

O-Type Stars of the Milky Way

Table with columns: SYSTEM NAME, STAR CLASSIFICATION, STELLAR DATA, SYSTEM MEMBERSHIP, EXPLOSION DATA, COORDINATES, and REMARKS/IMAGES, ETC. The table lists numerous O-type stars with their respective parameters and discovery details.

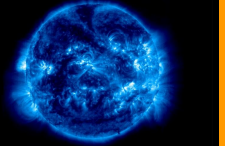
O-Type Stars of the Milky Way

by CMEM Andrew Gleason

An O-type star is a hot, blue-white star of spectral type O in the Yerkes classification system employed by astronomers. They have temperatures in excess of 30,000 kelvins (K) and so appear to the left on the Hertzsprung-Russell diagram.

Stars of this type are particularly rare; only 0.00003% of the main sequence are O-type stars. However, because they are usually very bright, they can be seen when further away than dimmer stars, and two of the 50 brightest stars as seen from Earth are O-type. Due to high temperature and luminosity, O-type stars end their lives rather quickly in violent supernova explosions, resulting in black holes or neutron stars. Most of these stars are young massive main sequence, giant, or supergiant stars.

O-type stars are typically located in regions of active star formation, such as the spiral arms of a spiral galaxy or a pair of galaxies undergoing collision and merger (such as the Antennae Galaxies). These stars burn out very rapidly, measured in millions of years, compared to the violent contraction of a galaxy's arms. Furthermore, O-type stars are also frequent in multiple star systems where their evolution is more difficult to predict due to mass transfer and the possibility of component stars going supernova at different times.



How to use this sheet:

If a galaxy is nearby, preferably with this sheet, this will be able to add stars via the 'Data' spreadsheet. There are certain categories that your own history permits. Other data may be required to enter manually. The 'Map' sheet will display the star's location on a coordinate system based on right ascension relative to J20.

System Name	Please make a separate entry for each O-Type star if there are more than one in the system
Star	with acronym
Spectral Type	Specify the spectral class followed by an Arabic Number (e.g. O5)
Luminosity Class	Following the Yerkes spectral classification (see below)
Age	and the number in million years without the 'million'
Solar Masses	Format 000.000
Star Mass	Format 000.000
Temperature	in Kelvin without the 'K'
Luminosity	With scientific notation
Solitary Star?	No, if it is part of a binary system
# of O-Types	Total number of O-Types including primary
Peak Velocity?	Number of peaks listed in the system
Neutron Star?	Number of neutron stars present in the system
Hot-Flare?	Number of hot flares present in the system
Contributed by:	Please state your name and
Full Coordinates	Specify and include with the necessary although it may confuse
Coordinates (X, Z, Y)	Amount of this row go X then Z then Y coordinates

The Yerkes Spectral Classification

V star for hypergiants or extremely luminous supergiants

III luminous supergiants

III (intermediate luminous supergiants)

II blue luminous supergiants

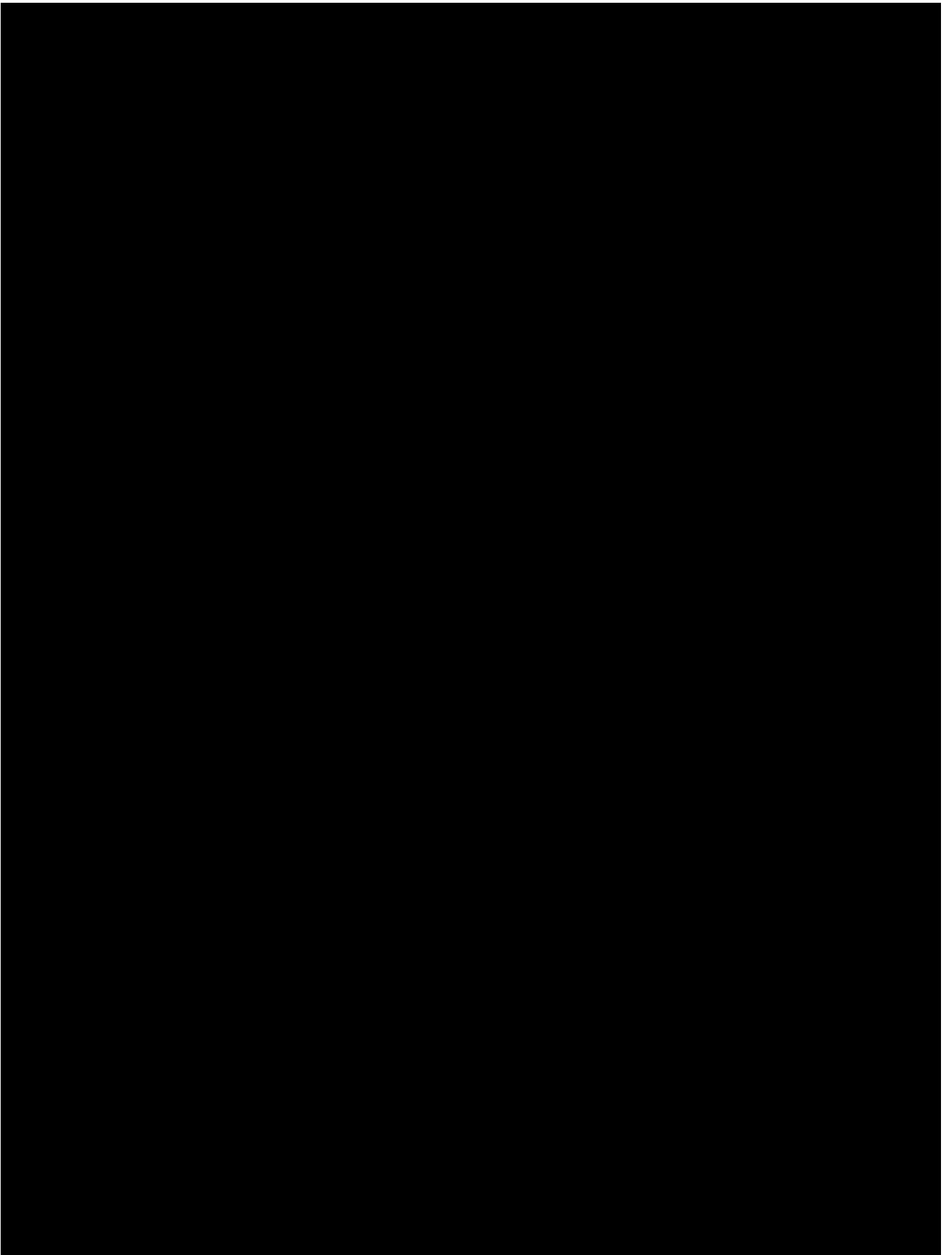
I bright giants

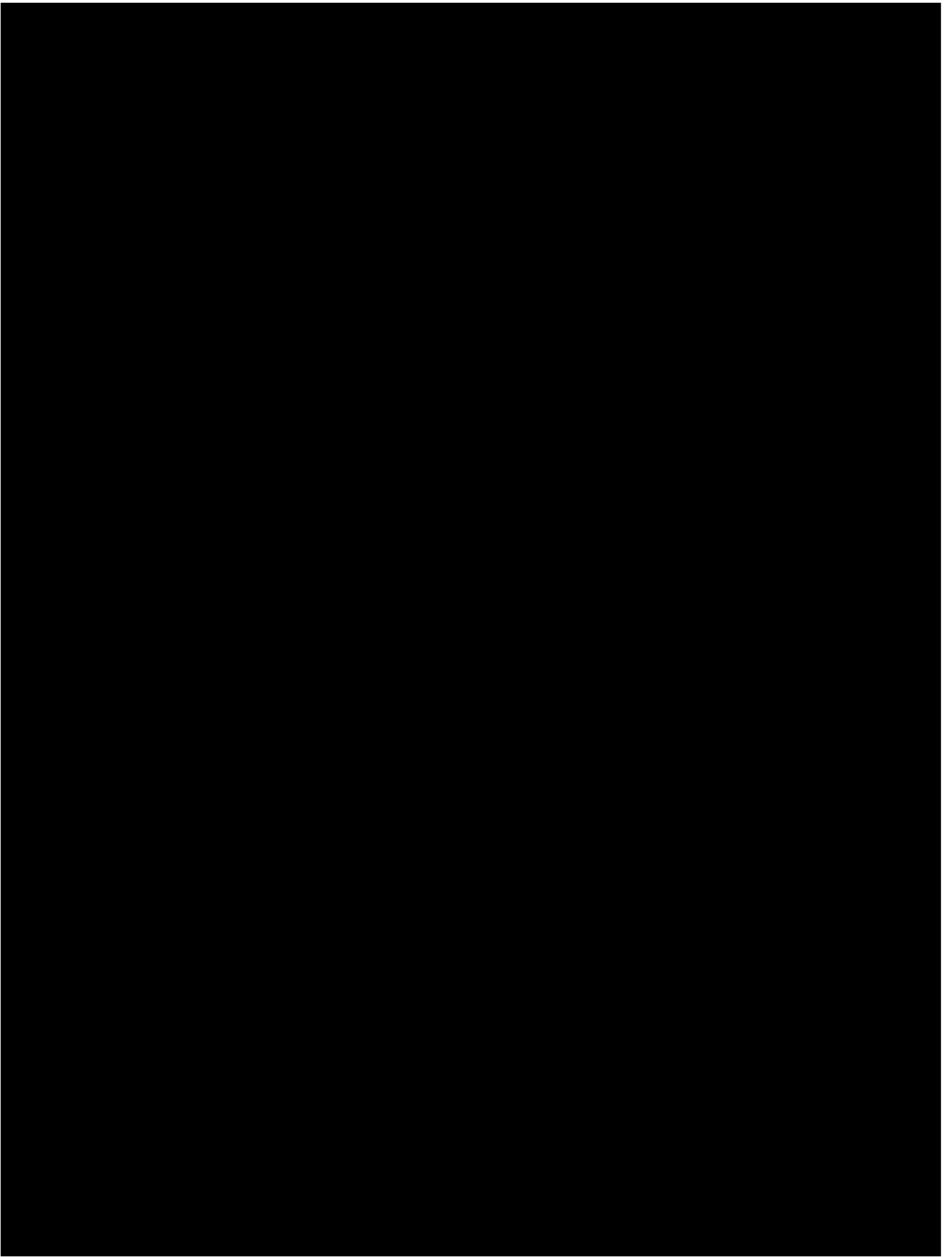
IV normal giants

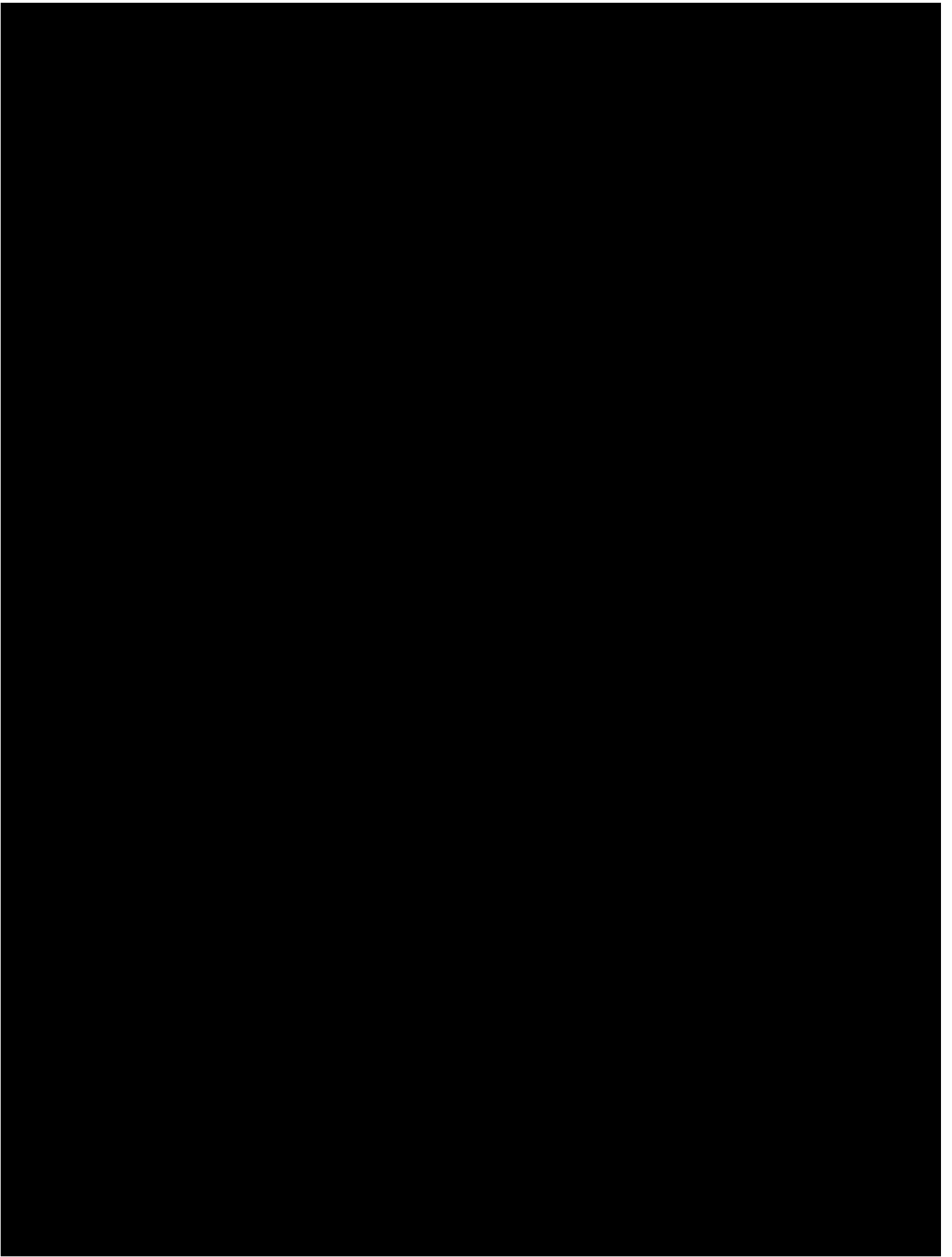
V main sequence stars (dwarfs)

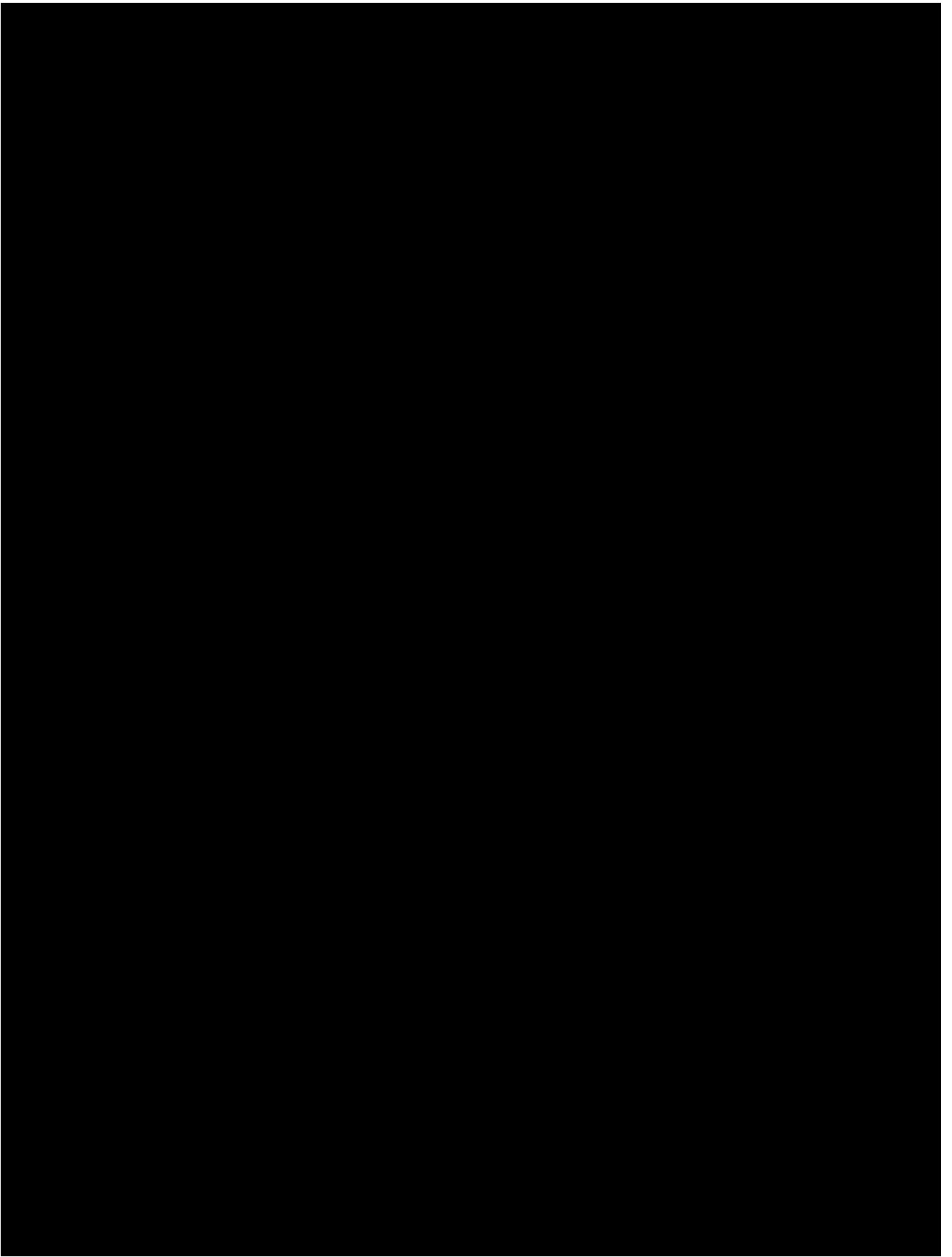
VI sub-dwarfs

VI hot sub-dwarfs and white dwarfs

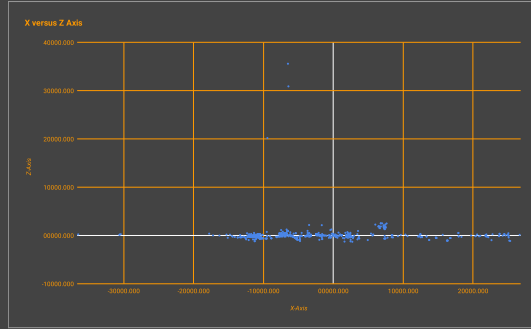
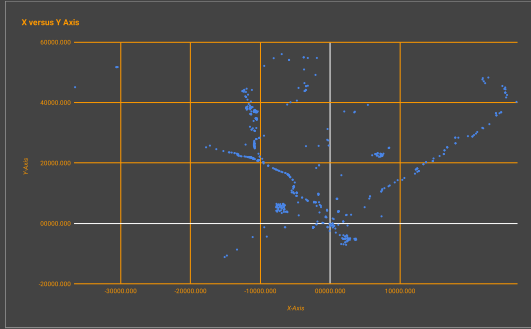


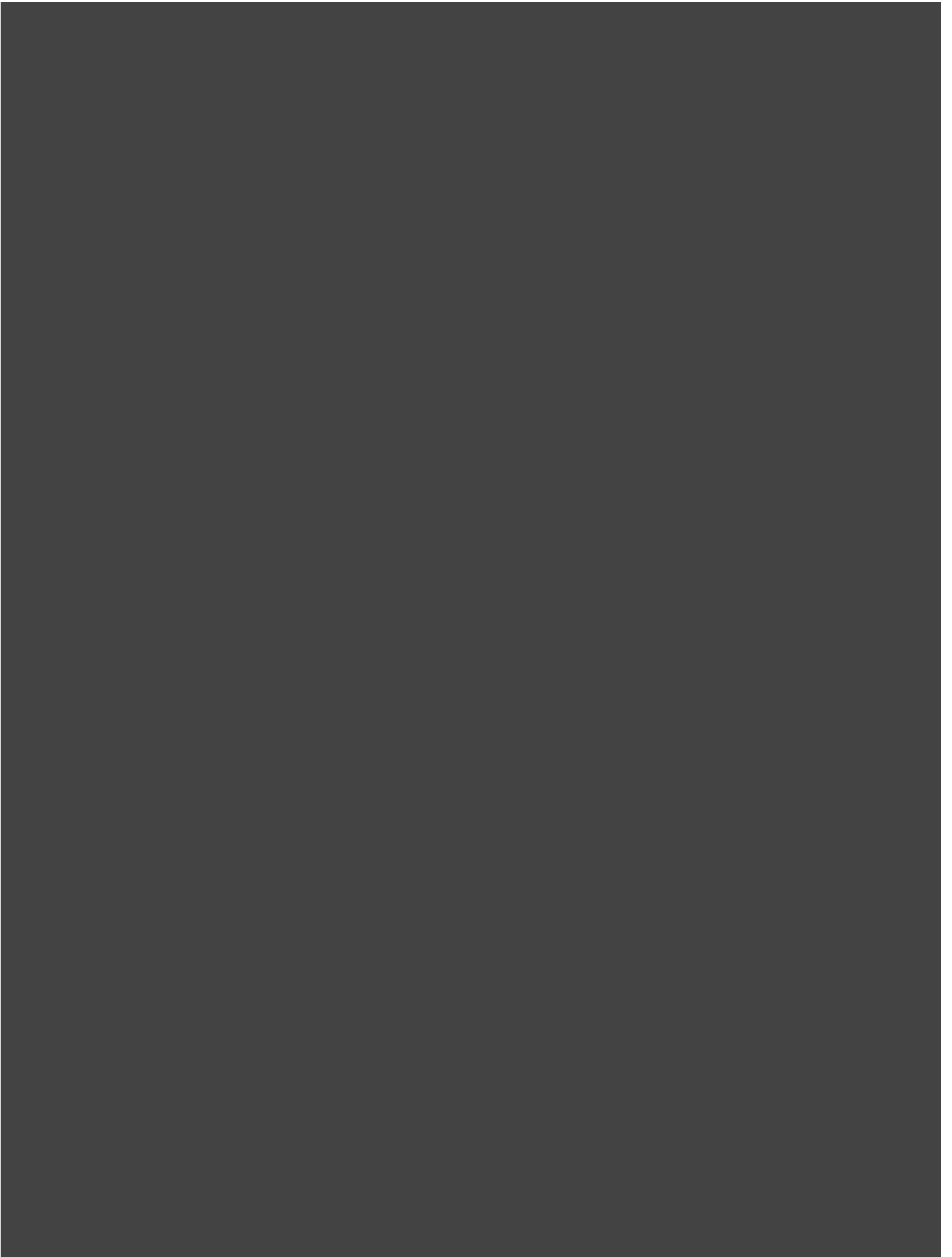


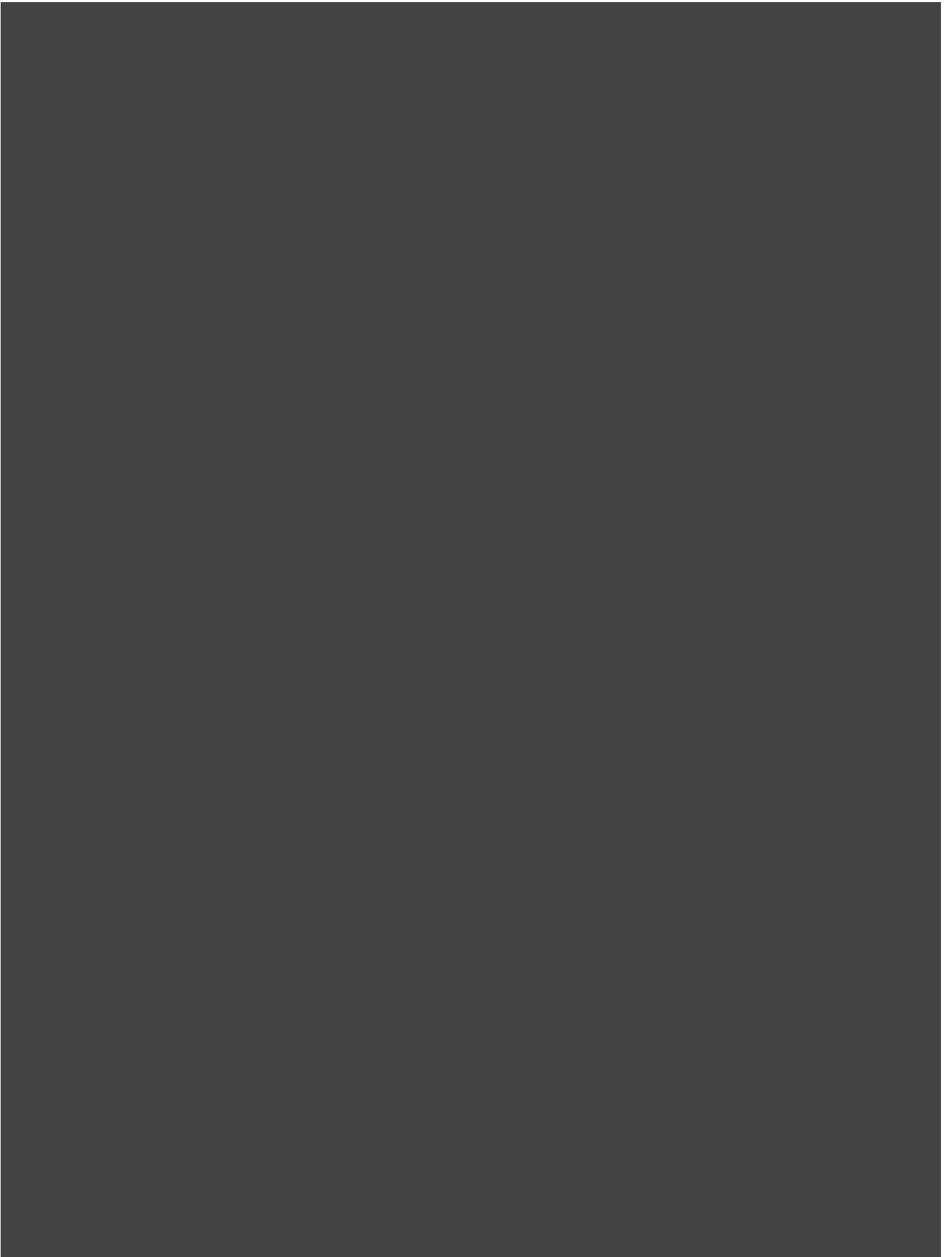


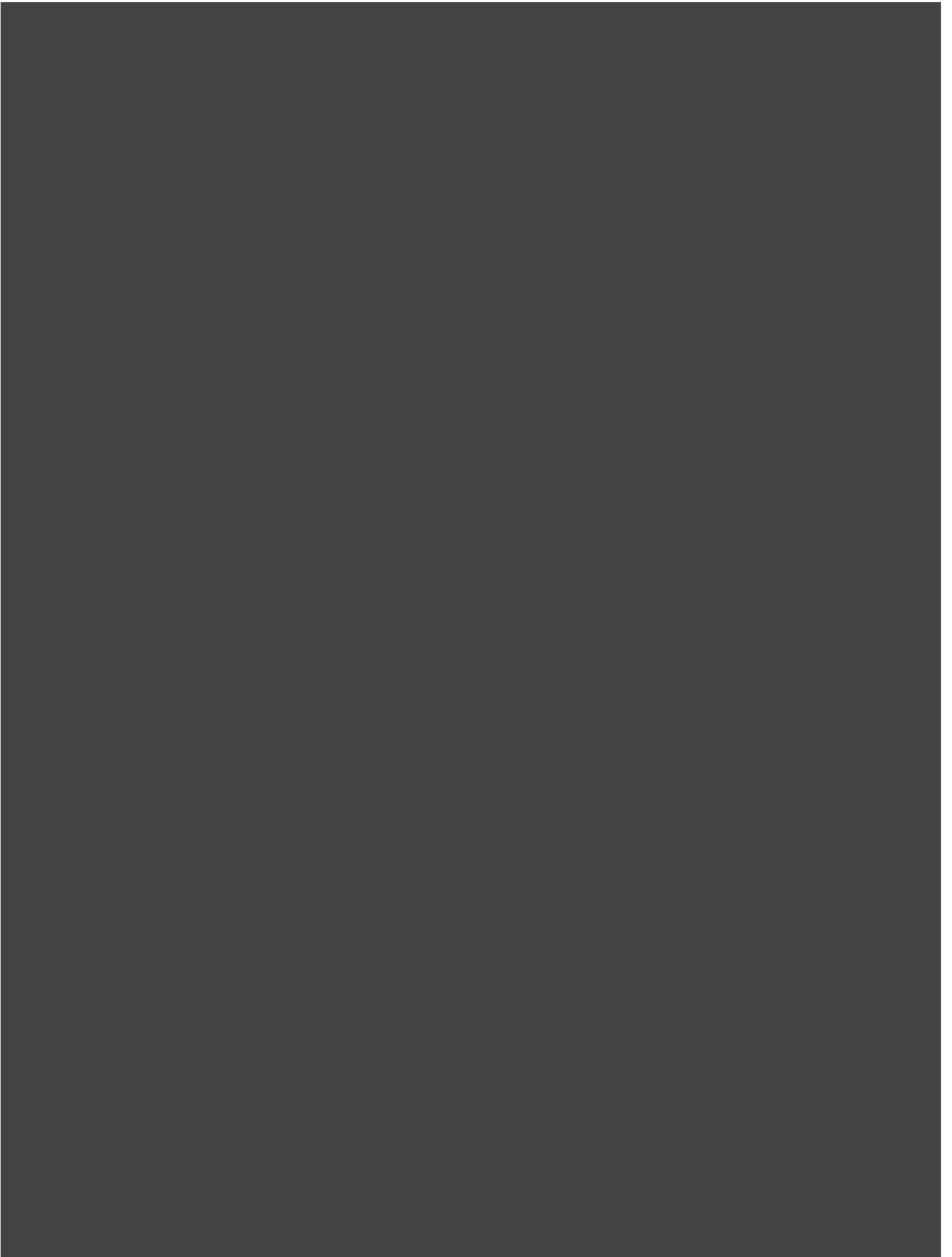


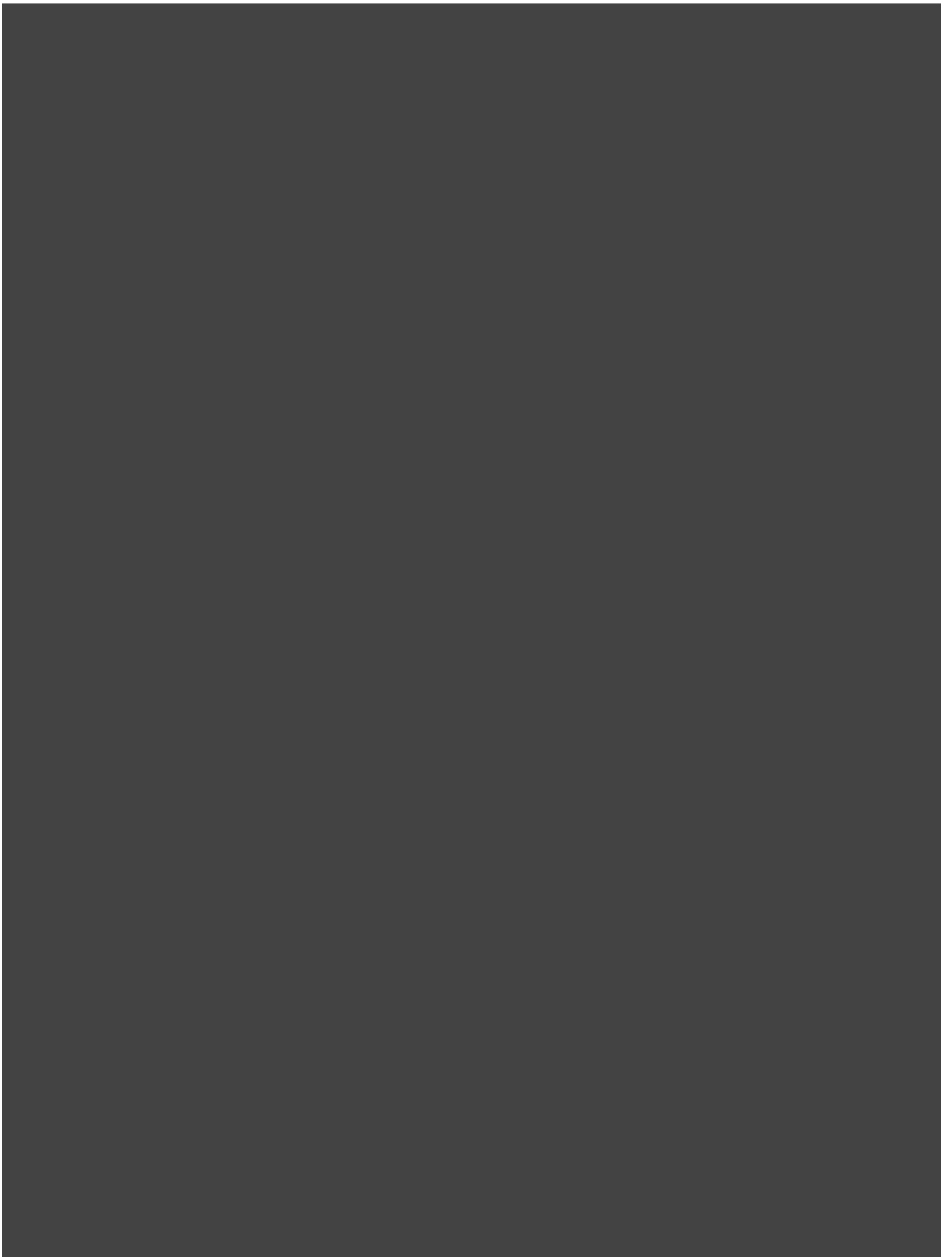


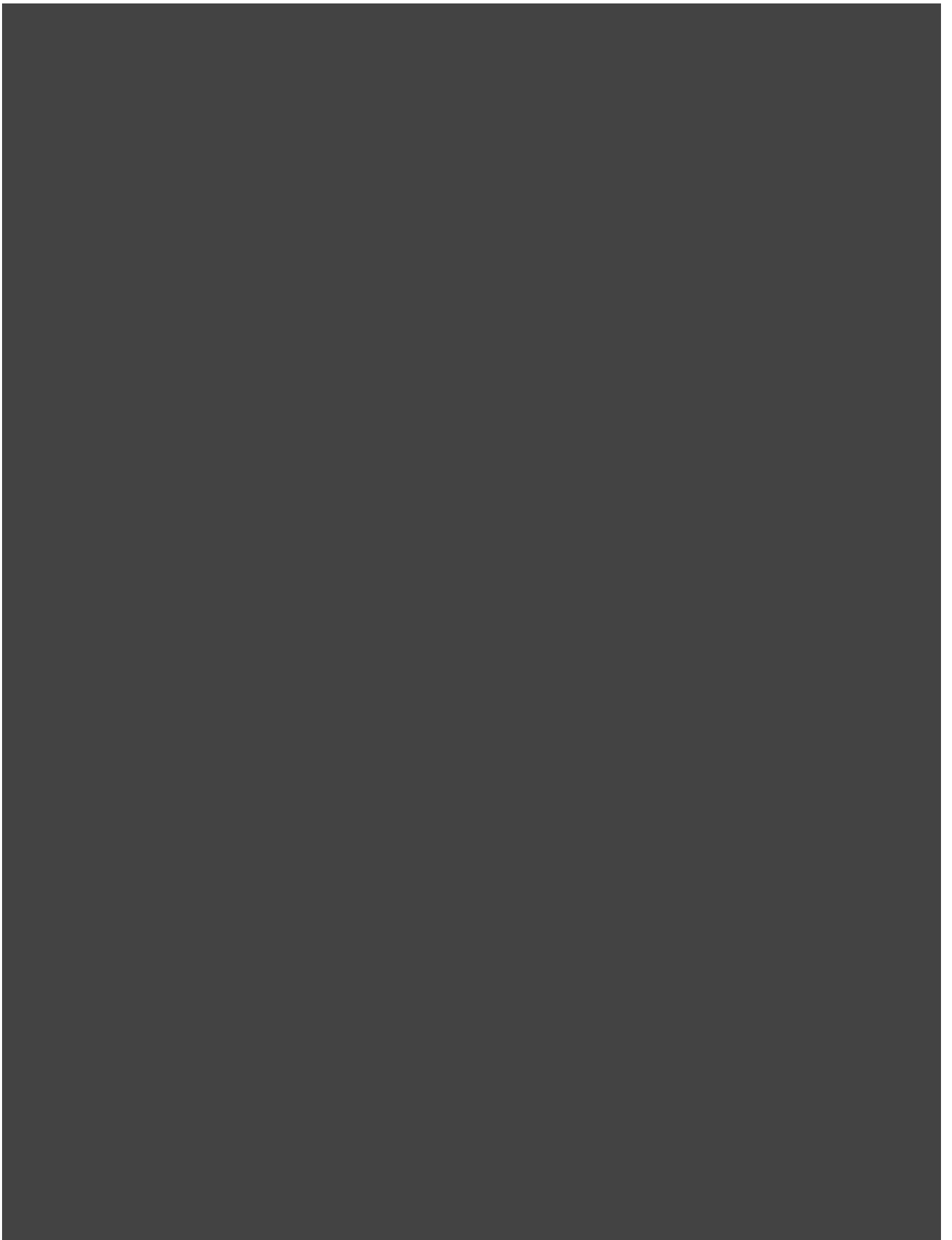




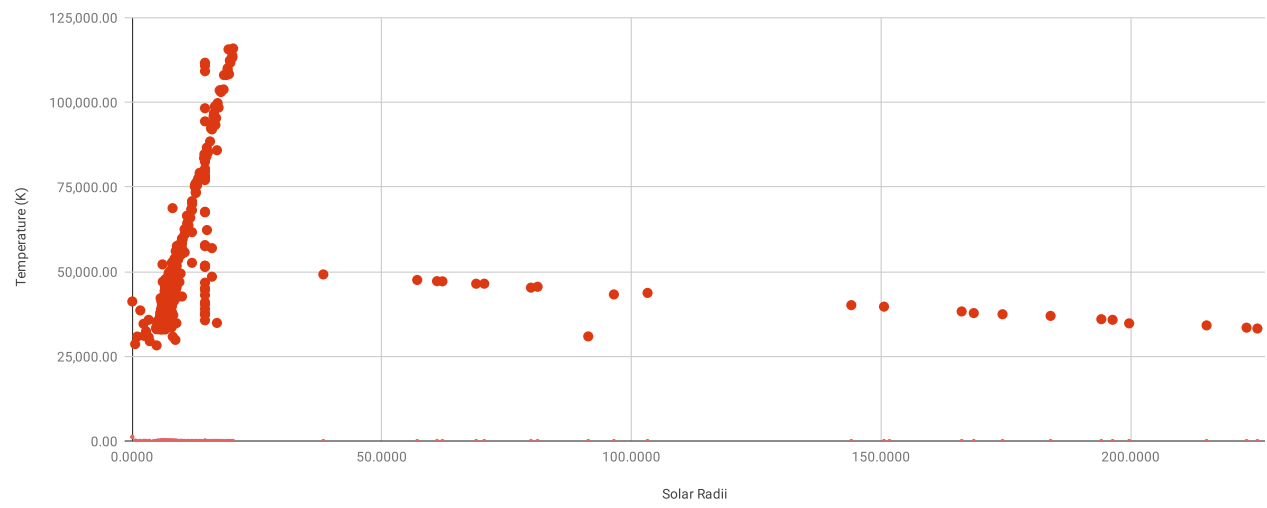








Temperature (K) vs. Solar Radii



[1] type here

Please give the age in million years without the word 'million', e.g. 870 for 870 million years.
<1 million = 0

[2] In Solar radii

[3] Please give the temperature in Kelvins.

[4] type here

No, if at least one other 'vertical' star is present, incl. neutrons and black holes.