

# Der Komet 103P/Hartley im Jahre 2023

## berechnet für den Standort Mitteldeutschland

### Die Bahnelemente:

|                                 |                         |
|---------------------------------|-------------------------|
| Periheldurchgang                | 2023-Oktober-13.3568000 |
| Bahnezentrizität                | 0.6929330               |
| Periheldistanz                  | 1.0675500 aE            |
| große halbe Bahnachse           | 3.476603 aE             |
| Umlaufzeit in Jahren            | 6.482475                |
| Länge des aufsteigenden Knotens | 219.727500 Grad         |
| Perihellänge                    | 181.293600 Grad         |
| Bahnneigung                     | 13.594200 Grad          |
| Grundhelligkeit                 | 8.5 mag.                |
| Luminiszenzfaktor               | 8.00                    |

### Details zur Sichtbarkeit

|                    |                          |
|--------------------|--------------------------|
| größte Sonnennähe: | 1.06757 aE am 13.10.2023 |
| größte Erdnähe :   | 0.37083 aE am 28.09.2023 |
| größte Helligkeit: | 7.0 am 07.10.2023        |

Grenzgröße der Analyse: 12.0

ab 20.07.2023 morgens sichtbar mit Helligkeit 12.0  
positioniert im Sternbild PEG, Helligkeit 12.0

ab 02.08.2023 Übergang ins Sternbild AND, Helligkeit 10.9

ab 22.08.2023 zirkumpolar mit Helligkeit 9.2

ab 02.09.2023 Übergang ins Sternbild PER, Helligkeit 8.4

ab 19.09.2023 Übergang ins Sternbild AUR, Helligkeit 7.4

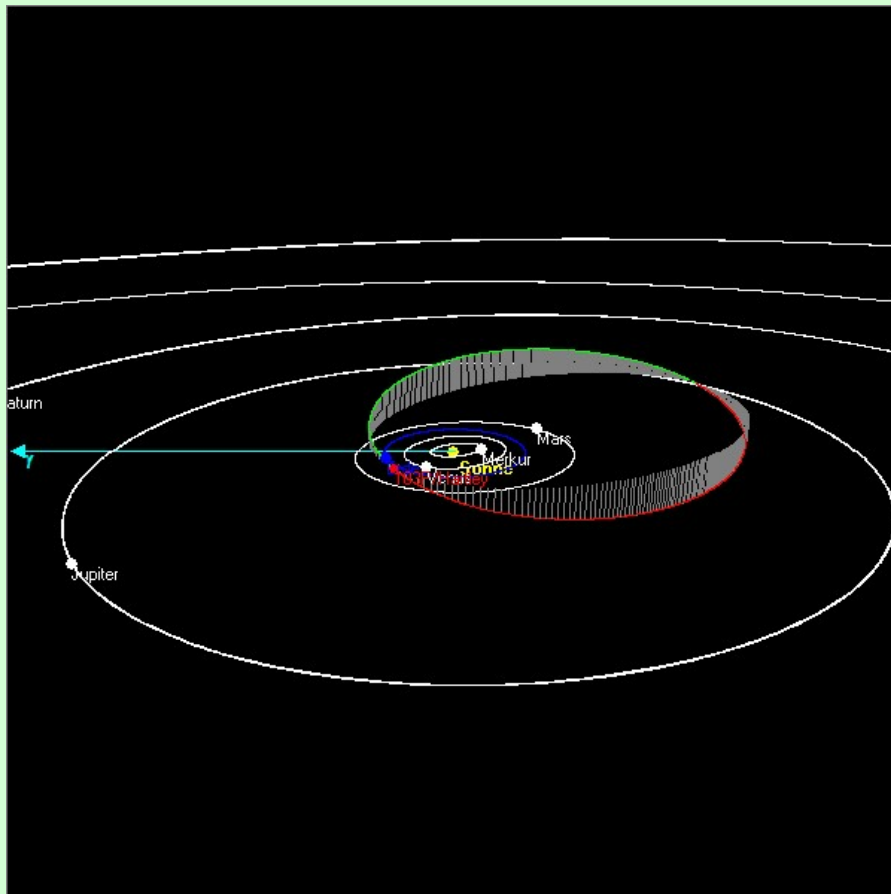
ab 21.09.2023 morgens sichtbar mit Helligkeit 7.3

ab 04.10.2023 Übergang ins Sternbild GEM, Helligkeit 7.0

ab 22.10.2023 Übergang ins Sternbild CNC, Helligkeit 7.2

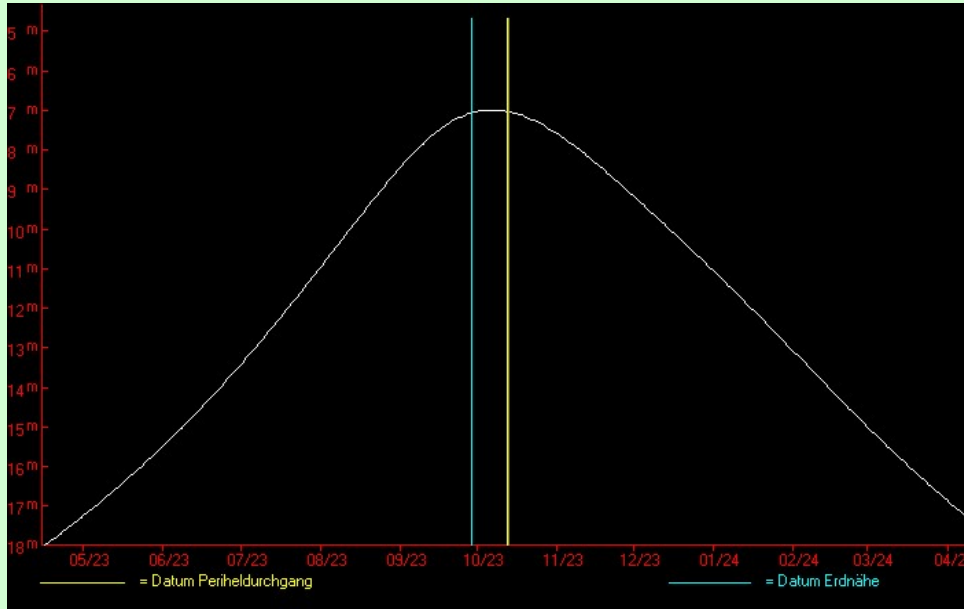
ab 01.11.2023 Übergang ins Sternbild HYA, Helligkeit 7.6

ab 13.01.2024 Übergang ins Sternbild PUP, Helligkeit 11.8

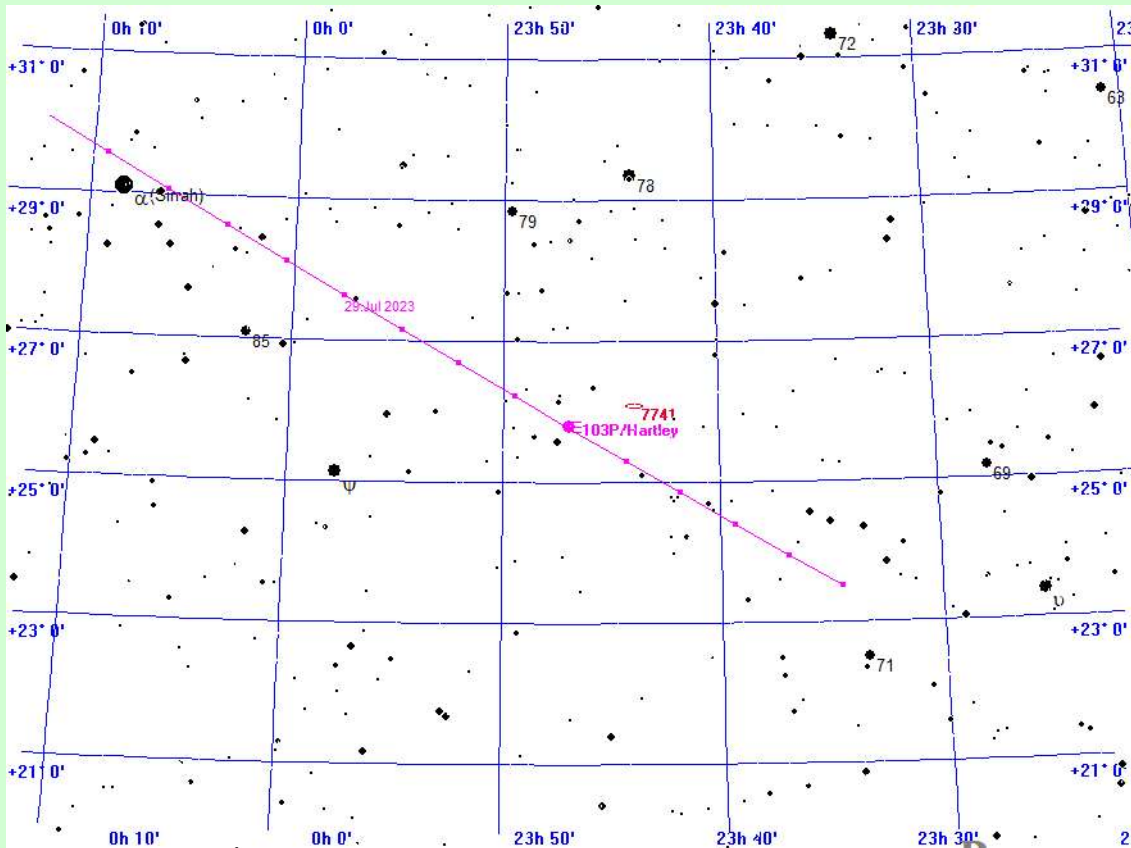


Die Bahn des Kometen 103P/Hartley

# Der Komet 103P/Hartley im Jahre 2023 berechnet für den Standort Mitteldeutschland



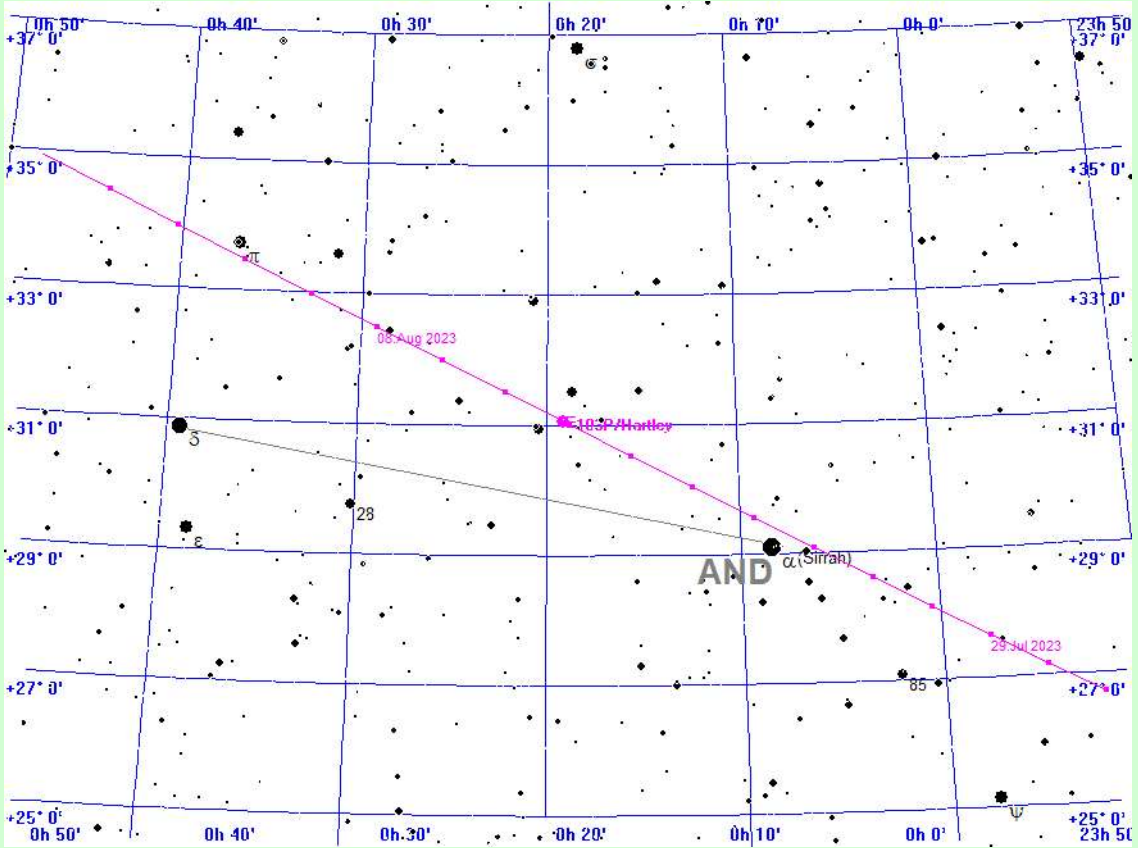
Die Lichtkurve des Kometen 103P/Hartley



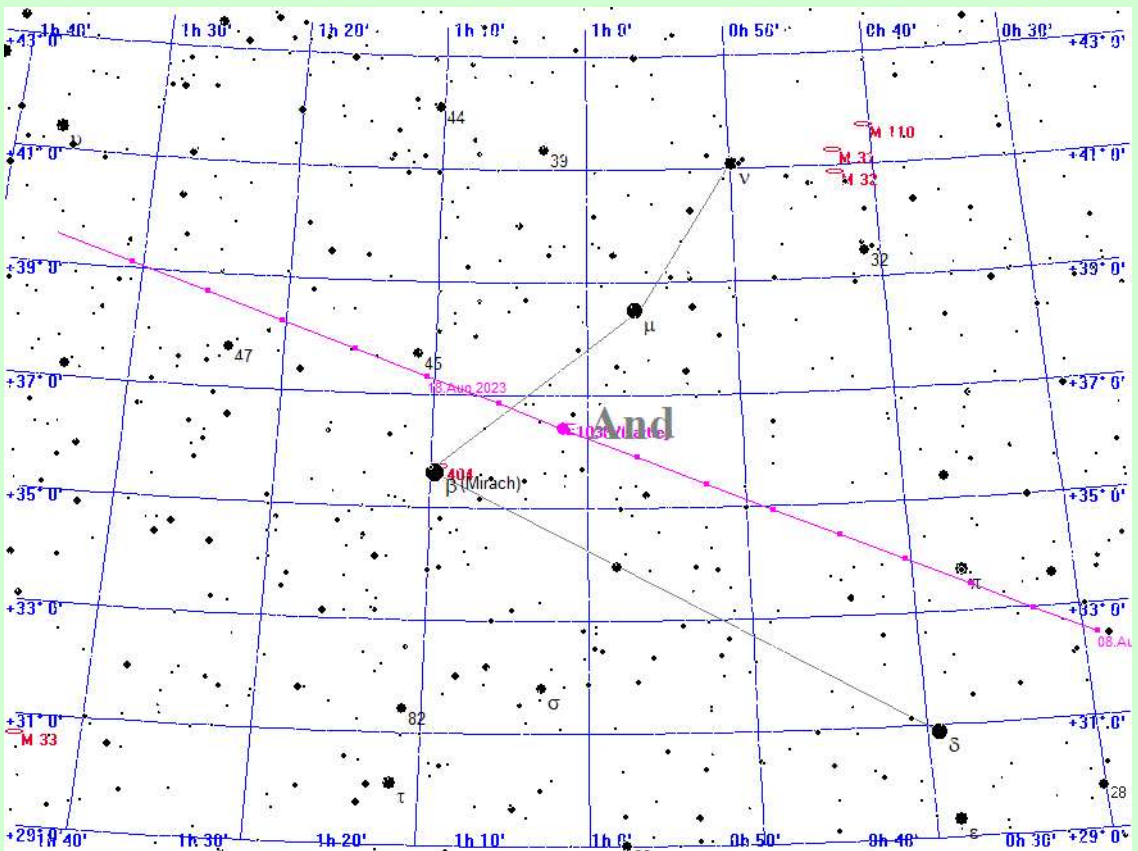
103P/Hartley am 25.7.2023

# Der Komet 103P/Hartley im Jahre 2023

## berechnet für den Standort Mitteldeutschland



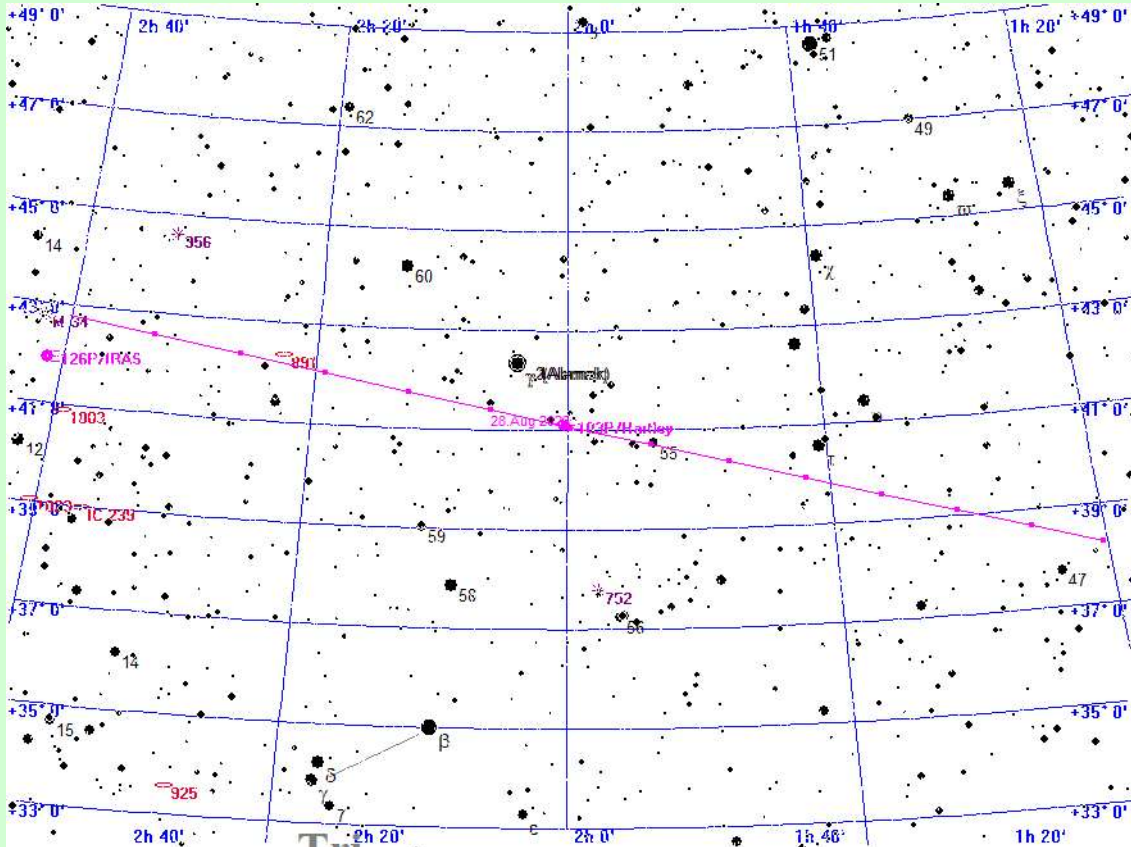
103P/Hartley am 5.8.2023



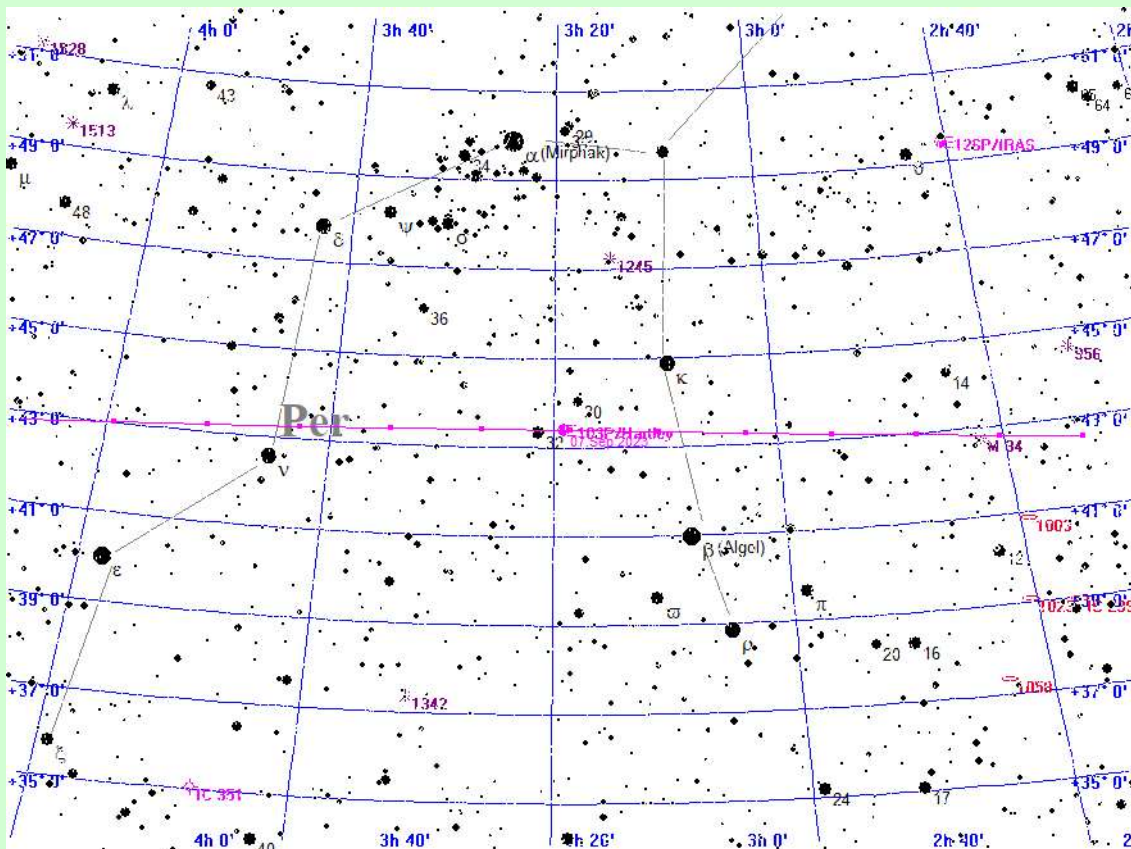
103P/Hartley am 16.8.2023

# Der Komet 103P/Hartley im Jahre 2023

## berechnet für den Standort Mitteldeutschland

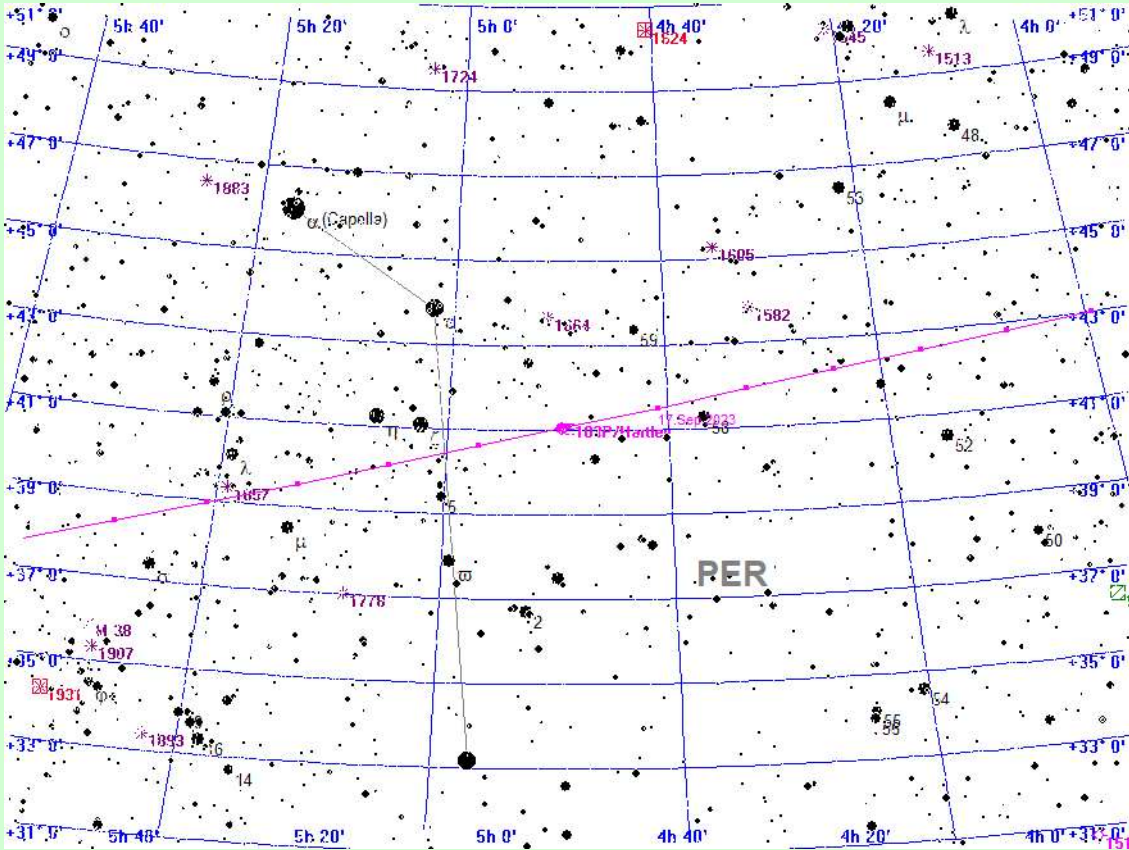


103P/Hartley am 27.8.2023

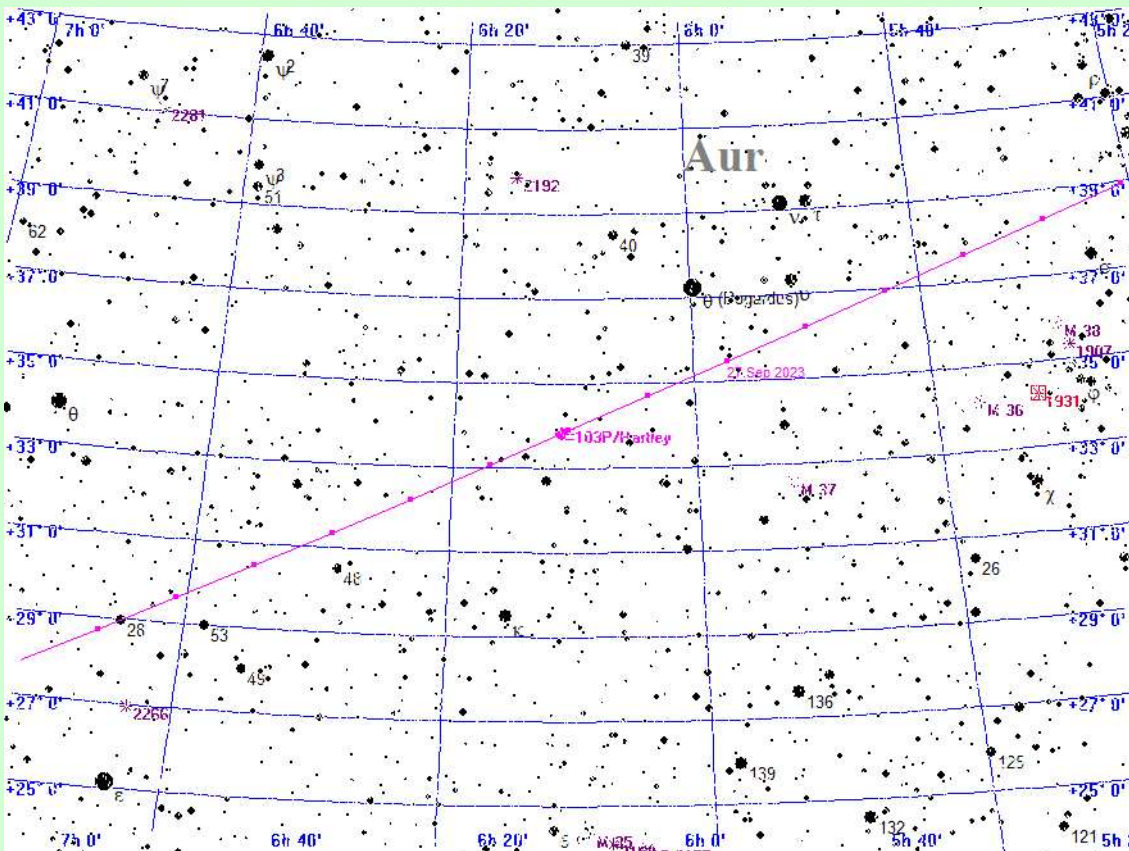


103P/Hartley am 7.9.2023

# Der Komet 103P/Hartley im Jahre 2023 berechnet für den Standort Mitteldeutschland



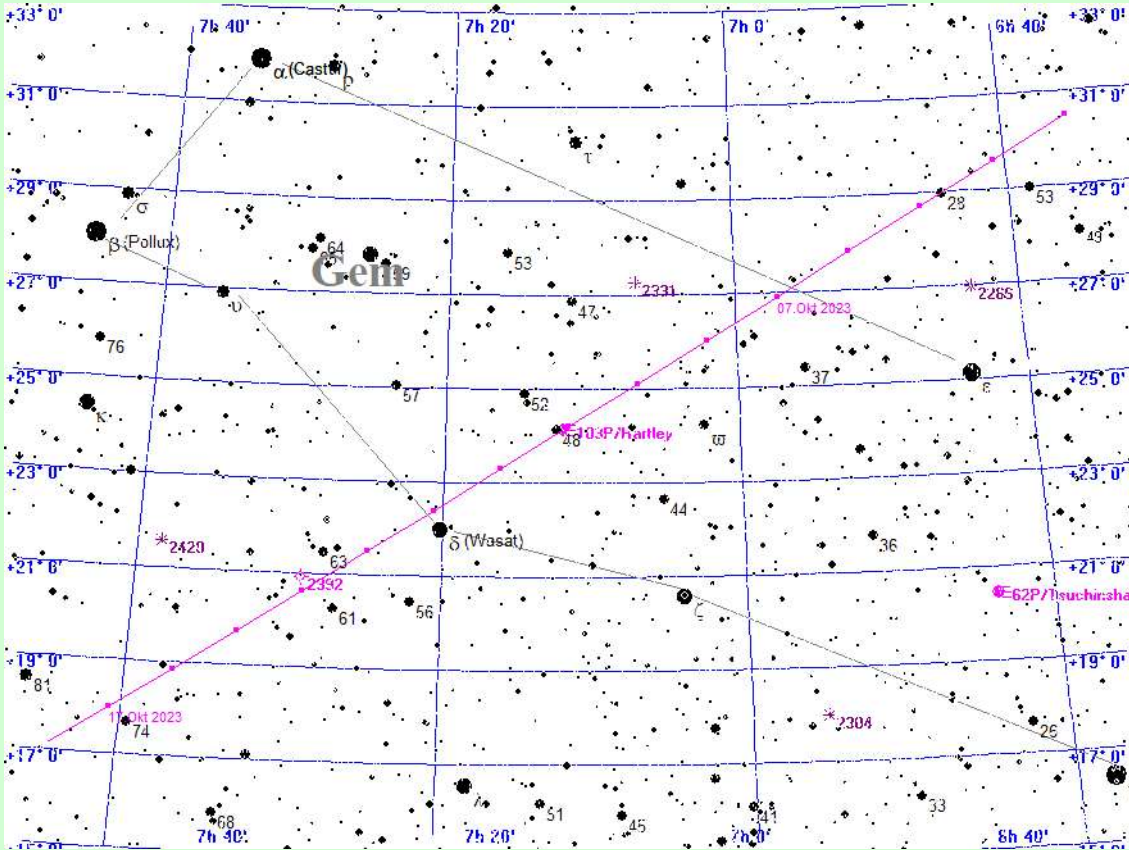
103P/Hartley am 18.9.2023



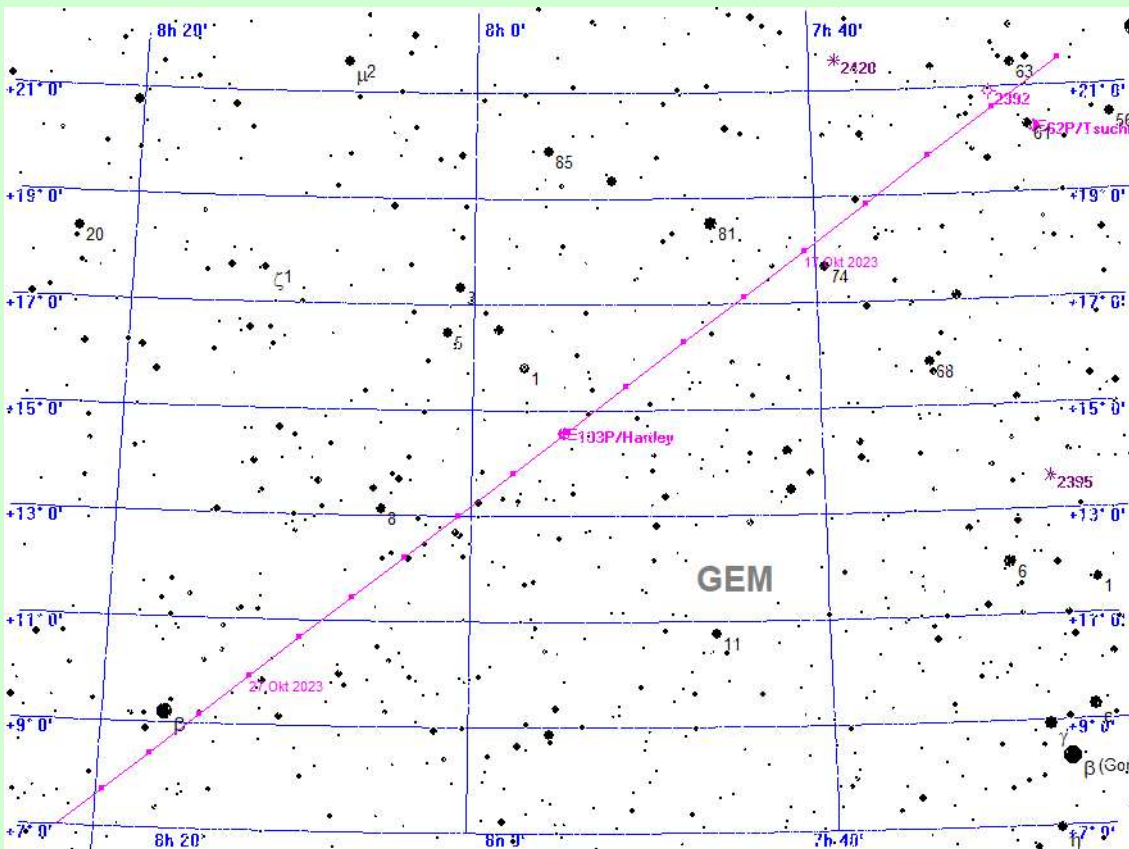
103P/Hartley am 29.9.2023

# Der Komet 103P/Hartley im Jahre 2023

## berechnet für den Standort Mitteldeutschland



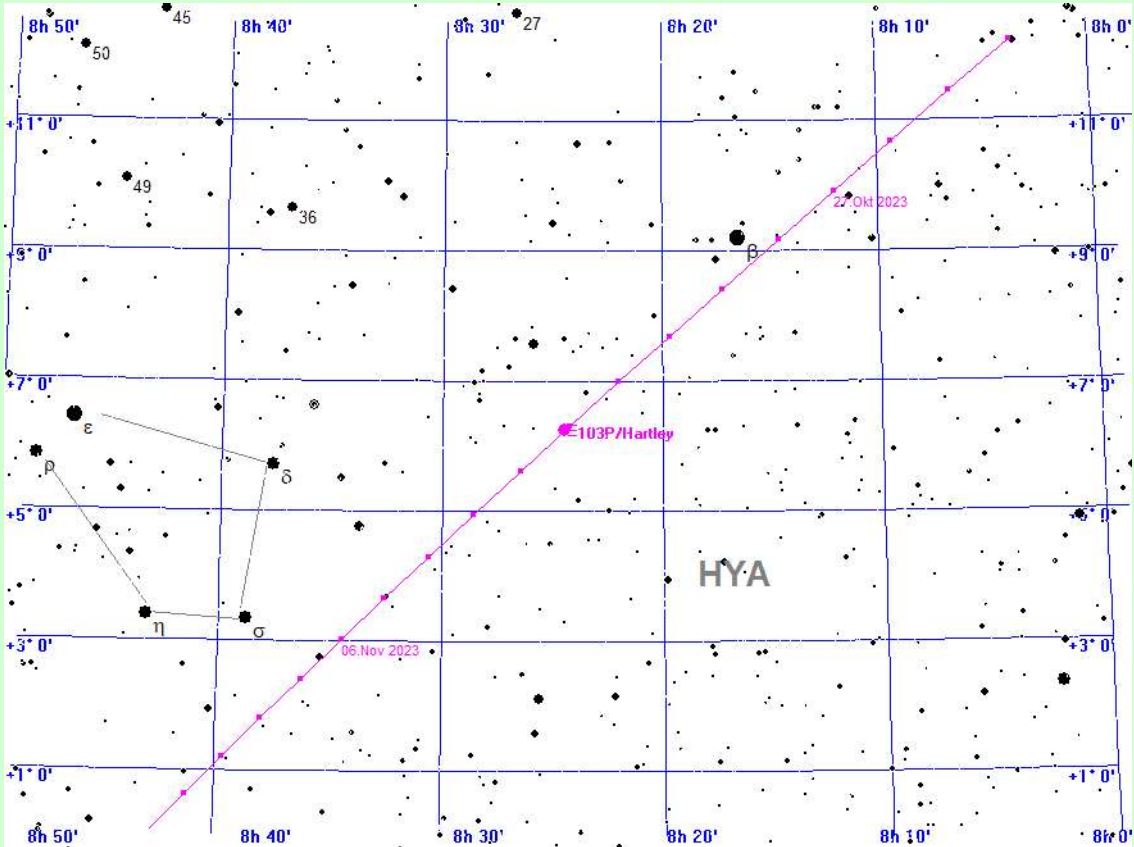
103P/Hartley am 10.10.2023



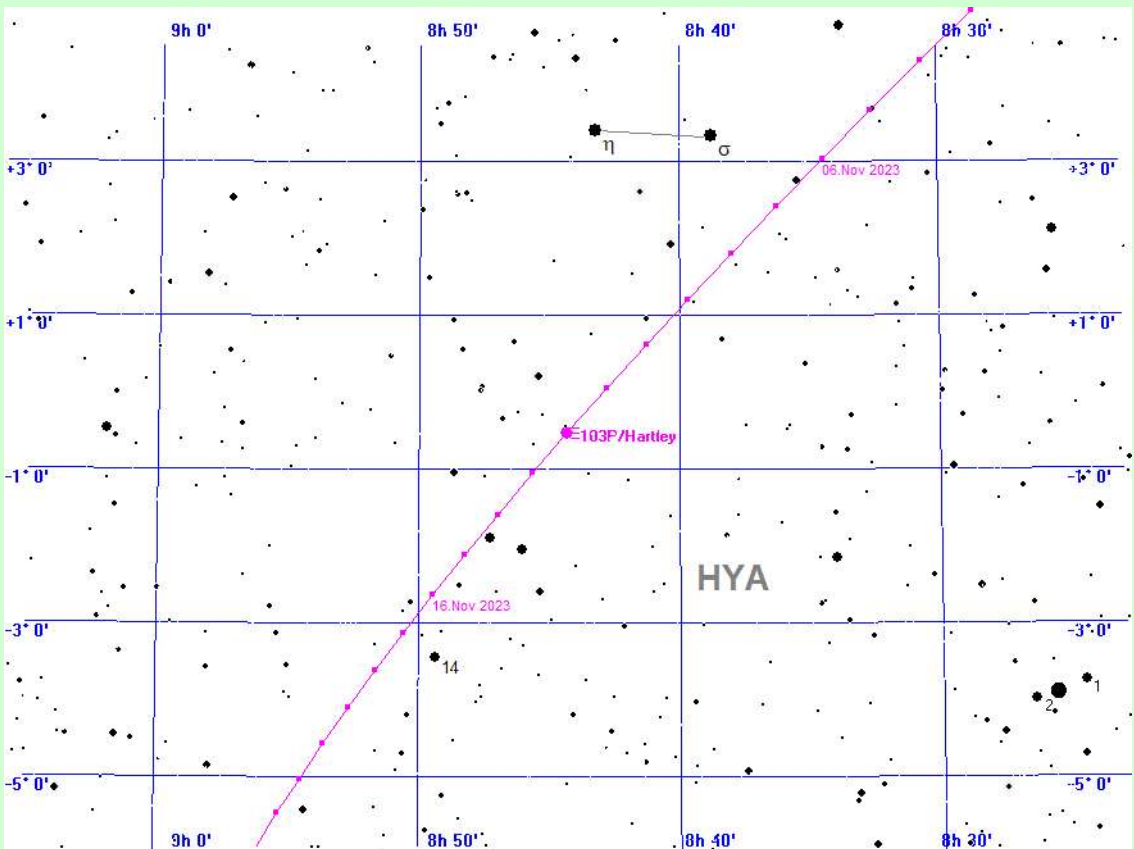
103P/Hartley am 21.10.2023

# Der Komet 103P/Hartley im Jahre 2023

## berechnet für den Standort Mitteldeutschland



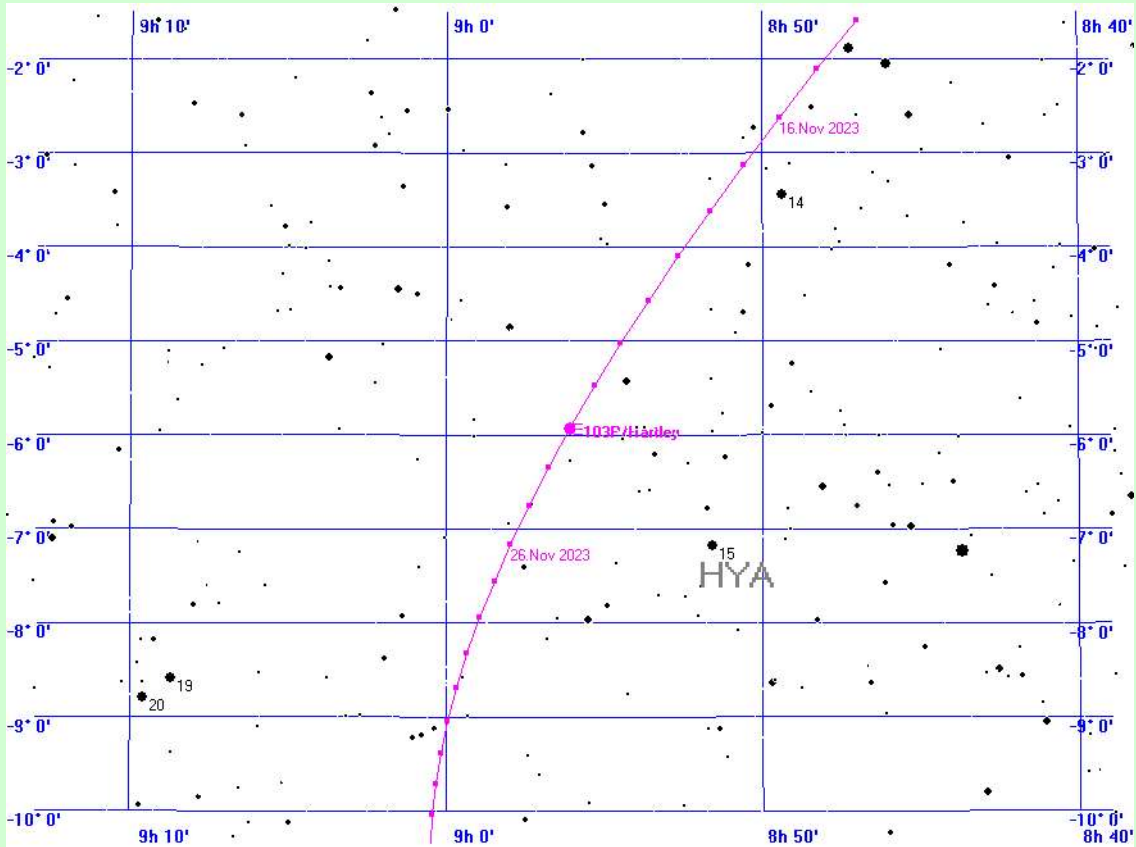
103P/Hartley am 1.11.2023



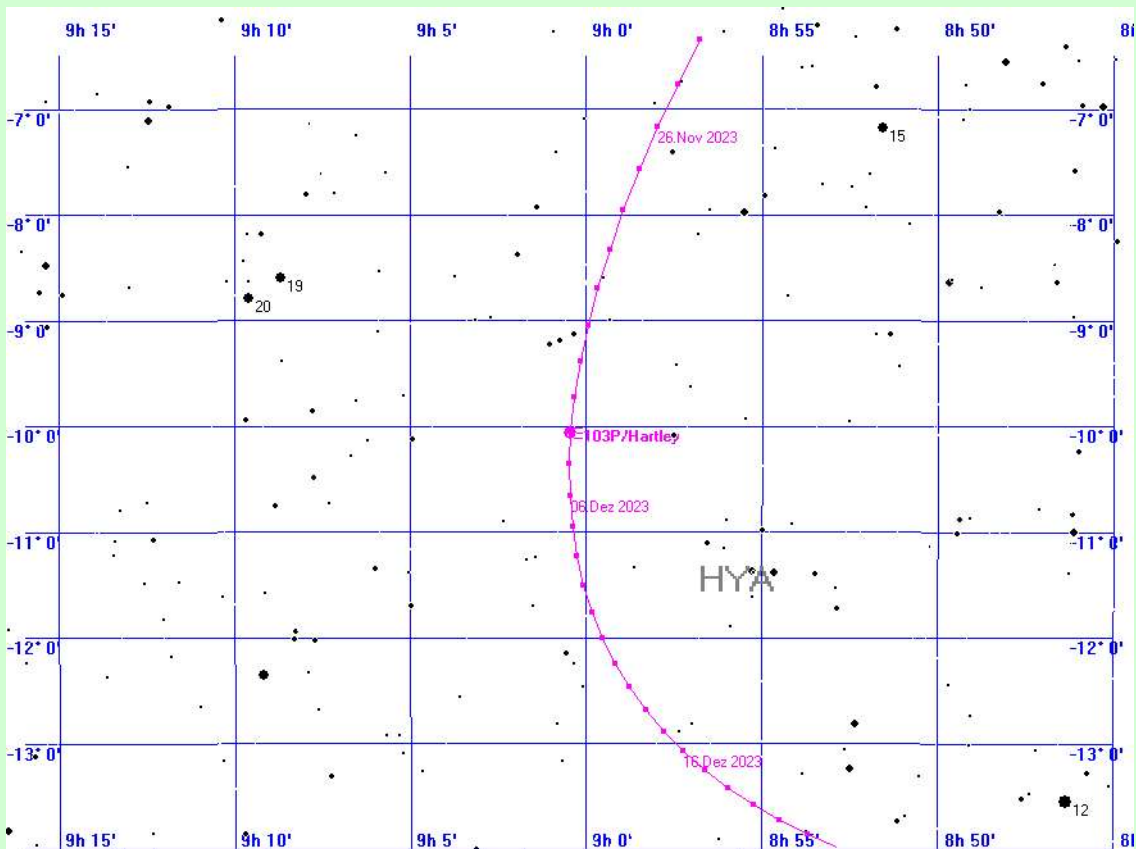
103P/Hartley am 12.11.2023

# Der Komet 103P/Hartley im Jahre 2023

## berechnet für den Standort Mitteldeutschland



103P/Hartley am 23.11.2023

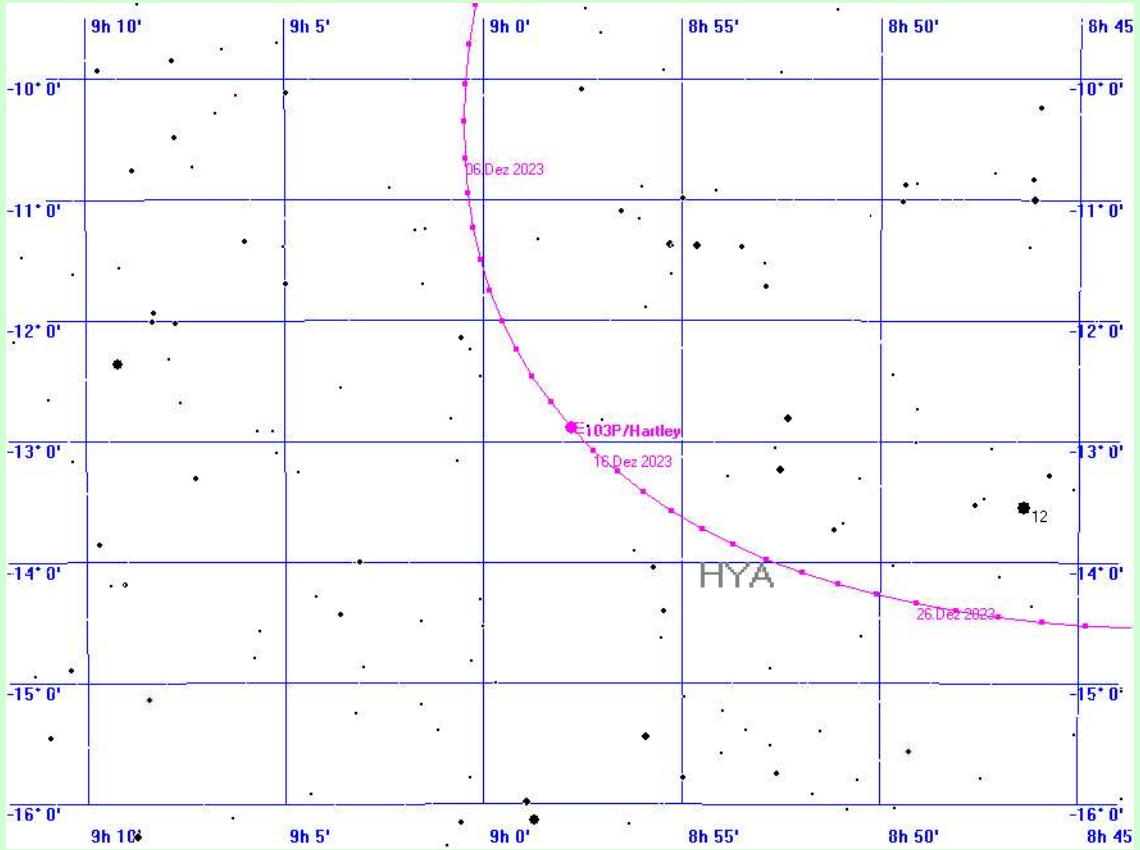


103P/Hartley am 4.12.2023

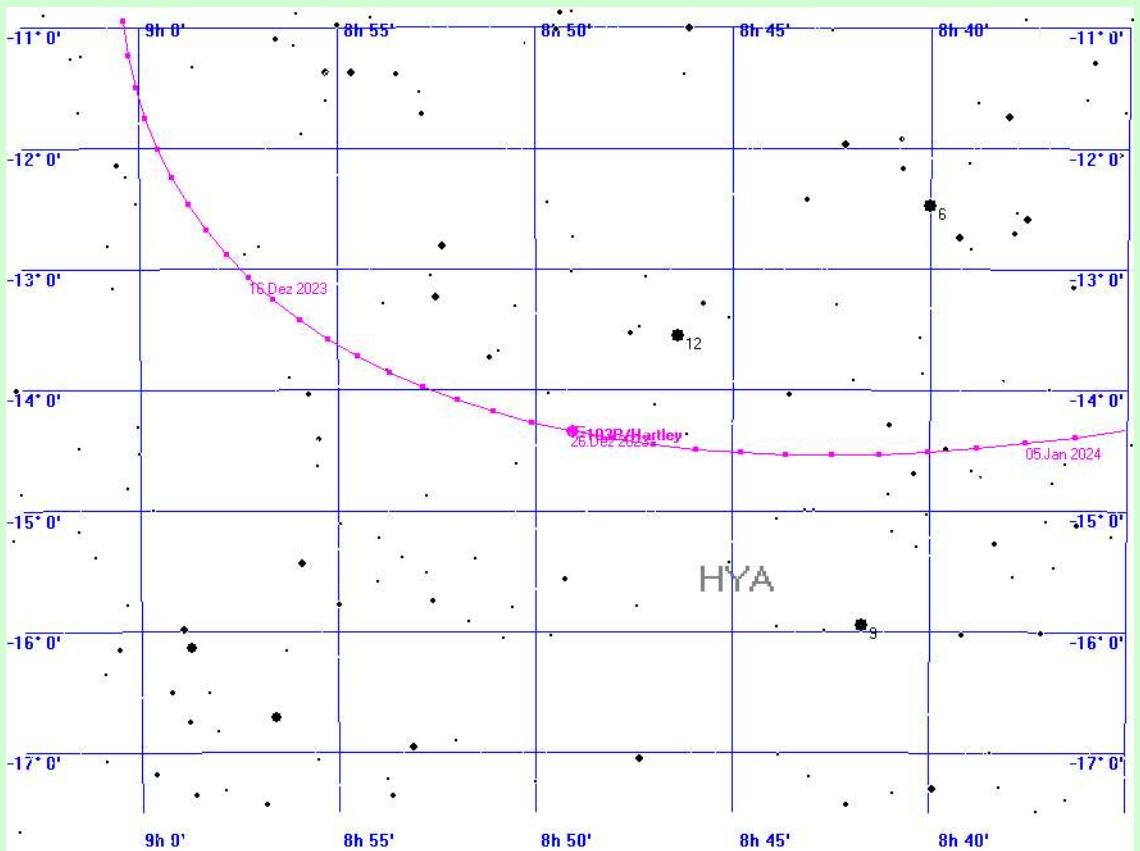


# Der Komet 103P/Hartley im Jahre 2023

## berechnet für den Standort Mitteldeutschland

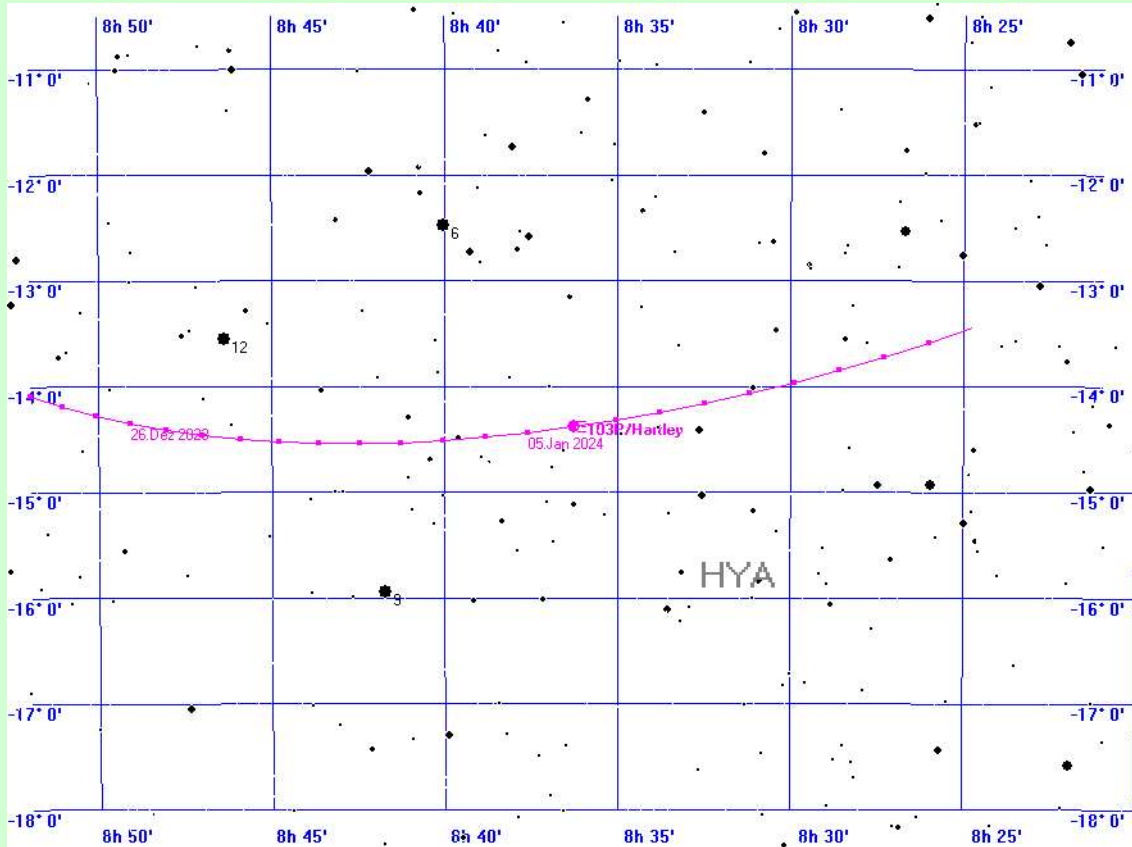


103P/Hartley am 15.12.2023



103P/Hartley am 26.12.2023

# Der Komet 103P/Hartley im Jahre 2023 berechnet für den Standort Mitteldeutschland



103P/Hartley am 6.1.2024

# Der Komet 103P/Hartley im Jahre 2023

## berechnet für den Standort Mitteldeutschland

### Ephemeride und Konjunktionen des Kometen 103P/Hartley

| Datum   | Rektaszens. | Deklination  | r        | Delta    | Hell. | Aufg. | Untg. | TOpt. | Höhe | Azi | Stb |
|---|-------------|--------------|----------|----------|-------|-------|-------|-------|------|-----|-----|
| Do. 20. Jul 2023  | 23h34'33.5" | +23°29'59.9" | 1.546 aE | 0.862 aE | 12.0  | 20:52 | 13:16 | 03:31 | +58° | SO  | PEG |
| 23:59 Konjunktion mit BD+23 4769, Helligkeit 6.4, Distanz 39.3'                     |             |              |          |          |       |       |       |       |      |     |     |
| Fr. 21. Jul 2023  | 23h36'55.6" | +23°56'45.5" | 1.537 aE | 0.850 aE | 11.9  | 20:47 | 13:17 | 03:34 | +59° | SO  | PEG |
| 23:59 Konjunktion mit NGC 7741, Galaxie, Helligkeit 11.7, Größe 4.5', Distanz 2.0°  |             |              |          |          |       |       |       |       |      |     |     |
| 03:34 Konjunktion mit BD+23 4769, Helligkeit 6.4, Distanz 37.7'                     |             |              |          |          |       |       |       |       |      |     |     |
| Sa. 22. Jul 2023  | 23h39'20.3" | +24°23'43.7" | 1.529 aE | 0.837 aE | 11.8  | 20:42 | 13:19 | 03:36 | +60° | SO  | PEG |
| 23:59 Konjunktion mit NGC 7741, Galaxie, Helligkeit 11.7, Größe 4.5', Distanz 1.3°  |             |              |          |          |       |       |       |       |      |     |     |
| 00:00 Konjunktion mit BD+23 4769, Helligkeit 6.4, Distanz 47.5'                     |             |              |          |          |       |       |       |       |      |     |     |
| So. 23. Jul 2023  | 23h41'47.6" | +24°50'54.2" | 1.520 aE | 0.825 aE | 11.7  | 20:38 | 13:21 | 03:38 | +60° | SO  | PEG |
| 23:59 Konjunktion mit NGC 7741, Galaxie, Helligkeit 11.7, Größe 4.5', Distanz 46.5' |             |              |          |          |       |       |       |       |      |     |     |
| Mo. 24. Jul 2023  | 23h44'17.6" | +25°18'17.0" | 1.512 aE | 0.812 aE | 11.6  | 20:33 | 13:23 | 03:40 | +61° | SO  | PEG |
| 23:11 Konjunktion mit NGC 7741, Galaxie, Helligkeit 11.7, Größe 4.5', Distanz 43.2' |             |              |          |          |       |       |       |       |      |     |     |
| Di. 25. Jul 2023  | 23h46'50.6" | +25°45'51.7" | 1.503 aE | 0.800 aE | 11.6  | 20:28 | 13:25 | 03:43 | +62° | SO  | PEG |
| 00:00 Konjunktion mit NGC 7741, Galaxie, Helligkeit 11.7, Größe 4.5', Distanz 43.8' |             |              |          |          |       |       |       |       |      |     |     |
| Mi. 26. Jul 2023  | 23h49'26.6" | +26°13'38.0" | 1.495 aE | 0.788 aE | 11.5  | 20:23 | 13:27 | 03:45 | +63° | SO  | PEG |
| 00:00 Konjunktion mit NGC 7741, Galaxie, Helligkeit 11.7, Größe 4.5', Distanz 1.3°  |             |              |          |          |       |       |       |       |      |     |     |
| Do. 27. Jul 2023  | 23h52' 5.7" | +26°41'35.8" | 1.486 aE | 0.776 aE | 11.4  | 20:19 | 13:29 | 03:47 | +63° | SO  | PEG |
| 00:00 Konjunktion mit NGC 7741, Galaxie, Helligkeit 11.7, Größe 4.5', Distanz 1.9°  |             |              |          |          |       |       |       |       |      |     |     |
| Fr. 28. Jul 2023  | 23h54'48.2" | +27° 9'44.7" | 1.478 aE | 0.764 aE | 11.3  | 20:14 | 13:32 | 03:50 | +64° | SO  | PEG |
| Sa. 29. Jul 2023  | 23h57'34.2" | +27°38' 4.3" | 1.470 aE | 0.753 aE | 11.2  | 20:09 | 13:34 | 03:52 | +65° | SO  | PEG |
| So. 30. Jul 2023  | 0h 0'23.9"  | +28° 6'34.1" | 1.461 aE | 0.741 aE | 11.1  | 20:04 | 13:37 | 03:54 | +66° | SO  | PEG |
| 23:59 Konjunktion mit BD+28 4704, Helligkeit 6.1, Distanz 50.9'                     |             |              |          |          |       |       |       |       |      |     |     |
| Mo. 31. Jul 2023  | 0h 3'17.5"  | +28°35'13.8" | 1.453 aE | 0.730 aE | 11.1  | 19:59 | 13:40 | 03:56 | +66° | SO  | PEG |
| 23:59 Konjunktion mit BD+28 4704, Helligkeit 6.1, Distanz 5.5'                      |             |              |          |          |       |       |       |       |      |     |     |
| Di. 01. Aug 2023  | 0h 6'15.1"  | +29° 4' 2.6" | 1.445 aE | 0.719 aE | 11.0  | 19:54 | 13:43 | 03:59 | +67° | SO  | PEG |
| 01:03 Konjunktion mit BD+28 4704, Helligkeit 6.1, Distanz 5.0'                      |             |              |          |          |       |       |       |       |      |     |     |
| Mi. 02. Aug 2023  | 0h 9'16.9"  | +29°33' 0.0" | 1.436 aE | 0.708 aE | 10.9  | 19:49 | 13:47 | 04:01 | +68° | SO  | AND |
| 00:00 Konjunktion mit Alpha AND, Helligkeit 2.1, Distanz 29.9'                      |             |              |          |          |       |       |       |       |      |     |     |
| Do. 03. Aug 2023  | 0h12'23.1"  | +30° 2' 5.3" | 1.428 aE | 0.697 aE | 10.8  | 19:43 | 13:50 | 04:03 | +68° | SO  | AND |
| Fr. 04. Aug 2023  | 0h15'34.0"  | +30°31'17.5" | 1.420 aE | 0.686 aE | 10.7  | 19:38 | 13:54 | 04:06 | +69° | SO  | AND |
| 23:59 Konjunktion mit BD+30 42, Helligkeit 5.9, Distanz 20.8'                       |             |              |          |          |       |       |       |       |      |     |     |
| Sa. 05. Aug 2023  | 0h18'49.8"  | +31° 0'35.7" | 1.412 aE | 0.676 aE | 10.6  | 19:33 | 13:58 | 04:08 | +70° | SO  | AND |
| 04:08 Konjunktion mit BD+30 42, Helligkeit 5.9, Distanz 16.2'                       |             |              |          |          |       |       |       |       |      |     |     |
| So. 06. Aug 2023  | 0h22'10.5"  | +31°29'58.9" | 1.404 aE | 0.665 aE | 10.6  | 19:27 | 14:03 | 04:10 | +70° | S   | AND |
| 00:00 Konjunktion mit BD+30 42, Helligkeit 5.9, Distanz 40.7'                       |             |              |          |          |       |       |       |       |      |     |     |
| Mo. 07. Aug 2023  | 0h25'36.6"  | +31°59'25.7" | 1.396 aE | 0.655 aE | 10.5  | 19:22 | 14:07 | 04:12 | +71° | S   | AND |
| Di. 08. Aug 2023  | 0h29' 8.3"  | +32°28'54.8" | 1.388 aE | 0.645 aE | 10.4  | 19:16 | 14:12 | 04:15 | +72° | S   | AND |
| 23:59 Konjunktion mit BD+32 80, Helligkeit 5.9, Distanz 40.2'                       |             |              |          |          |       |       |       |       |      |     |     |
| Mi. 09. Aug 2023  | 0h32'45.6"  | +32°58'24.8" | 1.380 aE | 0.635 aE | 10.3  | 19:10 | 14:18 | 04:17 | +72° | S   | AND |
| 23:59 Konjunktion mit Pi AND, Helligkeit 4.4, Distanz 16.1'                         |             |              |          |          |       |       |       |       |      |     |     |
| Do. 10. Aug 2023  | 0h36'29.1"  | +33°27'53.9" | 1.372 aE | 0.625 aE | 10.2  | 19:04 | 14:23 | 04:19 | +73° | S   | AND |
| 04:19 Konjunktion mit Pi AND, Helligkeit 4.4, Distanz 10.5'                         |             |              |          |          |       |       |       |       |      |     |     |
| Fr. 11. Aug 2023  | 0h40'18.8"  | +33°57'20.4" | 1.364 aE | 0.615 aE | 10.1  | 18:58 | 14:29 | 04:21 | +74° | S   | AND |
| 00:00 Konjunktion mit Pi AND, Helligkeit 4.4, Distanz 45.1'                         |             |              |          |          |       |       |       |       |      |     |     |
| Sa. 12. Aug 2023  | 0h44'15.0"  | +34°26'42.1" | 1.356 aE | 0.606 aE | 10.1  | 18:52 | 14:36 | 04:23 | +74° | S   | AND |
| So. 13. Aug 2023  | 0h48'18.1"  | +34°55'57.0" | 1.349 aE | 0.596 aE | 10.0  | 18:45 | 14:43 | 04:26 | +75° | S   | AND |
| Mo. 14. Aug 2023  | 0h52'28.4"  | +35°25' 2.7" | 1.341 aE | 0.587 aE | 9.9   | 18:39 | 14:50 | 04:28 | +75° | S   | AND |
| Di. 15. Aug 2023  | 0h56'46.0"  | +35°53'56.6" | 1.333 aE | 0.578 aE | 9.8   | 18:32 | 14:58 | 04:30 | +76° | S   | AND |
| 23:59 Konjunktion mit NGC 404, Galaxie, Helligkeit 11.0, Größe 4.3', Distanz 1.8°   |             |              |          |          |       |       |       |       |      |     |     |
| Mi. 16. Aug 2023  | 1h 1'11.4"  | +36°22'35.8" | 1.326 aE | 0.569 aE | 9.7   | 18:24 | 15:07 | 04:32 | +76° | S   | AND |
| 23:59 Konjunktion mit NGC 404, Galaxie, Helligkeit 11.0, Größe 4.3', Distanz 1.4°   |             |              |          |          |       |       |       |       |      |     |     |
| Do. 17. Aug 2023  | 1h 5'44.8"  | +36°50'57.5" | 1.318 aE | 0.560 aE | 9.6   | 18:16 | 15:16 | 04:34 | +77° | S   | AND |
| 03:23 Konjunktion mit NGC 404, Galaxie, Helligkeit 11.0, Größe 4.3', Distanz 1.3°   |             |              |          |          |       |       |       |       |      |     |     |
| 23:59 Konjunktion mit 45 AND, Helligkeit 5.8, Distanz 26.0'                         |             |              |          |          |       |       |       |       |      |     |     |
| Fr. 18. Aug 2023  | 1h10'26.6"  | +37°18'58.3" | 1.311 aE | 0.552 aE | 9.6   | 18:07 | 15:27 | 04:36 | +77° | S   | AND |
| 00:00 Konjunktion mit NGC 404, Galaxie, Helligkeit 11.0, Größe 4.3', Distanz 1.6°   |             |              |          |          |       |       |       |       |      |     |     |
| 04:36 Konjunktion mit 45 AND, Helligkeit 5.8, Distanz 19.2'                         |             |              |          |          |       |       |       |       |      |     |     |
| Sa. 19. Aug 2023  | 1h15'16.9"  | +37°46'34.7" | 1.303 aE | 0.543 aE | 9.5   | 17:57 | 15:39 | 04:38 | +78° | S   | AND |
| 04:38 Konjunktion mit BD+36 220, Helligkeit 6.5, Distanz 41.9'                      |             |              |          |          |       |       |       |       |      |     |     |
| So. 20. Aug 2023  | 1h20'16.2"  | +38°13'42.9" | 1.296 aE | 0.535 aE | 9.4   | 17:45 | 15:53 | 04:41 | +78° | S   | AND |
| 04:41 Konjunktion mit 47 AND, Helligkeit 5.6, Distanz 46.1'                         |             |              |          |          |       |       |       |       |      |     |     |
| Mo. 21. Aug 2023  | 1h25'24.6"  | +38°40'18.8" | 1.289 aE | 0.527 aE | 9.3   | 17:30 | 16:11 | 04:43 | +79° | S   | AND |
| Di. 22. Aug 2023  | 1h30'42.6"  | +39° 6'18.2" | 1.282 aE | 0.519 aE | 9.2   | ---   | ---   | 04:45 | +79° | S   | AND |
| Mi. 23. Aug 2023  | 1h36'10.2"  | +39°31'36.3" | 1.274 aE | 0.511 aE | 9.1   | ---   | ---   | 04:47 | +80° | S   | AND |
| 23:59 Konjunktion mit Tau AND, Helligkeit 4.9, Distanz 40.9'                        |             |              |          |          |       |       |       |       |      |     |     |
| Do. 24. Aug 2023  | 1h41'47.9"  | +39°56' 8.3" | 1.267 aE | 0.504 aE | 9.1   | ---   | ---   | 04:49 | +80° | S   | AND |
| 00:14 Konjunktion mit Tau AND, Helligkeit 4.9, Distanz 40.9'                        |             |              |          |          |       |       |       |       |      |     |     |
| Fr. 25. Aug 2023  | 1h47'35.7"  | +40°19'48.9" | 1.260 aE | 0.497 aE | 9.0   | ---   | ---   | 04:51 | +80° | S   | AND |
| 23:09 Konjunktion mit 55 AND, Helligkeit 5.4, Distanz 2.2'                          |             |              |          |          |       |       |       |       |      |     |     |
| Sa. 26. Aug 2023  | 1h53'33.8"  | +40°42'32.6" | 1.254 aE | 0.489 aE | 8.9   | ---   | ---   | 04:53 | +81° | S   | AND |
| 00:00 Konjunktion mit 55 AND, Helligkeit 5.4, Distanz 3.4'                          |             |              |          |          |       |       |       |       |      |     |     |
| So. 27. Aug 2023  | 1h59'42.5"  | +41° 4'13.6" | 1.247 aE | 0.482 aE | 8.8   | ---   | ---   | 04:55 | +81° | S   | AND |
| 00:00 Konjunktion mit BD+40 407, Helligkeit 6.8, Distanz 42.4'                      |             |              |          |          |       |       |       |       |      |     |     |
| Mo. 28. Aug 2023  | 2h 6' 1.7"  | +41°24'45.9" | 1.240 aE | 0.476 aE | 8.8   | ---   | ---   | 04:57 | +81° | S   | AND |
| 23:59 Konjunktion mit NGC 891, Galaxie, Helligkeit 10.9, Größe 13.1', Distanz 2.0°  |             |              |          |          |       |       |       |       |      |     |     |
| 00:00 Konjunktion mit Gamma AND, Helligkeit 2.3, Distanz 59.9'                      |             |              |          |          |       |       |       |       |      |     |     |
| Di. 29. Aug 2023  | 2h12'31.6"  | +41°44' 3.1" | 1.233 aE | 0.469 aE | 8.7   | ---   | ---   | 04:59 | +82° | S   | AND |

# Der Komet 103P/Hartley im Jahre 2023

## berechnet für den Standort Mitteldeutschland

### Ephemeride und Konjunktionen des Kometen 103P/Hartley

| Datum  | Rektaszens.  | Deklination  | r        | Delta    | Hell. Aufg. | Untg. | TOpt. | Höhe       | Ri. | Stb |
|--|--|--------------|----------|----------|-------------|-------|-------|------------|-----|-----|
| berechnet für den Standort Mitteldeutschland |  |              |          |          |             |       |       |            |     |     |
| 23:59  | Konjunktion mit BD+40 500, Helligkeit 5.8, Distanz 55.9'                                     |              |          |          |             |       |       |            |     |     |
| Mi. 30.Aug 2023                              | 2h19'12.0"   | +42° 1'58.7" | 1.227 aE | 0.463 aE | 8.6         | ----  | ----  | 05:01 +82° | S   | AND |
| 05:01  | Konjunktion mit NGC 891, Galaxie, Helligkeit 10.9, Größe 13.1', Distanz 26.4'                |              |          |          |             |       |       |            |     |     |
| 05:01  | Konjunktion mit BD+40 500, Helligkeit 5.8, Distanz 48.8'                                     |              |          |          |             |       |       |            |     |     |
| Do. 31.Aug 2023                              | 2h26' 3.0"   | +42°18'26.0" | 1.220 aE | 0.456 aE | 8.5         | ----  | ----  | 05:03 +82° | S   | AND |
| 00:00  | Konjunktion mit NGC 891, Galaxie, Helligkeit 10.9, Größe 13.1', Distanz 38.9'                |              |          |          |             |       |       |            |     |     |
| Fr. 01.Sep 2023                              | 2h33' 4.3"   | +42°33'18.1" | 1.214 aE | 0.450 aE | 8.5         | ----  | ----  | 05:04 +82° | S   | AND |
| 23:59  | Konjunktion mit M 34, off. Sternh., Helligkeit 5.2, Größe 35.0', Distanz 20.1'               |              |          |          |             |       |       |            |     |     |
| Sa. 02.Sep 2023                              | 2h40'15.6"   | +42°46'28.0" | 1.208 aE | 0.445 aE | 8.4         | ----  | ----  | 05:06 +83° | S   | PER |
| 05:06  | Konjunktion mit M 34, off. Sternh., Helligkeit 5.2, Größe 35.0', Distanz 4.7', evtl. Transit |              |          |          |             |       |       |            |     |     |
| So. 03.Sep 2023                              | 2h47'36.7"   | +42°57'48.7" | 1.202 aE | 0.439 aE | 8.3         | ----  | ----  | 05:08 +83° | S   | PER |
| 00:00  | Konjunktion mit M 34, off. Sternh., Helligkeit 5.2, Größe 35.0', Distanz 1.0°                |              |          |          |             |       |       |            |     |     |
| Mo. 04.Sep 2023                              | 2h55' 7.1"   | +43° 7'13.1" | 1.196 aE | 0.434 aE | 8.2         | ----  | ----  | 05:10 +83° | S   | PER |
| Di. 05.Sep 2023                              | 3h 2'46.2"   | +43°14'34.5" | 1.190 aE | 0.429 aE | 8.2         | ----  | ----  | 05:12 +83° | SO  | PER |
| 23:59  | Konjunktion mit BD+41 631, Helligkeit 6.2, Distanz 59.9'                                     |              |          |          |             |       |       |            |     |     |
| Mi. 06.Sep 2023                              | 3h10'33.5"   | +43°19'46.2" | 1.184 aE | 0.424 aE | 8.1         | ----  | ----  | 05:14 +83° | SO  | PER |
| 23:59  | Konjunktion mit 32 PER, Helligkeit 5.0, Distanz 32.6'  |              |          |          |             |       |       |            |     |     |
| Do. 07.Sep 2023                              | 3h18'28.2"   | +43°22'41.9" | 1.178 aE | 0.419 aE | 8.0         | ----  | ----  | 05:16 +83° | SO  | PER |
| 05:16  | Konjunktion mit 32 PER, Helligkeit 5.0, Distanz 13.9'  |              |          |          |             |       |       |            |     |     |
| Fr. 08.Sep 2023                              | 3h26'29.5"   | +43°23'15.6" | 1.173 aE | 0.414 aE | 8.0         | ----  | ----  | 05:17 +82° | SO  | PER |
| 00:00  | Konjunktion mit 32 PER, Helligkeit 5.0, Distanz 55.2'  |              |          |          |             |       |       |            |     |     |
| Sa. 09.Sep 2023                              | 3h34'36.5"   | +43°21'22.0" | 1.167 aE | 0.410 aE | 7.9         | ----  | ----  | 05:19 +82° | SO  | PER |
| 05:19  | Konjunktion mit BD+42 795, Helligkeit 6.4, Distanz 49.0'                                     |              |          |          |             |       |       |            |     |     |
| Sa. 10.Sep 2023                              | 3h42'48.2"   | +43°16'56.4" | 1.162 aE | 0.406 aE | 7.8         | ----  | ----  | 05:21 +82° | SO  | PER |
| 05:21  | Konjunktion mit Ny PER, Helligkeit 3.8, Distanz 41.5'  |              |          |          |             |       |       |            |     |     |
| Mo. 11.Sep 2023                              | 3h51' 3.7"   | +43° 9'54.7" | 1.157 aE | 0.402 aE | 7.8         | ----  | ----  | 05:23 +81° | SO  | PER |
| 00:00  | Konjunktion mit BD+43 818, Helligkeit 6.0, Distanz 52.2'                                     |              |          |          |             |       |       |            |     |     |
| Di. 12.Sep 2023                              | 3h59'21.8"   | +43° 0'13.7" | 1.151 aE | 0.398 aE | 7.7         | ----  | ----  | 05:25 +81° | SO  | PER |
| Mi. 13.Sep 2023                              | 4h 7'41.4"   | +42°47'51.0" | 1.147 aE | 0.395 aE | 7.7         | ----  | ----  | 05:26 +80° | SO  | PER |
| 23:59  | Konjunktion mit BD+41 844, Helligkeit 6.2, Distanz 33.8'                                     |              |          |          |             |       |       |            |     |     |
| Do. 14.Sep 2023                              | 4h16' 1.4"   | +42°32'45.3" | 1.142 aE | 0.392 aE | 7.6         | ----  | ----  | 05:28 +80° | SO  | PER |
| 21:25  | Konjunktion mit BD+42 946, Helligkeit 6.2, Distanz 9.0'                                      |              |          |          |             |       |       |            |     |     |
| Fr. 15.Sep 2023                              | 4h24'20.6"   | +42°14'56.2" | 1.137 aE | 0.389 aE | 7.6         | ----  | ----  | 05:30 +79° | SO  | PER |
| 20:59  | Konjunktion mit NGC 1582, off. Sternh., Helligkeit 7.0, Größe 37.0', Distanz 1.9°            |              |          |          |             |       |       |            |     |     |
| 00:00  | Konjunktion mit BD+42 946, Helligkeit 6.2, Distanz 13.6'                                     |              |          |          |             |       |       |            |     |     |
| Sa. 16.Sep 2023                              | 4h32'37.9"   | +41°54'24.2" | 1.132 aE | 0.386 aE | 7.5         | ----  | ----  | 05:32 +79° | SO  | PER |
| 00:00  | Konjunktion mit NGC 1582, off. Sternh., Helligkeit 7.0, Größe 37.0', Distanz 1.9°            |              |          |          |             |       |       |            |     |     |
| 20:57  | Konjunktion mit 58 PER, Helligkeit 4.3, Distanz 39.7'  |              |          |          |             |       |       |            |     |     |
| So. 17.Sep 2023                              | 4h40'52.1"   | +41°31'11.0" | 1.128 aE | 0.384 aE | 7.5         | ----  | ----  | 05:33 +78° | SO  | PER |
| 05:33  | Konjunktion mit BD+40 1032, Helligkeit 6.1, Distanz 41.8'                                    |              |          |          |             |       |       |            |     |     |
| Mo. 18.Sep 2023                              | 4h49' 2.2"   | +41° 5'19.2" | 1.124 aE | 0.381 aE | 7.4         | ----  | ----  | 05:35 +78° | SO  | PER |
| 00:00  | Konjunktion mit BD+40 1045, Helligkeit 6.0, Distanz 53.4'                                    |              |          |          |             |       |       |            |     |     |
| Di. 19.Sep 2023                              | 4h57' 7.3"   | +40°36'52.4" | 1.119 aE | 0.379 aE | 7.4         | ----  | ----  | 05:37 +77° | SO  | AUR |
| 20:50  | Konjunktion mit 6 AUR, Helligkeit 6.6, Distanz 52.1'   |              |          |          |             |       |       |            |     |     |
| Mi. 20.Sep 2023                              | 5h 5' 6.2"   | +40° 5'55.1" | 1.115 aE | 0.377 aE | 7.3         | ----  | ----  | 05:38 +76° | SO  | AUR |
| 23:59  | Konjunktion mit NGC 1857, off. Sternh., Helligkeit 7.0, Größe 6.0', Distanz 1.2°             |              |          |          |             |       |       |            |     |     |
| Do. 21.Sep 2023                              | 5h12'58.3"   | +39°32'32.7" | 1.111 aE | 0.376 aE | 7.3         | 19:13 | 18:05 | 05:40 +76° | SO  | AUR |
| 21:09  | Konjunktion mit NGC 1857, off. Sternh., Helligkeit 7.0, Größe 6.0', Distanz 21.1'            |              |          |          |             |       |       |            |     |     |
| 05:40  | Konjunktion mit My AUR, Helligkeit 4.9, Distanz 57.7'  |              |          |          |             |       |       |            |     |     |
| Fr. 22.Sep 2023                              | 5h20'42.6"   | +38°56'51.4" | 1.108 aE | 0.374 aE | 7.3         | 19:42 | 17:44 | 05:42 +75° | SO  | AUR |
| 00:00  | Konjunktion mit NGC 1857, off. Sternh., Helligkeit 7.0, Größe 6.0', Distanz 30.3'            |              |          |          |             |       |       |            |     |     |
| Sa. 23.Sep 2023                              | 5h28'18.6"   | +38°18'58.1" | 1.104 aE | 0.373 aE | 7.2         | 20:03 | 17:30 | 05:43 +74° | SO  | AUR |
| So. 24.Sep 2023                              | 5h35'45.6"   | +37°39' 0.2" | 1.101 aE | 0.372 aE | 7.2         | 20:21 | 17:18 | 05:45 +73° | SO  | AUR |
| Mo. 25.Sep 2023                              | 5h43' 3.1"   | +36°57' 5.7" | 1.098 aE | 0.372 aE | 7.2         | 20:38 | 17:09 | 05:47 +73° | SO  | AUR |
| Di. 26.Sep 2023                              | 5h50'10.7"   | +36°13'22.9" | 1.094 aE | 0.371 aE | 7.1         | 20:53 | 17:00 | 05:48 +72° | SO  | AUR |
| Mi. 27.Sep 2023                              | 5h57' 8.2"   | +35°28' 0.5" | 1.091 aE | 0.371 aE | 7.1         | 21:07 | 16:52 | 05:50 +71° | SO  | AUR |
| 23:59  | Konjunktion mit BD+35 1334, Helligkeit 6.1, Distanz 50.2'                                    |              |          |          |             |       |       |            |     |     |
| Do. 28.Sep 2023                              | 6h 3'55.2"   | +34°41' 7.3" | 1.089 aE | 0.371 aE | 7.1         | 21:20 | 16:44 | 05:52 +70° | SO  | AUR |
| 00:44  | Konjunktion mit BD+35 1334, Helligkeit 6.1, Distanz 50.1'                                    |              |          |          |             |       |       |            |     |     |
| Fr. 29.Sep 2023                              | 6h10'31.5"   | +33°52'52.1" | 1.086 aE | 0.371 aE | 7.1         | 21:32 | 16:37 | 05:53 +69° | SO  | AUR |
| 22:32  | Konjunktion mit BD+32 1217, Helligkeit 5.8, Distanz 58.7'                                    |              |          |          |             |       |       |            |     |     |
| Sa. 30.Sep 2023                              | 6h16'57.2"   | +33° 3'23.9" | 1.084 aE | 0.371 aE | 7.0         | 21:44 | 16:30 | 05:55 +69° | SO  | AUR |
| 23:59  | Konjunktion mit BD+32 1300, Helligkeit 6.4, Distanz 59.4'                                    |              |          |          |             |       |       |            |     |     |
| So. 01.Okt 2023                              | 6h23'12.1"   | +32°12'51.5" | 1.081 aE | 0.372 aE | 7.0         | 21:55 | 16:23 | 05:56 +68° | SO  | AUR |
| 05:56  | Konjunktion mit BD+32 1300, Helligkeit 6.4, Distanz 49.5'                                    |              |          |          |             |       |       |            |     |     |
| Mo. 02.Okt 2023                              | 6h29'16.3"   | +31°21'23.4" | 1.079 aE | 0.373 aE | 7.0         | 22:05 | 16:17 | 05:58 +67° | SO  | AUR |
| 05:44  | Konjunktion mit 48 AUR, Helligkeit 5.6, Distanz 48.0'  |              |          |          |             |       |       |            |     |     |
| Di. 03.Okt 2023                              | 6h35' 9.8"   | +30°29' 8.1" | 1.077 aE | 0.373 aE | 7.0         | 22:15 | 16:10 | 06:00 +66° | SO  | AUR |
| 23:06  | Konjunktion mit 53 AUR, Helligkeit 5.8, Distanz 49.2'  |              |          |          |             |       |       |            |     |     |
| Mi. 04.Okt 2023                              | 6h40'52.7"   | +29°36'13.6" | 1.076 aE | 0.375 aE | 7.0         | 22:24 | 16:04 | 06:01 +65° | SO  | GEM |
| 23:59  | Konjunktion mit NGC 2266, off. Sternh., Helligkeit 9.5, Größe 7.0', Distanz 1.9°             |              |          |          |             |       |       |            |     |     |
| 23:14  | Konjunktion mit 28 GEM, Helligkeit 5.4, Distanz 23.9'  |              |          |          |             |       |       |            |     |     |
| Do. 05.Okt 2023                              | 6h46'25.2"   | +28°42'47.8" | 1.074 aE | 0.376 aE | 7.0         | 22:33 | 15:58 | 06:03 +65° | SO  | GEM |
| 06:03  | Konjunktion mit NGC 2266, off. Sternh., Helligkeit 9.5, Größe 7.0', Distanz 1.8°             |              |          |          |             |       |       |            |     |     |
| 00:00  | Konjunktion mit 28 GEM, Helligkeit 5.4, Distanz 26.8'  |              |          |          |             |       |       |            |     |     |
| Fr. 06.Okt 2023                              | 6h51'47.4"   | +27°48'58.2" | 1.073 aE | 0.377 aE | 7.0         | 22:42 | 15:52 | 06:04 +64° | SO  | GEM |

# Der Komet 103P/Hartley im Jahre 2023

## berechnet für den Standort Mitteldeutschland

### Ephemeride und Konjunktionen des Kometen 103P/Hartley

| Datum   | Rektaszens. | Deklination  | r        | Delta    | Hell. | Aufg. | Untg. | TOpt. | Höhe | Ri. | Stb |
|---|-------------|--------------|----------|----------|-------|-------|-------|-------|------|-----|-----|
| berechnet für den Standort Mitteldeutschland  |             |              |          |          |       |       |       |       |      |     |     |
| Sa. 07.Okt 2023   | 6h56'59.5"  | +26°54'51.6" | 1.071 aE | 0.379 aE | 7.0   | 22:50 | 15:47 | 06:06 | +63° | SO  | GEM |
| 23:59 Konjunktion mit NGC 2331, off. Sternh., Helligkeit 8.5, Größe 18.0', Distanz 1.7° |             |              |          |          |       |       |       |       |      |     |     |
| 23:35 Konjunktion mit 40 GEM, Helligkeit 6.4, Distanz 34.1'                             |             |              |          |          |       |       |       |       |      |     |     |
| So. 08.Okt 2023   | 7h 2' 1.8"  | +26° 0'34.9" | 1.070 aE | 0.381 aE | 7.0   | 22:57 | 15:41 | 06:07 | +62° | SO  | GEM |
| 01:14 Konjunktion mit NGC 2331, off. Sternh., Helligkeit 8.5, Größe 18.0', Distanz 1.7° |             |              |          |          |       |       |       |       |      |     |     |
| 00:00 Konjunktion mit 40 GEM, Helligkeit 6.4, Distanz 35.1'                             |             |              |          |          |       |       |       |       |      |     |     |
| Mo. 09.Okt 2023   | 7h 6'54.5"  | +25° 6'14.1" | 1.069 aE | 0.382 aE | 7.0   | 23:04 | 15:35 | 06:09 | +62° | SO  | GEM |
| 23:59 Konjunktion mit 48 GEM, Helligkeit 5.9, Distanz 11.9'                             |             |              |          |          |       |       |       |       |      |     |     |
| Di. 10.Okt 2023   | 7h11'37.8"  | +24°11'55.1" | 1.069 aE | 0.384 aE | 7.0   | 23:11 | 15:30 | 06:10 | +61° | SO  | GEM |
| 03:13 Konjunktion mit 48 GEM, Helligkeit 5.9, Distanz 3.9'                              |             |              |          |          |       |       |       |       |      |     |     |
| Mi. 11.Okt 2023   | 7h16'12.0"  | +23°17'43.3" | 1.068 aE | 0.387 aE | 7.0   | 23:18 | 15:24 | 06:12 | +60° | SO  | GEM |
| Do. 12.Okt 2023   | 7h20'37.3"  | +22°23'43.5" | 1.068 aE | 0.389 aE | 7.0   | 23:24 | 15:19 | 06:14 | +59° | SO  | GEM |
| 03:24 Konjunktion mit Delta GEM, Helligkeit 3.5, Distanz 23.2'                          |             |              |          |          |       |       |       |       |      |     |     |
| Fr. 13.Okt 2023   | 7h24'54.0"  | +21°30' 0.3" | 1.068 aE | 0.391 aE | 7.0   | 23:30 | 15:14 | 06:15 | +59° | SO  | GEM |
| 06:15 Konjunktion mit NGC 2392, plan. Nebel, Helligkeit 9.9, Größe 0.3', Distanz 49.7'  |             |              |          |          |       |       |       |       |      |     |     |
| 05:35 Konjunktion mit BD+21 1596, Helligkeit 6.5, Distanz 19.8'                         |             |              |          |          |       |       |       |       |      |     |     |
| Sa. 14.Okt 2023   | 7h29' 2.3"  | +20°36'37.7" | 1.068 aE | 0.394 aE | 7.0   | 23:35 | 15:08 | 06:17 | +58° | SO  | GEM |
| 00:10 Konjunktion mit NGC 2392, plan. Nebel, Helligkeit 9.9, Größe 0.3', Distanz 18.5'  |             |              |          |          |       |       |       |       |      |     |     |
| 00:10 Konjunktion mit 61 GEM, Helligkeit 5.9, Distanz 36.5'                             |             |              |          |          |       |       |       |       |      |     |     |
| So. 15.Okt 2023   | 7h33' 2.6"  | +19°43'39.6" | 1.068 aE | 0.396 aE | 7.1   | 23:40 | 15:03 | 06:18 | +57° | SO  | GEM |
| 00:15 Konjunktion mit NGC 2392, plan. Nebel, Helligkeit 9.9, Größe 0.3', Distanz 1.5°   |             |              |          |          |       |       |       |       |      |     |     |
| Mo. 16.Okt 2023   | 7h36'55.1"  | +18°51' 9.2" | 1.068 aE | 0.399 aE | 7.1   | 23:45 | 14:58 | 06:20 | +56° | SO  | GEM |
| Di. 17.Okt 2023   | 7h40'39.9"  | +17°59' 9.6" | 1.069 aE | 0.402 aE | 7.1   | 23:50 | 14:53 | 06:21 | +56° | SO  | GEM |
| 00:24 Konjunktion mit 74 GEM, Helligkeit 5.1, Distanz 25.2'                             |             |              |          |          |       |       |       |       |      |     |     |
| Mi. 18.Okt 2023   | 7h44'17.4"  | +17° 7'43.3" | 1.069 aE | 0.405 aE | 7.1   | 23:54 | 14:47 | 06:23 | +55° | SO  | GEM |
| Do. 19.Okt 2023   | 7h47'47.9"  | +16°16'52.6" | 1.070 aE | 0.408 aE | 7.1   | 23:58 | 14:42 | 06:24 | +54° | SO  | GEM |
| Fr. 20.Okt 2023   | 7h51'11.4"  | +15°26'39.6" | 1.071 aE | 0.411 aE | 7.2   | --:-- | 14:37 | 06:26 | +54° | S   | GEM |
| Sa. 21.Okt 2023   | 7h54'28.3"  | +14°37' 5.9" | 1.073 aE | 0.414 aE | 7.2   | 00:02 | 14:32 | 06:27 | +53° | S   | GEM |
| So. 22.Okt 2023   | 7h57'38.8"  | +13°48'13.0" | 1.074 aE | 0.417 aE | 7.2   | 00:06 | 14:27 | 06:29 | +52° | S   | CNC |
| 06:29 Konjunktion mit BD+13 1811, Helligkeit 6.0, Distanz 26.2'                         |             |              |          |          |       |       |       |       |      |     |     |
| Mo. 23.Okt 2023   | 8h 0'43.1"  | +13° 0' 2.1" | 1.076 aE | 0.420 aE | 7.3   | 00:09 | 14:22 | 06:30 | +52° | S   | CNC |
| 00:46 Konjunktion mit BD+13 1811, Helligkeit 6.0, Distanz 24.1'                         |             |              |          |          |       |       |       |       |      |     |     |
| Di. 24.Okt 2023   | 8h 3'41.4"  | +12°12'34.2" | 1.078 aE | 0.424 aE | 7.3   | 00:12 | 14:17 | 06:32 | +51° | S   | CNC |
| 00:49 Konjunktion mit 8 CNC, Helligkeit 5.1, Distanz 59.2'                              |             |              |          |          |       |       |       |       |      |     |     |
| Mi. 25.Okt 2023   | 8h 6'33.8"  | +11°25'50.0" | 1.079 aE | 0.427 aE | 7.3   | 00:15 | 14:12 | 06:33 | +50° | S   | CNC |
| Do. 26.Okt 2023   | 8h 9'20.6"  | +10°39'50.1" | 1.082 aE | 0.430 aE | 7.4   | 00:18 | 14:07 | 06:35 | +50° | S   | CNC |
| 06:35 Konjunktion mit BD+10 1746, Helligkeit 6.1, Distanz 42.0'                         |             |              |          |          |       |       |       |       |      |     |     |
| Fr. 27.Okt 2023   | 8h12' 1.9"  | + 9°54'34.9" | 1.084 aE | 0.434 aE | 7.4   | 00:21 | 14:01 | 06:36 | +49° | S   | CNC |
| 00:56 Konjunktion mit BD+10 1746, Helligkeit 6.1, Distanz 13.2'                         |             |              |          |          |       |       |       |       |      |     |     |
| Sa. 28.Okt 2023   | 8h14'37.9"  | + 9°10' 4.6" | 1.086 aE | 0.437 aE | 7.4   | 00:23 | 13:56 | 06:38 | +48° | S   | CNC |
| 06:38 Konjunktion mit Beta CNC, Helligkeit 3.5, Distanz 22.0'                           |             |              |          |          |       |       |       |       |      |     |     |
| So. 29.Okt 2023   | 8h17'14.9"  | + 8°24'31.5" | 1.089 aE | 0.441 aE | 7.5   | 23:27 | 12:51 | 05:39 | +48° | S   | CNC |
| 00:01 Konjunktion mit BD+09 1921, Helligkeit 6.3, Distanz 27.8'                         |             |              |          |          |       |       |       |       |      |     |     |
| Mo. 30.Okt 2023   | 8h19'40.4"  | + 7°41'33.3" | 1.092 aE | 0.444 aE | 7.5   | 23:29 | 12:46 | 05:41 | +47° | S   | CNC |
| Di. 31.Okt 2023   | 8h22' 1.0"  | + 6°59'20.1" | 1.095 aE | 0.448 aE | 7.5   | 23:31 | 12:41 | 05:42 | +47° | S   | CNC |
| Mi. 01.Nov 2023   | 8h24'16.8"  | + 6°17'51.8" | 1.098 aE | 0.451 aE | 7.6   | 23:32 | 12:36 | 05:44 | +46° | S   | HYA |
| Do. 02.Nov 2023   | 8h26'27.8"  | + 5°37' 8.3" | 1.101 aE | 0.455 aE | 7.6   | 23:34 | 12:31 | 05:45 | +45° | S   | HYA |
| Fr. 03.Nov 2023   | 8h28'34.2"  | + 4°57' 9.4" | 1.105 aE | 0.458 aE | 7.7   | 23:35 | 12:26 | 05:47 | +45° | S   | HYA |
| Sa. 04.Nov 2023   | 8h30'36.1"  | + 4°17'54.6" | 1.108 aE | 0.462 aE | 7.7   | 23:36 | 12:21 | 05:48 | +44° | S   | HYA |
| 02:52 Konjunktion mit BD+05 1997, Helligkeit 5.9, Distanz 53.8'                         |             |              |          |          |       |       |       |       |      |     |     |
| So. 05.Nov 2023   | 8h32'33.4"  | + 3°39'23.8" | 1.112 aE | 0.465 aE | 7.8   | 23:37 | 12:16 | 05:50 | +43° | S   | HYA |
| 05:50 Konjunktion mit BD+03 2014, Helligkeit 6.3, Distanz 58.1'                         |             |              |          |          |       |       |       |       |      |     |     |
| Mo. 06.Nov 2023   | 8h34'26.4"  | + 3° 1'36.5" | 1.116 aE | 0.469 aE | 7.8   | 23:38 | 12:11 | 05:51 | +43° | S   | HYA |
| 05:51 Konjunktion mit BD+03 2014, Helligkeit 6.3, Distanz 11.3'                         |             |              |          |          |       |       |       |       |      |     |     |
| Di. 07.Nov 2023   | 8h36'15.1"  | + 2°24'32.6" | 1.120 aE | 0.472 aE | 7.9   | 23:39 | 12:06 | 05:52 | +42° | S   | HYA |
| 00:13 Konjunktion mit BD+03 2014, Helligkeit 6.3, Distanz 24.1'                         |             |              |          |          |       |       |       |       |      |     |     |
| Mi. 08.Nov 2023   | 8h37'59.4"  | + 1°48'11.5" | 1.124 aE | 0.476 aE | 7.9   | 23:39 | 12:01 | 05:49 | +42° | S   | HYA |
| Do. 09.Nov 2023   | 8h39'39.6"  | + 1°12'33.0" | 1.129 aE | 0.479 aE | 8.0   | 23:40 | 11:56 | 05:47 | +41° | S   | HYA |
| Fr. 10.Nov 2023   | 8h41'15.6"  | + 0°37'36.7" | 1.133 aE | 0.483 aE | 8.0   | 23:40 | 11:51 | 05:45 | +40° | S   | HYA |
| Sa. 11.Nov 2023   | 8h42'47.5"  | + 0° 3'22.2" | 1.138 aE | 0.486 aE | 8.1   | 23:40 | 11:45 | 05:42 | +40° | S   | HYA |
| So. 12.Nov 2023   | 8h44'15.3"  | - 0°30'10.7" | 1.142 aE | 0.490 aE | 8.1   | 23:40 | 11:40 | 05:40 | +39° | S   | HYA |
| Mo. 13.Nov 2023   | 8h45'39.1"  | - 1° 3' 2.5" | 1.147 aE | 0.493 aE | 8.2   | 23:40 | 11:35 | 05:37 | +39° | S   | HYA |
| 06:01 Konjunktion mit BD-01 2130, Helligkeit 5.3, Distanz 46.7'                         |             |              |          |          |       |       |       |       |      |     |     |
| Di. 14.Nov 2023   | 8h46'58.9"  | - 1°35'13.4" | 1.152 aE | 0.496 aE | 8.2   | 23:40 | 11:30 | 05:35 | +38° | S   | HYA |
| 06:03 Konjunktion mit BD-01 2130, Helligkeit 5.3, Distanz 10.6'                         |             |              |          |          |       |       |       |       |      |     |     |
| Mi. 15.Nov 2023   | 8h48'14.7"  | - 2° 6'43.8" | 1.157 aE | 0.500 aE | 8.3   | 23:40 | 11:25 | 05:32 | +38° | S   | HYA |
| 00:15 Konjunktion mit BD-01 2130, Helligkeit 5.3, Distanz 20.1'                         |             |              |          |          |       |       |       |       |      |     |     |
| Do. 16.Nov 2023   | 8h49'26.6"  | - 2°37'34.0" | 1.163 aE | 0.503 aE | 8.3   | 23:39 | 11:20 | 05:29 | +37° | S   | HYA |
| 06:05 Konjunktion mit 14 HYA, Helligkeit 5.3, Distanz 41.7'                             |             |              |          |          |       |       |       |       |      |     |     |
| Fr. 17.Nov 2023   | 8h50'34.7"  | - 3° 7'44.2" | 1.168 aE | 0.506 aE | 8.4   | 23:39 | 11:14 | 05:27 | +37° | S   | HYA |
| 06:06 Konjunktion mit 14 HYA, Helligkeit 5.3, Distanz 24.9'                             |             |              |          |          |       |       |       |       |      |     |     |
| Sa. 18.Nov 2023   | 8h51'38.9"  | - 3°37'14.7" | 1.174 aE | 0.509 aE | 8.4   | 23:38 | 11:09 | 05:24 | +36° | S   | HYA |
| 00:14 Konjunktion mit 14 HYA, Helligkeit 5.3, Distanz 36.1'                             |             |              |          |          |       |       |       |       |      |     |     |
| So. 19.Nov 2023   | 8h52'39.3"  | - 4° 6' 5.9" | 1.179 aE | 0.513 aE | 8.5   | 23:37 | 11:04 | 05:21 | +36° | S   | HYA |
| Mo. 20.Nov 2023   | 8h53'36.0"  | - 4°34'17.9" | 1.185 aE | 0.516 aE | 8.5   | 23:37 | 10:59 | 05:18 | +35° | S   | HYA |
| 06:11 Konjunktion mit BD-04 2490, Helligkeit 6.0, Distanz 45.2'                         |             |              |          |          |       |       |       |       |      |     |     |

# Der Komet 103P/Hartley im Jahre 2023

## berechnet für den Standort Mitteldeutschland

### Ephemeride und Konjunktionen des Kometen 103P/Hartley

| Datum   | Rektaszens. | Deklination  | r        | Delta    | Hell. | Aufg. | Untg. | TOpt. | Höhe | Ri. | Stb |
|---|-------------|--------------|----------|----------|-------|-------|-------|-------|------|-----|-----|
| Di. 21.Nov 2023   | 8h54'28.9"  | - 5° 1'51.2" | 1.191 aE | 0.519 aE | 8.6   | 23:36 | 10:53 | 05:15 | +35° | S   | HYA |
| 06:12 Konjunktion mit BD-04 2490, Helligkeit 6.0, Distanz 18.1' |             |              |          |          |       |       |       |       |      |     |     |
| Mi. 22.Nov 2023   | 8h55'18.1"  | - 5°28'45.9" | 1.197 aE | 0.522 aE | 8.6   | 23:34 | 10:48 | 05:12 | +34° | S   | HYA |
| 00:11 Konjunktion mit BD-04 2490, Helligkeit 6.0, Distanz 15.4' |             |              |          |          |       |       |       |       |      |     |     |
| Do. 23.Nov 2023   | 8h56' 3.6"  | - 5°55' 2.3" | 1.203 aE | 0.525 aE | 8.7   | 23:33 | 10:43 | 05:08 | +34° | S   | HYA |
| 00:10 Konjunktion mit BD-04 2490, Helligkeit 6.0, Distanz 39.3' |             |              |          |          |       |       |       |       |      |     |     |
| Fr. 24.Nov 2023   | 8h56'45.4"  | - 6°20'40.6" | 1.209 aE | 0.528 aE | 8.8   | 23:32 | 10:38 | 05:05 | +34° | S   | HYA |
| Sa. 25.Nov 2023   | 8h57'23.6"  | - 6°45'41.1" | 1.215 aE | 0.531 aE | 8.8   | 23:31 | 10:32 | 05:02 | +33° | S   | HYA |
| So. 26.Nov 2023   | 8h57'58.2"  | - 7°10' 3.9" | 1.222 aE | 0.534 aE | 8.9   | 23:29 | 10:27 | 04:58 | +33° | S   | HYA |
| 06:19 Konjunktion mit 17 HYA, Helligkeit 6.9, Distanz 57.0'     |             |              |          |          |       |       |       |       |      |     |     |
| Mo. 27.Nov 2023   | 8h58'29.2"  | - 7°33'49.1" | 1.228 aE | 0.537 aE | 8.9   | 23:28 | 10:22 | 04:55 | +32° | S   | HYA |
| 06:20 Konjunktion mit 17 HYA, Helligkeit 6.7, Distanz 49.6'     |             |              |          |          |       |       |       |       |      |     |     |
| Di. 28.Nov 2023   | 8h58'56.6"  | - 7°56'56.8" | 1.234 aE | 0.540 aE | 9.0   | 23:26 | 10:16 | 04:52 | +32° | S   | HYA |
| 00:04 Konjunktion mit 17 HYA, Helligkeit 6.7, Distanz 51.3'     |             |              |          |          |       |       |       |       |      |     |     |
| Mi. 29.Nov 2023   | 8h59'20.4"  | - 8°19'27.2" | 1.241 aE | 0.543 aE | 9.1   | 23:24 | 10:11 | 04:48 | +32° | S   | HYA |
| Do. 30.Nov 2023   | 8h59'40.7"  | - 8°41'20.1" | 1.248 aE | 0.546 aE | 9.1   | 23:22 | 10:05 | 04:44 | +31° | S   | HYA |
| Fr. 01.Dez 2023   | 8h59'57.4"  | - 9° 2'35.6" | 1.255 aE | 0.549 aE | 9.2   | 23:20 | 10:00 | 04:41 | +31° | S   | HYA |
| Sa. 02.Dez 2023   | 9h 0'10.5"  | - 9°23'13.6" | 1.262 aE | 0.552 aE | 9.2   | 23:18 | 09:55 | 04:37 | +31° | S   | HYA |
| So. 03.Dez 2023   | 9h 0'20.1"  | - 9°43'13.9" | 1.269 aE | 0.555 aE | 9.3   | 23:16 | 09:49 | 04:33 | +30° | S   | HYA |
| Mo. 04.Dez 2023   | 9h 0'26.2"  | -10° 2'36.4" | 1.276 aE | 0.558 aE | 9.3   | 23:13 | 09:44 | 04:29 | +30° | S   | HYA |
| Di. 05.Dez 2023   | 9h 0'28.7"  | -10°21'20.9" | 1.283 aE | 0.561 aE | 9.4   | 23:11 | 09:38 | 04:25 | +30° | S   | HYA |
| Mi. 06.Dez 2023   | 9h 0'27.8"  | -10°39'27.2" | 1.290 aE | 0.563 aE | 9.5   | 23:09 | 09:33 | 04:22 | +29° | S   | HYA |
| Do. 07.Dez 2023   | 9h 0'23.4"  | -10°56'55.0" | 1.297 aE | 0.566 aE | 9.5   | 23:06 | 09:27 | 04:18 | +29° | S   | HYA |
| Fr. 08.Dez 2023   | 9h 0'15.6"  | -11°13'44.1" | 1.304 aE | 0.569 aE | 9.6   | 23:03 | 09:22 | 04:13 | +29° | S   | HYA |
| Sa. 09.Dez 2023   | 9h 0' 4.4"  | -11°29'54.1" | 1.312 aE | 0.572 aE | 9.6   | 23:00 | 09:16 | 04:09 | +28° | S   | HYA |
| So. 10.Dez 2023   | 8h59'49.8"  | -11°45'24.8" | 1.319 aE | 0.575 aE | 9.7   | 22:57 | 09:11 | 04:05 | +28° | S   | HYA |
| Mo. 11.Dez 2023   | 8h59'31.9"  | -12° 0'15.9" | 1.327 aE | 0.578 aE | 9.8   | 22:54 | 09:06 | 04:01 | +28° | S   | HYA |
| Di. 12.Dez 2023   | 8h59'10.6"  | -12°14'26.9" | 1.334 aE | 0.580 aE | 9.8   | 22:51 | 09:00 | 03:57 | +28° | S   | HYA |
| Mi. 13.Dez 2023   | 8h58'46.2"  | -12°27'57.5" | 1.342 aE | 0.583 aE | 9.9   | 22:48 | 08:55 | 03:52 | +27° | S   | HYA |
| Do. 14.Dez 2023   | 8h58'18.5"  | -12°40'47.6" | 1.350 aE | 0.586 aE | 9.9   | 22:44 | 08:49 | 03:48 | +27° | S   | HYA |
| Fr. 15.Dez 2023   | 8h57'47.7"  | -12°52'56.6" | 1.358 aE | 0.589 aE | 10.0  | 22:41 | 08:44 | 03:44 | +27° | S   | HYA |
| Sa. 16.Dez 2023   | 8h57'13.9"  | -13° 4'24.3" | 1.365 aE | 0.592 aE | 10.1  | 22:37 | 08:38 | 03:39 | +27° | S   | HYA |
| So. 17.Dez 2023   | 8h56'37.0"  | -13°15'10.6" | 1.373 aE | 0.595 aE | 10.1  | 22:34 | 08:33 | 03:34 | +27° | S   | HYA |
| 23:59 Konjunktion mit BD-12 2716, Helligkeit 6.1, Distanz 51.5' |             |              |          |          |       |       |       |       |      |     |     |
| Mo. 18.Dez 2023   | 8h55'57.3"  | -13°25'15.0" | 1.381 aE | 0.598 aE | 10.2  | 22:30 | 08:27 | 03:30 | +27° | S   | HYA |
| 23:59 Konjunktion mit BD-12 2716, Helligkeit 6.1, Distanz 44.9' |             |              |          |          |       |       |       |       |      |     |     |
| Di. 19.Dez 2023   | 8h55'14.8"  | -13°34'37.6" | 1.389 aE | 0.601 aE | 10.2  | 22:26 | 08:22 | 03:25 | +26° | S   | HYA |
| 23:59 Konjunktion mit BD-12 2716, Helligkeit 6.1, Distanz 41.1' |             |              |          |          |       |       |       |       |      |     |     |
| Mi. 20.Dez 2023   | 8h54'29.5"  | -13°43'18.0" | 1.397 aE | 0.604 aE | 10.3  | 22:22 | 08:16 | 03:21 | +26° | S   | HYA |
| 06:41 Konjunktion mit BD-12 2716, Helligkeit 6.1, Distanz 40.6' |             |              |          |          |       |       |       |       |      |     |     |
| Do. 21.Dez 2023   | 8h53'41.5"  | -13°51'16.2" | 1.405 aE | 0.607 aE | 10.4  | 22:18 | 08:11 | 03:16 | +26° | S   | HYA |
| 00:00 Konjunktion mit BD-12 2716, Helligkeit 6.1, Distanz 41.0' |             |              |          |          |       |       |       |       |      |     |     |
| Fr. 22.Dez 2023   | 8h52'51.1"  | -13°58'32.1" | 1.413 aE | 0.610 aE | 10.4  | 22:13 | 08:06 | 03:11 | +26° | S   | HYA |
| 00:00 Konjunktion mit BD-12 2716, Helligkeit 6.1, Distanz 44.8' |             |              |          |          |       |       |       |       |      |     |     |
| Sa. 23.Dez 2023   | 8h51'58.1"  | -14° 5' 5.7" | 1.421 aE | 0.614 aE | 10.5  | 22:09 | 08:00 | 03:06 | +26° | S   | HYA |
| 00:00 Konjunktion mit BD-12 2716, Helligkeit 6.1, Distanz 51.7' |             |              |          |          |       |       |       |       |      |     |     |
| So. 24.Dez 2023   | 8h51' 2.8"  | -14°10'56.9" | 1.430 aE | 0.617 aE | 10.6  | 22:05 | 07:55 | 03:01 | +26° | S   | HYA |
| Mo. 25.Dez 2023   | 8h50' 5.3"  | -14°16' 5.6" | 1.438 aE | 0.620 aE | 10.6  | 22:00 | 07:49 | 02:57 | +26° | S   | HYA |
| Di. 26.Dez 2023   | 8h49' 5.6"  | -14°20'31.9" | 1.446 aE | 0.624 aE | 10.7  | 21:55 | 07:44 | 02:52 | +26° | S   | HYA |
| Mi. 27.Dez 2023   | 8h48' 3.8"  | -14°24'15.8" | 1.454 aE | 0.627 aE | 10.7  | 21:51 | 07:39 | 02:47 | +26° | S   | HYA |
| 23:17 Konjunktion mit 12 HYA, Helligkeit 4.3, Distanz 55.2'     |             |              |          |          |       |       |       |       |      |     |     |
| Do. 28.Dez 2023   | 8h47' 0.1"  | -14°27'17.4" | 1.463 aE | 0.631 aE | 10.8  | 21:46 | 07:34 | 02:42 | +26° | S   | HYA |
| 00:00 Konjunktion mit 12 HYA, Helligkeit 4.3, Distanz 55.2'     |             |              |          |          |       |       |       |       |      |     |     |
| Fr. 29.Dez 2023   | 8h45'54.6"  | -14°29'36.6" | 1.471 aE | 0.635 aE | 10.9  | 21:41 | 07:28 | 02:37 | +26° | S   | HYA |
| 00:00 Konjunktion mit 12 HYA, Helligkeit 4.3, Distanz 57.1'     |             |              |          |          |       |       |       |       |      |     |     |
| Sa. 30.Dez 2023   | 8h44'47.4"  | -14°31'13.8" | 1.479 aE | 0.638 aE | 10.9  | 21:36 | 07:23 | 02:32 | +25° | S   | HYA |
| So. 31.Dez 2023   | 8h43'38.5"  | -14°32' 8.9" | 1.488 aE | 0.642 aE | 11.0  | 21:31 | 07:18 | 02:27 | +25° | S   | HYA |
| Mo. 01.Jan 2024   | 8h42'28.2"  | -14°32'22.2" | 1.496 aE | 0.646 aE | 11.1  | 21:26 | 07:13 | 02:22 | +25° | S   | HYA |
| Di. 02.Jan 2024   | 8h41'16.5"  | -14°31'53.9" | 1.505 aE | 0.650 aE | 11.1  | 21:21 | 07:08 | 02:16 | +25° | S   | HYA |
| Mi. 03.Jan 2024   | 8h40' 3.6"  | -14°30'44.4" | 1.513 aE | 0.655 aE | 11.2  | 21:15 | 07:03 | 02:11 | +25° | S   | HYA |
| Do. 04.Jan 2024   | 8h38'49.6"  | -14°28'54.0" | 1.522 aE | 0.659 aE | 11.2  | 21:10 | 06:58 | 02:06 | +26° | S   | HYA |
| Fr. 05.Jan 2024   | 8h37'34.7"  | -14°26'23.1" | 1.530 aE | 0.663 aE | 11.3  | 21:04 | 06:53 | 02:01 | +26° | S   | HYA |
| Sa. 06.Jan 2024   | 8h36'18.9"  | -14°23'12.2" | 1.539 aE | 0.668 aE | 11.4  | 20:59 | 06:48 | 01:56 | +26° | S   | HYA |
| 23:59 Konjunktion mit BD-14 2564, Helligkeit 6.4, Distanz 55.7' |             |              |          |          |       |       |       |       |      |     |     |
| So. 07.Jan 2024   | 8h35' 2.4"  | -14°19'21.8" | 1.547 aE | 0.673 aE | 11.4  | 20:53 | 06:43 | 01:51 | +26° | S   | HYA |
| 23:59 Konjunktion mit BD-14 2564, Helligkeit 6.4, Distanz 50.0' |             |              |          |          |       |       |       |       |      |     |     |
| Mo. 08.Jan 2024   | 8h33'45.5"  | -14°14'52.5" | 1.556 aE | 0.677 aE | 11.5  | 20:48 | 06:38 | 01:45 | +26° | S   | HYA |
| 05:37 Konjunktion mit BD-14 2564, Helligkeit 6.4, Distanz 49.7' |             |              |          |          |       |       |       |       |      |     |     |
| Di. 09.Jan 2024   | 8h32'28.1"  | -14° 9'45.0" | 1.565 aE | 0.682 aE | 11.6  | 20:42 | 06:34 | 01:40 | +26° | S   | HYA |
| 00:00 Konjunktion mit BD-14 2564, Helligkeit 6.4, Distanz 52.0' |             |              |          |          |       |       |       |       |      |     |     |
| Mi. 10.Jan 2024   | 8h31'10.5"  | -14° 4' 0.1" | 1.573 aE | 0.687 aE | 11.6  | 20:36 | 06:29 | 01:35 | +26° | S   | HYA |
| Do. 11.Jan 2024   | 8h29'52.8"  | -13°57'38.5" | 1.582 aE | 0.693 aE | 11.7  | 20:30 | 06:24 | 01:30 | +26° | S   | HYA |
| Fr. 12.Jan 2024   | 8h28'35.1"  | -13°50'41.1" | 1.591 aE | 0.698 aE | 11.8  | 20:25 | 06:20 | 01:25 | +26° | S   | HYA |
| Sa. 13.Jan 2024   | 8h27'17.6"  | -13°43' 9.0" | 1.599 aE | 0.704 aE | 11.8  | 20:19 | 06:15 | 01:19 | +26° | S   | PUP |
| 23:59 Konjunktion mit 22 PUP, Helligkeit 6.1, Distanz 56.8'     |             |              |          |          |       |       |       |       |      |     |     |
| So. 14.Jan 2024   | 8h26' 0.4"  | -13°35' 3.1" | 1.608 aE | 0.709 aE | 11.9  | 20:13 | 06:11 | 01:14 | +26° | S   | PUP |
| 23:59 Konjunktion mit 22 PUP, Helligkeit 6.1, Distanz 36.7'     |             |              |          |          |       |       |       |       |      |     |     |

**Der Komet 103P/Hartley im Jahre 2023**  
berechnet für den Standort Mitteldeutschland

**Ephemeride und Konjunktionen des Kometen 103P/Hartley**

| Datum   | Rektaszens. | Deklination  | r        | Delta    | Hell. | Aufg. | Untg. | TOpt. | Höhe | Ri. | Stb |
|---|-------------|--------------|----------|----------|-------|-------|-------|-------|------|-----|-----|
| Mo. 15. Jan 2024  | 8h24'43.7"  | -13°26'24.6" | 1.617 aE | 0.715 aE | 11.9  | 20:07 | 06:06 | 01:09 | +27° | S   | PUP |
| 05:27 Konjunktion mit 22 PUP, Helligkeit 6.1, Distanz 32.0' |             |              |          |          |       |       |       |       |      |     |     |