

Examiner Name: Francesco Shankar.....

Student Name :...Alex Weston.....

Title... Modelling the UV and Optical Emission from Accretion Disks
around Supermassive Black Holes.....**13% Content (Report)**Mark:

95

(mark out of 100 in box please)

Abstract	Comments: Even though I might have not defined AGN variability as one of the “biggest mysteries in extra-galactic astronomy” (cfr. Dark Matter), the Abstract is definitely well written and it includes a proper introduction and motivation to the topic of this project along with some concluding remarks. The Introduction is extremely rich in details and gradually lays out the main components of the research project. The mathematical formalism is accurate and developed in large part by the student himself. In addition, the report includes nice applications of the model to reproduce the data. It is clear from the amount of information, varied references and calculations that the student has seriously engaged with the project becoming a real expert in this topic. The Conclusions section should have been better expanded to include a brief summary of the main results and their relevance against the state of the art and our overall understanding of AGN.
Background information	
Scope and balance of material	
Clarity of explanation	
Appropriate level of science	
Synthesis & critical discussion	
Appropriate use of references	

5% Presentation (Report)Mark:

94

Structuring of report	Comments: The report is extremely well structured, as the initial Table of Contents shows. The style is clear and fluid with no apparent typos. The equations are also well written and explained, and the choice of Figures is entirely appropriate, with useful labels, legends and captions.
Layout and general presentation	
Use of figures and diagrams	

Correctness and style of English	
----------------------------------	--

9% Viva

Mark:

93

Application of relevant basic science	<p>Comments:</p> <p>The student started with an introduction to the project. He explained that the aim of the project was to probe the cause of flux variability in AGN. He detailed the assumptions made in the modelling. The student also made use of a graph he prepared to better explain the system. The student has acquired an in-depth understanding of the topic and has developed above-average mathematical/numerical skills, as proven by the quality of the report and answers given during the viva.</p>
Understanding of knowledge	
Understanding wider context	
Ability to discuss critically	

3% Project Summary Report

Mark:

85

Ability to summarize the topic for a non-expert	<p>Comments:</p> <p>The summary is extremely well written and even though it contains some high-level/technical points (e.g., X-ray reprocessing), these are nicely explained via similarities with renown phenomena. Also the choice of cartoon-like figure is appropriate.</p>
Correctness and style of English	

Examiner Signature...



Date.....29/04/2021.....