



# Visibility charts from European Southern Observatory, La Silla

## 1 Epochs

- CHART 1: 2017-08-18

## 2 Cuts applied to the selection

| Quantity                                     | Condition | Description                    | Units  |
|--|-----------|--------------------------------|--------|
| Alt  | > 30      | Maximum altitude               | deg    |
| $\widehat{SEO}$                              | > 30      | Solar elongation               | deg    |
| $\widehat{MEO}$                              | > 5       | Lunar elongation               | deg    |
| $m_V$  | n.a.      | Apparent magnitude             | mag    |
| $\alpha$                                     | n.a.      | Phase angle                    | deg    |
| $\phi$                                       | n.a.      | Apparent diameter              | arcsec |
| $\mathcal{D}$                                | > 0       | Minimum duration of visibility | min    |
| Visibility computed between civil twilights. |           |                                |        |

### 3 Meaning of displayed quantities

| Quantity               | Description                   | Units    |
|------------------------|-------------------------------|----------|
| Target                 | Target designation            | –        |
| $m_V$                  | Apparent magnitude            | mag      |
| $\phi$                 | Apparent diameter             | arcsec   |
| $\mathcal{D}$          | Duration of visibility window | h:m      |
| Alt                    | Altitude                      | deg      |
| Az.                    | Azimuth                       | deg      |
| RA                     | Right Ascension               | h:m:s    |
| DEC                    | Declination                   | d:m:s    |
| Rate                   | Apparent non-sidereal motion  | arcsec/h |
| $\lambda_G$            | Galactic longitude            | deg      |
| $\beta_G$              | Galactic latitude             | deg      |
| $r$                    | Range to observer             | au       |
| $\Delta$               | Heliocentric distance         | au       |
| $\alpha$               | Solar phase angle             | deg      |
| $\widehat{\text{SEO}}$ | Solar elongation              | deg      |
| $\widehat{\text{MEO}}$ | Moon elongation               | deg      |

For each target, the values are reported at the time of the highest altitude.

### Credits

**ViSiON** (**V**isibility **S**ervice for **O**bserving **N**ights) has been developed by Benoît Carry and Jérôme Berthier at IMCCE.

If ViSiON was helpful for your research, please add the following in your acknowledgments: “This publication makes use of the Virtual Observatory Web service ViSiON, developed by IMCCE and OCA.”

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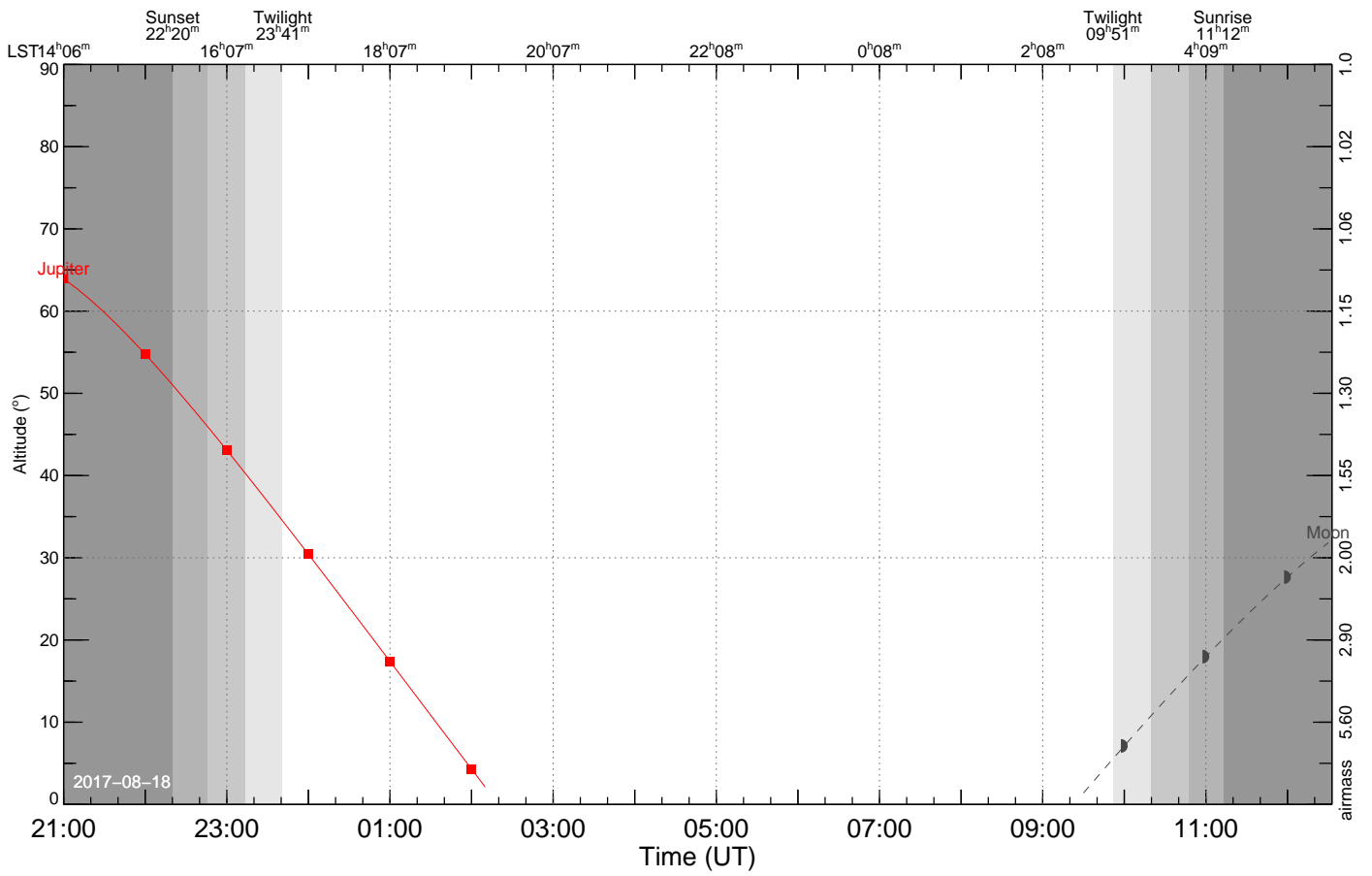
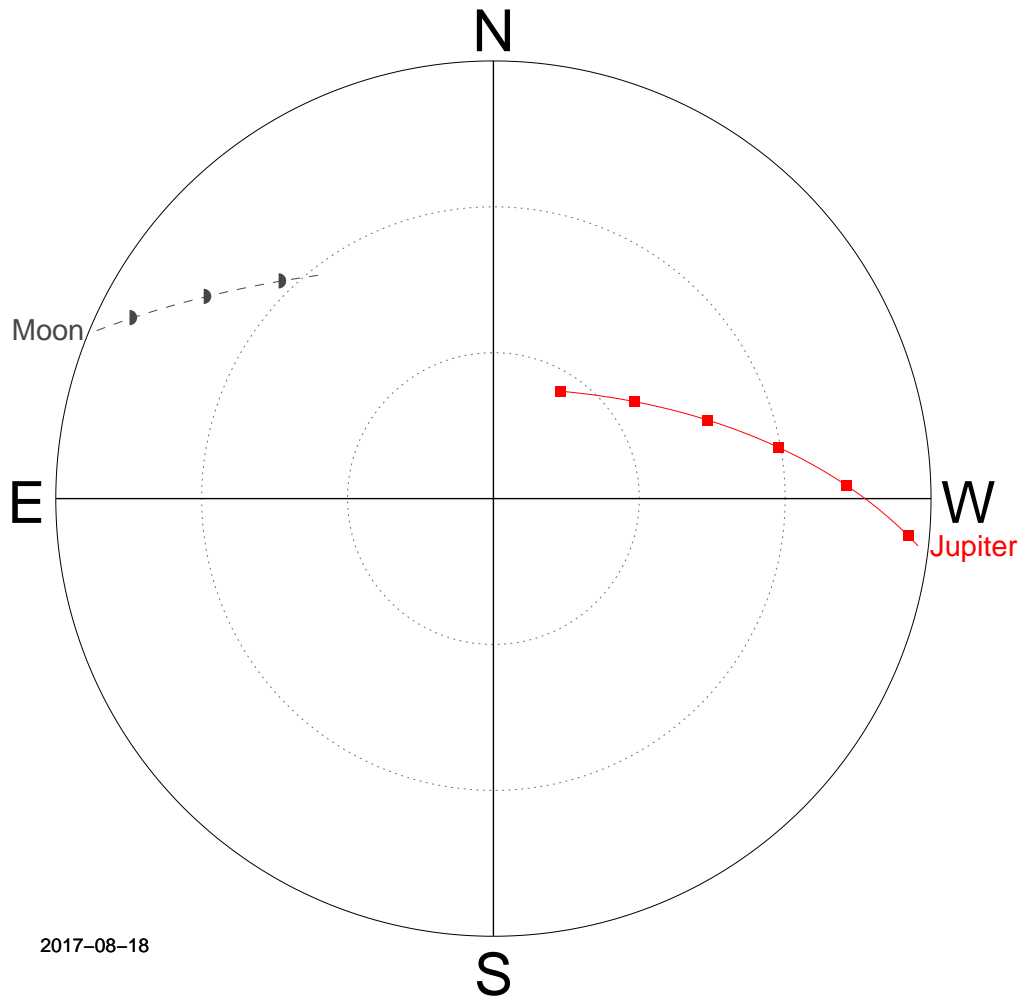


Figure 1: Airmass charts for epoch 2017-08-18





| Target  | $m_V$ | $\phi$ | $\mathcal{D}$ | Alt | Az. | RA               | DEC                 | Rate | $\lambda_G$ | $\beta_G$ | $r$   | $\Delta$ | $\alpha$ | $\widehat{SEO}$ | $\widehat{MEO}$ | Links  |
|---------|-------|--------|---------------|-----|-----|------------------|---------------------|------|-------------|-----------|-------|----------|----------|-----------------|-----------------|--|
| Moon    | -6.33 | 1963   | $12^h00^m$    | 14  | 57  | $7^h 50^m 41^s$  | $19^\circ 09' 53''$ | 1767 | 382         | 21        | 0.002 | 1.009    | 149.5    | 30.4            | 0.0             | <i>ice</i> -  |
| Jupiter | -1.79 | 32.19  | $1^h20^m$     | 45  | 292 | $13^h 13^m 36^s$ | $-6^\circ 34' 19''$ | 24   | 313         | 55        | 5.99  | 5.44     | 8.6      | 53.5            | 92.0            | <i>ice</i> -  |

Table 1: Ephemerides summary for epoch 2017-08-18, values are reported at the time of the highest altitude.