Stellar wind signatures in sdB stars?

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SdB stars are extreme horizontal branch stars which are sufficiently hot and numerous to be the main contributors to the UV excess in early type galaxies. Most of the sdB stars are formed by close binary evolution. Their atmospheric abundance patterns are highly peculiar. Due to diffusion processes, some elements can be strongly depleted (e.g. helium) while others are enriched even with respect to solar composition. Standard diffusion theory fails to explain the observed abundances (even for the rather simple atom helium) by orders of magnitude. Mass loss has frequently been envoked to explain the observed abundances. Such attempts have met with limited success. Since no indications for stellar winds have been found mass loss rates are free parameters for the diffusion models. Recently, we have discovered anomalous Hα profiles in four out of a sample of 43 sdB stars and argue that these profiles are distorted by stellar winds.