

**Project Specification Form**

***This form needs to be completed and submitted on blackboard on 9th October 2020 by 5pm. Please email a copy of this completed form to*** [***guillaume.zoppi@northumbria.ac.uk***](mailto:guillaume.zoppi@northumbria.ac.uk) ***by the same deadline.***

Programme: Physics w/ Astrophysics

Student's Name: Thomas Scattergood

Project Title: The formation and evolution of blue super giant stars

Project Supervisor: Natasha Jeffery

Background to the Project: Blue supergiant stars account for less than 1% of all stars in the known universe yet still have a substantial impact on other parts of the universe and galaxy formation. The evolution of blue supergiants plays an impactful role despite an accountability of small proportions. Blue supergiants having a much shorter main sequence than most sun like stars could potentially allow the study and further the understanding of solar interior and stellar evolution.

Overall Aims of the Project (as a guide, write 1 aim and 3 objectives):

The main aim of this project is to study and understand the fundamental formation and the evolution of blue supergiant stars and how the death (either leading to a black hole or a supernova) impacts the surrounding universe

Objectives:

1. To study and analyse the conditions that lead to the formation of a blue supergiant star by examining the pre nebula of existing blue supergiant stars
2. To investigate the potential evolutionary path and how the death of a blue supergiant star can affect the surrounding universe either by a supernova, black hole or other factors
3. To compare the stellar composition, structure, features such as solar flares and sunspots and processes such as nuclear fusion of blue supergiant stars to solar-like stars

Approved by supervisor:................................... Date: ...................................