**Olivine- Thermometers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Reference | Name in ThermoBar |  | Pressure-dependent? | H2O-dependent? |
| **Olivine-Liquid thermometry. *Function “calculate\_ol\_liq\_temp”*** | | | | |
| Putirka (2008) | T\_Put2008\_eq19 |  | **Yes** | No |
| T\_Put2008\_eq21 |  | **Yes** | **Yes** |
| T\_Put2008\_eq22 |  | **Yes** | **Yes** |
| Beattie (1993) | T\_Beatt93\_ol |  | **Yes** | No |
| T\_Beatt93\_ol\_HerzCorr |  | **Yes** | No |
| Sisson and Grove (1992) | T\_Sisson1992 |  | **Yes** | No |
| Pu et al. (2017) | T\_Pu2017 |  | No | No |
| Pu et al. (2021) | T\_Pu2021 |  | **Yes** | No |
| **Olivine-Spinel thermometry. *Function “calculate\_ol\_sp\_temp”*** | | | | |
| Coogan et al. (2014) | T\_Coogan2014 |  | No | No |
| Wan et al. (2008) | T\_Wan2008 |  | No | No |

**Feldspar Thermometers, Barometers and Hygrometers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Reference | Name in ThermoBar | Temperature-dependent? | Pressure-dependent? | H2O-dependent? |
| **Plagioclase-Liquid thermometry. *Function “calculate\_fspar\_liq\_temp”*** | | | | |
| Putirka (2008) | T\_Put2008\_eq23 |  | **Yes** | **Yes** |
| T\_Put2008\_eq24a |  | **Yes** | **Yes** |
| **Plagioclase-Liquid Barometry. *Function “calculate\_fspar\_liq\_press”*** | | | | |
| Putirka (2008) | P\_Put2008\_eq25 | **Yes** |  | No |
| **Alkali Feldspar-Liquid thermometry. *Function “calculate\_fspar\_liq\_temp”*** | | | | |
| Putirka (2008) | T\_Put2008\_eq24b |  | **Yes** | No |
| **Plagioclase-Alkali Feldspar thermometry. Function “calculate\_plag\_kspar\_temp”** | | | | |
| Putirka (2008) | T\_Put2008\_eq27a |  | **Yes** | No |
| T\_Put2008\_eq27b |  | **Yes** | No |
| T\_Put\_Global\_2Fspar |  | **Yes** | No |
| **Plagioclase-Alkali Feldspar thermometry. Function “calculate\_plag\_kspar\_temp\_matching”** | | | | |
| Putirka (2008) | H\_Put2008\_eq25b | **Yes** | **Yes** |  |
| Putirka (2005) | H\_Put2005\_eqH | **Yes** | No |  |
| Waters and Lange (2015) | H\_Waters2015 | **Yes** | **Yes** |  |
| **Other Functions** | | | | |
| **Iterative solving of pressure and temperature:**  **calculate\_fspar\_liq\_press\_temp:** Iteratively solves P and T for fspar-liq pairs using an equation for pressure, and an equation for temperature  **Matching all possible pairs**  **calculate\_plag\_kspar\_temp\_matching:** Calculates P and T for all possible plag-kspar pairs (with user-selected options for equilibrium criteria) | | | | |