

## 2.3.2.1 Understand coronal conditions under which the shocks form and determine the interplanetary conditions where they evolve

*Description of the objective (to be written):*

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- **SPICE:**

- **Target:** Active Regions, Quiet Sun, Coronal Holes.
- **Observing mode:** Dynamics, CME Watch.
- **Slit size:** 2" for Dynamics; 4" for CME Watch.
- **Exposure time/cadence and number of X positions:** 5 s, X=160 for Dynamics; 30 s, X=224 for CME Watch.
- **Field of View:** 5'x11' for Dynamics; 15'x11' for CME Watch.
- **Number of repetitions of the study:** 1 CME Watch, followed by 3 Dynamics followed by 1 CME Watch (repeat for different targets).
- **Observation time per day:** 5 hours for a combination (1 CME Watch, 3 Dynamics and 1 CME Watch – 1.9 hours per study for CME Watch; 0.4 hours per study for Dynamics).
- **Key SPICE lines to be included:** H I 1025 Å, C III 977 Å, O VI 1032 Å, Ne VIII 770 Å, Mg IX 706 Å, Si XII 520 Å (x2) – 10 lines (4 profiles and 6 intensities) for Dynamics; C III 977 Å, O VI 1032 Å, O VI 1037 Å, Ne VIII 770 Å, Mg IX 706 Å, Fe X 1028 Å and Fe XX 721 Å (the last line in case of a flare)– 15 lines (5 profiles+10 intensities) for CME watch.
- **Observing window preference:**
- **Other instruments:** EUI, PHI, SWA, EPD, SolOHI.
- **Comments:** *The choice of lines, and also the number of intensities and profiles, is flexible, although the sum of the intensities and profiles is constrained to a maximum (e.g 15 for composition mapping). While varying the number of intensities and profiles, within the maximum, has no effect on the duration of the study, it will have an effect on the telemetry.*