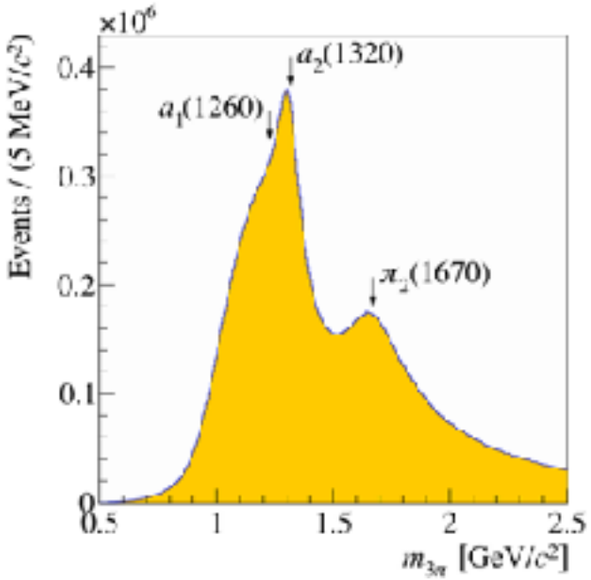
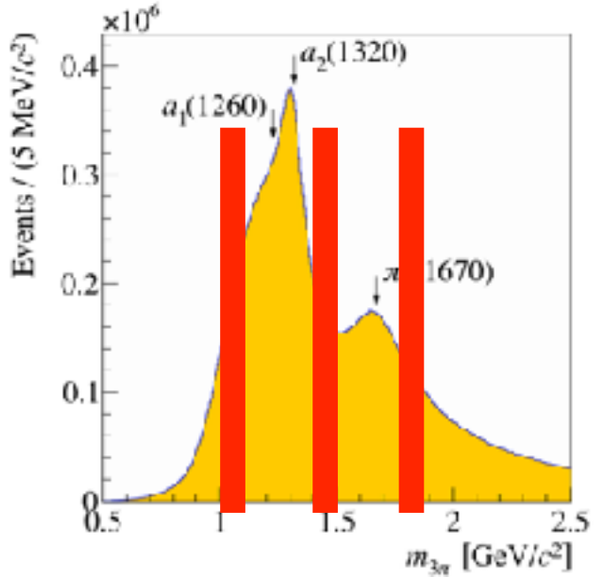
Discussion : Amplitude analysis

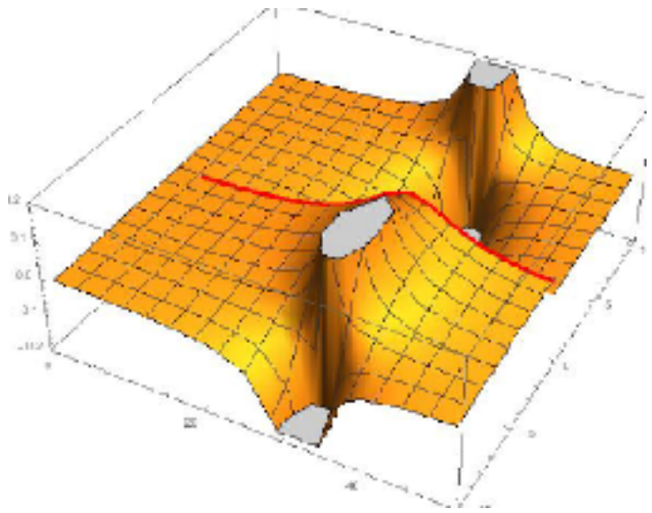


Nature: real axes



QCD

?? ??



Physical interpretation: complex planes

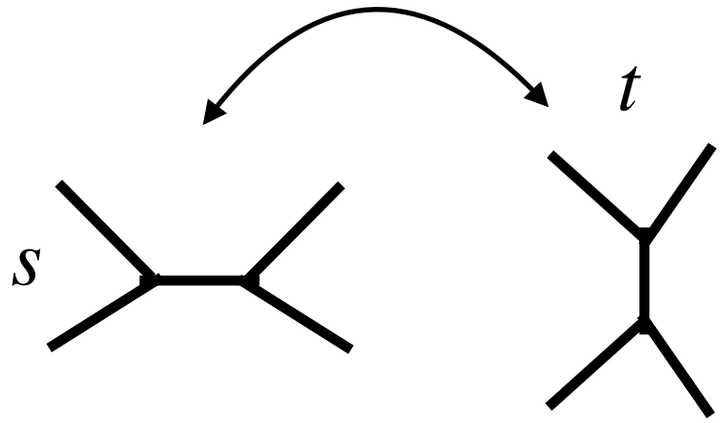
What are reaction amplitudes ?

2^{N-1} functions of $3N-10$ Mandelstam variables

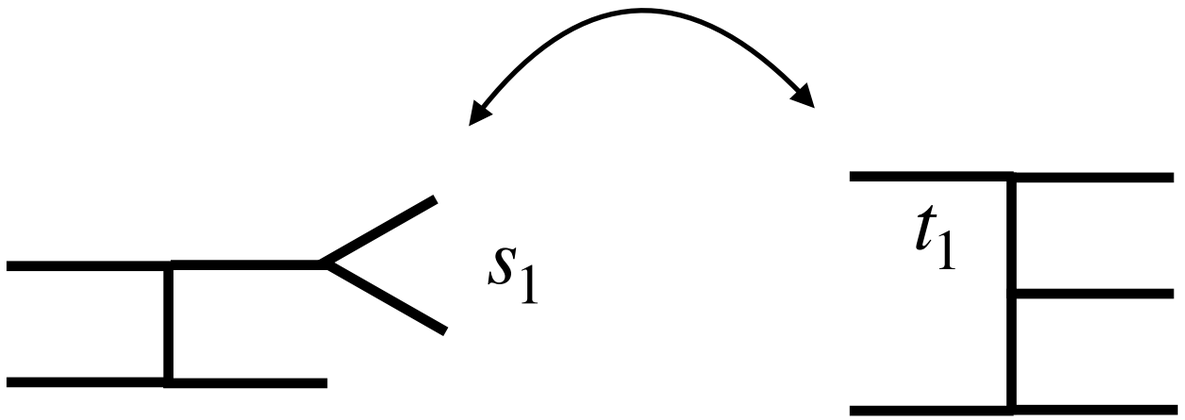
Analyticity in s,t, …, crossing symmetry, unitarity

Singularities fixed by QCD (unknown)

$$2 \to 2,\ 1 \to 3 : A = A_{\lambda_1,\lambda_2,\lambda_3,\lambda_4}(s,t)$$



$$2 \to 3 : A = A_{\lambda_1,\ldots\lambda_5}(s,t_1,t_2,s_1,s_2)$$



(a subjective) SWOT analysis

S: Top-bottom vs bottom-top approaches can complement each other and help exploring nature of resonances

W: Small community, fragmentation of efforts.

O: New experimental discoveries, progress in lattice simulations lead to exciting (interdisciplinary) research opportunities.

T: What is the big picture (why should one care about # sheet)?