

# On Astronomical References in *Vyāsa-Dhṛtarāṣṭra-Samvāda* in the *Bhīṣmaparvan* 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 *Bhīṣmaparvan* 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 *Bhīṣmaparvan*. These references are contained mainly in chapters 2 and 3, and occur in the context of *Vyāsa* '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 *piḍā* 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 *Vyāsa* 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) *Vyāsa* 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 *Bhishmaparvna*, 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 *Parīṣiṣṭas* [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:

*iha yuddhe mahārāja bhaviṣyati mahānḥṣayaḥ*

*yathemāni nimittāni 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 nityam paśyāmi bhārata/*

*udayāstamane sūryam kabandhaiḥ parivāritam*// 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/*

*trivarnāḥ 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) *jyalitārkenḍu nakṣatraṁ nirviṣeṣa dinakṣapaṁ/*

*ahorātraṁ mayā drṣṭāmtatkṣayāya 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) *alakṣyaḥ prabhayāhinaḥ paurṇamāsiñca kārṭikim/*

*candrobhūdagnivarṇaśca samavarṇe nabhasthale//* MB(VI. 2. 23)

“On the full moon night of *kārṭika*, 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 *Dhṛtarāṣṭra* 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 *kārṭika 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 pariḡhādinām pariveṣorka candrayoḥ*

(b) *lākṣālohita varṇatvaṁ sarveṣāñca vicāraṇam//* 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 kṛṣṇagrivaṁ savidyutaṁ/* 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)

(e)*pr̥thivyām rājavan̄śyānām 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 śastrāya.....*

*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-Parīṣiṣṭa*.

### 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 *rohini* (Aldeberan) and *śvetagraha* transgressing *citrā*, which indicates the selective destruction of the *kuru* clan.

(i)*rohoṇim piḍayanneṣa stitho rājañśanaiścaraḥ/*

*vyāvṛtām lakṣma somasya bhaviṣyati mahadbhayaṁ*// 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)*abhikṣṇam kampate bhūmirarkam rāhustathāgrasat/*

*śveto grahastathā citrām 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) *prājāpatyaṃ hi nakṣatraṃ grahas tīkṣṇo mahādyutiḥ/  
śanaīscarah piḍayati piḍayan prāṇinodhikaṃ*// 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 vakraṃ jyeṣṭhāyāṃ madhusūdana/  
anūrādhāṃ prārthayate maitraṃ saṃśamayanniva*// 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) *nūnaṃ mahadbhayaṃ kṛṣṇa kurūnāṃ samupasthitaṃ/  
viśeṣeṇa vārṣṇeya citrāṃ piḍayate grahaḥ*// MB(V. 141. 9)

“Indeed a great danger awaits the *kuru* family and is indicated by the *graha* afflicting *citrā*.”

(d) *somasya lakṣma vyāvṛttaṃ rāhurarka mupeṣyati*/ 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 *Bhīṣmaparvan*, 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* afflicting *citrā* 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:

*citrāsu kurukṣetrādhīpasya maraṇaṃ samādiśettajñah* / BS (XI. 57)

“If the afflicted (by a comet) asterism be *citrā*, 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 (“*senayoraśivaṃ ghoram.*”). 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 tāmrārūṇaśikhau prajvalitāvubhau*” 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-Parīśiṣṭa* [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 mākranya tiṣṭati*// MB(VI. 3. 12)

“Deadly *dhūmaketu* has overcome *puṣya*.”

(ii) *senayo raśivaṃ ghoram kariṣyati mahāgrahaḥ/*

*maghūsvaṅgārako vakraḥ śravaṇeca 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 mākranya sūryaputreṇa piḍyate*

*śukraḥ proṣṭapade pūrve samāruhya viśāṃ pate*

*uttaretu parikramya sahitaḥ pratyudikṣate//* MB(VI. 3. 14)

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

(iv) *śyāmo grahaḥ prajvalitaḥ sadhūmaḥ sahapāvakaḥ*

*aindraṃ tejasvi nakṣatraṃ jyeṣṭhāmākramya tiṣṭati//* MB(VI. 3. 15)

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

(v) *dhruvaḥ prajvalito ghoram apasavyam pravartate/*

*citrāsvātyantare caiva dhiṣṭitaḥ paruṣo grahaḥ//* MB(VI. 3. 16)

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

(vi) *vakrānuvakram kṛtvāca śravaṇe pāvaka prabhah/*

*brahmarāśIm samāvṛtya lohitaṅgo vyavasthitaḥ//* MB(VI. 3. 17)

“*pāvakaprabha* has gone circumventing *śravaṇa*, and *lohitaṅga* has become steady after enclosing *brhmarāśi*.”

(vii) *saṃvatsara sthāyinau ca grahau prajvalitāvubhau/*

*viśākhāyoḥ samīpasthau bṛhaspati śanaīscarau//* 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) *kṛttikāsu grahastivro nakṣatre prathame jvalan/*

*vapūṃṣyapaharan bhāsā dhūmaketuriva sthitaḥ//* MB(VI. 3. 26)

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

(ix) *triṣu pūrveṣu sarveṣu nakṣatreṣu viśāmpate/*

*budhaḥ sampatate bhikṣṇam janayan sumahadbhayaṃ//*

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*, *paraṣa*, *pāvaka*, *dhūma*, *lohitāṅga*, *tivra*, *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), *śyāmagraha* as dark planet (to refer to Mercury), and *paraṣagraha* 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) *caturdaśim pañcadaśim bhūtapurvām ca ṣoḍaśim/  
imāntu nābhijānāmi amāvāsyaṁ trayodaśim// MB(VI. 3. 28)  
candrasūryāvubhau grastāvekamāse trayodaśim/  
aparvaṇi grahāvetau prajāḥ samkṣapayīṣyataḥ// 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-Pariśiṣṭa*:

*yadi tu rāhurubhau śaśibhāskarau  
grasati pakṣamanantaramantataḥ/  
puruṣaṣoṇita kardama vāhini*

*bhavati bhūrna ca varṣati mādhaveḥ*// AP(53. 3.5)

### Discussion and Conclusion

It is clear that the omens described by *Vyāsa* 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 *Vyāsa* in *Bhīṣmaparvan*. 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 *Vyāsa*, 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 *Vyāsa*’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 every thing 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-Parīṣiṣṭa*.

### Abbreviations

AV	<i>Atharvaveda</i>
AP	<i>Atharvaveda-Parīṣiṣṭa</i>
BS	<i>Bṛhat Samhitā</i>
MB	<i>Mahābhārata</i>

### References and Notes

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

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

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