First of all, we would like to thank the referee for their thoughtful comments. They have helped us identify places where the exposition can be clarified and have also highlighted several interesting directions for future work. In the following, we quote each point of the report in turn and respond to them.

- *In the discussion of "accidental unitarity," could the authors clarify the assumptions under which Reflection Reality effectively determines the unitary subspace?*

  In general, Reflection Reality is a necessary but not sufficient condition for Unitarity. This can be seen from the fact that RR implies the existence of a preserved norm on the state space, where the norm is hermitian but might be indefinite.

  But, we claim that a large generic class of RR-satisfying theories are also unitary, without the need to fine-tune any parameters in the Lagrangian. In particular, if you take a unitary theory and perturb the Lagrangian by an RR-satisfying term, then the resulting theory will still be unitary.

  In particular, does this require holding the spectrum and number of propagating degrees of freedom fixed?

  Yes, this argument requires that the number of fundamental degrees of freedom propagating in the Lagrangian does not change. The example in 5.4 of the Proca Lagrangian was given to illustrate this point. The Proca Lagrangian (Eq. 5.4) is unitary when $m^2 > 0$, but it has a negative-norm propagating mode in the tachyonic case $m^2 < 0$. These domains are separated by the $m^2 = 0$ Maxwell case, where there is a gauge-symmetry and hence there is 1 fewer propagating degree of freedom. Perturbations which change the sign of m^2 are therefore not allowed perturbations for purposes of the above argument. (More generally, continuity requires that one cannot obtain a negative-norm state without passing through a case with a zero-norm state, implying the existence of an additional gauge symmetry.)

  It is not clear to us what the referee means by the "spectrum". If this refers to the spectrum of the Hamiltonian H (for simplicity, we can consider a non-cosmological context, where H is independent of time), then of course perturbations to the Lagrangian L can change the energy eigenvalues, without thereby modifying the unitary condition $H^\dagger = H$. This is precisely what happens for a typical RR-satisfying perturbation to a unitary H. (Conversely, if we decline to impose RR, a generic complex perturbation to H will make the energy eigenvalues become complex, which is a symptom of the fact that Unitarity is now violated.)

- *Does Reflection Reality, perhaps together with locality, imply the full set of Schwinger–Keldysh unitarity relations (see eg. 1805.09331), or is it meant to capture only part of this structure?*

  RR by itself captures only part of the full Schwinger–Keldysh structure. As discussed around (2.15), RR requires only the existence of a preserved norm and therefore enforces the analogue of the SK constraints associated with Hermiticity of the Hamiltonian. In the language of 1805.09331, this is equivalent to enforcing the counterparts of eqs. (2.20) and (2.23), but not the analogue of (2.25), which encodes the largest-time equation and cutting rules. Thus RR should be viewed as a weaker constraint than full SK unitarity.

  Of course, in any field theory where we happen to accidentally obtain full Unitarity, all other implications of Unitarity will also hold.

- *In realistic inflationary models the background spontaneously breaks time translations, so the late-time mode functions deviate from pure* $\eta^{\Delta-d}$ *scaling and acquire slow-roll and logarithmic corrections. In this situation, do you expect any controlled remnant of your cosmological CPT / phase-fixing relation to survive, or should your result be understood as strictly confined to exact de Sitter and not directly applicable to generic inflationary EFTs?*

  Our derivation applies strictly to the $\epsilon = 0$ de Sitter limit. However, as explained in the discussion below (3.50), and emphasised in the following discussions in the rest of the paper, the relation is robust for a large class of boost-breaking Lagrangians, including those appearing in the Effective Field Theory of Inflation 0709.0293. In the Discussion we noted that slow-roll corrections induce only small deviations (of order a few per cent) to the late-time scaling behaviour, and hence we expect that a controlled remnant of our relation should survive as an expansion in slow-roll parameters. A detailed analysis of these corrections would be an interesting direction for future work.

- *What conditions guarantee that the analytic continuation* $(\eta, k) \to (e^{i\pi}\eta, e^{i\pi}k)$ *is valid, and is there a natural extension of the phase relation to principal-series fields or to theories with more complicated singularity structure?*

  The analytic continuation is valid whenever the mode functions admit an analytic branch through the negative real axis and no singularities obstruct the contour deformation. This is satisfied for both complementary- and principal-series fields in the bulk. Our restriction to the complementary series was not due to a limitation of the continuation itself, but because for principal-series fields the boundary behaviour is not characterised by a definite scaling weight. As a result, the phase relation for the wave-function coefficients is not directly meaningful: in holographic language, principal-series bulk fields source operators with complex conformal dimension, and CRT relates such operators to their complex conjugates. Thus it maps $\psi_n \equiv \langle \mathcal{O}_1 \dots \mathcal{O}_n \rangle$ to $\tilde{\psi}_n \equiv \langle \mathcal{O}_1^\dagger \dots \mathcal{O}_n^\dagger \rangle$ rather than to ψ_n^*.

- *In the loop examples treated with dimensional regularisation, the coefficient of the* $1/\epsilon$ *divergence satisfies your phase relation, and the associated finite term acquires an imaginary shift relative to this divergent piece. Should one expect the full renormalised finite part of a loop diagram to obey any generalised version of your phase constraint, or is the result intended to apply strictly to the divergent coefficient?*

  The phase relation applies directly to the regulated value at fractional d, and also to the coefficient of the log divergence. The finite part in the $d \to$ integer limit is generically renormalisation-scheme dependent, and counterterms may shift the (renormalised) mass or scaling dimension of the field. In such cases, the naïve phase relation need not hold. However, if one works with fields whose mass is protected, or for which the renormalised mass is known, then one can formulate an analogous phase relation for the renormalised correlators. A full investigation of this generalisation would be interesting but goes beyond the scope of the present work but was explored to some extent in 2501.06383.