Investigations in to the Acam scattered light issues. 12 July 2011.
Prepared by Kevin Dee.

Test required to ascertain if the scattered light from the internal surface of the sky fog baffle can reach the Acam fold flat without additional reflections from other surfaces.

Introduction.

The 3D models of the telescope clearly show that currently the Acam fold flat has a direct line of site to the inner surface of the sky fog baffle which we know is illuminated by moon light. The placement of a black card aperture baffle at the base of the sky fog baffle will stop the Acam fold flat from seeing the internal surface of the illuminated sky fog baffle.

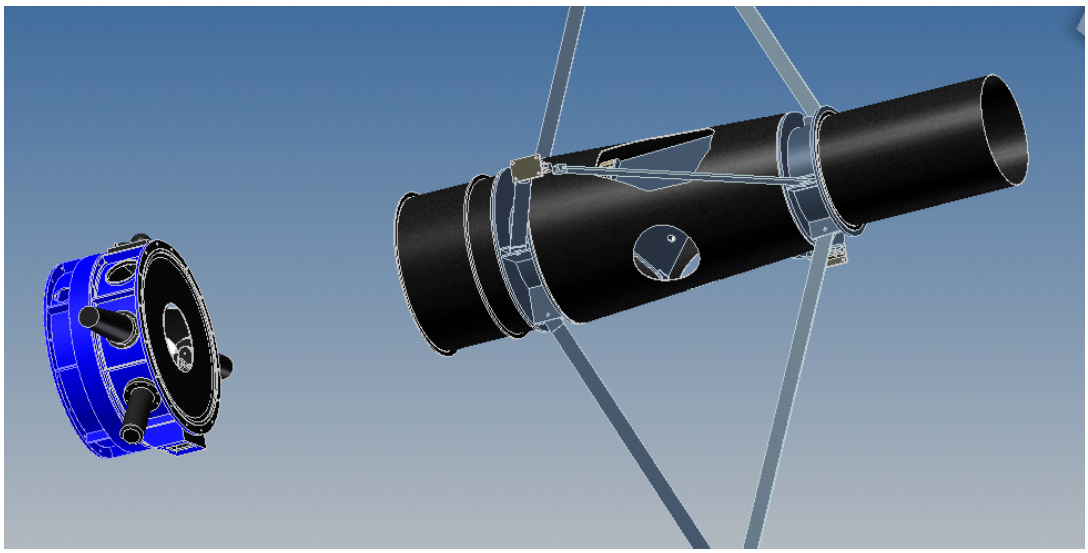

Fig 1. CAGB with respect to the Nasmyth turret assembly.

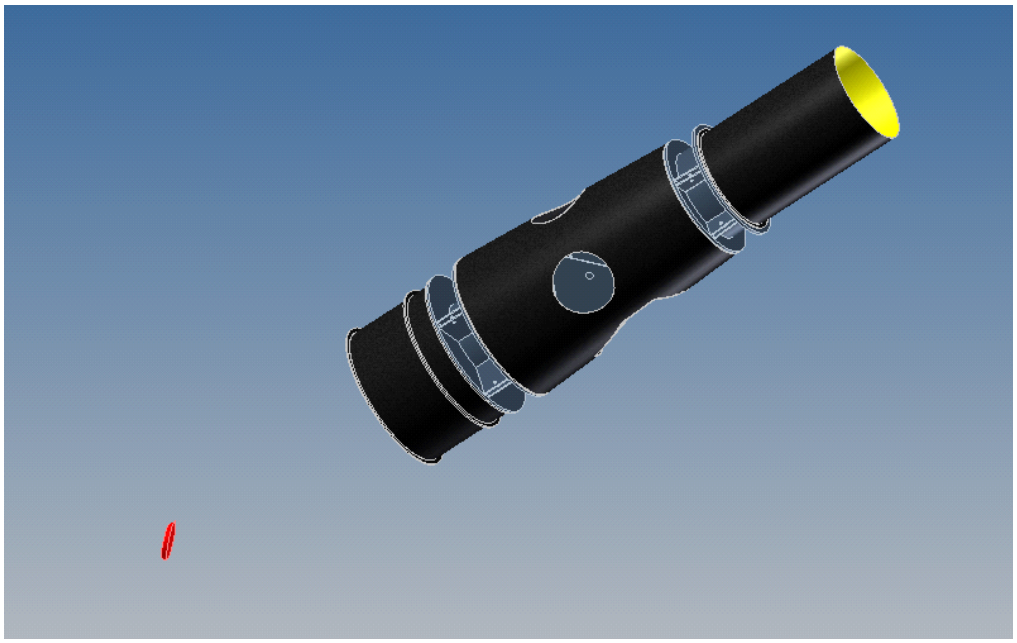

Fig 2. Acam fold mirror (red) with Nasmyth turret assembly. Note inside of sky fog baffle has been highlighted in yellow for clarity.

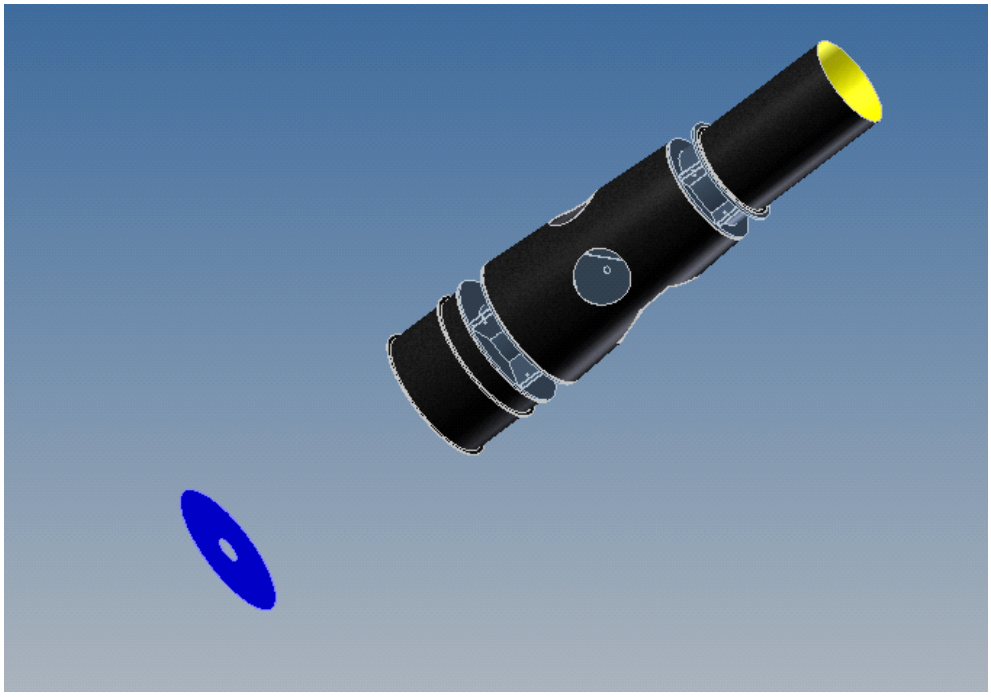

Fig 3. Acam fold flat has now been substituted with an aperture disc (blue) that represents the field of the Acam fold flat mirror with the CAGB.

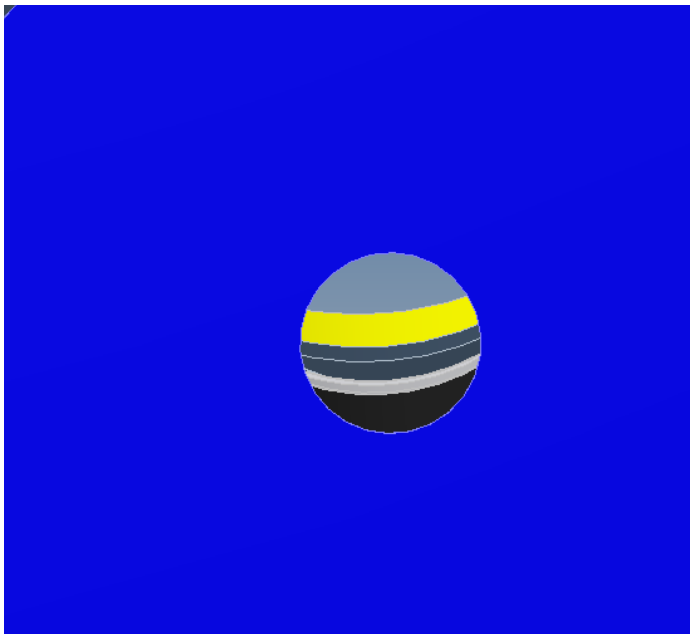

Fig 4. Looking off axis from the Acam fold aperture disc towards the secondary mirror you can see the inside surface of the sky fog baffle (yellow).

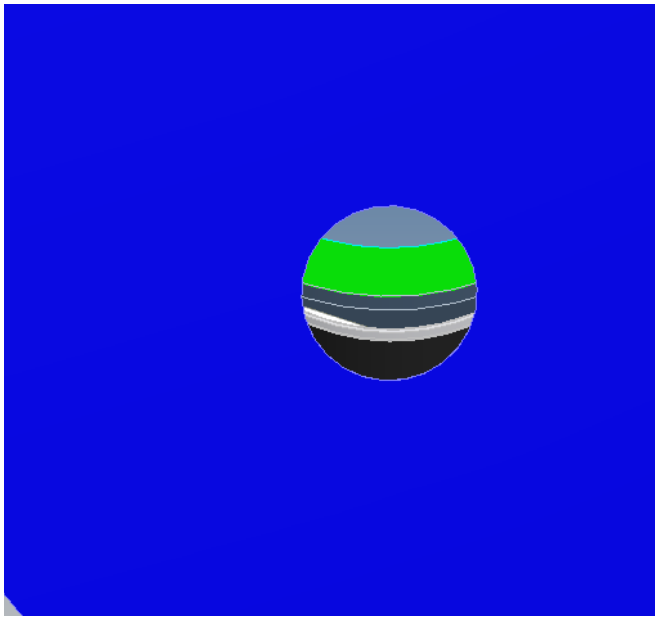

Fig 5. Looking off axis from the Acam fold aperture disc towards the secondary mirror. The inner surface of the sky fog baffle is obscured by a new disc baffle (green).

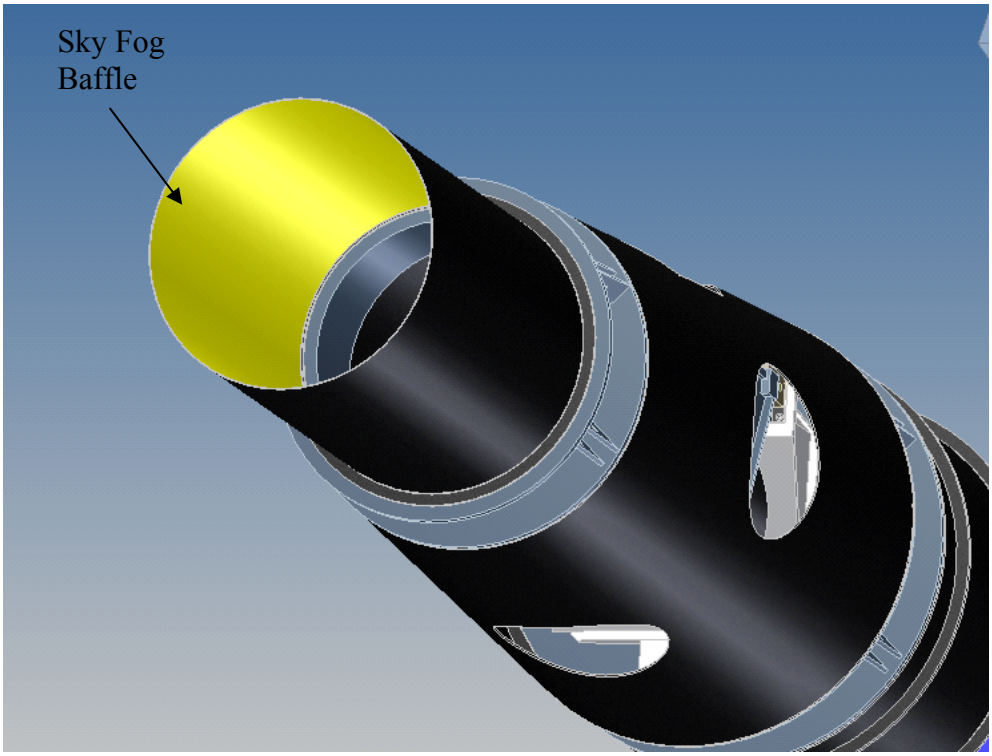

Fig 6. Sky fog baffle fixed to next section where a simple disc baffle can be placed.

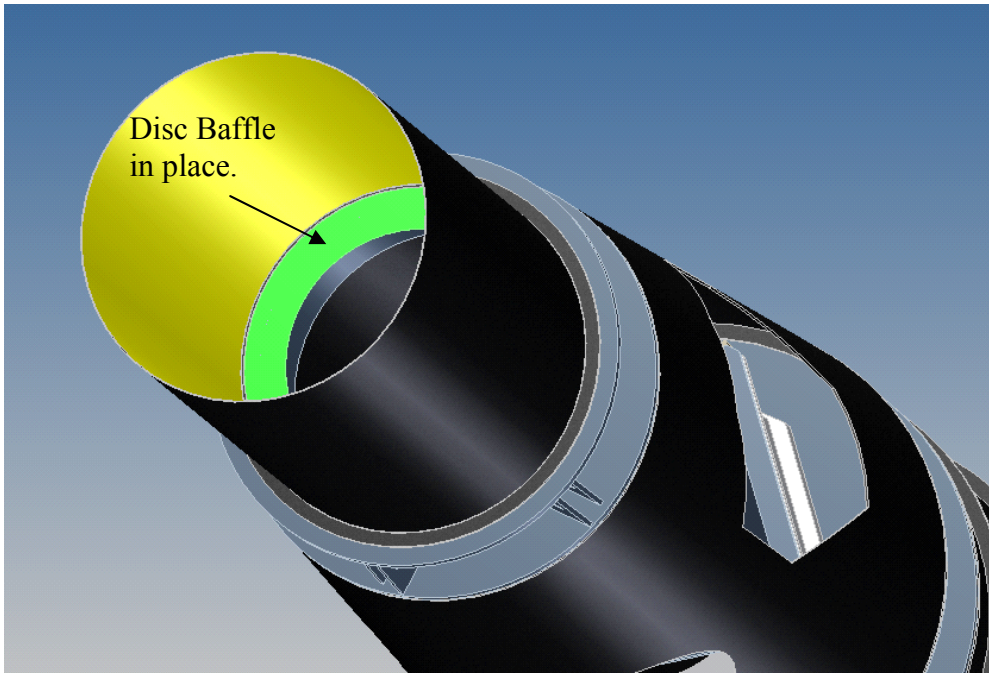

Fig 7. Disc baffle (green) in place.

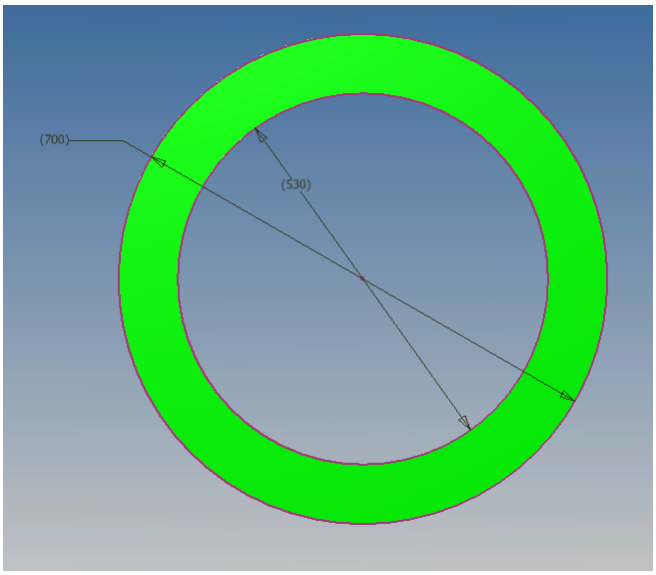

Fig 8. Disc baffle made out of black card. 2 Baffles should be made and tried. Outside diameter 700 mm inside diameter 530 (baffle 1) and 580 (baffle 2). Use baffle 1 first then baffle 2.

Tests can be carried out initially in the day time using the lamp to feed light into the Nasmyth sky fog baffle.

Safety Note.
Working on, near or around the Nasmyth turret exposes you to the risk that objects or tools could fall down towards the Cassegrain cluster. To minimise the risk do all preparation work away from the turret and do not handle tools inside the turret itself.

Kevin Dee