

# Appendix A

## Constants and acronyms

### A.1 Table of constants

Table A.1: Table of constants

| Symbol               | Value                      | Units                                               | Description                                            |
|----------------------|----------------------------|-----------------------------------------------------|--------------------------------------------------------|
| $h$                  | $6.626068 \cdot 10^{-34}$  | J.s                                                 | Planck constant                                        |
| $k$                  | $1.3806504 \cdot 10^{-23}$ | J.K <sup>-1</sup>                                   | Boltzmann constant                                     |
| $\sigma_{\text{SB}}$ | $5.6704 \cdot 10^{-8}$     | J.s <sup>-1</sup> .m <sup>-2</sup> .K <sup>-4</sup> | Stefan-Boltzmann constant                              |
| $G$                  | $6.673 \cdot 10^{-11}$     | m <sup>3</sup> .kg <sup>-1</sup> .s <sup>-2</sup>   | Gravitational constant                                 |
| $c$                  | $2.99792458 \cdot 10^8$    | m.s <sup>-1</sup>                                   | Speed of light in vacuum                               |
| $AU$                 | $1.496 \cdot 10^{11}$      | m                                                   | Astronomical Units – distance of the Earth to the Sun  |
| $pc$                 | $3.08568025 \cdot 10^{16}$ | m                                                   | Parsec – distance of ...                               |
| $ly$                 | $0.306601$                 | pc                                                  | Light year – distance covered by the light in one year |
| $M_{\odot}$          | $1.989 \cdot 10^{30}$      | kg                                                  | Mass of the Sun                                        |
| $R_{\odot}$          | $6.955 \cdot 10^8$         | m                                                   | Radius of the Sun                                      |
| $M_{\text{Jup}}$     | $1.89 \cdot 10^{27}$       | kg                                                  | Mass of Jupiter                                        |
| $R_{\text{Jup}}$     | $6.9911 \cdot 10^7$        | m                                                   | Radius of Jupiter                                      |
| $M_{\oplus}$         | $5.97 \cdot 10^{24}$       | kg                                                  | Mass of the Earth                                      |
| $R_{\oplus}$         | $6.3728 \cdot 10^6$        | m                                                   | Radius of the Earth                                    |

### A.2 Some acronyms

BT2 = 2<sup>nd</sup> CoRoT blind test exercise

CCD = Charged Coupled Device

EW = equivalent width

IRF = Iterative Reconstruction Filter (Alapini & Aigrain, 2009)

LC = light curve

NIF = Non-linear Iterative Filter (Aigrain & Irwin, 2004)

PSF = Point Spread function

$T_{\text{eff}}$  = stellar effective temperature

RV = radial velocity