



# Carrington/L5 – Going Forward

Where Do We Go From Here? Discussion & Actions



# The 'Carrington' mission

- Conceived as a UK National mission
- High heritage UK platform & instrumentation
- Low cost
- Has generated interest & momentum
- OPERATIONALLY reliable 24x7 data
- Launch 2021



# The 'Carrington' mission

- Mission profile / location
- Satellite bus
- Instrumentation
- Ground segment
- Evidence
  - Science
  - Economic



# Mission profile / location

- L5
  - Slow drift
  - Narrower angle
- Direct injection transit 1.1yrs
- Science data on transit thru' LGA & MGA?



# Ground Segment

- Need 4 ground stations (15m dedicated dish)
- 2/3 data centres for resilience
- UK, US, S Korea ??



# Priority needs for L5 instruments / parameters

- EUV imager
- Magnetometer
- Energetic particles
- Heliospheric Imager
  - Total power
  - polarised
- Plasma
  - $V, n, T$
- Magnetograph
- Coronagraph
- White light imager
- XRS
- Radio



# Priority needs for L5 instruments / parameters

1. Coronagraph
2. Heliospheric Imager
3. Magnetograph
4. In-situ
  - Magnetometer
  - Plasma (speed & density)
  - Energetic particles



# Evidence

- IPSP socio-economic case
  - Economic cost at global & national level
  - Cost benefit of forecasts
  - $\Delta$ forecast  $\rightarrow$   $\Delta$ mitigation  $\rightarrow$   $\Delta$ cost benefit





# Evidence

- Scientific evidence – does any exist already?
- CME arrival prediction
  - 2 view CME parameterisation
  - Improving background field
- SIR (~~CIR~~) prediction Flare forecasting / concerning AR identification



Met Office



Thank you