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## README - Sensor Model - Main

### Guidance, Navigation and Controls Subsystem

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#### se\_main()

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**Reviewed by:** NOT YET REVIEWED - Aruja Khanna, KT Prajwal Pratiksh

**Description:**

This is the Main Script for the Sensor Model. This can be converted to a Function in the future as no Input / Output is involved.

**Formula & References:**

The overall structure is based on:

[Development of star image simulator for star sensor algorithm validation](#) [1]

**Input files/ Files Accessed:**

The following Functions/ Scripts are called:

1. **se\_PP\_1.load\_constants.m:** (Script) - Load all files from `Sensor_Model/Inputs/`
2. **se\_PP\_2.catalogue.m:** (Script) - Preprocesses the SSP SKY2000 Catalogue.
3. **se\_PR\_Main.m:** (Function) - The Main Function for Processing Block

**Output:**

The Image Matrix and the Table containing all relevant data fields is stored in `/Sensor_Model/Outputs/`

## References

- [1] N S Ardi et al. "Development of star image simulator for star sensor algorithm validation". In: *Journal of Physics: Conference Series* 1130 (Nov. 2018), p. 012020. DOI: [10.1088/1742-6596/1130/1/012020](https://doi.org/10.1088/1742-6596/1130/1/012020). URL: <https://doi.org/10.1088/1742-6596/1130/1/012020>.