Given dataset no Has the data an order? (e.g., Ordered i temperature range) yes no Centric value Has the data a central value? (e.g., zero in vertical velocity) yes CHOOSING COLOUR MAP CLASS AND TYPE A Is the data ordered Diverging/ Circular/ yes no relative to a central value? converging A periodic Bl (e.g., residual temperature) <sup>B</sup> Is the data periodic yes no (e.g., orientation) multidiverging sequential **CLASS** cyclic sequential Important small yes Should small data variations? variations be visible? no categorical **TYPE** continuous discrete yes Empty values I Does the data contain Prevent colour map empty values like NaNs? no containing the figure (e.g., measured surface background colour temperature) CHOOSING COLOUR COMBINATION Is there an intuitive The data parameter has colouring for the parameter? (e.g., blue to red for temperature) intuitive colours yes no Centric value I Has the data a central value? (e.g., zero in vertical velocity) yes no no Light figure Is the plot Light figure background background background light? yes yes Use light Use dark Use colour coloured coloured map with Use light Use dark centre centre parameterpart for part for intuitive colour map colour map high values high values colours Scientific Crameri et al. (2020, Nat Comms.)