A Fresh Science-History Journal: Cost-Free to Major Libraries

DIO — The International Journal of Scientific History.
Deeply funded. Mail costs fully covered. No page charges. Offprints free.

- Since 1991 inception, has gone without fee to leading scholars & libraries.
- Contributors include world authorities in their respective fields, experts at, e.g., Johns Hopkins University, Cal Tech, Cambridge University, University of London.

- Journal is published primarily for universities’ and scientific institutions’ collections; among subscribers by request are libraries at: US Naval Observatory, Cal Tech, Cornell, Johns Hopkins, Oxford & Cambridge, Royal Astronomical Society, British Museum, Royal Observatory (Scotland), the Russian State Library, the International Centre for Theoretical Physics (Trieste), and the universities of Chicago, Toronto, London, Munich, Göttingen, Copenhagen, Stockholm, Tartu, Amsterdam, Liège, Ljubljana, Bologna, Canterbury (NZ).
- New findings on ancient heliocentrists, pre-Hipparchos precession, Mayan eclipse math, Columbus’ landfall, Comet Halley apparitions, Peary’s fictional Crocker Land.
- Entire DIO vol.3 devoted to 1st critical edition of Tycho’s legendary 1004-star catalog.
- Investigations of science hoaxes of the 1st, +2nd, 16th, 19th, and 20th centuries.

Paul Forman (History of Physics, Smithsonian Institution): “DIO is delightful!”
E. Myles Standish (prime creator of the solar, lunar, & planetary ephemerides for the pre-eminent annual Astronomical Almanac of the US Naval Observatory & Royal Greenwich Observatory; recent Chair of American Astronomical Society’s Division on Dynamical Astronomy): “a truly intriguing forum, dealing with a variety of subjects, presented often with [its] unique brand of humor, but always with strict adherence to a rigid code of scientific ethics . . . [and] without pre-conceived biases . . . . [an] ambitious and valuable journal.”
B. L. van der Waerden (world-renowned University of Zürich mathematician), on DIO’s demonstration that Babylonian tablet BM 55555 (100 BC) used Greek data: “marvellous.” (Explicitly due to this theory, BM 55555 has gone on permanent British Museum display.)
Rob’t Headland (Scott Polar Research Institute, Cambridge University): Byrd’s 1926 latitude-exaggeration has long been suspected, but DIO’s 1996 find “has clinched it.”
Hugh Thurston (MA, PhD mathematics, Cambridge University; author of highly acclaimed Early Astronomy, Springer-Verlag 1994): “DIO is fascinating. With . . . mathematical competence . . . judicious historical perspective, [. . .] inductive ingenuity, . . . [DIO] has solved . . . problems in early astronomy that have resisted attack for centuries . . . .”

Annals of Science (1996 July), reviewing DIO vol.3 (Tycho star catalog): “a thorough work . . . extensive [least-squares] error analysis . . . demonstrates [Tycho star-position] accuracy . . . much better than is generally assumed . . . . excellent investigation”.
British Society for the History of Mathematics (Newsletter 1993 Spring): “Fearless . . . . [on] the operation of structures of [academic] power & influence . . . much recommended to [readers] bored with . . . the more prominent public journals, or open to the possibility of scholars being motivated by other considerations than the pursuit of objective truth.”
Table of Contents

DIO: Page:
1 Scrawlins 3
2 Correspondence 13
3 Referees Refereed 23
4 Tycho 1004-Star Catalog’s Completion Was Faked 35

News note added 1993:

Impact

We were pleased at recent national-level attention to Ted Heckathorn’s startling recovery of Roald Amundsen’s 1911 longitude observations, a story first broken in DIO 2.2 (1992), where for the first time the spherical trig navigation of Amundsen’s great South Pole journey was mathematically explained, including several sample computations.

A gratifying byproduct of this work has been complete vindication for the martyred British explorer Robert Scott’s similar S.Pole navigation, which had lately been much attacked, quite unjustly.

Boyce Rensberger’s prominent 1993/6/1 Washington Post story on these matters — explicitly citing DIO — was picked up by AAAS’s Science (1993/6/11, Constance Holden). Both accounts rightly emphasize the negative impact of Heckathorn’s discovery upon the Robert Peary 1909 North Pole claim (entirely lacking in steering observations), which is now more suspect than ever as the most successful science hoax of the century.

Informational note added 1993:

History-of-science & Dissent

DIO 2.3 showed (§8 in 17) that, in 1991, the preeminent History-of-science organs, Journal for the History of Astronomy and Isis, published handsome lead articles (gov’t-funded Neugebauer-Muffa output, on ancient astronomical history), the central contentions of which depended heavily on astounding mismath, including two crucial errors [both refereed by Muffoslo] in gradeschool arithmetic. (Full details in Journal for Hysterical Astronomy 1.2, esp. §G9.) The sole response from the History of science community is the incident described below.

In reaction to 1992/10/30 receipt of DIO 2.3, a wellknown Hist.sci archon — professor in Johns Hopkins University’s Hist.sci Dep’t & sometime boardperson at History of Science Society’s Isis — swiftly (without a word to DIO) contacted the Johns Hopkins University central Milton Eisenhower Library, resulting in the Library’s cancellation of its DIO subscription. These low doings were expected to remain secret.

DIO congratulates the Hist.sci center upon the brilliance, the clarity, & especially the characteristic dexterity of this latest demonstration of: [a] Hist.sci’s renowned dedication to free intellectual discourse, & [b] how unafraid Hist.sci archonund is of DIO.
H11 My own attitude is uncomplex: fraud in science is to be denounced, not alibied. Even in Tycho’s work. (See Thoren 1990 p.293, excusing Tycho’s suspected plagiarism of a key astronomical discovery: quoted J.HA 1.2 [H2].) No, it’s not pleasant to acknowledge either the ten fabricated Tycho star-places — or the implications of data-faking having occurred at such a rarified level among astronomical greats. But these are the stark truths. And I do not propose to pretend otherwise.

References


Acknowledgements: for cheerfully providing expert assistance, I thank Jimmy Poultnay,69 Jan Koornneef, Francesco Paresce, Linda Tripp, and especially Barbara Rawlins.

Acknowledgements: for cheerfully providing expert assistance, I thank Jimmy Poultnay, Jan Koornneef, Francesco Paresce, Linda Tripp, and especially Barbara Rawlins.

\[\text{[Note added 1992/11: Despite Nixon-pal R.Perot’s retrograde-loop 1992 in-out-in pseudo-run for the White House, about 1/6 of the voters bought his act and voted for him. Comment: NOBODY who’s genuinely running for office — i.e., not running as a cunning soap — is going to drop out when leading the polls, which is just what Perot did. His subsequent attempts to justify & rationalize this patently inexplicable performance are even more disingenuous than the original show. We probably haven’t seen the last of Perot’s pioneering new business enterprise: dial-a-votesplitter.]}\]

\[\text{[Question: Is it accidental that Charon’s nodal line is so nearly coincident with Pluto’s apsidal line?]}\]

\[\text{[For DR’s speculation regarding the astronomical placement of these monuments, see his lecture at the 1984 Greenwich centenary celebration of the prime meridian’s establishment (Vistas in Astronomy 28:255; 1985).]}\]

\[\text{[If you like corrupt gov’t, police, & media, then: just keep drugs illegal. Another hitherto-unnotated paradox: the big profits (which purchase control of Congressmen by smarter criminals) connected to hard drugs are contingent on drugs not succeeding with most of the public. (So, black leaders’ suspicion — which I do not share — that drug-sales are injected selectively into ethnic ghettos, is not a priori incredible.) E.g., if a majority of the citizenry got hooked on cocaine, prohibition would be repealed (as for booze in 1933) — and mafia profits would plunge. In case the reader is imagining a personal stake here, it should be added that DR strictly avoids — and makes a pest of himself warning youngsters against — drugs or non-nutritive stimulants of any type. That includes tobacco, alcohol, & caffeine. The happiness-through-chemistry myth promoted by US media ads is a key element in setting up youth for drug-use. I am so turned off by this greedy propaganda that I don’t even take aspirin. (Whether for individual or societal depression, the media singularly promotes quick-sell band-aids, not stable-health longterm solutions.)]}\]

69 Prof Emeritus, Classics, Johns Hopkins University. A generation ago, Jimmy’s sister and our old friend, Anne Poultnay Taylor, made us a gift of her own summery painting of our family’s longtime Ruxton house. It has now hung in our Baltimore home for over a decade.
A6 The US public believes it longs for truth. So, why does it systematically keep electing two-faced liars to public office?5

A7 Since certain public enemies of my late friend Robert Newton have regularly attacked triples (even spelling)6 in his work (e.g., DIO 1.3 fn 264), I cannot resist returning the favor — through the revealing little item that follows. The extremely handsome *Journal for the History of Astronomy* (Editor-for-Life: Lord Hoskin, University of Cambridge, Churchill College) makes a point of prominently listing, on each issue’s inside front cover, its “Advisory Editors” & their uniformly eminent institutional affiliations. (See §4 fn 65.) For years (at least 1987-1992), this JHA list has rendered “Advisory Editor” N.Sivin’s (where *Isis* was edited until 1991) as the University of “Pennsylvania.”7 This despite several resettlements of this special-press-page’s type. Again,8 we ask: how many scholars actually read, even occasionally, the journals we cut down forests to make? Thus, perversely, the abortive JHA charge of faking his star catalog has not only made his theft much more believable (in his work (e.g., fn 264), I cannot resist returning the favor but has directly resulted in exposing the far greater figure Tycho, engaging in the very same utterly dishonest practice — and by exactly the same scheme RN&DR (Tycho!) — had charged against Ptolemy (disbelieved by Evans & his Muffia pals): simply adding a precession constant to celestial longitudes. JHA must of course thank the ever-courageous JHA’s massive if ineffectual Evans 1987 sneak attack on DR, for handing such an important discovery. But DR’s thanks to the extremely handsome JHA will be as nothing that triggered DR’s discovery of Hipparchos’ hoaxes: DIO 1.3 [N11], and [b] the Tycho case’s public demonstration of establishment-beloved DR’s inductive and fraud-detecting abilities. (Imagine the sheer bulk of Muffia chopper-enamel that’ll grind down, before admission of the latter item. Dentists will mass-vacation on the restoration-proceeds.)

A8 [a] In DIO 1.1 (§2 fn 7), we learned that US politicians (allegedly fighting poverty) have expressed astonishment & surprise that, when poor women (many of whom had virtually no other job prospects) were paid extra money for each child produced, they bore lots of children — and thus poverty expanded rather than contracted. [b] Similarly, the US cancer-industry has lately been fighting breast-cancer with X-rays10 (well known to

---

5 Least any reader has failed to connect §A5 to §A6, I add the item that: illegal drug profits in the US are ordmag 1000 times the combined (official) salaries of all of the 435 US Congressmen (who write “our” laws). So, does Congress rule vice? Or vice, versa.

6 There are those who would imply incompetence merely because of a scholar’s unorthodox spelling of an ancient’s name. (Note also J.HA 1.2 fn 92.) See a certain OG’s very first review of R.Newton’s output: *Centaurus* 17.2:173 (O Gingerich 1972). Though not entirely negative, it cites some odd alleged “flaws” or “ineligancies” in nonhistorian RN’s recent *Astronomer’s Notes* (Johns Hopkins 1990) [published as “Bn Yunus” as “Emn Jounis”. Comments: [a] Revealingly (downright embarrassingly) trivial. [b] R Newton 1970 p.304 notes 3 different spellings. [c] There is no uniformly accepted Anglicization of this 11th century Moslem astronomer’s name. [d] Throughout, R.Newton 1970 uses “Emn Jounis”, not OG’s alleged “Emn Jounis”. [e] This review’s editor-in-chief. *Centaurus*. Gingerich, O. [f] Revelation: HG. [g] Recheck R.Newton’s *Astronomer’s Notes*. By contrast, OG casts no aspersions on any specific person’s scholarly ability, during his current review of the work of the Muffia’s reputed satirist-entertainer Noel Coward Swerdlow and other Hist.sci volk, when he offers the weighty complaint (JHA 2.2:150, 1992): some Hist.sci scholars “no longer [choose] to distinguish between principle and principal.” (The fact that Hist.sci archons cannot distinguish between principled and unprincipled seems to be of far less interest to them than spelling the words correctly. Reminds one of [E]nny Jiggins’ [tennis] card, in *My Fair Lady*). DIO’s mailing label brought the misspelling to Sivin’s attention (exclamatorily) in 1991.

7 DIO’s mailing label brought the misspelling to Sivin’s attention (exclamatorily) in 1991.

8 See here at §3 [Ch 6 & DIO-J.HA 1.2 §B4 (the JHA’s “Winter Equinox”), or the previous issue’s “Royal Cometen” (J.H.A. 1.18 §B3).

9 What’s-left-of-the-left (WLL) keeps suicidally promoting this “cure” for poverty. Instead of having the next generation raised largely by stable middle-class couples, the WLL effectively insist’s it’s less demeaning to have much of the next generation instead raised by poor single mothers at least one of whose “jobs” is collecting child-welfare cheques, with govt’s-social-worker bureaucrats riding patemalistic herd on the show. (The theory is: just pay enough welfare, and poverty will atrophy naturally. As wacky as the Reaganaetion-notions that if you cut taxes enough, the unburdened economy’s reborn tax-base will make up the gov’t revenue-loss. One is naturally impressed by the dementia of these theories’ creators — but I reserve my particular awe for the straightfaced polys & presiding over a public.) Well, we’ve now experienced several generations of replacing real parents with bureaucrats, and the inner-city results suggest — to right-thinking observers’ shocked surprise — that the govt’s makes a lousy parent. (Nonetheless, all known US political parties refuse effectively to interfere in this eternal cycle with a few decades’ stop-gas & inequitable banditism.) Note: Scandal has been shown (so far) that welfare can be made effective & noncyclical — and not a mainline subsidy to drugpushers. But the US media seems singularly uninterested in exploring what differences have made the N.European approach work.

10 Breast-X-rays are now aggressively marketed under the sales-sphemism, “mammograms” (not “breast-X-rays”). The term is called “risk-benefit”, which translates as: “do we really see much risk in X-rays causing breast-cancer — nonetheless, the claimed benefits of early-detection outweigh that (allegedly trifling) regrettable iatrogenic downside. Few patients are made aware of this ruling logic, in order that they can make an informed choice between options. Are mammograms simply another fad (like iotseliections, a generation ago) which provide a robust steady income to medbiz? And: is or is not the cancer industry not TV-tort-tactic mammogram-hustling ads’ claims that mammograms improve survival odds? The statistical details

---

self-piekills Evans. . . . [Further on pickill-suicide: DIO 1.2 fn 29.]

11 Thus, perversely, the abortive JHA attempt (Evans 1987) to save Ptolemy from the charge of faking his star catalog has not only made his theft much more believable (§H6) but has directly resulted in exposing the far greater figure Tycho, engaging in the very same utterly dishonest practice — and by exactly the same scheme RN&DR (Tycho!) — had charged against Ptolemy (disbelieved by Evans & his Muffia pals): simply adding a precession constant to celestial longitudes. JHA must of course thank the ever-courageous JHA’s massive if ineffectual Evans 1987 sneak attack on DR, for handing DIO such an important discovery. But DR’s thanks to the extremely handsome JHA will be as nothing that triggered DR’s discovery of Hipparchos’ hoaxes: DIO 1.3 [N11], and [b] the Tycho case’s public demonstration of establishment-beloved DR’s inductive and fraud-detecting abilities. (Imagine the sheer bulk of Muffia chopper-enamel that’ll grind down, before admission of the latter item. Dentists will mass-vacation on the restoration-proceeds.)

12 of course to anyone outside the immediate Muffia, it is obvious that Tycho stands so far above Ptolemy as to be in virtually a different phylum. But a comparison of the ten Tycho stellar hoaxes to real astronomers’ work is not flattering to Tycho: [a] the proof is certain, & [b] there is no question of an innocent interpretation. It will only add more scholars’ disgrace to Tycho’s if modern Hist.sci archons attempt to brush aside the fact that a deliberate hoax (even if one of modest proportions, in context) has been discovered in the work of an astronomical giant: data fabrication by indoor computation from theory. Note: From the much-publicized fudgings, which modern scholars have demonstrated (as against speculation on Galileo & I.Newton, involving actual wholecloth computation of star catalogues), there is no uniformly accepted Anglicization of this 11th century Moslem astronomer’s name. [c] There is no universally accepted anglicization of this 11th century Moslem astronomer’s name. [d] Throughout, R.Newton 1970 uses “Ebn Yunus”, not OG’s alleged “Ebn Jounis”. [e] This is a not-entirely-theoretical point. If such archons represent the sort of scholar that major universities wish to harbor and promote, then each of these institutions must share credit for the ultimate scientic crime appears to be restricted to a very few astronomers, Ptolemy & Tycho being the most famous. (And astrologer-mathematician-quackser Ptolemy wasn’t even an astronomer.) Thus, the Tycho stars here exposed must now rank as the fakest data ever published by an astronomical Immortal. Nothing like the Tycho fabrications have ever been found in the work of such other premier astronomical observers as Hipparchos, Walther, Bradley, Herschel, Bessl, etc.) I must comment just as I have upon Ptolemy’s similar behavior, which is condemned by R.Newton 1977 & Rawlins 1982C, but defended by Mufonis — who claim (§H10) that Ptolemy is not unethical when he plagiarizes hundreds of stars (in a few days of indoor arithemetic) and then instead explicitly pretends in detail to have himself made laborious, delicate outdoor observations of these stars (a task that would require years of time, plus more years spent acquiring the requisite expertise). DR’s view: if this is not science theft-fraud, then there is no such thing.

13 I must add the warning: Hist.sci archons’ easy ethics (on such matters as plagiarism) suggest that the wise modern scholar will not leave unattended, within their reach or eyesight, any new discoveries of his own. Careful readers of DIO may come to suspect that this is a not-entirely-theoretical point. If such archons represent the sort of scholar that major universities wish to harbor and promote, then each of these institutions must share credit for the diffusion of their ethics — and such pioneering Hist.sci notions as: Ptolemy’s merely stealing ordmag 1000 stars from Hipparchos (without attribution) is not dishonest. (See Harvard’s Gingerich 1981 p.43; also [Muffia 1990] pp.215-216.)
Hame 2.1
1992 April

appear63 at magnitude64 $\mu = 7.95$ for Tycho, while (again by the JHA formula), Tycho recorded nothing outside of Cen dimmer than $\mu = 6.42$ ! (For the dimmest real cat D stars, are rising instead of falling. But, not to worry: the good news is that trends $[a]$&$[b]$ have increased,11 not decreased, the business of (& need for) $[a]$ our pols & $[b]$ our docs.

A9 In our obviously Lucifer-founded world, the solution to Satanists’ vexing Problem—of Good is simple: the anomalous existence of goodness must be blamed upon rebellious man’s free will. (Let’s nobody ask what created man & the good in him . . . .)

A10 When the CIA was deputed (& granted vast unseen sums) to protect us from no-doubt-imminent foreign invasion, one of the cuter facets of this prank on the public was: good-old-reliable Congress was deputed to protect us from the CIA. Result: CIA-connected persons (e.g., ex-CIA chief Bush) running the US. (Suggestion: try imagining the extent of the secret funds the CIA has at its disposal, whenever it wishes to affect domestic politics.)12

A11 Tons of words have been written on govt’s solutions to human problems. Yet the most important solution is: how can one place these solutions into power? This question is a reminder that in govt’s matters, as with inductive problems in physical science: there is no systematic method of solution. (If there were, we would have quickly eliminated all civil woes and solved all physical mysteries.)

B Doubletakes

B1 S.Allen (1955): I’m scared that if I think about religion, I might become an atheist — yes, singular — in the totalitarian grasp of hucksters may be measured by the equally singular fact that: it never even identifies (much less bestows long-overdue praise upon) those decent celebrities (e.g., Vidal, Brando) who refuse to feed the media. How can TV’s news condemn bribe-taking by public figures — when the media’s own incessant scal-lifeblood ads are performed in return for scal bribes?

B3 Late-Autumn 1991 Jenny Jones promo for her new housewife-catering network talkshow (debating 1991/9/16): Why do men call our soap-operas dumb, and then watch 5 hours of wrestling? DIO solicits inductive comment upon the evolution that produced this final version of this ad. [See DIO 4.3 §13 fn 2.]

B4 How deeply the media is — yes, singular — in the totalitarian grasp of hustlers may be measured by the equally singular fact that: it never even identifies (much less bestows long-overdue praise upon) those decent celebrities (e.g., Vidal, Brando) who refuse to feed the media. How can TV’s news condemn bribe-taking by public figures — when the media’s own incessant fiscal-lifeblood ads are performed in return for fiscal bribes?

C Germs

C1 The more time-saving devices are invented, the less spare time we have.

C2 Ever heard a druglord (Philip Morris, Busch, or mafia) bemoan tax money flushed down the poverty-welfare cycle?

C3 If God existed: humans, politicians, theology, & $\tau$ would all be rational.13
can be dressed up, but the bottom line is a startling, publicly-undisclosed contradiction: [a] thanks to mass mammograms, early detections of breast cancer are way up; so [b] why haven’t death rates fallen as dramatically? (In fact, are they so handsome & so festooned with inside-cover assoc-editor brag-lists precisely because the inside cover is all that gets looked at? And $\S$7 suggests even that isn’t being read. . . .) It would appear that only one scholar on Earth has ever carefully read Evans 1987. And DR isn’t even a JHA subscriber.

I suspect that Evans 1987 n.41 was hurriedly added in press, since its preferred extinction-constant ($A_0$ = 0.20 mag/atm) exposes his n.16 attacks on DR — just as thoroughly as does his later n.42 — when neither exposes the very same $A_0$ = 0.20 mag/atm: Evans 1987 p.260. [Like preference also at Evans 1987 p.269 & esp. p.271.]

63 Using the original formula $A = pcsc\theta/(8/3)(9/5 + 6\theta^1/2)$ (where $p$ & $\theta$ are as in fn 17), and following Evans 1987 (p.168) in adopting epoch 1591 & latitude 55°.91, we find that the light from 2g Cen passed through $A = 19/2$ molecular atm before arriving at Hven. (Our $A$ is Evans’ in his eq.2.) See above at fn 17. (Note that setting $T = 273°K$ in the above formula will produce $A$ values close to those given by Rawlins 1982 eq.6.)

64 And we have not included sky-brightness, which, even on the best nights, can add ordm 0.1 mags of visual difficulty.

65 More hilarious post-extinction magnitudes yet are demanded by other Evans 1987 statements of possible-visibility, the wildest being the claim that in 1591, 1°CMA = $C475$ (star $#475$ of the Tycho cat C which Evans is testing against, from being virile (through 35.5 atm . . . ) from latitude 55°) was dimmer than Tycho’s own extinction formula (his eq.2), this star would appear at mag $\mu = 10.1$ in Bergen! Finally, by the same formula, Fomalhaut (through 16.8 atm) would have post-extinction magnitude $\mu = 4.54$ from Hven, whereas Tycho should have seen $\mu = 3.91$! (According to this massy $JHA$’s (!) magnitude, according to this massive $JHA$ paper’s central sole—pre-Cernbog “Prolom” $\mu = 267$, based squarely upon its eq.2). This paper’s magnitude & extinction assessments purport (Evans 1987 p.275) to have been turned out with the meaningful assistance of an impressive flock of prominent scientists. (Curiously, the JHA’s top-ranking Prolomyadiulator, O.Gingerich, who saw this astonishing article all the way through from its 1st draft printout to nowhere thanked in the paper the 3 dozen or so scientists who would have the integrity now to publicly distance themselves from the many-entertaining paper they once innocently signed onto. They have lent entirely unmerited credibility to a paper aimed at killing and (is Evans’ in his eq.2) will produce $A$ values close to those given by Rawlins 1982 eq.6.)

66 The US medical establishment’s spectacular failure regarding the spread of AIDS (the worst record of any internationally advanced nation) has likewise created a fiscal bonanza for that very establishment (fn 19). Inexp US business CEOs’ gross salaries (especially the golden-parachute-fad) have rightly been attacked as merely reward-failure. Why has there not been equal recognition of the AIDS-mediz lobby’s similar dynamic?
D Heritage

D1 Given the state of the world (which justifies massive political cynicism), I am occasionally asked why I remain happy and optimistic.

D2 Simple: for no cost beyond merely getting born, we not only partake of the beauties of nature (simple blue of sky and smell of grass&flowers, the visual grandeur of terrestrial clouds or Mirandan topography), but additionally we become beneficiaries of the art&genius of men (or their schools) such as: Homer, Aristarchos, Archimedes, Lucretius, Michelangelo, Marlowe—"Shakespeare", Tycho-Kepler, Newton-Halley, Voltaire, Lagrange-Laplace, Beethoven, Turner, Berlioz, Darwin, Liszt-Wagner-Mahler-Strauss, Russell, Einstein.

D3 For the same admission price, we video-visit the Moon, Halley's Comet, and even—thanks primarily to Ed Stone & Gary Flandro—the gorgeous swirling blue giant planet Neptune (my 2nd favorite celestial body). In this respect, even Neptune's discoverer, Leverrier, was not so fortunate as we.

D4 Dramatic entertainment abounds. Uplifting music, deeper and far more varied than that available to the wealthiest king of 2 centuries ago (& even then only upon his prearranged occasion) now floods the humblest US home, at the merest flick of a switch.

D5 How can anyone stay depressed or blanket-misanthropic, for even a few consecutive minutes, when humanity has made such riches an inheritance-in-common to all?

E A Puzzle for the Ages

E1 Greg tells me that his twin brother Chris was born 2 minutes after him. But, on Greg's 8th birthday, Chris had yet to celebrate a birthday.

E2 Question: what is Greg's age?

E3 The answer will appear in a later issue of DIO. (Hint for those attempting to solve this puzzle: it helps if you aren't a Vice President of the Royal Astronomical Society.) The first person to send the correct solution to DIO receives: [i] a free DIO subscription, and [ii] mention in our next issue.

F Educational Ironies

F1 Every time you bet on a sports hero's performance, you contribute to creating an economic motive for him to: [a] privately bet against himself, [b] throw the contest you bet on, & [c] thereby walk off with a piece of your gambling loss.

F2 Likewise, every time you answer a pollster's political question, you are telling politicians exactly how to lie to you.

F3 When evaluating pols, citizens feel protected by their imagined ability to see through most con-men — a confidence which fails to account for sample-filtration, by naïvely assuming that polls are like most of the breed. After all, it’s obvious that: the con-artist who least appears to be, will be the most successful — and thus the most toobiquitous.

F4 Wait 'til a fraction of the money, stolen (largely by real-state-spectulators) during the Reagan-era Savings&Lootings deregulation&kickback orgy, starts filtering into the 1992 election process, paying for mass-befuddlement advertisements, to help elect most of the very politicians who made it all possible. Lucky botomy is still legal.

---

61 Tycho's cat D (1598) lacked only about 1% of his announced 1000 star dream. Peary's final (1909) sledger-trip fell roughly 20% short of his longsought N.Pole.

62 I notice that Noel C. Swerdlow 1979 p.529 heaps scorn upon R.Newton for the latter's then-moot suggestion that Ptolemy faked data to agree with previously existing round-number parameters. (Curiously, NCS himself later learned that Ptolemy did precisely that! — see JHA 1.2 fn 125 on Ptolemy's use of Pliny's integer-degree max elongations. The integrity-required apology to RN in this NCS paper was no doubt accidentally printed with invisible ink.) Yet we see that Tycho's goal was an even thousand stars, so his fake stars were brought on by his desire to assure that two parameters came out to traditional integral-degree values. Therefore, though I do not myself accept the particular RN theory which NCS attacks, it is not an inherently unreasonable one. Thus, NCS' lordly sarcasm is as apt as ever.
immediately raising an even worse question. When surveying the history of discovery, it is
worth keeping even in mind a certain caution: how often were labors & novel finds, now
attributed to the chief of a team or of an academic school, actually made by lower-echelon
figures? There is no reason to suppose that this alternate form of “usurpation” is entirely
a contemporary phenomenon. Moreover, the underlying whipping ploy may not even apply
here. Let’s face the obvious: [a] Tycho was himself more desperate than anyone to complete
the promised thousand stars, thus it is incredible that he would not have supervised these
proceedings. [b] At the start of the final push towards this completion, his records state
that he needs 60 more stars, but these same records contain only 47 stars (D6), a deficit of 13 stars — thus, to excuse Tycho is effectively to say that he couldn’t count to 60. (See the reflections of Thoren 1990 p.298 upon Tycho’s conscious responsibility for the
faults of his star cataloging.)

H3 For several reasons, I expect certain factions to downplay the import of the foregoing
discovery of fraud in the output of one of astronomy’s giants. Indeed, I hope (other
chroniclers of the Hist.sci movement will keep careful record of the descent of the usual
establishment-sycophant phagocytes, upon the open wound this article will represent to them, as they attempt the usual career-serving damage-control, allegedly to protect the
reputation-of-academe — oblivious to the fact that archonial phags’ own censorial behavior is far more substantially damaging to academe’s integrity than what they hope to cover up. A tempting alibi for Tycho will be: the faked stars constitute merely 1% of cat D (fn 61). One might respond in the tradition of Samuel Johnson’s legendary crack at David Hume. Instead, let’s simply note that Tycho has been suspected previously of plagiarism. (It seems that the idea of the obliquity’s variation — fn 55 — came originally from C.Rothmann.) The charge has been generally regarded (e.g., Thoren 1990 p.293) as not finally provable. However, the matter of the faked cat D stars (examined here) is unambiguous as to the fact that plagiarism indeed occurred in Tycho’s output.

H4 Thus, the revelation of Tychonian star-fakes has the same rôle for an evaluation of Tycho’s integrity as the case of “Crocker Land” later had for explorer R.Peary. Peary’s N.Pole claim is baseless & absurd, but much of the hard evidence of deliberate falsity in that

1598, Keplero dedicated the catalogue to Rudolph as a New Year’s gift”. Later (B1), Longomontanus published cat C (while Keplero published cat D; B1). Perhaps Longomontanus knew something. However, though Longomontanus spent years at Hoven (Opp fakes), he did not arrive at Wandsbeck (Cen fakes) until late 1598 (Dreyer 1980 p.272), well after cat D had been completed & distributed. The different additive constants, used for the Opp & Cen fakes, might suggest 2 hands at work. (The implication is discouraging, namely, that falsity is more ubiquitous in science than of most of us wish to accept is the case. If a small group of assistants felt pressed to produce data, the result might be: Table 2, with the small-bounty fakes not given a separate entry. [And the uniformity of magnitudes from Copernicus for both sets of fakes also suggests a single fabricator — perhaps inventing the two fake-star sets ordmag 1 & 227.)

This is suggested by the common crudity of the additive constant: whole degrees in both cases. The two constants are simply integral roundings of the figures Tycho himself gives at OIO 2.254 for the mean difference between his longitudes Ptolemy & Hipparchos & Ptolemy: 24° 21’ for the former & 21’ for the latter. To manufacture the Cen stars’ λ, the faker added 21’ to Ptolemy’s λ (Table 2). For the Opp stars, either of two theories works (CI & C2): [a] The faker simply added 28° to the λ of the Copernicus 1543 star catalog. (This constant is the integral rounding of cat D’s λ = 27° 37’ for D1 = Âni, the star which is the λ zero pt of the Copernicus 1543 star catalog. Copernicus’ λ are just 6°/23 less than Ptolemy’s — and 4° less than Hipparchos’, except for the ordinaries 100 stars whose longitudes Ptolemy deliberately altered by 5°, in order to hide his criminal plagiarism of Hipparchos’ great Catalog: R.Newton 1977 pp.250-252. [See also DIO 4.1 [3C [3C 1].] And-or: [b] The faker just added 24° to Hipparchos’ λ (Table 1), while [b] doesn’t, for most Almajest maps: [(N in force) (N in force)] The names of those persons attached to Tycho’s observatories are listed at Dreyer 1980 pp.381-384.

58 Rather like pretending that Reagan didn’t know about the Iran-Contra fiscal shellgame, even though he cared more about it than anybody else.

59 Despite my high admiration for Tycho’s monumental achievements, his opposition to heliocentrism constitutes an objection. At the time, DR cannot pass over in silence. Tycho’s arguments at Thoren 1990 pp.250 & 304 are comparable in folly to Ptolemy’s, though Tycho creditably went as far as having the planets revolving around the Earth (Earth-circling) Sun: Thoren 1990 p.252. (See DIO 1.1 17 [C3 & fn 2.) And one may speculate (in total absence of textual support) that Tycho’s high praise for “Incomparabilis Vir Nicolaus Copernicus” (OIO 3.337) hints that Tycho may have harbored more doubts of geocentricity than he published.

60 See Thoren’s alibi at DIO 1.2 [H2].

G Contradiction?

G1 US leftists believe that the ruling gov’t-media combine is a creature of business, and thus their enemy. Yet this ruling combine agrees with the Left’s support of: “education”-rebab, gun-control, treating every Sin (but homosexuality) as illness, the holy mission of preventing overcrowded jails, preserving the sanctity of AFDC, welfare, forced integration [except for the rich], affirmative action, massive Latin immigration, anti-racism, homosexuality-is-just-another-lifestyle, & opposition to using birth control for social engi-
neering or to using capital punishment as crime-deterrent or justice-symbol.

G2 US rightists believe that the same gov’t-media combine is a creature of Liberals, and thus their enemy. Yet this combine agrees with the Right’s support of: anti-socialism, anti-communism, the sacred virtues of capitalism, the anathematization of suck-the-rich schemes, real estate development of every square mm of US turf, [mass-paranoid belief in an invisible deity], the iniquity of any foreign leader who won’t salaam to the US State Dep’t, & (the mafia’s Eleventh Commandment) the eternal illegality of drugs.

G3 No one who wishes to understand who rules the US and how, can ignore these strikingly persistent apparent contradictions. Both sides explain such anomalies by presuming mere-pretense media-support for its own side’s above-cited sacred tenets. But, a hypothesis which may facilitate resolution: are the foregoing “Left” & “Right” media positions really contradictory?

H The Rehab Perpetual-Emotion Mirage

H1 Every TV ‘snews discussion of possible solutions to continuing guerilla-war-level US city crime is a variation on the same error: seeking the chimera of “rebab”. Whatever the TV’s approved-panacea (social programs, in-prison education, etc. — ) — it’s always the same delusion: if we get smart enough to throw the right lever, we can rebab the social misfits who commit crimes.

H2 But the sad truth is: we will never get that smart, because we aren’t even bright enough to realize that: [a] no such salvation is feasible here at present, without intolerable rebab-industry costs16 to the noncriminal majority; [b] a smart society’s first salvage-priority is to decent citizens (not to criminals), who deserve immediate (not someday) relief from street terrorism. For decades, “permissible” public discourse on preventing crime has implicitly presumed that, if we just tinkered a little longer with the rebab-machine, we’ll finally turn-the-corner on crime. (Remember the Vietnam War morass caused by light-at-the-end-of-the-tunnel propaganda?) Why does the media not ask if such a cure isn’t simply an emotional-wish delusion19 as wise observers (such as George Bernard Shaw) have long

16 By contrast, the overcrowding of neighborhoods (fn 22) is not discussed.

17 One steady thread of consistency: whichever position TV ‘snews adopts (“Left” or “Right”), the opposing viewpoint is systematically slighted.

18 We tend to think of “costs” just in terms of dollars, which permits the rebab­industry forever to portray skeptics as calloused cheapskates. So let’s get to the reality: yes, we might (might) be able to cure most violent criminals we may have harbored more doubts of geocentricity than he published.

19 The Rehab Perpetual-Emotion Mirage
I Elfenfantasía

II Lessons & Phags

I1 Question: What’s the most expensive movie ever made? Answer: the Reagan-Bush Presidency. US budget overruns are now a billion dollars per day. (Normal cinema’s definition of Boxofficebombdom, Heaven’s Gate, lost less than a mere $1,000,000/day.)

I2 Think of it in terms of sheen achievement. Under Reagan-Bush, the Republican Party’s reputation (in spending money faster than even a Democratic Congress’ tax-smacks can suck it out of us. (Again: a billion dollars PER DAY faster.) No one previously thought such a feat possible.

I3 The annual cost of servicing the Reagan-Bush debt now about equals the entire annual budget deficit — i.e., it is now, annually, costing the US as much to go broke (circularly than some degree of quarantine has been that it’s supposed to be so difficult to catch AIDS, since it usually spreads sexually. Just the sort of bright reasoning you pay Experts millions of tax dollars for. About on the order of opposing population planning by claiming it’s difficult to get pregnant. (One other common AIDS-related illusion: the media repeatedly plugs celebrity AIDS-benefits as allegedly raising money for research. Actually, AIDS-lobby celeb-events are raising money largely not for medical scientists but for lawyers & agents, to influence politicians to have you the taxpayer fund the medical research. Whether this is wise or not can be argued. But the implicit deception is indefensible.) Finally, the “education” cure has been defended by arguing: “even if it saves just one life, it’s worth it.” Perhaps. But no one on TV ‘snews has ever suggested the same defense for any variant or degree of quarantining.

20 Woody Allen has the best reply (to the old who-are-you-to-play-God line): “somebody has to”.

21 Credit: my stepfather’s old friend, Henry Mencken.

22 TV ‘snews will predictably rebel at the hideous indignity of Crowded Jails, which it regards as a social blight far more intolerable than nightly (ratings-booster) crowded-neighborhood street-shootings of innocent citizens.

23 More apt yet: why not arrange that all paroled criminals will live in (or nextdoor to) the homes of the same judges, shrinks, & ilk that spring them?

24 See H.&M Medved The Hollywood Hall of Shame 1984 p.184 (“Passing the Megabuck”) for a funny-repulsive account of the Heaven’s Gate cultists’ attempts to blame each other for their disaster. This edifying spectacle provided a pilot script for the eternal White House-Congress budget-responsibility fingerpointing nicon.

suggested? Face it, rehab is statistically no more effective now than it was, 30 years of criminologist-BS before. In fact, it is probably al lot less so. Why depend on receiving the long-falsely-promised benefits of progress from a field that is actually in regress?

H3 Moreover, even if we assume (purely hypothetically) that criminologists, by studying murderers instead of fying them, really did discover a treatment which seriously dimin­ished criminal behavior; the entire effort would turn out to have been wasted — because this treatment would instantly be attacked & gutted (by ACLU & co) as over-invasive and degrading to persons’ & groups’ dignity: who-can-play-God as tampering with human individuality? . . .

H4 Obviously, prison-rehab is not the solution to crime. But the only efficacious long­range social solution (see DIO 1.2 §2 D) is not politically allowable, while the sham of allegedly rehab-educating The Bottom, is the only discussable gradual solution (§M1). So US streetcrime cannot be seriously rolled back.

H5 Regardless of lifelong social panaceas: what of the millions of career criminals already on the street? Even if one lacks the realism to recognize rehab as an eternally-out­of-reach mirage, it is undeniable (on the past record) that it is very far from a sure thing. So, does an intelligent nation gamble its future stability on the thoroughly, repeatedly self­discredited rehab-approach — or do we finally demand that another option be tested, at least in some sections of the US? What other option is available? (And why is it not seriously discussed on TV ‘snews?) The short-term answer is: spend what it takes to lock up violent criminals PERMANENTLY.22 Lock them up with each other (which shouldn’t be so bad, if rehab is turning them all into pacifists), instead of regularly paroling or springing them back among those of us who aren’t wealthy enough to live way out in relatively streetcrimeless posh suburbs — as do the genius architect-profiteers of the current US streetcrime-situation: judges, lawyers, shrinks, as well as network ‘snewsanchors & owners.23

II Lessons & Phags

H1 Some concluding thoughts on the Tycho fabrications. Against Tycho’s personal involvement (in the Oph starfaking here exposed) is the following important point: Tycho, well before he produced cat D, argued evidentially for the obliquity’s secular shift — indeed he claimed this as his own discovery.25 So one would expect a faking Tycho to alter the Oph stars’ Hipparchan latitudes, to account for this precessional effect. Yet no such alteration is found.

H2 Apologists tend to excuse embarrassments such as the foregoing (Tycho’s fake stars) as perhaps due to underlings.26 But this alibi betrays frying-pan-to-fire smarter, by

( in whole or part) 4 dim Cen stars, when brighter real quarry beckoned? — e.g., the 3 “middling”, easily-visible Sagittarius stars (γ Sgr, δ Sgr & ζ Sgr), which Evans 1987 p.168 thought (§F2) redeemed Ptolemy, since Tycho missed them. (Evans here uses the Journal for the History of Astronomy’s brilliant & novel abbrev of Sagittarius: “Sag”. DIO urges astronomers’ general adoption51 — as a prominent reminder of JHA’s rightful guardianship of refereeing standards for the rest of us: J.Hysterial Astron 1.2 fn 5.) The likely explanation for their absence from cat D is: timing.2 (See §§F & fn 50.) During the very end of Tycho’s pre-cat D observing period52 at Wandsbeck, the north tip of Cen culminated near night’s end, while Sgr was below the horizon all night.

G2 There are several reasons why I will speculate that the four Cen fakes (Table 2) originated at Wandsbeck, and may indeed have been produced just a few days before the 1598/1/2 date of cat D’s release. (Fn 10 contains a hint that only 2 days earlier, on 1597/12/31, these four Cen positions were not yet entered into cat D.) [a] From Hven, the (null) Cummings post-extinction magnitude of the most difficult of the four Cen stars (2g Cen) was μ = 6.48 (§B3); from Wandsbeck, the most difficult (4h Cen) had μ = 5.81 (fn 34) — almost twice as bright. Tycho’s normal outer-limit for μ lies either between these two figures or near the latter. (Not one star of the frantic Final Fifty, cited in fn 42, had μ as dim as 5.81.) [b] The crudity of the underlying deficiencies (1601.0 rms error54 14°: §C7) is not typical of Tycho’s output when he used his mounted instruments at Hven. But, when cat D was issued, Tycho had yet to make observations at Wandsbeck with anything but his primitive cross-staff (or “radius”: Ræder & Strömgren 1946 pp.96-97; Dreyer 1890 pp.19-20, 258; Thoren 1989 p.18-19.). [c] The Cen foursome would not be visible except near transit and in complete dark; but such conditions did not exist at Wandsbeck until virtually the date of cat D. On 1598/1/2, when the last of the Cen foursome transitted (LST = 13°30’, a bit past 6 AM Local Mean Time), the Sun’s altitude h = –18° (total dark). Only a week earlier, at LST = 13°30’, solar h = –14° — which would probably wipe out any possible naked-eye observations of the four dim Cen stars. So near the horizon (at Tycho’s latitudes), these objects would have been difficult enough even in complete darkness.

\[ h = \frac{30° \times \cos \left( \frac{360°}{60} \right)}{2} \]

\[ \cos \left( \frac{360°}{60} \right) \approx 0.999 \]

\[ h \approx \frac{30° \times 0.999}{2} \approx 14° \]
just call γ Sgr), δ Sgr, & ζ Sgr. So, we will next examine the exceedingly unmysterious causes for Tycho’s passing over these three stars (at OO 11:401 & OO 12:77-78).

F3 First off, it is obvious that these are summer stars — and Tycho reminds one (Räder & Strömgren 1946 p.113) that dim stars cannot be taken in the summer (since it never gets completely dark then in Denmark). Thus, capturing Evans’ three Sgr stars would require special, felicitously timed post-sunset autumn observations or (§F4) pre-dawn spring observations.

F4 Further possible mundane causes of Tycho’s omission become equally obvious when we reconstruct his record of the suspect 13 star Oph addendum (OO 3:364) — according to the simple hypothesis that all 13 were recorded during the last panicky observing night on Hven: 1597/3/15-16. The 1st quarter Moon (near the Summer Solstice & a north anti-node of the lunar orbit) was up most of the night, dampening prospects for capturing dim stars. As the Moon descended, observations of easy stars commenced (by sextant,48 thus no need for precise transit): 10A Oph, 53ν Ser, 55ξ Ser, 56o Ser, 57μ Oph (D683-687). The six eventually-faked Oph stars (§C2) may have been vainly attempted, after initially-innocent consultation of the Hipparchos-Pтолеми Ancient Star Catalog (Almajest 7.5-8.1), to rustle up some new stars (i.e., ones not already recorded by Tycho). But the six were mostly dimmer and lower than D683-687. For the faked six (D675-680), the records were: [a] never made, [b] poor (from moonlight), or [c] unreliable to the highly erroneous Almajest positions expected: see §C3-§C5, & fn 28. (Against any option but [a]: it’s hard to make any record any worse than D681’s: §E4. But Tycho retained & published it anyway.) For D675-680, Tycho presumed that the Almajest places better-represented-reality (22 fn 28 or Gradhoff 1990 p.199), so his later record he might have made of them. So he faked all six stars.

F5 On 1597/3/15-16, Tycho’s last Hven night, the Moon was beginning to set at about the start (Sun 18° below horizon)50 of astronomical twilight — about Local Sidereal Time 15:50 (shortly after 3:30 Hven Local Mean Time). Only a few minutes of total dark remained, of Tycho’s epochal 2 decade observing career at Hven. In this final, pathetically narrow slice of time, the stars 45d Oph, 3 Sgr, and 10γ Sgr were all about 6° magnitude (post-extinction), if we assume a perfect sky. (Approximate altitudes h at this time: 3°1/2, 4°1/2, & 1°, respectively. Pre-extinction magnitudes: 4.29, 4.54, & 2.99, respectively.)

F6 The attempt at low 45d Oph led to the very rough place, D681; but higher 3 Sgr was pretty well recorded, so D682 became Tycho’s last creditable star place. The failure to record the lowest star of (the 3 stars suggested at §F5), 10γ Sgr — an omission which [see §F2] so furrowed the brow of Evans 1987 (p.168) — was obviously just due to: [a] twilight’s onset (after time had been taken to record D681-682), [b] star not noticed at altitude barely 1°, and-or [c] low haze or clouds at the horizon.

F7 Thus ended Hven star-work — with a 13 star record so sloppy and so salted with fakes, that the entire night’s data-sheet was destroyed, to cover (successfully for nearly 400°) the scientific sins here revealed for the 1st time since their commission.

G Last-Minute Centaur

G1 Presumably the four Cen stars were later added onto the previously-assembled 1000 star catalog, as insurance against a miscound (or detection of repeats). But why fake ever-deeper into debt) as it would have cost to stay solvent if the debt had never been incurred in the first place.

I4 Been wondering why interest rates have stayed so low for so long in the post-Carter era? Suggestion: if interest rates now suddenly doubled, the cost of paying the annual interest on the (ballooning Reagan-Bush)52 US National Debt would double. And thus (§I3) the annual budget deficit would double.

I5 Before 1968, the GOP was regarded as unprogressive. But since 1968, it has given us (besides the foregoing):

[a] the first demonstration of simultaneous inflation & recession (Nixon), and
[b] our first booted President (also Nixon).

Let’s add it: we all underestimated the Republicans.

J Historians’ Inductive Logic

J1 Inducing the astronomy of the ancients from the paltry leavings we possess of their writings is a favorite DR intellectual pastime. Critical to DR’s approach is the working theory that the best known and most enduring ancient science writers are not the most central or reliable figures.26

J2 Fortunately for posterity, my historian-opponents in the attendant ancient-astronomy controversy are much smarter27 than I in such matters, and will set the record straight. The unerring trustworthiness of their approach is testified to by the examples that follow. These enable us to predict those verities which equally brilliant future historians will induce (from the ruins of our putative civilization), by depending upon the most widespread (& thus survivable) accounts:

J3 The most common portrayal of the use of alcoholic beverages in the US media was in TV advertisements. In these snapshots we learn that humans never drank alcohol. They held la-de-da parties to celebrate selecting wines that were either upscale or cheap or allegedly both; beer ads showed unpudgy youngsters posing with, twirling, & fondling beer cans — & nonstop-smiling. Curiously, the alcohol industry paid billions to network TV for the incessant visual portrayal of this connection between healthful happiness and nondrinking.

J4 While propane tanks were widely rumored to be intended for supplying heat, we know that their actual purpose was: blowing up buildings. Virtually all press accounts mentioning propane tanks describe explosions, not heating.

J5 Over 99% of film of the sex act surviving from US civilization is what were called “X films”. From viewing these (we’re told . . .), one learns that the normal sex act always ended in male withdrawal from the vagina, followed by the expression of seed upon some other part of the female. Since this was clearly the standard reproductive act, we conclude that sperm fertilized the human female’s body anywhere but through the vagina. Anywhere.

48 Illustration at Räder & Strömgren 1946 p.72 or Thoren 1990 p.169.
49 See Explan Suppl to AENA (1961) p.999.
50 In the real (dusty atmosphere) world, the order of visibility-ease at this time would obviously be: 3 Sgr, 45d Oph, & 10γ Sgr. And this order is reflected in these stars’ role in catalog D, namely: good (before unsigned), crude, & nonexistent, respectively. The actual coordinates of these three stars follow. (The 3rd is the one, 10γ Sgr, whose absence from Cat D so worried Evans: §F2 & §G1. Its place is found here via the excellent ecliptical star tables of K. Moersgaard & L. Kristensen, Centaurus 20 129; 1976.) The A & β (EKE 1601-D3) were, respectively: 257° 19’ & –6° 34’ (45d Oph), 261° 40’ & –4° 22’ (3 Sgr), 265° 42’ & –6° 55’ (10γ Sgr).
52 For confirmation, just ask any modern defender of the faker C.Pтолемы, whose magnificent Almajest so dominated publicly-accepted astronomy that it finally drove out of existence virtually all of the data & astronomical treatises of Aristarchos, Apollonios, & various other merely-honest scientists.
J6 The most Christian man in the history of the US (the most Christian of nations) must have been that exemplary scholar whose name was chosen (from all the hundreds of millions of US citizens) to be first placed in celestial preservation, for time eternal, on the first plaque left (1969) on the erosion-free Moon. This saint’s name: Richard Milhous Nixon.28

J7 From cinema “entertainment” dramas, we learn that almost no ugly wrinkled people smoked — though smooth, healthy, young, attractive people smoked incessantly (with nary a cough) in popular films. Just like in the other cigarette ads.

K Further Inductions

K1 Evolution of the Specie: From our records of late 20th century academe, we conclude that nothing refined a scholar’s creativity and ethics better than: touching and counting money.29 Or being a publisher: usually the same thing. Academic publications in such emotionally secure fields as History of science (Hist.sci) were filled with scholarly articles and reviews which went out of their way to extol the omniscient wisdom and exalted character of the businessman-scholar archons who peopled review committees and — or ran these very journals — or otherwise controlled the financial wellbeing of the scholars writing the articles that worshiped the gods. The only mystery here is why these archon paragons were not canonized to a man, since, according the consistent Hist.sci journal record: [a] No editor or society officer ever did anything more sinful than misspelling. [b] They were the brightest of the bright,30 not to mention generous, inspirational, rigorously fair & neutral. (We know that all such characterizations were true, because — being self-confident models of academic competence — these journals would not have published themselves had they thought they were flattery.) [c] No society officers or editors were ever censorial or vindictive. Or even cross. (Though they bore one. See under DIO, below: §K2.) It is still unclear what chemical was increasingly being added to 20th century currency, that made the much-touching of it so salutary to character.

K2 Near-Misses: Sad to say, at the very dawn of the Third Millennium, the above-cited otherwise-unruffled chorus of praise was — obstreperously and always erroneously — interrupted by the persistent dissent of an odd & trifling journal calling itself DIO. Happily, all intelligent scholars (i.e., those that spent time counting money, in reality or in dreams) agreed that DIO was never actually right about anything — and should be renamed Diatribe. (That the publisher was beyond all reason was notorious: e.g., if power-archons suppressed & secretly slandered him — which sacred duty is, after all, their privilege & prime Earthly mission — well, DIO would actually criticize this. Out in public, mind you. Who can fathom the folly of it?) Happily, no copies survive; and DIO is now almost exclusively known through the sparse remains of a flood of refutations, which — by a remarkable coincidence — burst forth immediately after the squirrulous publisher’s sole archonally-approved feat. (Death was presumably hurried31 by his fanatical refusal to partake of the well-known health benefits of cigarettes: §J7.) These refutations are almost exclusively by lower-echelon castrati. But their accounts of his work, being as accurate as the rest of the output of the handsome reputable Hist.sci journals of that day, are to be trusted implicitly, and the refutations built upon these accounts are completely convincing. Another amazing coincidence: we now know that the positions taken by the publisher (whose very name

28 We thank our childhood friend, Richard Lee Smith, for suggesting this item.

29 DR aside: O Gingerich has made the unintentionally-revealing observation that certain Hist.sci volk are now confusing the words “principle” and “principal”. (See fn 6.) Ah, these revealing capitalist slipp. I note that, after explorer-boxer R.Peary became a millionaire & stock investor c.1910, his correspondence occasionally uses the word “cheque” when he means: verify.

30 Another theory has it that the DIO publisher’s demise was related to a reputed motto of his, a printable version of which is: “Never kiss a jackboot, especially if it’s trying to neck.”

31 See, e.g., the Van Helden review cited at DIO 1.2 fn 3.

10 1992 April DIO 2.1 ¶1

1992 April DIO 2.1 ¶4

E2 The thirteen Oph stars are indeed precisely those that close our gap between the 1000 (pre-Cen) stars produced in cat D (just months later: 1598/12) and the 987 stars that existed (according to the extant miss record) when operations ceased at Hven (1597/3). By Tycho’s own count (§D5): 1000 minus 60 = 940 total stars before 1597. So, add the 47 taken (§D6) between then & his exit from Denmark: 940 plus 47 = 987. Or, by our other accounting: 777 (cat C: §B1) + 156 (1596 Appendix: §D1) + 54 (subsequent data: §D3) = 987. Let us now review the 13 suspect Oph stars.

E3 The first 6 stars were (as already shown: Table 1) transparently and clumsily faked by adding 28 onto Copernicus’ longitudes. (The original celestial records of these “observations” will never be found since they never existed.) Perhaps this may be said to illustrate the corrupting effect of grantmanship.35

E4 The last 5 stars (of the Oph 13) are all inexact repeats of other Oph stars already listed in cat C. But the two stars listed prior to them have remained unidentified, until now. These are the stars D681-682. (They are sandwiched between the 6 fakes D675-680 and the 5 repeat-stars D683-687.) I have reconstructed their origins, as follows.

E5 The upshot is that the 13 star-tacked-on Oph set is a disgrace. I suspect that (at the very least) Tycho’s assistant Longomontanus (the self-cited actual supervisor of the construction of cat D: Thoren 1990 p.297 n.133) was privy to inside gossip that some of the supplemental stars fattening cat C into cat D were obtained in discreditable fashion. (See §B1.) Perhaps not knowing which were faked (or, if he knew of some fakes, being unsure if these were all there), he threw out the whole lot (§B1) — and later printed (as cat C) just the 777 stars he trusted. Most of the ejected star-places were probably perfectly valid (as a test, I have checked the post-cat C stars in Crt and found that they are largely good to 1°-2') — genuine data36 lost to contemporary scientists, yet another cost37 of scientific fabry (which Hist.sci orthodoxy continues to regard as of no particular account).

F Final Hven Dawn

F1 The extreme roughness of the δ (~30') underlying D681’s published coordinates suggests last-gasp desperation (as does the null-dust post-extinction magnitude, μ = 5.23). It is possible that D681 & 682 (45d Oph & 3 Sgr) were the last Tycho observations at Hven, as dawn began breaking on the morning of 1597/3/16 (1597.23).

F2 One of the more amusing arguments to be found in Evans 1987 is his attempt to alibi Potlemy’s notorious (e.g., Rawlins 1982C) omission of all the low southern stars visible from 137 AD Alexandria but not visible from 128 BC Rhodos (Hipparcous’ place & epoch). In extenuation of this, Evans 1987 (p.168) triumphantly points to Tycho’s allegedly mysterious omission of the low but geometrically accessible stars γ Sgr (which we will

35 See in 14 & §D5. Modern scholars are all too familiar with this phenomenon. But few are doing much about it — besides shoehorning briskly for a firm personal place at the trough. Most institutions handle the attendant stink (not by reforms but) by suppressing & damning reformist criticism. Classic public relations priorities.

36 Tycho’s principal stars’ errors averaged less than half an arcmin. See Dreyer 1890 pp.351-358, 387-389; also Wesley 1978. (Note added 1993: See also DIO 3.) The worst of the 5 add-on Crt stars was D993 (24t Crt). Though its null-dust post-extinction magnitude was dim (μ = 5.82), its position error was less than 5'.

37 See also fn 28.
D3  I have searched through the Tycho star observation records later41 than early 1596. The search turned up 54 of the 71 extra stars,42 accounting for all the stars in 6 of the 8 post-cat C sets of §D2 — but none of the stars in the remaining 2 sets: in Oph and Cen. I.e., of Tycho’s last43 (post-cat C) 227 stars, these 17 stars (the 13 Oph supplemental stars & all 4 stars in Cen) are the only ones for which no empirical records of any sort appear in Tycho’s surviving ms materials. I need not add that these are the very 2 sets (17 stars in all) which contain all of the 10 faked star places. And, looking beyond the final 227 stars: in the entire cat D, almost no other stars lack supporting data.44

D4  We have already fully discussed the four Cen stars, noting that they are actually additional to the 1000. (Recall that the Cen quartet brought the total to 1004 stars: §B3.) Thus, if we fix our attention on the 1000 Tycho stars, we should temporarily set aside the Cen foursome and scrutinize just the Oph set of 13 star-places — which has now been isolated here as virtually (fn 44) the sole set of the 1000 stars for which no data have been found in the Tycho mss.

D5  In order to reconstruct how this Oph supplemental set of 13 came into being, we start with a simple question. When Tycho was informed of his full loss of royal patronage (in a letter of 1597/1/20; Dreyer 1890 p.231) and realized his days on Hven were numbered, just how many more stars did he believe he needed to make his desired 1000 stars? The answer is explicitly stated in a note written right on the manuscript of the final series of star-position data ever taken at Hven under Tycho (1597/2/4-3/10). At the beginning of these last star data is written (OO 13:98; §B1): “Desiderantur 60 pro compleendo millenario.” Just 60 more stars would do the trick. Tycho had claimed he had about 1000 stars as early as 1595 (a claim his astronomer-biographer rightly regards as a lie: §B1). It seems that Tycho was expecting (§B1) a commemorative medal for the 1000 stars (which would of course enhance his prospects for future funding).

D6  To qualify for this honor, he needed 60 more stars. But a count of these last Hven data (OO 13:98-100) shows that he only acquired 47 new listed stars before leaving Denmark. So, how did he get the last 13 stars (all Oph)?

E  Stars Without Sources

E1  We now turn to the set of 13 supplemental Oph stars, for which no records exist. These 13 are listed at the top of OO 3:364. They are separated from the rest of the constellation by the heading “sequentibus pertinent ad Ophiuchum et eius Serpentem”.

Longomontanus, when editing the Tycho star catalog, intended to use D701 (as the cat D order indicates), but noticed that D701 was just an identical repeat of D699. Noting that both D701 & D675 were labelled “in ducta tibia”, he substituted the (nonrepeat) data of D675 into the slot for C553. The result is that C553 is probably the sole faked star in cat C. (No real 3rd magnitude star is close to C553’s coordinates — which surely makes it a rarity in the generally excellent cat C.)

41  I’ve examined previous data as well in OO vols.10-13, finding none of the 10 suspects listed in Tables 1&2. The seeming 1591/10/10 observation of D678 at OO 12.171 is just a scribal error: for Tycho’s reference to Hipparchos’ 16th star of Oph, instead read 16th star of Ser — cataloged in the “1588” Appendix (complete until much later than 1558) to the 1592 observations; see OO 12.254. The original Tycho mss reside in the Royal Library at Copenhagen; but the full observational records are printed in OO vols. 10-13.

42  All 54 of the real data are found in OO vol.13 [note added 1993: they will be traced in DIO 3]. Cyg, pp.59-60; UMa, pp.59&72-76; B1, p.74; LMi, p.76; Per, p.99. The total number of outdoor stars (added to cat D by these data) shrinks to just 49 stars, after certain repeats & slips are accounted for. (DIO will round & henceforth refer to this set as the Final Fifty.) [Note added 1993: See Tables 19&20 in DIO 3’s upcoming contribution: the 1st critical edition of cat D.]

43  The actual chronology of cat C’s compilation was not simple; see Thoren 1990 p.297 n.133.

44  [Note added 1993: Of the 777 stars (cat C) recorded by Tycho before his final gleanings (the 227 stars we are now scrutinizing), only 4 stars’ observational data are missing. These are: D370-371 & D379-380. (In cat C: C528-329 & C337-338.) These were evidently observed (accurately) with Tycho’s rarely-used semicirculus (Ræder & Sterngren 1946 p.96, Thoren 1990 p.177), using Sintius & Algenib as reference stars. The data presumably got misfiled due to the extremely hazardous (probably experimental) mode of observation. Detailed analysis in DIO 3.]

1992 April  DIO 2.1  ¶1

is lost) were quite frequently “almost correct,” e.g., he (almost) discovered such now-accepted positions as: [a] heliocentrists’ work underlay all sophisticated ancient astronomy, [b] sph trig existed by the 2nd century BC and differential sph trig by the 2nd century AD, [c] Tycho faked ten stars of his Catalog, & [d] R. Amundsen was first to both the Earth’s Poles. However, in every case — yet another amazing coincidence — the reasoning produced by DIO was found wanting,35 and so the discovery-credit very properly went elsewhere.36 According to a controversial scholium (incompletely-erased, unfortunately), which for a time mistakenly confused several naïve idealists (each happily enlightened since, DIO is said to have claimed that, in all such cases, those parties now receiving credit for the discovery had published material ignorant-of or (usually)37 outright-opposing it — right up until DIO produced evidence which changed opinion. But the admitted fragmentary now-extant record supports not a bit of this transparent grumbling. Discovery [a] has long since been assigned to its lifetime supporter, N.C.Swerdlow; [b] went to math genius G.M.Toomer, [c] to O Gingerich & J.Evans (who pointed out alternate spellings38 of Hven & Wandsbeck, sloppily ignored by DIO), and [d] to National Geographic, which (according to the newspaper39 of 2100 AD) had always held that Amundsen was first to the N.Pole in 1926 and that R.Peary had just innocently dreamed his 1909 claim.

L  Collective Shamelessness

L1  The reader may suppose that §J7 is overstrong; however, it should not be amnesia-forgotten that Hollywood films have been used for most of this century to glamorize smoking. Did this occur by chance?

L2  When it began to be widely rumored c.1950 that smoking was medically suspect, one could count upon certain soft-hearted film producers to help out the poor misunderstood tobacco lobby. (Only the hardest cynic could suppose that a film’s kindness to weed-interests was performed in return for generous under-the-table scal support.) So, how did he get the last 13 stars (all Oph)?
always been this lobby’s strong suit, as we see from a particularly precious cinema scene, which I have extracted from our Doubletakes Dep’t, in order to display it, unabridged, in a special niche here.

L3 In the highly-promoted 1951 sci-fi film When Worlds Collide (mixing Velikovskyan & Noah’s-Ark Biblical themes),16 we encounter the following immortal exchange (between effectors and the Doctor), in the office of an astronomical observatory, 10° into the film:

Dr. Randall: Thanks, I’ll try one. Just in from S.Africa, Randall pulls out a cig of his own & offers it to the Doctor.

Dr. Randall: No. No, I confine my gazing to eye, ear, nose [lights Randall’s cig], and throat. I’m an M.D. [Immediately lights own cig.]

M Masterpiece Theatrical Integrity

M1 As tentatively predicted,17 the Royal Astronomical Society of London has so far printed no correction in response to the Journal for Hysterical Astronomy’s recomputations of the magnificently innocent RAS-published mismath (JQRAS 1985 p.514) of RAS Vice President David Hughes (J.HA centrepiece of DIO 1.1: §8 §B–§E & Table A).

M2 As for the same RAS Vice President’s alleged calendrical proof (Journal for the History of Astronomy 1986 p.189) of alleged British priority in seeing Comet Halley (DIO 1.1 §8 §G): the J.HA’s esteemed Editor-for-Life has indicated no interest in correcting that hilarious bit of typically unrefereed nonsense. (The J.HA & JQRAS annual subscription fees are each about $100.)

M3 These journals’ contempt for the truth is exceeded only by their contempt for their own loyal subscribers’ intelligence & independence. (The implicit whatayagonnandoaboutit presumption is that no scholar will complain. Or even inquire. Is the presumption correct?)

M4 And the Brits put on such convincing airs about honour and all that. Well, didn’t you Masterpiece Theatre fans ever wonder how Britain keeps producing the world’s very best actors?

scrunching permitted advertisers to get in more commercials during a film.) Recently, having noticed discrepancies in the actual-vs-official times of Cinemax (cable) films, I became curious as to the cause and started by comparing Cinemax versions to rental versions. I was amazed to find that Cinemax is scrunching films, commonly (but not always) at a 6/5 ratio, thus shortening them by precisely 4%. But why? (Not to get in more ad-time: Cinemax doesn’t even have ads.) Answer: mere scheduling convenience. While The Movie Channel starts films at odd times (like 9:25 PM), its competitor Cinemax prefers (especially in primetime) to start on the whole-hour or half-hour (like 9:30 PM). Thus, if a film is so inconsiderate as to last, say, 93⁄5 hours (which, if it started at 8 PM, would cause it to bump the next film’s starting time to c.9:35 PM), Cinemax will scrunch it down to 89⁄10 — all so that the following film can start at the round time, 9:30 PM. (The intent is obvious, since the only films which Cinemax scrunches are ones that are just a little bit over 90⁄12 or a similarly round time.) Classic films are less likely to be mistreated thus. However, even so well-known a film as Road Warrior has suffered the Cinemax scrunch. In any case, I find the practice almost as offensive as its sneakiness. No notice is given by Cinemax. Or the media’s film-promoters aka “critics”. (One recalls these same years’ obsessed attacks on Ted Turner’s colorization of old black&white films — which is harmless since most TV sets have a black&white button. The anti-colorization hysteria was obviously just the anti-Turner crowd’s way of sniping at him, since the far more serious scrunching-vogue has barely been noticed by these folks.)

16 The book (on which the film is based) was co-authored by Edw.Balmer & (the famous) Ph.Wylie: When Worlds Collide 1933 & After Worlds Collide 1934; rebound & published together in 1950, the same year Velikovsky’s Worlds in Collision appeared. (A near instance of mutually-boosting publicity.) The film’s special effects are occasionally quite effective, though nothing in it is as otherworldly as the goose sanctity at the start and end — laughably out of place today.

17 DIO 1.1 §8 fn 29.
C4 Another long-shot fluke helps cinch our exposure of the fraudulent one of the entries, D675: this star (36A Oph) happens to have a proper motion that is huge (especially for so dim an object), −1° 1 arcminually in declination. Of all the 404 objects in the Moesgaard-Kristensen 1976 catalogue of bright stars within 10° of the ecliptic, 36A Oph = D675 has the fastest shift of latitude. The star’s actual $\beta$ was $-23^\circ 35'$ in Hipparchos’ day, disagreeing with Hipparchos’ recorded $\beta_H$ ($-2^\circ 1/4$) by $20^\prime$, which is about equal to his mean $\beta_H$ error (R. Newton 1977 p. 216); however, by Tycho’s time, the star’s actual $\beta$ had shot to $-3^\circ 22'$. Thus, even aside from its wrong sign, D675’s $\beta$ was off by over a full degree: an error of $1^\circ 10'$.

C5 A final slip by the plagiarist: Hipparchos’ star PK251 (from which D680 was copied) does not even exist. It is simply 390 Oph with $\lambda = 231^\circ 1/2$ accidentally written as $234^\circ 1/2$ by Hipparchos. Tycho just copied the error.

C6 Having established this background, we now return to consider, in Table 2, cat D’s four-add-on Cen stars (D1001–1004; OO 3:373). To our astonishment, we find that the longitudes have been faked, in almost exactly the same way the Oph fakes were accomplished: $21^\circ$ of presumed precession (fn 56) added onto Ptolemy’s longitudes for stars PK935-938. (These stars are listed at PK p. 71, Toomer 1984 Almagest p. 394.) Note: the Cen mean $\lambda_T$ error exceeds 1°. Keep in mind the context: Tycho’s positional errors were normally about 1 or 2 arcminutes. [Note added 1993: See §E5, and DIO 3’s forthcoming full edition of cat D; standard-deviation $= e$.]

C7 However, the latitudes $\delta$ are no closer to Ptolemy than to reality. Evidently, declinations $\delta$ were genuinely observed somewhere (poor rms error: 14') and then combined with the fabricated longitudes $\lambda$ (§C6), to yield latitudes with Tycho’s obliquity $\epsilon = \gamma/6$ for PK251 ($\lambda_T$).

DIO 2.1

2 Correspondence: Reaction to DIO 1.1

A Fantasies

A1 Absolutely delighted with DIO. I’ve long said that what this backward nation needs is a good three-letter abbreviation for junk-mail. You have my warmest congratulations for finally supplying it. [Signed] The Malignant

A2 I lost no time reading your magazine. [Signed] DMcC.

A3 DIO is inimitable. I simply cannot put it down. Having not chosen to pick it up. Ahead of the garbage man. [Signed] N. Coward.

A4 You are a genius. I love you & long to bear your child. [Signed] Spike.

A5 DIO makes the libellous implication that I am a litigious dictator, which is a damned lie. Retract or I shall sue. [Signed] Lord Thinskin, Deity-for-Life.


B Realities

B1 OK, now to subside from dreams-of-gory to: the real letters. Before dipping into that barrel, though, I must note that numerous unwritten verbal reactions were received. Several professional sociologists expressed gratitude for the raw data that DIO is placing onto the public record. And, while a number of readers said the footnotes’ print was eyestrainingly tiny, at least one DIO subscriber reads more due to precession (largely obliquity-decrease). (In the Moesgaard-Kristensen 1976 catalog, cat D: standard-deviation $= e$.)

B2 DIO 1.1 drew encouraging missives from so many quarters that not all can be included here. Some are too kind to quote, such as the letter from my Gilman School physics teacher Bill Porter (who, at the instigation of DR’s lifelong friend & advisor Ludlow Baldwin, introduced me to the wonders of calculus & Newton’s Laws, when I was only 16’ old). But I will always treasure them privately.

C Honesty & Belief

From: Louisa Fitzgerald Huber, Harvard University

1995/1/21

C1 glad to find someone who among other things makes a case against stupid or downright dammingly dishonest reviews. . .

C2 It’s funny: the people who at the bottom of it all don’t believe much of anything are the ones who care the most for honesty and accuracy.

D Alkaline Reaction

D1 I hope that soon you may even succeed in diluting the acid component of the ink $\text{2}$ and thus keep the innocent paper free from contamination.

2 Now living within easy driving distance of BrownU, Bill is available for tutoring. Mufosi take grateful note.

3 A delightfully artful reference to DIO’s back-inside-cover statement.
D2  [Your] Hipparchos paper [DIO 1.1 §6] clearly falls within my field of interest and competence. It reveals an important new stage-setting for the interplay between Babylonian and Greek-Hellenistic astronomy.

D3  I find a lack of consistency in using [YJ] ... for the [UH solar] mean motion instead of [YJ troublesome and may be detrimental to the interpretation of the year-lengths YB, tropical or Metonic, i.e., 235/19 times synodic month? ... This takes it to be tropical and accordingly “the best of a rather poor lot of surviving ancient estimates” [§88]. But interpreted as Metonic it is clearly inferior to 365;14.48° [YJ] which the author (therefore?) brings into play for the demonstration of the success of the UH orbit in imitating eclipse events.

D5  DIO believes no extended responses are necessary, for those who have read the original DR paper with care. Three brief comments: [a] The on-the-nose agreement displayed at §H5 of the DR paper shows that the proposed UH mean motion indeed matches Hipparchos’ final mean motion table to 1’. [b] Though Y1 (eqs. 1&4) revealed [to DIO] Hipparchos’ raw recorded time for the 135 BC SSSol, it is obvious from Almajest 3.1 that Hipparchos’ contemporaneous solar tables instead used year-length Y1 (DR eq. 7). [c] The same Babylonian tablet ACT 210 contains both Y2 and MA1 (ibid eq. 10), and these 2 numbers are obviously not in the ratio 235:19 — rather Y2/MA1 does very closely approximate 235/19 (as Moesgaard has often justly emphasized, contra R.Newton). Therefore, we know that Y2 was (wisely & boldly) not founded in any way upon lunar data or considerations. (I.e., the tropical year was not falsely identified with 235/19 months — Meton’s 432 BC scheme, subsequently followed in some degree by Kallippos, Aristarchos, Hipparchos, & Ptolemy.) Which is precisely why Y2 was the most accurate tropical year we have inherited from antiquity.

D6  I warmly commend the broadmindedness of Moesgaard (an internationally respected expert in this area) in acknowledging the essential validity & watershed import of the DR paper. [Note added 1993: Unfortunately, Moesgaard has failed to put this encouragement into public effect. See J.HA 1.2 fn 170.]

E  Ringside Chuckles

To:  DIO
From:  David Fowler, Math Inst, Univ Warwick, Coventry CV4 7AL, UK

E1  Many thanks for DIO & J.HA .... I’ve wondered how to thank you .... am enclosing one of my last offprints (for they were fabulously expensive) of a recent obscure article [Archaeol Hist Exact Sci 41:3:189 (1991)] on continued fractions — a topic close to your heart .... Also a little preprint (“Unit Fractions Again”) in which I loose off a few strident opinions. Had I enjoyed your journal less, I might have sent more reprints. (The old chestnut: “First prize: a week at Blackpool. Second prize: two weeks.”)

E2  I work outside most Muffins, cliques, schools, and the like — so I stand way outside most of the issues that you are dealing with, and treat these arguments and fights as high class entertainment.

E3  Moesgaard’s helpful observation is not mere carping. He & I are aware that the UH orbit fits the data regardless of whether Y1 or Y2 is adopted.

---

Table 2: Tycho’s Fake Centaurus Stars

<table>
<thead>
<tr>
<th>Cen</th>
<th>PK#</th>
<th>D#</th>
<th>Δp</th>
<th>βp</th>
<th>λT</th>
<th>βT</th>
<th>λ</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>2g</td>
<td>935</td>
<td>1001</td>
<td>211</td>
<td>30</td>
<td>211</td>
<td>247</td>
<td>-21</td>
<td>49</td>
</tr>
<tr>
<td>4h</td>
<td>936</td>
<td>1002</td>
<td>211</td>
<td>00</td>
<td>210</td>
<td>59</td>
<td>19</td>
<td>08</td>
</tr>
<tr>
<td>1i</td>
<td>937</td>
<td>1003</td>
<td>210</td>
<td>10</td>
<td>210</td>
<td>12</td>
<td>-20</td>
<td>51</td>
</tr>
<tr>
<td>3k</td>
<td>938</td>
<td>1004</td>
<td>211</td>
<td>00</td>
<td>211</td>
<td>03</td>
<td>-20</td>
<td>12</td>
</tr>
</tbody>
</table>

since real annual precession was virtually unvarying.) The method of the fraud is (aside from Tycho’s random-scatter embellishment) just that of Ptolemy himself: merely add a presessional constant to a prior observer’s stellar longitudes while keeping the stellar latitudes the same. Carrying this to new heights was: the astromoners who first heightening the fact & the method of Ptolemy’s “usurpation” (Tycho’s word) of Hipparchos’ Ancient Star Catalog was Tycho! — right in the preface to the very star catalog (cat D) containing the 10 stars here exposed as faked by just that same method, and using data preserved by that same ancient astronomer. ...
C Isolating the Fakes

C1 Our next discovery is a startling jolt to me, as a fervent admirer of the Tycho school’s genuine discoveries. I have found that the first 6 stars of Ophiuchus (Oph) in cat D are fakes. Simple recipe: [a] just add 28° onto Copernicus’ longitudes λ, which is almost (fn 56) equivalent to adding 24° of precession onto Hipparchos’ λ; [b] sprinkle a very few arcm of random scatter onto these results and onto Hipparchos’ presumably-little-changed latitudes,20 also adopted by Copernicus. (It is ironic that Tycho was a pioneer in precession, showing that astronomers’ equinoctial “trepidation” was chimerical—

20 weighting for eye-sensitivity, visible starlight (0.48μs) was broken into 21 spectral components, at 0.01μ intervals (intensity from Planc blackbody curve, with Tc from B–V via C. Allen Astrophysical Quantities 1976 p.197). Molecular extinction (fn 63) was applied to each through a Rayleighsque exponential formula fitted to the standard table of Allen (1976 p.126), with a further diminution for In-Tanaka’s extreme extinction. The 2e-perpendicular components were remeasured to yield the final magnitude. For high h, results are close to those for Evans’ HJA formula with his A0 = 0.13 for dust, & Evans’ choice A0 = 0.2 for standard dust. Which is a credit to both of us. And the credit for initiating taking-account-of extinction’s color-dependence, during analyses of older star catalogs, goes to Evans not DR, since Rawlins 1982C ignored this factor, while Evans 1987 [a] included it, & [b] computed it correctly — at least for stars not near the horizon. In this connection: the 1597.23 light from 2g Cen (dimmest Hven through A = 19.6 molecular atmospheres but merely Z = 11.6 ozone atmospheres, i.e., the key implicit premis for the HJA extinction formula of Evans 1987 [namely, that there is a single atm mass number A] breaks down for the very stars the HJA is arguing about: those of low altitude h. The dust atm mass D (fn 16) also parts company from A. But in the other direction. (E.g., 1591 Hven D = 24 for 2g Cen, thus its μ for Tycho, correctly computed according to the HJA-antazanced dust density, would be even dimmer than 7.95, by ordmag 0.01 magn. Only ordmag 10% of dust is higher than 4.5 km, and below that we may use an exponential dust density of standard scale height 1.2 km, with ozone opacity.) Indeed, for stars on the horizon at sea-level: А = 39, while Z = 13, and D is c.100! For close approach to horizon Δ & atm mass = sqrt(μ^2 + h^2), where R = Earth radius times 1.2 (adjustment for lightcurvature: Rawlins Amer/Phys 1979/2) & h = scale hgt (8 km for molecular, 1.2 km for dust). As to Z: see above. The drastic low-altitude ratios cited here (A/Z > 3 & D/A > 2 at horizon) appear to be known little if at all. For Allen’s standard dust opacity (adopted by HJA for antiquity), atm extinction at the sea-level horizon is about Δm = 11 magnitudes! I.e., Venus μ = 6, Sirius μ = 9. Are these for clear nights? By DR’s idealized null-dust math, Δm = 4 magns; ancient experience was something between our results, obviously (on the best nights) much nearer the latter. (Overprecise data for B–V = 1.8, 0.8, 0.2; null-dust Δm = 3.96, 4.17, 4.36, resp. Including Allen dust, Δm = 10.32, 10.65, 10.95, resp. The molec + oz + dust contributes: 3.57 + 0.39 + 3.36 = 10.32; 3.79 + 0.38 + 3.48 = 10.65, & 3.99 + 0.37 + 3.6 = 10.95. γ = 0.13 in Σ + μ = 0.026 + 0.37 + 0.110 + 0.024 + 0.071 + 0.104 + 0.015 resp.)

19 Some may take scatter as mere data of nothing than. MTT statistician P.Huber to DIO 1991/96, defending Ptolemy’s less subtle frauds (12 [1144]: “I do not contest that Ptolemy fudged his observational data….” If Ptolemy had seen anything wrong in what he was doing, I guess he would have added slight perturbations to his fake data (as present-day students do in physics lab courses….”). So, the clausmer the fraud, the less indictable it is? Obvious implication for those moderns now contemplating science fraud: merely can the scatter, and eminent professors will excuse your behavior! (Actually, Ptolemy did sneakily perturb c.10% of his data by 5’. In fn 56.)

20 Ulugh Beg’s catalog (epoch = mid-1437 AD) was then unpublished and unknown to Tycho. There survives no other massive original star catalog between Hipparchos and Tycho. (See Thoren 1990 p.297 n.134.)

F Penguins Under the Ecliptic Pole

To: DIO 1991/92

From: Keith Pickering, 10085 Country Rd. 24, Watertown, MN 55388

F1 . . . I was struck by your remark2 that Aldebaran and Antares “can never be seen simultaneously from the Mediterranean area”. . . . This led me to investigate the conditions under which Aldebaran & Antares are above the horizon at the same time.

F2 The [great circle] angular separation of the 2 stars is 169°.96, just over 10° from complete opposition. This implies that it would be possible for each star to be a comfortable 5° above the horizon simultaneously, provided that the median point of the 2 stars is at the zenith. . . . The median point turns out to be (epoch 2000.0) . . . less than 0.5° below the horizon. Correcting for refraction, this means that at least half of the solar disk would be visible at all times of the year for any observer who has the median point of the 2 stars at his zenith.

F3 But now we are faced with a problem: if we stand with the median point overhead (near the Antarctic Circle), . . . the [solar center on the ecliptic] can be no more than 0.5° below the horizon. Correcting for refraction, this means that at least half of the solar disk would be visible at all times of the year for any observer who has the median point of the 2 stars at his zenith.

F4 The way to save the situation is to rotate our horizon frame around the Aldebaran-Antares axis. Or, more precisely, around the axis joining [the two points on the ecliptic at the 2 stars’ longitudes]. Each star will be slightly “above” this axis for our hypothetical southern hemisphere observer. The rotation will tilt the horizon frame above the ecliptic. This led me to investigate the conditions under which Aldebaran & Antares are above the horizon simultaneously. Under which, under we must stand to see both stars simultaneously.

F5 Projecting this line on the equatorial-coordinate sphere, we find that it passes through its lowest declination at 68° 1/2 . . . . This implies that Aldebaran and Antares are both visible above the horizon on at least one day a year for all observers in the southern temperate zone, but observers travelling north of the Tropic of Capricorn will find it increasingly difficult to see simultaneously. If we extend the tilt all the way to 90°, the line ofzenieth lies declination 8°, which latitude can be regarded as the absolute northern limit from which the simultaneous observation can be made [ignoring refraction]. Observations from the Antarctic [south of c.74° S] are precluded by Aldebaran’s northerly declination.

F6 Now’s a tougher test: is it ever possible to observe Aldebaran, Spica, Antares, & Deneb Algedi simultaneously above the horizon? These four stars lie just south of the ecliptic in four different quadrants of the sky. Putting the south ecliptic pole near your zenith would allow all four to be above the horizon, but only during daytime. The horizon tilting strategy used above will not work, since at least one of the four will be rotated below the horizon along with [half] the ecliptic. The 4-star simultaneous observation is therefore impossible.

---

*This question arose because DIO 1991/92 fn 6 in 30 had noted that the latitudes of Aldebaran & Antares differed by exactly 180° (within 1’) from c.300 BC to 1200 AD — and that the Ancient Star Catalog (whose longitudes are generally expressed to precision 10’) placed these 2 bright stars exactly 180° apart. Neugebauer 1975 p.960 notes that this same stellar opposition was stressed by Kleomedes (4th century) & Rhetorius (6th century).

* A crude check is obtained from arctan tan cos λ = 8° 1/2. For about 300 BC, the same calculation would find that the limit was nearer to the Tropic of Cancer than to 8° N latitude.
F7 There is, however, one “miraculous” exception to this: for an observer at the correct latitude (the Antarctic Circle), and at the correct Local Sidereal Time (6°), the south ecliptic pole will be overhead and the [refracted] sun will be just above the horizon. If at the same time there were a total eclipse of the sun, all four stars could be visible simultaneously.

F8 The enterprising photographer who uses an all-sky lens to capture Aldebaran, Spica, Antares, Deneb Algedi, the eclipsed solar disk, and up to 5 bright planets, all ringing the horizon in a single frame, would certainly qualify for the Astrophoto of the Millennium Award. Such a photo would best be taken from a high-flying aircraft, because of: [1] lack of suitable land along the Antarctic Circle; [2] generally bad weather conditions in the region; [3] dip of the horizon due to altitude; [4] reduced atmospheric extinction.†

F9 Questions for DIO readers with eclipse-predicting software: When and where is the next time a path of totality will cross the Antarctic Circle at 06:00 LST? And when was the last time?

F10 P.S. I keep seeing references to “DR” in your magazine. Does this stand for “Dennis the Renegade”?...”}

Comments by D-the-R:

F11 I enjoy the footnote-to-a-foo note aspect of the foregoing. (Various DR research finds have started out as such.) So the following thoughts are 3rd order footnoting.

F12 The scene painted by Keith reminds me of one of my old favorite astrologer-hassling plays: ask a horoscope-caster to do a birth for the Arctic Circle at Local Sidereal Time (LST) 18° or the Antarctic Circle at LST 6°. (Any longitude will suffice.) Slight unstated problem: in either situation, the ecliptic is coincident with the horizon, so the astrologer’s critical “Ascendant” point becomes nonexistent and thus uncalculable.

F13 Forgetting relatively dim Deneb Algedi (the Seagot’s tail), we note that all the 1st-magnitude zodiac stars’ longitudes fall in one precise semicircle: Aldebaran, Castor, Pollux, Regulus, Spica, Antares. When the Sun is well into the opposite zodiacal semicircle, there will be at least a few minutes every night when all 6 of these famous stars are visible simultaneously in the southern hemisphere’s temperate zones, something that was never possible for the northern hemisphere ancient astronomers who first cataloged these objects.

F14 I note that the current celestial latitude of Pollux is +6°.7 (and slowly increasing); this is well outside the Moon’s usual (5° amplitude) range of wander off the ecliptic. In ancient lunar-planetary observational work, Pollux was traditionally (though see Almagest 9.7) not regarded as being quite of the import of Aldebaran, Regulus, Spica, & Antares, the famous 4 stars which were occultable by the Moon. However, a lunar occultation of Pollux is almost possible from the deep southern part of the Earth, since the Moon’s latitude can be as great as +5°.3, and the gap of 1°.4 (between this figure and Pollux’s latitude) is nearly covered by 1°.3, the maximum possible sum of the Moon’s horizontal parallax & semidiameter. But not quite. So such an occultation is now impossible to see from the Earth’s surface. However, in ancient times, the latitude of Pollux was less. (It was +6°.4 in King Tut’s time.) So occultations of it were occasionally visible from the Antarctic regions. The only catch is that no literate persons were there in those days to see the event. (Yahgans & penguins may have been luckier.) By the time civilized man had penetrated to the deep southern reaches of the Earth, the latitude of Pollux had so increased that the shadow (of Pollux’s light), cast by the Moon, grazed the Earth no more.

14 Tycho’s eventual 1598 distribution of the padded “thousand star” catalog D is excused by Dreyer 1890 p.266 thsly: “The handsome manuscript volumes . . . were chiefly intended as advertisements”. Thoren 1990 p.383: “they were good enough for advertising purposes”. (See DIO 1.2 fn 266.)

15 Dreyer’s notes to cat D (OIO 3:414, 416, 417) speak of the following regional star sums: 335 zodiac (correct), 480 north (vs. 481 actual), 185 south (vs. 188 actual); the stated total being 1000 stars (vs. 1004 actual).

16 Number of dust atmospheres \(D = \frac{\text{asc}(h^+ + 34/65 + 54/7^2) + \text{asc}(h^+ + 51/89 + 67/1^2)}{\text{exponential model}}\) dust scale-height 1.0 km (or the standard value 1.2 km, respectively. (For moderately different adopted scale-heights, one may extrapolate the 3 constants.) These are DR’s original formulae for \(D\) as a function of a celestial body’s apparent angular altitude \(h\) in degrees. (For an observer well above sea-level, these formulaes may be attenuated in an obvious crude exponential fashion. Both load & scale-height of atm dust are notoriously variable; thus, the formulae here are merely to be taken as rough estimates, not as rigorous representations of a fixed atmospheric model.) DR’s extinction-calculation procedure here will (unless otherwise stated) use zero atm dust, because: [a] even in modern times, dust-extinction is flaky, & [b] in ancient (pre-pollution) times, dust’s effect on clear dry winter seeing was probably small — perhaps nearly negligible on water-surrounded sites such as Rhodes & especially (near-arctic) Hven. (Objects transiting south of Hven are seen over c.100 m of water.)

17 DIO’s procedure for computing atmospheric refraction: set \(\tan c = \frac{S + 1/2}{R + 1/2}\), and compute \(a = \frac{p^2 - h^2}{g^2/2}\), where \(p = P/1013 + t = T/283\) (in millibars, in \(K\)); then, using either \(h = h^+ + 61/9\left(1+h^2/4\right) - 94/9\) or \(h = H^2/2\left(1+H^2/4\right) - 1/21\), atmospheric refraction \(r = 58^\circ\cdot b^{0.4} + 1/2\) (with \(h\) apparent altitude, \(H\) true altitude — both taken literally in degrees). (For DR formulae to compute molecular atm gas, & atm dust mass \(D\), see fn 63, fn 18, & fn 16, respectively.) These new DIO equations are easily handled by pocket calculator or computer; they more than suffice (at the professional level) for all situations, 0° to 90° altitude, at all likely Earth-based heights above or below sea-level. Given the recent findings of Schafer & Liller (PASP 102:796; 1990), on refraction’s vagaries near the horizon: the precision of DR’s formulae here is, if anything, overdone.

18 Standard mean ozone cover, adopted here throughout. We use: \(R = \text{sea-level radius of curvature of Earth’s surface (6378 km is close enough), } z = \text{observer’s height in km (above sea-level), } \kappa = 2.6, h_g = h \text{ g of h-lm arcane ozone layer (22 km), } r_{60} = (z + z + n(R + h_g)) & X = \text{arc cos}(\kappa, z, h_g)\). Thus, ozone atm mass \(Z\) (normalized, like \(A\), for unity at zenith), as a function of apparent altitude \(h\), is here found via the DR approximation (efficient for \(z < h_g\)) \(Z = \text{asc} X\). For the magnitude calculations of this paper (unless otherwise stated) using Vilnius salt] when Tycho already in January 1595 wrote to Rothmann that he had now finished “about a thousand stars,” and when he writes in his Mechanica that the great globe was quite finished in 1595, exhibiting a thousand stars. It has been suggested that it was this completion of Tycho’s star-catalogue which he wished to commemorate by the striking of a medal (or rather two, slightly different) bearing the year 1595. This is quite possible, and he may have wished . . . to have a memorial of the work carried on for nearly twenty years at Hven.
Tycho’s work never fully recovered, after his 1597 downfall. Not a single accurate Tycho star position was recorded subsequent to his leaving Hven. On 1598/1/2, he issued his “Thousand Star Catalog” (supposedly based entirely upon data observed before departure from Hven), which I will call “cat D” throughout this paper. Cat D’s stars are grouped into 46 constellations; the entire catalog is printed in the Tycho Opera Omnia (abbreviated henceforth here as “OO”) at vol.3 pp.344-373. Tycho died at Prague in 1601.

B Starstress

1 Tycho’s astronomer-biographer briefly provides (Dreyer 1890 p.227) the relation between Tycho’s traumatic 1597 eviction and his “1000-star” catalog (cat D), which was first distributed in 1598: “Most of his observations for determining accurate places of fixed stars were made before the end of 1592, and the results were embodied in a catalogue of 777 stars. Hereafter this, 777 star catalog will be called “cat C”. (The complete cat C is published at OO 2:258-280.) Both cat C and cat D were published after Tycho’s death. Each catalog’s star places were precessed to epoch 1601.03 AD. Dreyer 1890 (p.266) notes that cat C was the edition preferred & published by Tycho’s assistant, Johannes Kepler (Dreyer 1890 pp.266, 371) — whose perseverance & genius had by then transformed Tycho’s planetary observations into the three groundbreaking Kepler Laws3 (any one of which would entitle Kepler to first rank among astronomy’s pioneers). Dreyer 1890 (pp.227-228) continues

In 1595 observations of fixed stars were resumed in order to bring the number of stars in the catalogue up to 1000, and even in the first two months of 1597, immediately before leaving Hven, some observations were taken in hot haste to make up the thousand (pro compendio millenario [DIO], mostly only depending on a single measure of the declination and/or the distance from one or two known stars . . . . It must therefore be taken [with a grain of

11 Heretofore, it has always been assumed (fn 35) that all the cat D stars were observed at Hven. In his 1598 Astronomiae Instauratae Mechanica (dedication 1597/12/31; Dreyer 1890 p.261), Tycho said (op cit p.262 or Roeder & Stromgrens 1946 p.112) that his people had observed 1000 stars, not 1004, which (assuming the former figure was intended to be taken precisely) leaves open the interpretation that the final four Cen stars were observed at Wandsbeck and written into cat D only a few days before cat D was distributed 1598/1/2 (which in fact was very probably the case).4 However, [a] Tycho never stated that any star places were observed at Wandsbeck, and his Wandsbeck records (OO 13:105f) include no such data. [b] The preface (OO 3:340) to cat D says it contains 1000 stars, not the actual figure: 1004.
12 See Dreyer 1890 p.265. Ibid p.266: “Tycho sent magnificently bound copies of the star-catalogue to . . . influential men in Austria & Germany, to the King of Denmark”, etc. Thoren 1990 pp.383f speaks (contra Roeder & Stromgrens 1946 p.112) of Tycho hesitating about distributing these handwritten copies and suggests Tycho didn’t print the Catalog because he had doubts about the “quality” of the post-cat C stars. Another possible explanation of apparent hesitancy is: Tycho himself knew on 1598/1/2 (or learned a little later) that cat D had been slightly fleshed out with fake stars.
13 It is generally stated (e.g. Dreyer 1890 p.266 or Moesgaard 1983 p.311) that cat D’s epoch = 1600 AD. Actually, Tycho says (OO 3:340, 344) that his epoch is for the end (not start) of the year 1600 (Julian cal). In the Hist sci literature, I have not seen any mention of this, though Dreyer & P.Ryba understood Tycho’s convention (e.g., Dreyer 1890 p.387). Operating out of a Protestant country, he was working in the Julian calendar. Thus, his 1600/1/21 is Gregorian 1601/1/10, so the Besselian epoch of cat D is 1601.03. (Besselian dating was officially discontinued 8 ago; but, for its attractive traditional simplicity of expression, I will use it anyway throughout this paper — and in any future articles it seems apt for.)
14 [Note added 1993. For a detailed and novel argument in favor of the consistency of Kepler’s physical astronomy, see A.Davis Centaurs 35/97f (1992).]

G Footnote-Bifocalling

To: DIO

From: Christopher Walker, British Museum, Dep’t W.Asian Antiquities

Your kindly sending me a copy of the first issue of such an interesting journal as DIO & J.HA deserves an extended letter in reply, since you touch on many matters of interest to me; having recently invested in a pair of bifocal spectacles to read cue-card inscriptions, I may even be able to cope with the footnotes . . . .

G2 I am currently working a little on the archival evidence for the adoption of the Metonic cycle in Babylonia — but even getting reliable data on that one point takes a lot of checking.

H The Looking Glass

H1 The following multiply-enlightening exchange occurred between DIO and MIT statistician Peter Huber. Huber’s humor & high intelligence make his letters a good read, quite aside from the Ptolemy context. But the correspondence also usefully typifies the Through-the-Looking-Glass quality of Mufossi effusions regarding Ptolemy’s behavior. And it suggests an analogy to embryonic growth’s rapid replication of evolution: in a few letters, we see Huber go through the same shifts & alibis which it had originally required years of Mufossi ingenuity & sinuosity to refine into a bulwark-fence against admitting that an alleged scientific Immortal was dishonest. (Evaporating Myth One: Ptolemy was not a scientist at all. He was perhaps a skilled mathematician. But he was, first&handmost, an astrologer.)

H2 Huber is the sole scholar who wrote DIO to defend the otherwise silent Mufossi (who have been publishing Huber’s ancient-astronomy work, e.g., in the recent Abe Sachs memorial volume). We recall that Mufossi don Otto Neugebauer calls Ptolemy “The Greatest Astronomer of Antiquity”. Huber’s good friend O.Gingerich on the other hand calls Ptolemy “The Greatest Astronomer of Antiquity” (§3 in 28). Interestingly, as we will see below, Huber inadvertently — while attempting to defend both these promoters’ logic — demotes Ptolemy (about correctly)11 to the level of a mere textbook writer. Huber condemns R.Newton for

11 Another irresistible reaction to DIO: sociologist Scott Halupka (my Johns Hopkins softball-partner-in-ringerdom) says he skims everything but the footnotes. He finds the academic inghting the best part of the show. Suspecting that other DIO 1.1 readers also got overmuch into our footnotes (much as seasoned MAD magazine readers get addicted to panel-backgrounds), DR will attempt to move some of the same sort of weird stuff into the main text in this & future issues. Besides integrity, fun, & novel discovery, I intend that the only predictable aspect of DIO will be: unpredictability. E.g., given the long timegap between past DIO issues, Mufossi seem to have hoped that no response is necessary since DIO & J.HA have perhaps died. Several typically-subtle-high-level Hist sci probes have revealed allot more Hist sci interest in this question than in citing the discoveries revealed in DIO. Standard. Pathetically standard.

12 One interpretation of the Ptolemy scandal might be: the Almajest is what happened when mathematical ability overwhelmed scientific ability. (For a different slant on this question, see P.Huber’s thoughts at §H22.) By this statement, I am not at all subscribing to the amusingly ubiquitous modern myth (e.g., Neugebauer 1975 pp.108, 367, 643, 667, 938) that mainstream Greek scientists were non-empirical. (See DIO 1.1 §11 in 24 & DIO 1.2 §E3 and the highly recommended analysis of R.Newton Crime of Claudius Ptolemy Johns Hopkins Univ 1977 pp.350-354.) There are some gorgeous mathematics in the Almajest. But, since Ptolemy is a multiply-convicted plagiarist, it is hard to know how responsible he is for this. Similarly: much of the astronomy of the Almajest is of a higher level than what remains of, say, Hipparchos’ work. But the same caution is recommended: we have no firm evidence that the Almajest’s astronomy is Ptolemy’s personal contribution — while there is plenty of indication that large parts of it are due to others.

13 The long-standard edition of the Almajest, that of K. Manitius, calls it a mere Handbuch. (Manitius’ is still the preferable edition of the Almajest in some respects, e.g., sound judgement.) See DR Queen’s Quarterly 1984 p.973.
trivia, while excusing Ptolemy for every kind of cheating — and Huber is “neutrally” ([H21]) undisturbed by Mufa suppression of discourse. The implicit double-standard is evidently so unconscious that Huber probably won’t be aware of it — until [a] seeing it dissected in these DIO pages, or [b] looking (at his responses) in a mirror.

H3 It is false & mass-defamatory to suggest (as at §H13, below) that ancients approved of plagiarism more readily than moderns. I have elsewhere13 quoted Pliny’s blunt opinion (modern in 77 AD, anyway) that plagiarism is theft. (See also Synesios: J.HA 1.2 fn 154.)

To: DIO 1991/8/12
From: P. Huber, Dep’t Math, M.I.T., Cambridge, MA 02139

H4 Bill Tuman has shown me a copy of DIO[1.1] and I would appreciate getting a copy of my own.

H5 Incidentally, while I deplore the mud-slinging between Swerdlow and RR Newton, I believe RRN is wrong on several points. First, his statistical analysis of medieval eclipses is affected by a hidden selection bias bad enough that his conclusions cannot be trusted. When I tried to confront him on that issue at a meeting, I believe in the early 1970s, he shut up and refused to discuss as soon as he realized that I was a professional statistician. How should one interpret such a behavior? I then felt it would be a waste of time to read his works!

H6 Second, it seems to me that RRN approaches Ptolemy with a thoroughly post-Gauss frame of mind. Ptolemy did not have least squares! . . . I know that it was accepted practice among Babylonian observers to report observations not as they were, but as they should have been under good weather conditions, sometimes (but probably not always) with a footnote stating that the event had not actually been observed.

To: P. Huber, MIT, 2-334, Cambr, MA 02139-4307 1991/8/23
From: DR

H7 You may not realize that I have no opinion on R. Newton’s eclipse-discrimination, having long ago opted for a method (of determining mean Earth-spin-deceleration) which quite side-steps the need for selecting among the motley ancient eclipse reports. (See DIO 1.1 §5 n.11 & §6 n.5.) Nonetheless, I will be glad to receive your evidence that RRN’s work in this area is infected by a “hidden selection bias”. I know that our mutual friend van der Waerden also rejects RRN’s eclipse sampling, but this never prevented him from appreciating RRN’s considerable contributions to the scientific history of ancient astronomy.

H8 You speak of mud-slinging “between” Noel Seraph [Swerdlow] & RRN, implying shared responsibility. The record is sufficiently clear on the point that you may wish to reconsider this sentence’s expression. (Seraph has attacked in repulsive fashion even so gentle and esteemed a scholar as van der Waerden. See DIO 1.1 §6 n.6 and the 1973 Isis 64:239 Seraph review there discussed.)

H9 The enclosed offprint (American Journal of Physics 55:3:235; 1987) reveals a wholly new, crucial-experiment argument14 showing that Ptolemy already possessed the Almagest mean motion of Mercury before he fabricated (obviously using that very mean motion!) the 1395/17 “observation” which

13 E.g., Rawlins 1982C and DIO 1.1 §1 §B1: Huber had just written to thank DIO for receiving the latter.

14 [fn in orig letter] Previous accusations that Ptolemy had computed his “observations” from his tables had to be defended in statistical fashion. But the AJP argument’s unexpected confirmation of said charges: [a] is entirely independent of prior skeptical findings, and [b] is not statistical.

§4 Tycho 1004-Star Catalog’s Completion Was Faked

Summary

It is demonstrated that Tycho Brahe’s famous “Thousand Star Catalog” (1598) — largely a genuine, hard-wrought marvel of its creator’s perfectionism — contains 10 last-minute-added stars which are faked entirely (6 stars) or in part (4 stars). The method of these frauds is essentially Ptolemy’s time-honored one (which is exposed right in the Tycho catalog’s preface!): simply add a constant (for precession) onto a previous star catalogue’s celestial longitudes, while leaving the latitudes unchanged.1

A Tycho’s Vice

A1 Tycho Brahe is properly ranked as one of the handful of genuine immortals in the history of astronomy. His school is responsible for a string of epochal advances — especially in the lunar motion theory, which before Tycho had suffered from rapidly varying errors of c.1°, and which he left with accuracy spectacularly improved:2 by an ordnag. The sad (if intriguing) tale that follows may alloy, but certainly cannot still, our gratitude for Tycho’s invaluable heritage — a monument to the adventurous best in humanity.

A2 In 1597, having lost the royal patronage of willful17 teener Christian IV, Tycho was kicked out of his longtime home-observatories,5 & SkyCastle” (1580) & nextdoor “StarCastle” (c.1584), on his isle of Hven. (This island is in the channel between modern Sweden6 & Denmark. Hven may be seen in the distance from our family’s north Copenhagen home.) Hardly a stone of his observatories remains visible today on Hven — a fate depressingly akin to that of the now-utterly-lost instruments of his great ancient star-cataloging predecessors Timocharis (c.300 BC) & Hipparchos (c.130 BC), whose (entirely speculative) portraits were hung, with Tycho’s own, in StarCastle’s warming room (Thoren 1990 p.184).

1 See §C.
2 See, e.g., the list at Dreyer 1890 p.262.
3 For years, there have been speculations regarding early use of the navigational method of lunar distances for longitude-determination. Only by post-exploration comparisons of observed (home&away) times of lunar conjunction would any such method be feasible before Tycho — because of the gross inaccuracy of the celestial tables then available, e.g., those of Regiomontanus.
4 Frederick II having died in 1588 with Christian only 11 old, Denmark was ruled by a board of regents until 1596 Summer. It didn’t take long after Christian’s official “maturity” for Tycho to detect waning interest in astronomy at the Danish court. Christian IV is now curiously well-thought-of in Denmark, even though he lost Tycho & turf — to Germany & Sweden, respectively.
5 Hellmann 1970 pp.404-405. Thoren 1990 p.145 displays a romanticized image of Uraniborg (based on the contemporary woodcut reproduced at p.110): H.Hansen’s 1862 painting, now hanging at Fredericksborg Castle, Denmark (Zealand). (Perhaps the Hansen was felt to atone partially for the loss of an original portrait painting of Tycho in the 1859 fire at Fredericksborg: Dreyer 1890 p.264.) Paying for such projects as Uraniborg may have been related to Christian’s cutting the formerly generous flow of royal funds to Tycho, an act which led directly to the fake stars here revealed. The castle is named for Christian’s predecessor, Frederick II, who (fortunately for posterity) had a greater interest in astronomy. Evidently, the horoscope (partly empirical — a rarity indeed!) which Tycho had produced at prince Christian’s 1577/4/2 birth (Thoren 1990 p.120) did not predict the eventual schism nor Christian’s archonial treatment of Tycho (Thoren 1990 p.380). Incidentally, throughout this paper, I have attempted to keep dates in the Julian calendar used by Denmark until 1700/2/19(J)=3/1(G) — an ideal time to switch calendars. (I was about to say “upgrade”, since the Gregorian calendar is many times more accurate than the Julian. However, wouldn’t we & Maffia capo G.Toomer [see DIO 1.2 fn 24] be alot less confused about historical dates if the world had just stuck to the Egyptian calendar Ptolemy preferred?) It is no coincidence that the superior Gregorian calendar and Tycho’s superior observations occurred just before (not after) the telescope’s debut. All 3 advances were concurrent phases of an age in which original intellect, unleashed by printing & the decline of faith, was bursting forth in varied directions.
6 Though correctly regarded as a Dane, Tycho was born in Skåne, which is now part of Sweden.
7 On the buildings’ rapid post-Tycho decay and dismantling: see Dreyer 1890 pp.375f.
that you cease dabbling in shrinkoanalysis until you’ve mastered skills closer to home, such as arithmetic?)

C18 When challenged to make good on the suspected non-uniqueness allegation (i.e., to produce your fantasized alternate solutions), you can’t cut it and are finally (1/14 — 10 months and stacks44 of computer readouts after your receipt of the paper in mid-Jan) reduced to pleading that you had not had enough time (!) and that you need my help. . . .

C19 A review of your review’s shiftiness:

[1] You say (1983/2/18) that . . . [you’re checking] the paper’s computations and add (3/17) that you’re doing so with a “fine-tooth comb” for the QJRAS — and I respond with grateful encouragement (3/22).

[2] Months later, this assault has failed to find a single miscalculation, so [without warning or consulting DR, ere sending the ref report to the QJRAS you suddenly] recommend the paper’s rejection (7/23) because: maybe the solutions aren’t unique. Maybe, mind you.

[3] I brand this “pure bluff” and challenge you find any of the alternate solutions you’ve alleged (7/23, 8/26) were the determining factor in your rejection-recommendation.

[4] More months later, you’ve still discovered not a one, so now you claim (11/14) that you’re too busy to search for them — & you supply no estimate of how long you’ll stay “busy”.

C20 Are you representing the Roy.astr.Soc. or Franz Kafka? The reason your stories have become phantasmagoric nonsense is elementary: you are [a] trying to censor, while [b] hoping to evade the onus of censorship. . . . I’m not going to sit still while you have it both ways. Choose [a] or [b].

C21 Your grossly incredible gyrations have rendered all-too-believable the unsavory hypothesis that . . . . All action since your assignment last winter as referee has merely been a search for a plausible technical alibi . . . . [For rejection], an “intensive” (7/23) search that unexpectedly has become a year-long, frustrating, & sinuous ordeal, since the paper turned out to have none of the errors your clique is so dextrously accustomed to (and accustomed to publishing in its own sloppy output) — and thus quite naturally took for granted would be easy to find in this paper.

C22 . . . you have revealed yourself nakedly for what others have reported you are. I yet remain genuinely reluctant to believe this. But, for me, this is a simple cruel experiment.

C23 OG’s suppression of this paper (which ended all OG-DR relations) was simply the dowry for a convenient political marriage, as QJRAS “Editor” D.Hughes46 and the JHA joined forces — and shut down any further (skeptical) discussion of Ptolemy’s fakery at either journal. The trifling cost: the inception of DIO. To this day, OG refuses — along with the entire Mufa — to admit the slightest misbehavior in this matter. And the miscalculations — implicit and-or explicit — of Pedersen 1974, Neugebauer 1975, Toomer 1977, & Gingerich 1981 (fn 38, §C17, or J.HA 1.2 fn 56) have never been publicly acknowledged.47 Isn’t being a power-type wonderful? Reality is so: Arrangeable. . . .

he claims45 this mean motion was computationally based upon. See item [5] (pp.236-237). (Note also item 4!) Curtis Wilson, van der Waerden, & others regard this as an important contribution to the Ptolemy Controversy. (Your friends in the Neugebauer clique, including its satellite O Gingerich, have not deigned to take note of it.)17 I look forward to your comments [upon this & the enclosed DIO 1.1].

To: DIO

1991/9/6

From: P. Huber, Dep’t Math, M.I.T., Cambridge, MA 02139

H10 . . . About data faking. Consider the following:

H11 At present, most statistics texts use fabricated or fudged data, thinly disguised as real data . . . . The usual reason given is that the focus is on methodology, not on the subject matter, and that it is much easier to teach the methodology by using “clean”, small data sets, with distracting details stripped away. . . . I myself do not like fudging and think one should use it only as a last resort, if one cannot find . . . real data sets to make the point without adulteration.

H12 It is standard practice today in the physical sciences not to report raw observational data. Customs can vary widely. Compare for example our current attitudes with regard to copyright and plagiarism to those prevailing among medieval authors and, more close to our days, among Singers of Tales . . . .

H13 Second, I surmise that Ptolemy reported the observations not as they were, a simple crucial experiment.

44 Shown to DR 1983/6/4: DIO 1.1 §1 fn 9.

45 Compact DR footnote in original letter: “No rule of law — as revealed by contrasts: [a] comparison to treatment of other papers, and [b] shifting: (make-up-the-alibis-as-needed, as-we-go-along) criteria for [rejecting] this paper.”

46 Featured in J.HA 1.1 & 1.2. OG had previously been a severe critic of Hughes “editing”: loc cit [B2].

47 Toomer 1984 App.C admits Ptolemy’s solutions are wrong & cites RNR (never DR); but forgets the long history of Mufa-supported false solutions: §C15. DIO always alerts readers to & publicly corrects every one of its occasional errors. Some of the above turned out to be unhistorically erroneous. In 2003, A.Jones found better solutions for Mars & Jupiter: see DIO 11.2. This doesn’t excuse suppression of the other 3 solutions (& the rest of the 1983 paper, whose revolutionary cyclic thesis Jones establishes firmer than DR), but it vindicates Gingerich’s caution on 2.)
but as they SHOULD HAVE BEEN: you calculate predictions, and if your admitted imprecision of observations agree within reasonable bounds, you stick with the theory. [DR's added caps. Muffia's most-avoided question: from whom came the theory by which Ptolemy pre-calculated what he "SHOULD" observe? — i.e., what was the original empirical base for the theory which gave the "right" answers?] Especially so if you do not trust your own talents as an observer! All the available evidence seems to indicate that Ptolemy was not a first rate observer, so his course of action may have been the prudent one. The same argument applies to the fixed star catalog. — As I mentioned in my previous letter, I have some antique evidence from Babylonian sources for the second part. For example, it is well known that the dates of solstices and equinoxes always agree with the known computational scheme (which was not very accurate), but they are reported just like observations. [DR: reported with Ptolemy-style discussions of the instruments allegedly used?!! Hardly.]

H15 I think RRN misjudges the cultural context. His claims of fraud presuppose malicious intent, and I fail to see any basis for that. [DR: Note that in the previous paragraph, Huber himself refers to Ptolemy’s too-faithfully-computed “fake data”. So “fake” data don’t imply malicious intent, while “fraudulent” data do?!! And, no less an authority than the Editor-for-Life of the Journal for the History of Astronomy says that a scholar who uses such terms as “fabrication” places “a barrier” between himself and the “writing of history” (†3 §2b). What a show . . . .]


H17 I was especially intrigued at this last piece of implicit logic, which is: no matter how strong the evidence for fraud by historical figure P, if scholar N mentions it, then scholar S is (according to Huber: §H16) no worse (than N) if S then accuses scholar N of fraud — no matter how nonexistent the evidence for the latter allegation. Another lesson in Muffia Morality. (No wonder fraud is so common in science — if those who object to it must endure Muffia-style-vengeances.) DR understandably kept his next letter brief:

To: P.Huber, MIT, 2-334, Camb., MA 02139-4307
From: DR

H18 Thanks for yours of the 6th.

H19 I have a question: are you sympathetic to the idea of promptly scheduling a 2-sided symposium on the Ptolemy Controversy? — to be held before an audience of professional astronomers, the panel comprising: myself & preferably (but not necessarily) another skeptic or two, plus yourself (if you like), O Gingerich (in case he’s willing), presumably the cynosure Swerdlow and—or Toomer, backed up by as many other leading Ptolemy-apologist scholars as the Neugebauer cult is willing to exhibit for live crossexamination before competent scientists.

H20 The obvious expectation that the proposed panel’s composition will give Ptolemy’s defenders a strong advantage (at least numerically) creates no deterrent on my side.

To: DIO
From: P. Huber, Dep’t Math, M.I.T., Cambridge, MA 02139

H21 . . . I am neutral with regard to your Ptolemy symposium. In 1974, I participated in a Velikovsky panel . . . neither side in any emotionally loaded controversy will ever bother to look at the evidence. The scientists

C16 The longstanding Muffia mean-motions farce raises a question (see also 1 §A7) that goes to the heart of why centrist academic publications exist: is anybody actually reading the papers published in these handsome, extremely expensive journals? (No wonder Hist.sci publications are not famous for extensive correspondence columns: DIO 1.1 §5 fn 24.) Note †4 fn 65 or J.HA 1.2 §J2 (item# 2). [Far too often, the authors aren’t checking their own work. [2] The journal “editors” aren’t reading much of anything. [3] Invisible alleged referees are letting the most obvious blunders go to press. (E.g., the JHA’s Winter Equinox: DIO 1.2 §B4.) And [4] the readership isn’t noticing them either.]

To: O.Gingerich A-209, SAO, 60 Garden Str., Cambr., MA 02138 1983/11/25
From: DR

C17 . . . For years, you and yours have published (1974-1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C18 Publications are not famous for extensive correspondence columns: DIO, J.HA, etc.

C19 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C20 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C21 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C22 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C23 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C24 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C25 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C26 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C27 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C28 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C29 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C30 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C31 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C32 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C33 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C34 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!

C35 . . . For years, you and yours have published (1974–1981, including in QJRAS) solutions for the Alm. planet mean motions which are not only non-unique (your unsupported charge against my paper’s solutions), they are false. (Simple division. Awesome experts here. . . .) Yet on a imsy point: Is anybody actually reading reported with Ptolemy-style discussions of the instruments allegedly used?!
helps suppressors of his stripe explain their behavior to colleagues, if they give it out that the object of their connivings is not actually engaged in principled resistance to tyrannical censorship, but is a nut who subconsciously invites mistreatment. The implicit amorality (internal & projected) is suspiciously typical of Hist.sci archons’ general approach (§C10) to all scholarship, past & present.

To: O.Gingerich A-209, SAO, 60 Garden Str., Camb., MA 02138 1983/8/31
From: DR

C13 . . . classic: abuse a dissenting scholar, increase the dosage if he doesn’t agree to take it quietly; and then, when he reacts, accuse him of abuse — and of wanting abuse when he knowingly chooses the honorable route of not agreeing to go along with this political filth.

C14 . . . [yours is] the fiercest refereeing assault on a paper I’ve ever heard of (revealing in itself) . . . Your 1981 QJRAS (paper Gingerich 1981) . . . and 1983/7/23 [rejecting referee-report’s explanation ([Ptolemy’s] observations) fails to reproduce these motions for all 5 planets . . . So your explanation ([based upon] false mathematics: simple division[!]) is published in QJRAS [Gingerich 1981], and [now] you of all people recommend that my correct mathematics not be published [in the same journal]. That’s fair.

C21 My final letter to OG on this matter started from one of funniest pinacles of the entire improbable history of the Ptolemy Controversy, namely, that a flock of Hist.sci’s leading archons had for years been publishing false (non-fit) solutions of the VERY SAME Almajest problems! The institutions & publishers whose pages or pages of time & effort have promoted this extended pretense include: Princeton Institute, BrownU, Harvard, Springer-Verlag, Royal Astronomical Society, JHA, Centaurus, Arch Int Hist Sci. In several prominent cases (fn 38), including OG’s own Mars solution (fn 19), the reader was given to believe that careful mathematical check-matchings (more arithmetic I must emphasize) had occurred, when this was not true. The point is crucial to the Ptolemy debate since the Mufa solutions were based on Ptolemy’s purported method of computing the mean motions, which were lies in all 5 cases. (Even Toomer 1984 p.672 now agrees that Ptolemy was “not of course justified in concealing [the mean motions’ sources] from his readers”.

H24 If we defend plagiarism by pointing to other instances, this is effectively just broadening the indictment of the academic community. Curious line of defense.

H25 Huber begins his rejoinder to DIO by attacking RN for being a bad statistician (§H5). Yet, when it transpires (§H9) that the case that Ptolemy faked & plagiarized is airtight anyway, Huber does not cede confirmation to RN or DR — but instead increasingly shifts (§H11–§H15) to contending that these are not such grave sins.

H26 Huber’s comparison ([H23]) of his 1960s behavior to Ptolemy’s is irrelevant. (Was L.Newton elevated for dressing up calculus-obtained results in geometric garb? Come now.)

H27 Huber condemns a single verbal nonresponse. Hell, I’ve been dealing with 15+ of repeated nonresponse to write (eg. 1984/4/30 to O.Gingerich), even published (Rawlins Amer J Physics 1987) suggestions of the very item (face-to-face discussion at a scientific gathering) which Huber damps RN for allegedly evading on one solitary occasion. (Further details: fn 24.) The Mufia’s long & consistent evasion Huber “neutrally” ignores — arguing that encounters wouldn’t do any good. (Why is Huber not excusing RN’s alleged longago silent encounter by supposing that his responding to Huber wouldn’t do any good?) Hmm. Huber refused to read RN’s work after their noncommunication. So, will Mufia avoidance of debate cause Huber to cease reading Mufia output? . . .

H28 Huber’s long letter of 1991/9/16 manages (during pages of opinions, guesses, generalities, and analogies) to avoid responding to all the parts of DR’s 1991/8/23 letter which show his apologia for Ptolemy & the Mufia to be inadequate, e.g., [a] Noel C. Seraph’s vicious, unprovoked attack on gentle BdW (Huber brought to Huber’s attention at §H8), and [b] O.Gingerich’s laborious, persistent, devious attempts to deny credit to DR for finding the numbers behind the Almajest planet mean motions. (See fn 25; §3 §C3 & §C15; Rawlins Amer J Physics 1987/3/30; DIO 1.1 §f 1 fn 9, DIO 1.2 fn 56. [And DIO 11.2 cover & p.30].)

H29 From Huber’s 1991/9/16 letter we learn that: [a] Nothing at all reprehensible has been done by Ptolemy (who Huber says MERELY deceived his readers and faked data)

were as bad as the Velikovsky fans. Thus, a Ptolemy symposium might be fun, but I am not at all sure whether it would achieve any useful purpose. . .

At present, Toomer is the expert on Ptolemy, and he simply must be on the panel, whether willingly or by coercion, if there is a symposium.

. . . I am pretty sure that the ancient astronomers . . . must have derived their parameters by trial and error from rather inadequate sets of observations. But I am equally sure that for a self-respecting Greek scientist the only legitimate scientific paradigm was the deductive one. This adds still another facet to the Ptolemy controversy: how to publish results found by unsavory methods!

H23 I must add that I happen to be sensitized to such issues, because back in the 1960’s I had made myself a name in statistics by legitimizing the field of robust statistics in terms of the then prevalent paradigms. That is, I had been able to invent and solve a mathematically rigorous optimality problem in a murky area shunned by most academic statisticians, and I had done so in full awareness of the fact that the mathematical rigor I was injecting was nothing more than window-dressing, needed to make robust methods acceptable.

DR has several reactions to the foregoing:

C15 The modern imposition began with pseudo-checked statements (by attacking RN for being a bad statistician (xH5). Yet, when it transpires (xH9) that the case that Ptolemy faked & plagiarized is airtight anyway, Huber does not cede confirmation to RN or DR — but instead increasingly shifts (§H11–§H15) to contending that these are not such grave sins!

C22 DR asks 2 questions: [a] Where has DR failed to listen to the other side? (Mufia works are cited almost nonstop in relevant DIO output — admiringly when appropriate. . . .

C23 DR’s letter is responsive & specific regarding the attacks on RN’s use of eclipses. (I am happy to note that Huber’s adopted Earth spin-acceleration is almost identical to that independently deduced at DIO 11.1 fn 5.)
or by the Neugebauer Mufia (whose sole possible indiscretion is Swerdlov’s regrettable-but-of-course-purely-defensive countermudslinging). [b] No, it is R.Newton who is to be damned; he is unhistorical & evasive, and it would be a waste of time to read his works.  

H30 All of this will surely seem perfectly reasonable to any gathering of competent scientists. (I can’t imagine that anyone could have for a moment imagine that there are double standards operating here, or that such hypothetical bias could have anything to do with Huber’s friendship with O.Gingerich.) Therefore, I urge that a Ptolemy symposium be held (as proposed at §H19), to ensure that RN’s (& DR’s) vile position be given its thoroughly deserved evidential quietus. If the Mufia continues to remain silent to this proposal, I can only quote the 1991/8/12 words of someone Huber admires (§H5: appraising an alleged RN evasion of confrontation): “How should one interpret such a behavior?” 

H31 Stepping back from trees & twigs here, to discern the forest: we may, by analogy to the foregoing, envision the path down which Hist.sci ethics promise to take academe. During an exam at a large university, a hypothetical jock freshman copies answers from an adjacent honor student. The professor, insufficiently enlightened by Hist.sci morality, reports the incident. The jock-cheater responds by wisely hiring Mufia legal talent and submits, to the President of the university, a beautifully typed letter, from which we excerpt the following wisdom: 

H32 ... Our firm [Otto, Zero, Seraph, Tumor, Hooberdamm, & Cloneez] has drafted the following statement and transmitted it to the accusing professor: 

Given that the said Mr.Jock had, previous to this test, never heard of a certain Kraut-4-eyes named Karl Gauss, and given that the said Mr.Jock is accused merely of copying all of Mr.Honor Student’s answers faithfully and without alteration (we know that a dishonest student would deliberately get a few answers wrong in order to cover his tracks), and given that Mr.Honor Student’s answers were (if, for the sake of argument, one admits the charge) evidently regarded by Mr.Jock as ‘theoretical constructs’ which Mr.Jack — with admirable intellectual modesty — had good cause to believe were more accurate than his own work, we allege that no dishonest intent has been proved. We therefore ask for our client’s immediate relief from imputations of unethical conduct. Until further evidence is produced than mere moralizing, dressed up with sociologically-inappropriate application of currently-fashionable postGaussian paradigms, we continue to regard Mr.Jock as the Greatest Intellectual On Campus. 

24 RN allegedly made a statistical misjudgement regarding medieval eclipses, and Huber claims that RN refused to respond after receiving certain verbal information (Huber’s statistical expertise) at a meeting c. 20 ago. Comments: [a] Huber raises this to me only many years later (now that RN is not able to comment). [b] Even trusting Huber’s recollection of this encounter, other interpretations (than fear of his brilliance) are faintly possible. (This is, after all, just a sample of one. Is Huber proud of damning a scholar’s entire corpus on such a basis? I hope Huber will re-read & re-think his astonishing 1991/8/12 claim.) [c] Huber dislikes RN’s nonreaction to him on a single ephemeral occasion. By contrast, the Mufia’s avoidance of DR is consistent over 35 of the written public record; and it is not subject to misinterpretation, especially since its reality has been directly attested through multiple sources (DIO 1.1 §A8). I have repeatedly urged a public discussion or debate; see, e.g., the 1978 challenge cited in DIO 1.1 (§1 fn 20) or the suggestion in Amer J Physics 1987/3 (an offprint of which was sent Huber 1991/8/23). No takes. None of this Mufia behavior (documented in detail in DIO 1.1) appears to lead to any conclusions or insights, while a single instance of RN’s shyness (and he was shy in person) causes Huber to reject all RN’s work — and to portray RN to Tuman and to me as a coward, which is a particularly amazing tag to attach to such a bold explorer & scholar. (In fact, RN did not avoid contrary scholars’ work but replied in extensive detail in his 1979 book.) 

25 My 1991/8/23 letter was subtly suggested (see above, fn 15) that Huber ask OG for a xerox of DR’s solutions for all the Almajest mean motions, sent to OG on 1980/4/13. (Math details of letter quoted below at §3 C6.) Instead of giving credit to the discoverer, 0 and his colleague Toomer have done all in their power to deny it. (See also DIO 1.2 §D4.) If Huber is going to maintain that his friends have done nothing especially amiss, he should not be afraid to see relevant raw evidence. (Silent OG has now had years to work up an alibi for his behavior. Let’s urge him to try it out. In the open.)

26 OG’s 1983/7/23 referee report concluded (p.4) with a delicious slip of phraseology (emph added): “I have... put in an inordinate amount of work in order to convince myself that...” (see also DIO 1.1 §f.) There is no such thing as crime! Except using the word “crime”. (See §B2.) 

C10 Unlike Dr.O (or DR), my wife has a Harvard degree in social psychology. Her reaction to this Hist.sci archon’s kook speculation: it bears a remarkable resemblance to other’s standard allibis for human misbehavior. Psychoanalysis has made a similar contribution to criminal law: criminals aren’t guilty, they’re just victims. (Result: our streets are as ethical as our scholars.) Thus the unstated essential Hist.sci objection to R.Newton’s book, The Crime of Claudius Ptolemy (Johns Hopkins Univ 1977): in Hist.sci, there is no such thing as crime! Except using the word “crime”. (See §B2.) 

C11 While viewing a 1976 award ceremony for a man who had suffered years of persecution (for a very decent though unpopular cause), a reporter whispered to me: “people like that thrive on suffering”. (And I thought I was cynical.) But, at least this reporter was not himself trying to inflict it. 

C12 Thanks to his superarchon-serving gossip-slanders, his gofer-manipulations, his pseudo-refereeing, and his mental & ethical limitations, O.Gingerich has probably caused me more needless bother than any living (2nd-level) archon — and he claims I seek such impedimenta? (If he really believes this, then: why are his libels spread behind-the-back? — e.g., the wildly defamatory private OG letter quoted in DIO 1.1 fn 20.) Evidently, it (Some details at DIO 1.1 §1 fn 9, and below here. The results instead later appeared in DR papers in Bull Amer Astr Soc 17:852, 1985, and Amer J Physics 55:235, 1987.) The OG 1983/7/23 report’s justification for rejection was: alternate period-relations could easily be found, which would satisfy the Almajest planet mean motions just as well as DR’s. I called this “pure bluff” and challenged OG to go right ahead and find these solutions: e.g., DR letters of 1983/9/1, 9/27, 11/25. OG kept puffing anything that even faintly resembled an alternate parent solution, no matter how bad the fit: see above at §C3, e.g., the [d] solutions. [Note added 2003. While neither OG nor DR nor K.Moeggaard fn 26 ever found valid alternate solutions for Mars&Jupiter (OG&KM’s don’t even try!), A.Jones did so (2003 Sept). A.Jones did not give me the solution he found here; true solutions for the other 3 planet-motions, plus fn [17] all 5 ancestor period-relations.) 

C8 It may come as a pleasant surprise to learn that Dr.O.Gingerich is an expert psychologist. After preventing JQAS publication of the DR solutions (which headed-off public exposure of his own foulup of the same Mars equation in the same journal), he wrote: 

To: DR 1983/8/26 From: O.Gingerich, Harvard College Obs, Smithsonian Astrophys Obs ... a [PBS] lecture ... on Beethoven ... gave a perceptive analysis of why [he] never managed to marry despite being passionately in love and over again. Some quirk of his character caused him always to choose women who would be unattainable, and the analyst concluded that this was a deliberate subconscious maneuver by Beethoven rather than the repeated cruelty of fate. I am beginning to suppose that there must be an analogy in your own preference to play the martyr rather than getting published. 

31
contrasts between the DR & Mufa solutions (§C3). An optimist will see the positive side here: cases as egregious as this are useful, since there are neophyte power-operators-to-be who (before matriculation) may doubt the blanket-censorship power of academic archons. E.g., redacting censors may be downcast by the demise of the premordern legendary models (starchambers, etc.). So, when youngsters need inspiration, it takes incidents such as this to get them out of the doldrums into brighteyed anticipation for what can be accomplished by determined manipulating — especially when a juggling 0 is trying to save several of his faces from the wringers they’ve caught in.

C5 Some excerpts of DR-O.Gingerich correspondence follow. We begin with the DR 1980 letter that transmitted the Almajest planet mean motions solutions to Harvard’s O.Gingerich, second-top editor of the world’s most consciously prestigious astronomy-hist journal, the JHA. (The reader may well wonder just how it came about that most of the DR solutions ended up being published, unattributed, in the 1984 Almajest App.C of OG’s friend, G.Toomer of BrownU: §C5. [Note added 1993: Toomer has now become officially attached to OG’s Harvard Hist.sci dept.’ Snug.])

To: O.Gingerich, 100 Avon Hill Str., Cambr., MA 02140 1980/4/13 From: DR

C6 . . . Regarding the Almajest mean motions: . . . I uncovered the actual distance/time ratios on which all the Almajest planetary mean motions (synodic) are based, . . . Results [using $1^3 = 1$ Egyptian yr = 365.25]:

- Mercury, 725(720 + 20);
- Venus, 15(167 + 14);
- Mars, 29(288 + 4)/6(155)14+34(40); [found invalid in 2003: fn 24]
- Jupiter, 325(35563+01+24); [found invalid in 2003: fn 23]
- Saturn, 285(29581+12).

[Sidenote in orig: . . . the time-spans for Mars & Jupiter are 2246302/135 & 1296382/45, respectively . . .] Comparing prime-constituents of numerators proves a connection to the ratios given in Ptolemy’s Preface (Alm.9.3) for all but Mars. A similar check of Ptolemy’s distance/time figures he alleged were the observational basis of the tables’ mean motions: failure for all 5 cases.

This is the late R.Newton’s discovery. So Neugebauer’s scenario (HAMA) 1975, p.152f) is plain wrong. And Crime’s charge [RN] that the mean motions are pre-assumed is verified.

C7 As noted above, OG was not about to let mere facts impede his upcoming QJRAS 1980 & 1981 defenses of Ptolemy, so he simply ignored these findings in both papers. Later, when I attempted to publish my solutions (more in the form of §C3 here, plus fn 17 ancestor period-relations), OG was appointed QJRAS referee. After massive computer attempts failed to find a computational flaw in the DR paper, OG rejected it anyway. . . .

as “disreputable” scum (G.Toomer’s 1984 Almajest p.viii), even while selling, for considerable coin: [a] superfaker C.Ptolemy as “The Greatest Astronomer of Antiquity” (Princeton Institute’s O.Neugebauer & Harvard’s O.Gingerich, DIO 1.1 fn 24, 46 (17 [B2]), [b] a flock of Babylonian astronomers as the “sophisticated” ([17.2][32]) mathematical astronomers behind high pre-Ptolemy Greek astronomy, and [c] its own Mufosis as the sole reputable, trustworthy sources of wisdom on these subjects. (I recall a broker who used to brag that his highly-Reputable firm didn’t sell to clients that had it recently written-under & aggressively promoted a stock that, within a few months of issue at $20, had plunged to ording $1. So a more accurate boast would have been: the firm indeed peddles penny stocks, but its good breeding forbids selling them for anything less than bluechip prices: fn 11 & JHA 1.2 fn 172.) As I was saying, Mufosis have exhibited a brilliance which DR wholly lacks.

Note DR’s 1980 nonrealization (yet) that the denominator also (like the numerator) has 4 of excess over an integral number of revolutions. See fn 14. Since the number of heliocentric revolutions equals the difference between numerator & denominator, the later (1982) discovery was an apparent confirmation of the validity of the 1980/84/13 letter’s ratio for Mars — suggesting that the underlying period-relationship was simply (using heliocentric revolutions) 327(0155 + 4) = a relation of exactly the same format as the other four planets’ (§C6), but of heliocentric not geocentric design (i.e., numerator is integral in helioc not geoc).
lapdog) that enables him to suppress or ignore other scholars’ work that does not find favor with him — see especially the introduction to his [1984 Springer-Verlag] translation of the Almagest which positively reeks of his unpleasant egotism. With people like these at the head of the history of science establishment in the U.S.A., who in his right mind would want to have anything to do with it?

B Forked Pen Dep’t: the Mind-Behind

B1 The following letter was received by R.Newton, in belated response to a paper he’d submitted (during the previous decade) to the extremely handsome Journal for the History of Astronomy. The letter was written by the JHA’s Editor-for-Life, Michael A. Hoskin (Churchill College, Univ of Cambridge).

To: Dr R.R. Newton, Appl Physics Lab. The Johns Hopkins Univ 1980/3/6
From: M.A. Hoskin

B2 . . . It has taken far too long to come to a decision about your paper. . . . The [3 alleged referee] reports [DR: NOT enclosed] gave me no clear advice, . . . it is of the essence of history of science that one attempts to understand why [empth in orig] people acted as they did, and by using terms such as ‘crime’ and ‘fabrication’ you put a barrier between yourself and the writing of history. The great question is, what was Ptolemy’s intention? [Empth in orig.] To act as counsel for the prosecution is not to write history as understood in this journal, even if the facts you submit as part of the case for the prosecution are established by you. . . .

B3 . . . the problem for me has been whether the ingenuity and penetration more than compensated for the a-historical approach . . . [your] arguments have been stated in somewhat different form in your book [R.Newton 1977] . . . [the current paper] is a reply to critics, rather than an announcement of newly researched material.

B4 . . . I feel that I must give priority to other articles under consideration which do present new researches. I apologize once again for the delays, which I would like to think are very atypical of this journal.

B5 I look forward to publication of your researches. Yours sincerely,

-----

5 See below at ¶C10.
6 Compare to ¶B15.
7 For a glimpse of what the JHA’s Editors regard as worthwhile historical analysis, see JHA 1.2 fn in 36.
8 When DR 1st submitted a paper to JHA, response took 11 months. (See also DIO 1.1 § in 15.) What a card.
9 Planting the word “sincerely”, anywhere near Lord H’s fervent wish for more RN researches, requires a special kind of nerve, which evolution has reserved especially for journal-editors. But, aside from questions of frankness, there are here a couple of Catch 22s here that are easily missed:

[a] All relevant Hist.sci journals have printed papers that allegedly show Ptolemy was honest. But if skeptical papers say he was dishonest, they are rejected as unhistorical. (More of Hist.sci.’s kaleidoscopic Bureau of Double Standards: JHA 1.2 fn in 104.) What a neat way to hold a public debate on Ptolemy’s integrity: tape one side’s mouth shut.
[b] If the JHA refuses (¶B4) to print anything except new research, then, in order to publish in the JHA, RN would have been obliged originally to send his novel results (not to the relative security of his own university’s press, at Johns Hopkins, but rather) to an obviously unfriendly journal, whose editorial contains several of the leading enemies of his viewpoint — this while knowing that his discoveries would be privately circulated, unprotected, for perhaps a year of purported refereeing. (Recall: Lord H did not even send the 3 alleged referee reports on RN’s refused paper! Similarly: see JHA 1.2 fn in 6.) So His Lordship’s conveniently-conjured-up criterion represents a neat ploy than immediately meets the eye. It would seem to most of us that journals have another function than publishing new research, which is (DIO 1.2 fn in 20) to permit (nay, encourage) all sides of a controversy to argue their already-published cases in detail in its pages. But the Editor-for-Life is ruling that out. In this case, anyway. (Compare to van der Waerden vs. the JHA’s D.Preeze, around the same time: JHA 11:30-58; 1980.) Of course, the EIL did, understandably, not wish to squander precious JHA pagespace upon the “a-historical” (¶B3) nonsense of RN & DR — e.g., the paper, Rawlins 1999 (entirely new research, the very commodity EIL claims to

1992 April  DIO 2.1 ‡3

Venus:

Ptolemy mean motion =
[a] 0:36,59,25,53,11,28 degr/day
DR solution: 1800°/929°40′ = 540°/785°9′
[b] 0:36,59,25,53,11,28 degr/day
Ptol-Muff solution: 921°8′/14952°2′ = 1105661′/1793424′
[c] 0:36,59,24,58,01,51 degr/day
Moesgaard solution: 360°-84′/1661.5′ = 326592000′/529744391′
[d] 0:36,59,25,07,12,52 degr/day

Mercury:

Ptolemy mean motion =
[a] 3:06,24,06,59,35,50 degr/day
DR solution: 5220°/16802°24′ = 21750°/7001′
[b] 3:06,24,06,59,35,50 degr/day
PtMff sltn: 456726°53′/(147013°13′/2) = 109611452′/35283255′
[c] 3:06,24,06,58,39,48 degr/day
Moesgaard solution: 360°-39′/1291.5′ = 1279152000′/411739921′
[d] 3:06,24,06,59,00,50 degr/day

OK, so the five DR solutions match the Almagest 9.3 mean motions exactly. (And they use smaller factors than the non-fitting competing theories. See especially fn in 25.) BUT — as we’ve also just seen above — lots of top Mufiosa had already (pre-1980) publicly proclaimed solutions (for these same motions) which uniformly failed to fit. (See discussion & full sources at ¶C15 here; and at JHA 1.2 fn in 55, fn 56, ¶F3, & fn 129.) Thus, there was a problem, very simple and purely political: the new solutions were lovely, but the solver was of the worst possible social caste (J.HA 1.2 ¶H2) — top supporter of the hated R.Newton.

So O.Gingerich, himself publisher of one of his clique’s failed solutions (which he agrees privately is false: OG referee report to QJRAS 1983/7/23), suppressed publication of the above perfect-fit solutions (same ref report: see DIO 1.1 ¶ in fn 9). He & his Mufa friends have managed for twelve years to hide from the academic community their own foulups and DR’s [partial] success in this regard. One can only stand in awe of the political savvy & persistence such an achievement has required, given the stark simplicity of the numerical

25 DR’s solution for Venus achieves a perfect fit (6 sexagesimal places) from 4 digit components, while the Ptolemy-Muffa & Moesgaard solutions fail (by the 4th place) even with 7 digit & 9 digit components. See below at ¶C10.
26 Mufisa is not blood-Mufa, though the JHA & co. have attempted to use his work to obscure DR’s. (See also DIO 1.2 fn 126.) I have learned from Moesgaard’s papers. (Indeed, he has contributed various improvements to DR’s own papers . . .) However, this able scholar’s alternate explanations for DR-solved ancient mysteries are rather clverer than the ancients: nothing to be ashamed of! (DR also once [twice — see fn 23 & 24] committed the error of imposing more structure on data than actually resided there: cited DIO 1.1 § in 3C. And his mistake was worse than anything Moesgaard ever did or will do.) Moesgaard is a protégé of a top committed arithmetical detractor of RN-DR (O.Pedersen: see JHA 1.1 fn 11 & 126); & KM was among those scholars who circulated (starting 1980) continued-fraction-style solutions of the origin of Eratosthenes’ obliquity (11/83 semicircle) — shortly after DR transmitted the first continued-fraction solution (for Eratosthenes’ precision) to various archons here & abroad (1979/83/1 & days following). But, while KM had highly original twists to his solution & was innocently open about his paper (even mailing DR a pre-publication copy without being asked to), DR. To the contrary, I am humbled as I watch Mufa tactical skills, e.g., scofing at the eminent physicist R.Newton.
27 If “hate” seems too strong an expression, consult ¶G3. And his mistake was perhaps a year of purported refereeing. (Recall: Lord H did not even send the 3 alleged referee reports on RN’s refused paper! Similarly: see ¶C3. And his mistake was of RN & DR — e.g., the banned paper, Rawlins 1999 (entirely new research, the very commodity EfL claims to
28 As is clear from DIO 1.1 ¶ in 3C (¶16 & fn 3), & fn 17 in 3. I do not regard the Mufisa as less intelligent than DR. To the contrary, I am humbled as I watch Mufia tactical skills, e.g., scofing at the eminent physicist R.Newton.
Saturn:

Ptolemy mean motion =
[a] 0;57,07,43,43,40 degr/day

DR solution: 205200/215513h = 0;57,07,43,43,40 degr/day

Ptol-Muff solution: 126711/27/(133079)3/4 = 2542327/2661595 degr/day

[c] 0;57,07,43,44,18 degr/day

Moegaard solution: 360°-880/(11267M) = 3421440000/3593395577 degr/day

[b] 0;57,07,43,42,10,05 degr/day

Jupiter:

Ptolemy mean motion =
[a] 0;54,09,02,46,26 degr/day

DR solution: 23400/11267 degr/day

Ptol-Muff solution: 124305°45113732°23h = 2983338°/3305591 degr/day

[c] 0;54,09,02,45,09 degr/day

Moegaard solution: 360°-199/(2688M) = 2014875°/2232517 degr/day

[d] 0;54,09,02,44,55 degr/day

Mars:

Ptolemy mean motion =
[a] 0;27,41,40,19,20,58 degr/day

DR solution: 103684°/(224630°/82/335) = 152145°/329621 degr/day

Ptol-Muff solution: 69181°435149/8812/3 = 4159090°/8992900 degr/day

[c] 0;27,41,19,28,07 degr/day

Moegaard solution: 360°-90/(2377M) = 349920000°/75809887 degr/day

[d] 0;27,41,40,19,51,55 degr/day


22 This common sexagesimal notation expresses a daily motion (in degrees) of: 0 + 57/60 + 07/60 + 43/60 + etc. — i.e., each denominator is 60 to a power equal to its position in the sexagesimal display.

23 Note added 2003. DR’s 1980 Jupiter solution was originally presented here (with inexcusable carelessness: DIO 11.2 [4 in 26] as a high-odds fit. In 2003, Alex Jones found the actual solution, accounting even for the final place’s zero, which DR had mistakenly attributed to CanInscr rounding. (See ibid eq.45.)

24 DR’s Mars numerator & denominator not in extant texts, but circulated by DR in 1980, years before realization [1982] of integral period-relationship (fn 14). [Note added 2003. This attractively neat Mars theory turned out to be false, since A.Jones discovered (2003 Sept) another perfectly-fitting solution which (unlike DR’s) was largely based upon attested numbers. See DIO 11.2 (2003) p.30 & §14 fn 21.] (For the simple integral-sideral grandfather Mars period-relationship [still valid], see fn 21.)

B6 In brief, the JHA’s Editor-for-Life has told RN that the JHA cannot publish a paper which does not explain Ptolemy’s intent (JHA’s own emphasis), that being the “essence of history of science”. Let us call this argument “BLACK”, and next turn to the JHA’s promulgation of “WHITE”. (See also DIO 1.2 fn 15.) Emphases are added:

To: Dr. R.R.Newton, Johns Hopkins U, Applied Physics Lab

1983/6/21 From: O.Gingerich, Harvard College Observatory, Smithsonian Astrophysical Observatory.

B7 . . . I have just returned from a small conference in Aarhus, Denmark. Dennis Rawlinx was there, and his [1983/6/4] announcement that Ptolemy had reported [DR: reported observing] the same greatest elongation of Venus for two separate dates created quite a debate. [DR: OG’s exact 1983/6/6 term was “brawl”].

Dennis hoped that this would convince us all finally that Ptolemy was indeed a fraud, whereas he promptly discovered that while everyone thought his discovery to be fascinating, the question of Ptolemy’s moral uprightness or turpitude was ruled out of bounds for legitimate history of science, given our inadequate understanding of Ptolemy’s intentions in writing the [Almajest] or the expectations of his age.

B8 Sooo, let’s see. The Univ Cambridge’s JHA Editor-for-Life says (§B6) that finding Ptolemy’s intent represents the “essence” of Hist.sci — while the JHA’s now-#2 Editor (Harvard OG) says evaluating Ptolemy’s intent is “out of bounds” (§B7). We conclude that the vast editorial-expertise mind-behind the Journal for the History of Astronomy has succeeded in kicking the essence of the JHA right out of the JHA. Logical as usual, Governor.
C The Doctor Is In

C1 The foregoing may seem bizarre. But it seems almost sane, compared to the history to be described in this next section. And it is best to commence our account with a sober reminder: though this is a personal experience, the ultimate loser from the misbehavior here documented is not DR. The prime losers are: [a] Other modern scholars, whose freedom has been eroded out. [b] The public, which is being taught to discount scholars who are palming off fake knowledge on that very public. (DIO argues the case that Hist.sci grants are justified — but merely asks that our public be permitted to have the appropriate paternal and moral satisfaction of being thanked, for grants which are largely charity, not reward.) [c] The ancient scholars who genuinely observed, computed, and created the intellectual advances that are our scientific forebears of today’s archons. (i.e., certain modern scholars are suppressing the very research which exposes ancient suppressions of appropriate credit. It would be hard even to invent a more ironic situation.)

C2 As described in DIO 1.1 (§1 fn 9), the QRoy Astr Soc in 1983 appointed Ptolemy-p. man O Gingerich (whose decades of assiduous catering to the right archons has definitely rendered him: In) as sole referee of a paper by DR (who is proud to be Out, with the very same archons). This DR paper traced all 5 of Ptolemy’s hitherto-unosed planet synodic daily mean motions (Almajest 9.3) back to simple integral period relations (all 5 listed here in fn 17). In each of the 5 cases, the DR solution explained the Ptolemy daily mean motion down to the last sexagesimal place displayed. — i.e., about one 50 billionth of a degree precision for 4 planets; down to the 5th place for Jupiter’s motion (only attested to the 5th sexagesimal place: see fn 23), merely a billionth of a degree precision. Most [All! See fn 23&24] of the degree/days ratios’ components turned out to be numbers found right in the Almajest 9.3 discussion! (Unknown until DR sent15 solutions [3 of them historically correct] to the Journal for the History of Astronomy’s #2 Editor, O Gingerich, on 1980/4/13: see letter’s text, below at §C6.) The degrees/days components which produce precisely the longterm predecessor (found 1982) were then unknown: (1) the longterm predecessor (found 1982) were then unknown: [2] = 313 314 synodic revs = 324 sidereal yrs. Venus: 803 heliocentric revs = 391 sidereal revs = 427 sidereal yrs.

15 I well recall my own pre-DIO difficulties. But now, serial-disappointment at archival shortcomings is counter-balanced by: [i] the bliss of publication without censorship, [ii] the pleasure of my continuing good fortune in making serious & contributory discoveries (DIO 1.3 constitutes a precious cluster), and [iii] the educational plight spent chronicing the archons whose irresponsible antics make possible our readers’ enjoyment of the J.HA.

16 The longterm predecessor (relations (found 1982) were then unknown, but the prime factors of all 5 planets degrees/days motions were given in the 1980/4/13 letter, and those which related to the Almajest 9.3 attested numbers were also (306) listed. The Mars numerator (288° + 4°, later appearing in Rawlins 1987 p.237, was also provided, though I’d not yet noticed (j6c here) the seeming confirmation (noted in 1982) that the Mars denominator (2243630281335) also exhibited a 4° excess, over 615 ancient tropical (Metonic) years. [This misled DR to suppose Jupiter’s period relation in the geocentric/bible Almajest was integral in heliocentric not synodic revs. Oddly, helioc. turn out to be the basis after all: see Alex Jones’ (correct) inversion of DR’s misuse at DIO 11.24 fn 20.)

The Mullis cartula was offered to DIO readers at DIO 1.2 §11 [§C5-c13 etc. It comprises, e.g., O.Toomer (BrownU), A.Abade (Yale), N.C.Swerdlow (Chicago), B.Goldstein (Pitts). Its satellites include O.Gingerich (Harvard) & O.Grailhoff (Hamburg). See also J.HA 1.2 e.g., fn 13. Mullis’ attitude of unalloyed contempt (usually entailing just nitpicking) towards the ancient astronomical work of R.Newton-DR is largely peculiar to the Mullis itself. RN-DR historical research has long been published in leading academic forums (see J.HA 1.2 §14); it has been respectfully (& far from uncritically) cited by, e.g., W.Hartner (Frankfurt), K.Moensgaard (Aarhus), B.van der Waerden (Zürich), C.Wisneski (Yale), B.Goldstein (Va-Indians), S.Goldstein (Chicago), J.Carlson (MC), K.Moensgaard (Aarhus). I intendvenues, as well as the other consulting members of the Hist.sci community has aspired to the elevation of an arrogant & intolerant cult to the status of Dominant Experts — who lend an air of current pseudounanimity to their cultish views — is less logical than sociological. I suppose one could be depressed by the spectacle of academe effectively saying: either it doesn’t mind, or it actively approves, evolution via cohesive noncitation and slander towards any dissent (as well as suppressing DR’s 1983 paper presenting them, while O.G’s correspondent Toomer proceeded to publish most (3/5) of them first: 1984 Almajest App.C. (Luckily, RN had gotten all of these 3 DR results into print before then.)

17 The untested Mars solution’s ancestry is traced (back to the same sort of simple period relation which underlies each of the other 4 planet’s motions) on p.237 of DIO 1.2 §14. The finding relation (303 synodic revs = 647 sid yrs) is the most accurate possible sub-millennial period-relation for Mars.

C3 I provide, below, for each planet: [a] Ptolemy’s tabular synodic mean motion; [b] the DR solution;17 [c] the Ptolemy solutions long promoted by the Neugebauer-Mufa (§C4), helpfully tabulated by Toomer 1984 (now realizing at last that the Ptolemy solutions are false, Toomer 1984 p.672 says the tables’ origin is probably unknown); [d] the K.Moensgaard solution (for source & J.HA’s promotion of it, see DIO 1.2 §H3), based on hypothetical ancient adoption of an untested month M (29°31’50° = 318931°10800). I draw particular attention to the Ptolemy-Mars solution [c], since Gingerich 1981 pp.41-42 falsely insisted it matched the tabular18 value (Mars motion [a], below) even after R.Newton had specifically warned OG it didn’t check arithmetically (the late RN was the very first to point out DR had been using to his upcoming paper. (Gingerich 1980. 0 had sent DR a prepublication copy for comment.) OG has (publicly) stuck to this story for years. (Also key to maintaining the pretense, OG & the J.RAS’s Editor David Hughes later — as noted at §C2 & §C4 — suppressed DR’s much better-fitting [but also false!] solution: below, Mars item [b].) The comparisons for all 5 planets follow. (Every attested19 number is italicized.)

by Toomer 1984 p.672 (though naturally with no credit to DR, who first proved this truth, via the math of §C3 here). But in truth, to us: one smiles at 1991: highly ideologically uniform. Experts — which lends an air of current pseudounanimity to their cultish views — is less logical than sociological. I suppose one could be depressed by the spectacle of academe effectively saying: either it doesn’t mind, or it actively approves, evolution via cohesive noncitation and slander towards any dissent (as well as suppressing DR’s 1983 paper presenting them, while O.G’s correspondent Toomer proceeded to publish most (3/5) of them first: 1984 Almajest App.C. (Luckily, RN had gotten all of these 3 DR results into print before then.)