Can the Institute for Research in Schools work with you to inspire students and teachers?
Overview

• Brief introduction to IRIS
• Main aims

• How we got here

• Different approaches hopefully working with you
Using line intensity ratios to determine the geometry of plasma in stars via their apparent areas

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http://dx.doi.org/10.1016/j.hdpp.2009.10.001, How to Cite or Link Using DOI

Abstract
A simple method of calculating the mean line of sight in solid figures is demonstrated and used in conjunction with the Cauchy theorem for the mean chord. This gives a straightforward expression for the enhancement ratio of a uniform optically thick plasma as four times the ratio of the area of the shadow of the plasma in the line of sight to the full surface area. This is used to deduce that the maximum value this enhancement can take is two. The method is used in the analysis of a sphere and cylinder, and shows that the ratio can be calculated exactly for any angle of observation in these cases. This ratio is linked to its applications in the study of opacity effects in the plasma of distant stars, in particular the use of spectral line intensity ratio enhancement observations to make inferences about plasma geometry.
The Langton Ultimate Cosmic ray Intensity Detector
LUCID was launched on TechDemoSat-1 from Baikonur on a Soyuz 2 rocket on 8th July 2014
TDS-1 selfie!
Results
TRACKING
LUCID
Participating Schools
IOP PNCs
SEPnet
STFC
National projects

- Astronomy
- Danielle George
- Other ideas?
- Individual schools and students
Making Light of the Dark
Investigating the effects of dark matter on cosmological anisotropy
The Project:

• Working with Astronomy PhD student from Oxford
• Using data from 1 square degree of the VIDEO galaxy survey
• Values of RA, DEC, SSFR, Redshift and Mass for 500,000 galaxies
Project Aim:

To produce statistical evidence for the existence of dark matter by looking at non-uniformity of galaxy clustering
Summary

• LUCID data
• The TimPix project might be of interest  [http://cernatschool.web.cern.ch/timpix](http://cernatschool.web.cern.ch/timpix)
• CERN@school  [http://cernatschool.web.cern.ch/](http://cernatschool.web.cern.ch/)

• National projects
• PhD links
• Other projects
• Other ideas
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