) kṛtvā cāṅgārako vakraṁ jyeṣṭhāyāṁ madhusūdana/ anūrādhāṁ prārthayate maitraṁ sangamayanniva/ MB(V.141. 8)

“Mars has performed a retrograde turn at Antares, oh, madhusūdana, and appears to be begging anūrādhā ‘s friendship, as if to pacify it.”

(c) nūnaṁ mahadbhayaṁ kṛṣṇa kurūnāṁ samupasthitaṁ/ viśeṣeṇa vāruṇeyya cirrāṁ piḍayate grahaḥ/ MB(V. 141. 9)

“Indeed a great danger awaits the kuru family and is indicated by the graha polluting cirrā.”

(d) somasya lakṣma vyāvṛttāṁ rāhuṁ rāhuṁ mupesyaṁ/ MB(V. 141. 10)

“The moon lost its luster and rāhu is approaching the Sun.”

A lunar eclipse has already occurred and there is an impending solar eclipse.

This clearly shows that the second segment in Vyāsa’s description to Dhṛtarāṣṭra in Bhiṣmaparvan, of ill omens pertaining to the danger to the kuru s is consistent with the astronomical references in Udyogaparvan. It may be noted that there is a reference to a graha polluting cirrā in both cases. Graha here refers to a comet and not to planet Mercury as is generally translated. In fact, it can be compared to the following verse from Varāhamihira [17] when he discusses the effect of comets on asterisms:

cirrāsu kurukṣetradhipasya maraṇaṁ samādiṣṭetaṁ / BS (XI. 57)

“If the afflicted (by a comet) asterism be cirrā, a wise astrologer should predict the death of the ruler of Kurukṣetra.”

It may further be pointed out that this is the only segment, which includes true planetary positions in describing the omens.
The third segment

Vyāsa describes in the third segment further indicators of the calamity to the entire army (“senayorāśivaṁ ghoraṁ.”). It is this segment that has caused so much difficulty to the scholars in that the planets appear to have been described as being at two or more locations at the same time. It is possible that the apparent ambiguity and confusion in the stated planetary positions arise because of the implicit interpretation that the word graha means a planet. The word graha (from the root grah=to grasp or to seize) refers to any heavenly object, which can move and hence can grasp or seize a star. Thus, the word refers to a planet or comet, although in much later times in Indian Astronomy, during the early years of CE, it came to be associated with only a planet.

But, Vyāsa leaves no doubt to the fact that here the word graha refers to a comet:
“grahau tāmrāruṇaśikhau prajvalīvubhau” MB (VI. 3. 24)
‘the two grahās blazing with coppery and red hair’.

It may be noted that the word comet itself derives from the Greek word for hair. The word graha with red hair in the context here can only refer to a comet. Furthermore, as noted by Varāhamihira [18], the ancient astronomers Parāśara and Garga classified comets as sons of Sun, sons of Moon, sons of Mercury, sons of Venus, sons of Mars, Children of Jupiter and Children of Saturn, all of which indicate mainly impending calamities. This practice of considering a comet as “grahaputra” can be found in Atharvaveda-Pariśiṣṭa [19] also. The astronomical references in the third segment can now be examined in this light and the words “[son of]” have been added to the translation to make it clear.

(i) dhūmaketur mahāghoraḥ puṣya mākrāmya tiṣṭati// MB(VI. 3. 12)
“Deadly dhūmaketu has overcome puṣya.”

(ii) senayo raśivaṁ ghoraṁ kariṣyati mahāgrahaḥ/
maghāsvaṅgūrako vakraḥ śravaṇecā bṛhaspatiḥ// MB(VI. 3. 13)
“The mahāgraha appears to bring about an awful destruction in both armies. [Son of] Mars is retrograde in maghā, and [son of] Jupiter in śravaṇa.”

(iii) bhāgyam nakṣatra mākrāmya sūryaputreṇa pidyate
śukraḥ proṣṭapade pūrve samāruhya viśāṁ pate
uttaretu parikramya sahitāḥ pratyudṛśate// MB(VI. 3. 14)

“The son of Surya has crossed the asterism purva-phalgunī, and is vexing. Oh King, [son of] śukra has entered purva-proṣṭapada, going around uttara-proṣṭapada and is rising in both.”

(iv) śyāmo grahaḥ praṇevalaḥ sadhūmaḥ sahaṇavakaḥ
aṁdraṁ tejasvi nakṣatraṁ jyeṣṭāṁkramya tiṣṭati// MB(VI. 3. 15)

“Śyāmagraha is luminous and together with dhūma and pāvaka has crossed over to jyeṣṭā, the bright asterism ruled by Indra.”

(v) dhruvaḥ praṇevalo ghoraṁ apasavyaṁ pravartate/
citrāsvātyantare caiva dhiṣṭaḥ paruṣo grahaḥ// MB(VI. 3. 16)

“The luminous dhruva has moved to the right of ghora. The paruṣa graha has established itself between citrā and svāti.”

(vi) vakrānuvakraṁ kṛtvāca śravaṇe pāvaka prabhāh/
brahmaraśīṁ samāvrtya lohiṇāṅgo vyavasthitaḥ// MB(VI. 3. 17)

“Pāvakaprabhā has gone circumventing śravaṇa, and lohiṇāṅga has become steady after enclosing brhaṃraśī.”

(vii) saṁvatsara sthāyinau ca grahaḥ praṇevalavubhau/
viśākhyoḥ samipasthau brhaṃpaṭi śanaścarau// MB(VI. 3. 25)

“[sons of] Jupiter and Saturn, which stay around for a year, are both luminous and are near the two viśākha stars.”

(viii) kṛttikāsṛu grahaṁvvro nakṣatre prathame jvalan/
vapūṇīsyaphaharan bhāsā dhūmakaṭuriva sthitaḥ// MB(VI. 3. 26)

“The graha tivra blazing in the first constellation kṛttika, and concealing forms with luster resembles dhūmakaṭu.”

(ix) triṣu pūrveṣu sarveṣu nakṣatreṣu viśāṁpate/
budaḥ sampatate bhikṣaṁ janayan sumahadbhayāṁ
MB(VI. 3.27)

“[son of] Mercury is falling under all the three earlier constellations and causing a great terror.”
Vyāsa names specifically twelve comets, śveta, dhūmaketu, mahāgraha, paruṣa, pāvaka, dhūma, lohitāṅga, tīvra, pāvakaprabha, śyāma, ghora, and dhruvaketu. All these names can be found in the list given by Varāhamihira [20]. Earlier scholars had translated some of these names as planets, for example, śvetagraha as white planet (to refer to Venus), śyāmagrāha as dark planet (to refer to Mercury), and paruṣagraha as cruel planet (to refer to Rahu). Vyāsa refers to son of Sun, sūryaputra, explicitly, but he also refers to the comets by the name of the parent planets. While this is quite according to the Sanskrit grammar, it is this notation that has caused so much confusion. The scholars have interpreted these references literally as referring to planets themselves. The net result is the confusion of conflicting planetary positions. When it is realized that comets are to be considered, there is no ambiguity or confusion of any kind. Moreover, comets have been considered to be harbingers of calamity since Atharvaveda [21].

The fourth segment

In the final segment, Vyāsa describes the omens which indicate destruction of the entire population; these include a pair of eclipses, a lunar and a solar eclipse occurring in the same month and within an interval of thirteen days, and at an ‘aparvaṇi’ moment (i.e., not at the moment of exact conjunction or opposition of the sun and the moon).

(i) caturdaśīṁ pañcadaśīṁ bhūtapuruṣāṁ ca śoḍaśīṁ/  
imāntu nābhijāṇāmi amāvyāṁ trayodaśīṁ// MB(VI. 3. 28)  
candrasūryāvubhau grastāvekamāse trayodaśīṁ/  
aparvaṇi grahāvetau praṇāḥ saṁkṣapatiṣyataḥ// MB(VI. 3. 29)

“I know New Moon coinciding with fourteenth, fifteenth and also on the sixteenth day, but I have never known it coinciding with the thirteenth day. In one and the same month, both the Sun and the Moon are eclipsed on the thirteenth. These ill-timed eclipses indicate destruction of the people.”

This can be compared with a description from Atharvaveda-Pariśīṣṭa:

yadi tu rāhurubhau śaśibhāskarau
grasati pakṣamanantaramantataḥ/
puruṣaśoṇiṇī kardama vāhini
bhavati bhūrṇa ca varṣati mādhavaḥ/ AP(53. 3.5)

Discussion and Conclusion

It is clear that the omens described by Vyūsa in four different segments refer to different aspects: (i) an imminent war, (ii) calamity to the Kuru dynasty, (iii) destruction of the entire army, and (iv) danger to the entire population. As such they involve different astronomical happenings. The truly planetary positions are indicated in the omens pertaining to the calamity to the Kuru family and in this case the descriptions given by Karṇa in Udyogaparvan are identical to the descriptions given by Vyūsa in Bhiṣmaparvan. The alleged great confusion and ambiguity in ‘planetary’ positions seen by scholars pertain to the third segment, which describes omens of a great danger to the entire army. This segment does not refer to planets, but to comets and has been made explicitly clear by Vyūsa, but scholars have not taken note of it. Explicit references by specific names to comets have been mistranslated as planets, leading to confusion. Compounding the confusion is Vyūsa’s reference to comets as off springs of planets, but denoting them by the names of the parent planets. But, once it is recognized that Comets are implied here there is no confusion or ambiguity and everything falls into place. There is no necessity for introducing adhoc hypotheses such as those advanced by Daftari, Sharma or Iyengar to account for the ambiguity, because, it is non-existent.

The description of omens turns out to be a coherent account. It is evident that criticism directed against the descriptions is unwarranted. It may be remarked in passing that other non-astronomical omens in these two chapters can also be found in Atharvaveda-Pariśiṣṭa.

Abbreviations

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<td>AV</td>
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<td>BS</td>
<td>Bṛhat Samhitā</td>
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<td>MB</td>
<td>Mahābhārata</td>
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References and Notes


[3] See for example:

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[5] Holay, P. V., Year of the Kaurava Pandava War, presented at a Colloquium on *Dating the Mahabharata War based only on the Astronomical References*, January 5-6, 2003, Mythic Society, Bangalore.


[10] Raghavan, K. S., ibid


[12] Sharma, V. N., ibid

[13] Sharma, V. N., ibid

[14] Iyengar, R. N.,

[15] *Atharvaveda* (XIX. 9.9)


[18] ibid

[19] *Atharvaveda-Pariśiṣṭa*, ibid, (LII. 2. 1. – LII 4. 2. )

[20] *Bṛhat Saṁhitā*, ibid, in ‘ketucāra’, Ch. XI

[21]. *Atharvaveda* (XIX. 9. 10)