

Station: Surat

Location: Longitude : 72.83 E Latitude : 21.20 N

| Date       | Moonrise | Moonset | Sunrise | Sunset |
|------------|----------|---------|---------|--------|
|            | h. m.    | h. m.   | h. m.   | h. m.  |
| 2016/12/28 | 6-10     | 17-32   | 7-15    | 18- 6  |
| 2016/12/29 | 7- 0     | 18-20   | 7-15    | 18- 7  |
| 2016/12/30 | 7-49     | 19-12   | 7-16    | 18- 7  |
| 2016/12/31 | 8-36     | 20- 5   | 7-16    | 18- 8  |
| 2017/ 1/ 1 | 9-23     | 20-59   | 7-16    | 18- 8  |
| 2017/ 1/ 2 | 10- 6    | 21-54   | 7-17    | 18- 9  |
| 2017/ 1/ 3 | 10-49    | 22-49   | 7-17    | 18-10  |
| 2017/ 1/ 4 | 11-31    | 23-45   | 7-17    | 18-10  |
| 2017/ 1/ 5 | 12-12    | -----   | 7-17    | 18-11  |
| 2017/ 1/ 6 | 12-56    | 0-42    | 7-18    | 18-12  |
| 2017/ 1/ 7 | 13-41    | 1-41    | 7-18    | 18-12  |
| 2017/ 1/ 8 | 14-29    | 2-41    | 7-18    | 18-13  |
| 2017/ 1/ 9 | 15-22    | 3-44    | 7-18    | 18-14  |
| 2017/ 1/10 | 16-18    | 4-47    | 7-18    | 18-14  |
| 2017/ 1/11 | 17-18    | 5-50    | 7-19    | 18-15  |
| 2017/ 1/12 | 18-19    | 6-50    | 7-19    | 18-16  |
| 2017/ 1/13 | 19-21    | 7-46    | 7-19    | 18-16  |
| 2017/ 1/14 | 20-20    | 8-37    | 7-19    | 18-17  |
| 2017/ 1/15 | 21-18    | 9-25    | 7-19    | 18-18  |
| 2017/ 1/16 | 22-12    | 10- 7   | 7-19    | 18-18  |
| 2017/ 1/17 | 23- 4    | 10-47   | 7-19    | 18-19  |
| 2017/ 1/18 | 23-55    | 11-26   | 7-19    | 18-20  |
| 2017/ 1/19 | -----    | 12- 3   | 7-19    | 18-20  |
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| 2017/ 1/21 | 1-34     | 13-18   | 7-19    | 18-22  |
| 2017/ 1/22 | 2-23     | 13-58   | 7-18    | 18-22  |
| 2017/ 1/23 | 3-13     | 14-40   | 7-18    | 18-23  |
| 2017/ 1/24 | 4- 3     | 15-26   | 7-18    | 18-24  |
| 2017/ 1/25 | 4-53     | 16-13   | 7-18    | 18-24  |
| 2017/ 1/26 | 5-43     | 17- 4   | 7-18    | 18-25  |
| 2017/ 1/27 | 6-31     | 17-58   | 7-18    | 18-26  |
| 2017/ 1/28 | 7-19     | 18-52   | 7-17    | 18-26  |
| 2017/ 1/29 | 8- 4     | 19-48   | 7-17    | 18-27  |
| 2017/ 1/30 | 8-48     | 20-44   | 7-17    | 18-27  |
| 2017/ 1/31 | 9-31     | 21-41   | 7-16    | 18-28  |
| 2017/ 2/ 1 | 10-13    | 22-38   | 7-16    | 18-29  |
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| 2017/ 2/17 | -----    | 11-15   | 7- 8    | 18-38  |
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| 2017/ 2/20 | 1-55     | 13-19   | 7- 6    | 18-39  |
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| 2017/ 2/22 | 3-34     | 14-54   | 7- 5    | 18-40  |
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| 2017/ 2/24 | 5-10     | 16-40   | 7- 3    | 18-41  |
| 2017/ 2/25 | 5-57     | 17-36   | 7- 2    | 18-41  |
| 2017/ 2/26 | 6-42     | 18-33   | 7- 2    | 18-42  |
| 2017/ 2/27 | 7-26     | 19-31   | 7- 1    | 18-42  |
| 2017/ 2/28 | 8-10     | 20-29   | 7- 0    | 18-42  |
| 2017/ 3/ 1 | 8-53     | 21-29   | 6-59    | 18-43  |

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| 2017/ 3/ 3 | 10-24 | 23-29 | 6-58 | 18-44 |
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| 2017/ 3/ 6 | 12-59 | 1-31  | 6-55 | 18-45 |
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| 2017/ 3/ 8 | 14-54 | 3-25  | 6-53 | 18-46 |
| 2017/ 3/ 9 | 15-52 | 4-18  | 6-53 | 18-46 |
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| 2017/ 3/12 | 18-40 | 6-35  | 6-50 | 18-47 |
| 2017/ 3/13 | 19-34 | 7-15  | 6-49 | 18-47 |
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| 2017/ 3/22 | 2-13  | 13-35 | 6-41 | 18-50 |
| 2017/ 3/23 | 3- 1  | 14-27 | 6-40 | 18-51 |
| 2017/ 3/24 | 3-47  | 15-22 | 6-39 | 18-51 |
| 2017/ 3/25 | 4-32  | 16-17 | 6-38 | 18-51 |
| 2017/ 3/26 | 5-17  | 17-15 | 6-37 | 18-52 |
| 2017/ 3/27 | 6- 1  | 18-14 | 6-36 | 18-52 |
| 2017/ 3/28 | 6-45  | 19-15 | 6-35 | 18-52 |
| 2017/ 3/29 | 7-31  | 20-16 | 6-34 | 18-52 |
| 2017/ 3/30 | 8-17  | 21-19 | 6-34 | 18-53 |
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| 2017/ 4/ 1 | 9-59  | 23-24 | 6-32 | 18-53 |
| 2017/ 4/ 2 | 10-54 | ----- | 6-31 | 18-54 |
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| 2017/ 4/22 | 3- 8  | 14-59 | 6-14 | 19- 0 |
| 2017/ 4/23 | 3-52  | 15-56 | 6-13 | 19- 1 |
| 2017/ 4/24 | 4-35  | 16-56 | 6-13 | 19- 1 |
| 2017/ 4/25 | 5-20  | 17-57 | 6-12 | 19- 2 |
| 2017/ 4/26 | 6- 6  | 19- 0 | 6-11 | 19- 2 |
| 2017/ 4/27 | 6-55  | 20- 4 | 6-11 | 19- 2 |
| 2017/ 4/28 | 7-47  | 21- 9 | 6-10 | 19- 3 |
| 2017/ 4/29 | 8-43  | 22-13 | 6- 9 | 19- 3 |
| 2017/ 4/30 | 9-41  | 23-14 | 6- 9 | 19- 3 |
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| 2017/ 5/10 | 18-44 | 5-45  | 6- 3 | 19- 8 |
| 2017/ 5/11 | 19-35 | 6-24  | 6- 2 | 19- 8 |

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| 2017/ 5/12 | 20-24 | 7- 5  | 6- 2 | 19- 8 |
| 2017/ 5/13 | 21-14 | 7-49  | 6- 2 | 19- 9 |
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| 2017/ 5/16 | 23-37 | 10-11 | 6- 0 | 19-10 |
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| 2017/ 5/19 | 1- 4  | 12-48 | 5-59 | 19-11 |
| 2017/ 5/20 | 1-46  | 13-43 | 5-59 | 19-12 |
| 2017/ 5/21 | 2-27  | 14-39 | 5-59 | 19-12 |
| 2017/ 5/22 | 3-10  | 15-38 | 5-58 | 19-13 |
| 2017/ 5/23 | 3-54  | 16-39 | 5-58 | 19-13 |
| 2017/ 5/24 | 4-41  | 17-43 | 5-58 | 19-14 |
| 2017/ 5/25 | 5-32  | 18-48 | 5-58 | 19-14 |
| 2017/ 5/26 | 6-25  | 19-54 | 5-57 | 19-14 |
| 2017/ 5/27 | 7-24  | 20-58 | 5-57 | 19-15 |
| 2017/ 5/28 | 8-25  | 21-59 | 5-57 | 19-15 |
| 2017/ 5/29 | 9-28  | 22-56 | 5-57 | 19-16 |
| 2017/ 5/30 | 10-29 | 23-47 | 5-57 | 19-16 |
| 2017/ 5/31 | 11-29 | ----- | 5-57 | 19-17 |
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| 2017/ 6/ 9 | 19-11 | 5-47  | 5-56 | 19-20 |
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| 2017/ 6/15 | 23-45 | 10-42 | 5-57 | 19-22 |
| 2017/ 6/16 | ----- | 11-35 | 5-57 | 19-22 |
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| 2017/ 6/20 | 2-31  | 15-24 | 5-58 | 19-23 |
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| 2017/ 6/22 | 4- 9  | 17-32 | 5-58 | 19-24 |
| 2017/ 6/23 | 5- 5  | 18-37 | 5-58 | 19-24 |
| 2017/ 6/24 | 6- 5  | 19-41 | 5-59 | 19-24 |
| 2017/ 6/25 | 7- 8  | 20-41 | 5-59 | 19-24 |
| 2017/ 6/26 | 8-11  | 21-36 | 5-59 | 19-24 |
| 2017/ 6/27 | 9-14  | 22-26 | 5-59 | 19-25 |
| 2017/ 6/28 | 10-13 | 23-11 | 6- 0 | 19-25 |
| 2017/ 6/29 | 11-11 | 23-53 | 6- 0 | 19-25 |
| 2017/ 6/30 | 12- 4 | ----- | 6- 0 | 19-25 |
| 2017/ 7/ 1 | 12-56 | 0-31  | 6- 0 | 19-25 |
| 2017/ 7/ 2 | 13-47 | 1- 9  | 6- 1 | 19-25 |
| 2017/ 7/ 3 | 14-37 | 1-47  | 6- 1 | 19-25 |
| 2017/ 7/ 4 | 15-27 | 2-24  | 6- 1 | 19-25 |
| 2017/ 7/ 5 | 16-17 | 3- 4  | 6- 2 | 19-25 |
| 2017/ 7/ 6 | 17- 7 | 3-45  | 6- 2 | 19-25 |
| 2017/ 7/ 7 | 17-56 | 4-28  | 6- 2 | 19-25 |
| 2017/ 7/ 8 | 18-45 | 5-15  | 6- 3 | 19-25 |
| 2017/ 7/ 9 | 19-33 | 6- 3  | 6- 3 | 19-25 |
| 2017/ 7/10 | 20-18 | 6-54  | 6- 4 | 19-25 |
| 2017/ 7/11 | 21- 3 | 7-46  | 6- 4 | 19-25 |
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| 2017/ 7/13 | 22-25 | 9-32  | 6- 5 | 19-24 |
| 2017/ 7/14 | 23- 6 | 10-25 | 6- 5 | 19-24 |
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| 2017/ 7/17 | 0-28  | 13-13 | 6- 6 | 19-23 |
| 2017/ 7/18 | 1-12  | 14-12 | 6- 7 | 19-23 |
| 2017/ 7/19 | 2- 0  | 15-14 | 6- 7 | 19-23 |
| 2017/ 7/20 | 2-51  | 16-17 | 6- 7 | 19-23 |
| 2017/ 7/21 | 3-48  | 17-21 | 6- 8 | 19-22 |

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|------------|-------|-------|------|-------|
| 2017/ 7/22 | 4-48  | 18-23 | 6- 8 | 19-22 |
| 2017/ 7/23 | 5-51  | 19-21 | 6- 9 | 19-22 |
| 2017/ 7/24 | 6-54  | 20-14 | 6- 9 | 19-21 |
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| 2017/ 7/27 | 9-53  | 22-27 | 6-10 | 19-20 |
| 2017/ 7/28 | 10-47 | 23- 7 | 6-11 | 19-20 |
| 2017/ 7/29 | 11-40 | 23-45 | 6-11 | 19-19 |
| 2017/ 7/30 | 12-30 | ----- | 6-11 | 19-19 |
| 2017/ 7/31 | 13-21 | 0-23  | 6-12 | 19-18 |
| 2017/ 8/ 1 | 14-11 | 1- 2  | 6-12 | 19-18 |
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| 2017/ 8/ 6 | 18-15 | 4-48  | 6-14 | 19-15 |
| 2017/ 8/ 7 | 19- 0 | 5-40  | 6-14 | 19-14 |
| 2017/ 8/ 8 | 19-44 | 6-33  | 6-15 | 19-14 |
| 2017/ 8/ 9 | 20-25 | 7-27  | 6-15 | 19-13 |
| 2017/ 8/10 | 21- 6 | 8-21  | 6-15 | 19-12 |
| 2017/ 8/11 | 21-47 | 9-16  | 6-16 | 19-12 |
| 2017/ 8/12 | 22-28 | 10-11 | 6-16 | 19-11 |
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| 2017/ 8/14 | 23-56 | 12- 6 | 6-17 | 19-10 |
| 2017/ 8/15 | ----- | 13- 5 | 6-17 | 19- 9 |
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| 2017/ 8/17 | 1-38  | 15- 8 | 6-18 | 19- 7 |
| 2017/ 8/18 | 2-34  | 16- 8 | 6-18 | 19- 7 |
| 2017/ 8/19 | 3-35  | 17- 7 | 6-18 | 19- 6 |
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| 2017/ 9/13 | ----- | 13- 1 | 6-25 | 18-44 |
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| 2017/ 9/18 | 4-26  | 17-30 | 6-26 | 18-39 |
| 2017/ 9/19 | 5-25  | 18-13 | 6-26 | 18-38 |
| 2017/ 9/20 | 6-21  | 18-55 | 6-27 | 18-37 |
| 2017/ 9/21 | 7-16  | 19-35 | 6-27 | 18-36 |
| 2017/ 9/22 | 8-10  | 20-14 | 6-27 | 18-35 |
| 2017/ 9/23 | 9- 2  | 20-53 | 6-27 | 18-34 |
| 2017/ 9/24 | 9-54  | 21-33 | 6-28 | 18-33 |
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| 2017/ 9/26 | 11-36 | 22-58 | 6-28 | 18-31 |
| 2017/ 9/27 | 12-25 | 23-44 | 6-28 | 18-30 |
| 2017/ 9/28 | 13-14 | ----- | 6-29 | 18-29 |
| 2017/ 9/29 | 14- 1 | 0-31  | 6-29 | 18-28 |
| 2017/ 9/30 | 14-47 | 1-21  | 6-29 | 18-27 |

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| 2017/10/ 1 | 15-32 | 2-13  | 6-30 | 18-26 |
| 2017/10/ 2 | 16-15 | 3- 6  | 6-30 | 18-25 |
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| 2017/10/ 4 | 17-39 | 4-55  | 6-30 | 18-24 |
| 2017/10/ 5 | 18-21 | 5-52  | 6-31 | 18-23 |
| 2017/10/ 6 | 19- 5 | 6-50  | 6-31 | 18-22 |
| 2017/10/ 7 | 19-50 | 7-50  | 6-31 | 18-21 |
| 2017/10/ 8 | 20-38 | 8-51  | 6-32 | 18-20 |
| 2017/10/ 9 | 21-29 | 9-53  | 6-32 | 18-19 |
| 2017/10/10 | 22-23 | 10-55 | 6-32 | 18-18 |
| 2017/10/11 | 23-21 | 11-56 | 6-33 | 18-17 |
| 2017/10/12 | ----- | 12-55 | 6-33 | 18-17 |
| 2017/10/13 | 0-20  | 13-50 | 6-33 | 18-16 |
| 2017/10/14 | 1-20  | 14-40 | 6-34 | 18-15 |
| 2017/10/15 | 2-19  | 15-27 | 6-34 | 18-14 |
| 2017/10/16 | 3-17  | 16-10 | 6-34 | 18-13 |
| 2017/10/17 | 4-12  | 16-52 | 6-35 | 18-13 |
| 2017/10/18 | 5- 7  | 17-31 | 6-35 | 18-12 |
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| 2017/10/24 | 10-18 | 21-37 | 6-38 | 18- 8 |
| 2017/10/25 | 11- 7 | 22-24 | 6-38 | 18- 7 |
| 2017/10/26 | 11-55 | 23-13 | 6-38 | 18- 6 |
| 2017/10/27 | 12-41 | ----- | 6-39 | 18- 6 |
| 2017/10/28 | 13-26 | 0- 3  | 6-39 | 18- 5 |
| 2017/10/29 | 14- 8 | 0-54  | 6-40 | 18- 4 |
| 2017/10/30 | 14-50 | 1-47  | 6-40 | 18- 4 |
| 2017/10/31 | 15-31 | 2-40  | 6-41 | 18- 3 |
| 2017/11/ 1 | 16-12 | 3-36  | 6-41 | 18- 3 |
| 2017/11/ 2 | 16-55 | 4-33  | 6-42 | 18- 2 |
| 2017/11/ 3 | 17-40 | 5-33  | 6-42 | 18- 2 |
| 2017/11/ 4 | 18-27 | 6-33  | 6-43 | 18- 1 |
| 2017/11/ 5 | 19-18 | 7-37  | 6-43 | 18- 1 |
| 2017/11/ 6 | 20-13 | 8-42  | 6-44 | 18- 0 |
| 2017/11/ 7 | 21-12 | 9-46  | 6-44 | 18- 0 |
| 2017/11/ 8 | 22-12 | 10-48 | 6-45 | 17-59 |
| 2017/11/ 9 | 23-14 | 11-46 | 6-46 | 17-59 |
| 2017/11/10 | ----- | 12-39 | 6-46 | 17-59 |
| 2017/11/11 | 0-14  | 13-27 | 6-47 | 17-58 |
| 2017/11/12 | 1-13  | 14-11 | 6-47 | 17-58 |
| 2017/11/13 | 2- 8  | 14-52 | 6-48 | 17-58 |
| 2017/11/14 | 3- 3  | 15-32 | 6-49 | 17-57 |
| 2017/11/15 | 3-56  | 16- 9 | 6-49 | 17-57 |
| 2017/11/16 | 4-47  | 16-47 | 6-50 | 17-57 |
| 2017/11/17 | 5-39  | 17-27 | 6-50 | 17-57 |
| 2017/11/18 | 6-30  | 18- 6 | 6-51 | 17-57 |
| 2017/11/19 | 7-22  | 18-48 | 6-52 | 17-56 |
| 2017/11/20 | 8-12  | 19-33 | 6-52 | 17-56 |
| 2017/11/21 | 9- 2  | 20-18 | 6-53 | 17-56 |
| 2017/11/22 | 9-51  | 21- 6 | 6-54 | 17-56 |
| 2017/11/23 | 10-37 | 21-56 | 6-54 | 17-56 |
| 2017/11/24 | 11-22 | 22-46 | 6-55 | 17-56 |
| 2017/11/25 | 12- 4 | 23-38 | 6-56 | 17-56 |
| 2017/11/26 | 12-45 | ----- | 6-56 | 17-56 |
| 2017/11/27 | 13-26 | 0-29  | 6-57 | 17-56 |
| 2017/11/28 | 14- 5 | 1-23  | 6-57 | 17-56 |
| 2017/11/29 | 14-46 | 2-17  | 6-58 | 17-56 |
| 2017/11/30 | 15-28 | 3-14  | 6-59 | 17-56 |
| 2017/12/ 1 | 16-13 | 4-13  | 6-59 | 17-56 |
| 2017/12/ 2 | 17- 2 | 5-15  | 7- 0 | 17-56 |
| 2017/12/ 3 | 17-56 | 6-19  | 7- 1 | 17-56 |
| 2017/12/ 4 | 18-54 | 7-26  | 7- 1 | 17-56 |
| 2017/12/ 5 | 19-56 | 8-31  | 7- 2 | 17-57 |
| 2017/12/ 6 | 21- 0 | 9-33  | 7- 3 | 17-57 |
| 2017/12/ 7 | 22- 3 | 10-31 | 7- 3 | 17-57 |
| 2017/12/ 8 | 23- 5 | 11-23 | 7- 4 | 17-57 |
| 2017/12/ 9 | ----- | 12-10 | 7- 5 | 17-57 |
| 2017/12/10 | 0- 3  | 12-53 | 7- 5 | 17-58 |

|            |       |       |      |       |
|------------|-------|-------|------|-------|
| 2017/12/11 | 0-59  | 13-33 | 7- 6 | 17-58 |
| 2017/12/12 | 1-52  | 14-11 | 7- 6 | 17-58 |
| 2017/12/13 | 2-44  | 14-49 | 7- 7 | 17-59 |
| 2017/12/14 | 3-36  | 15-27 | 7- 8 | 17-59 |
| 2017/12/15 | 4-26  | 16- 6 | 7- 8 | 17-59 |
| 2017/12/16 | 5-17  | 16-47 | 7- 9 | 18- 0 |
| 2017/12/17 | 6- 8  | 17-30 | 7- 9 | 18- 0 |
| 2017/12/18 | 6-58  | 18-15 | 7-10 | 18- 1 |
| 2017/12/19 | 7-47  | 19- 2 | 7-11 | 18- 1 |
| 2017/12/20 | 8-34  | 19-52 | 7-11 | 18- 2 |
| 2017/12/21 | 9-20  | 20-41 | 7-12 | 18- 2 |
| 2017/12/22 | 10- 3 | 21-32 | 7-12 | 18- 3 |
| 2017/12/23 | 10-45 | 22-23 | 7-13 | 18- 3 |
| 2017/12/24 | 11-25 | 23-15 | 7-13 | 18- 4 |
| 2017/12/25 | 12- 3 | ----- | 7-14 | 18- 4 |
| 2017/12/26 | 12-42 | 0- 7  | 7-14 | 18- 5 |
| 2017/12/27 | 13-22 | 1- 1  | 7-14 | 18- 5 |
| 2017/12/28 | 14- 3 | 1-57  | 7-15 | 18- 6 |
| 2017/12/29 | 14-48 | 2-55  | 7-15 | 18- 6 |
| 2017/12/30 | 15-38 | 3-57  | 7-16 | 18- 7 |
| 2017/12/31 | 16-33 | 5- 1  | 7-16 | 18- 8 |

all times in local time ( = UT + 5.5h )