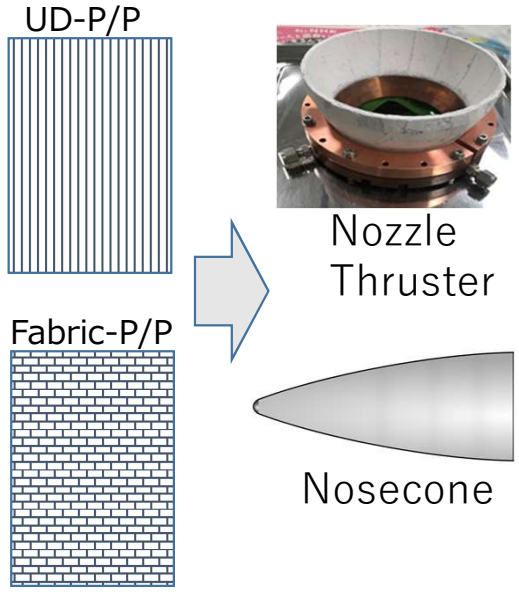
SAML/Almedio CMC, Prepregs for CMC

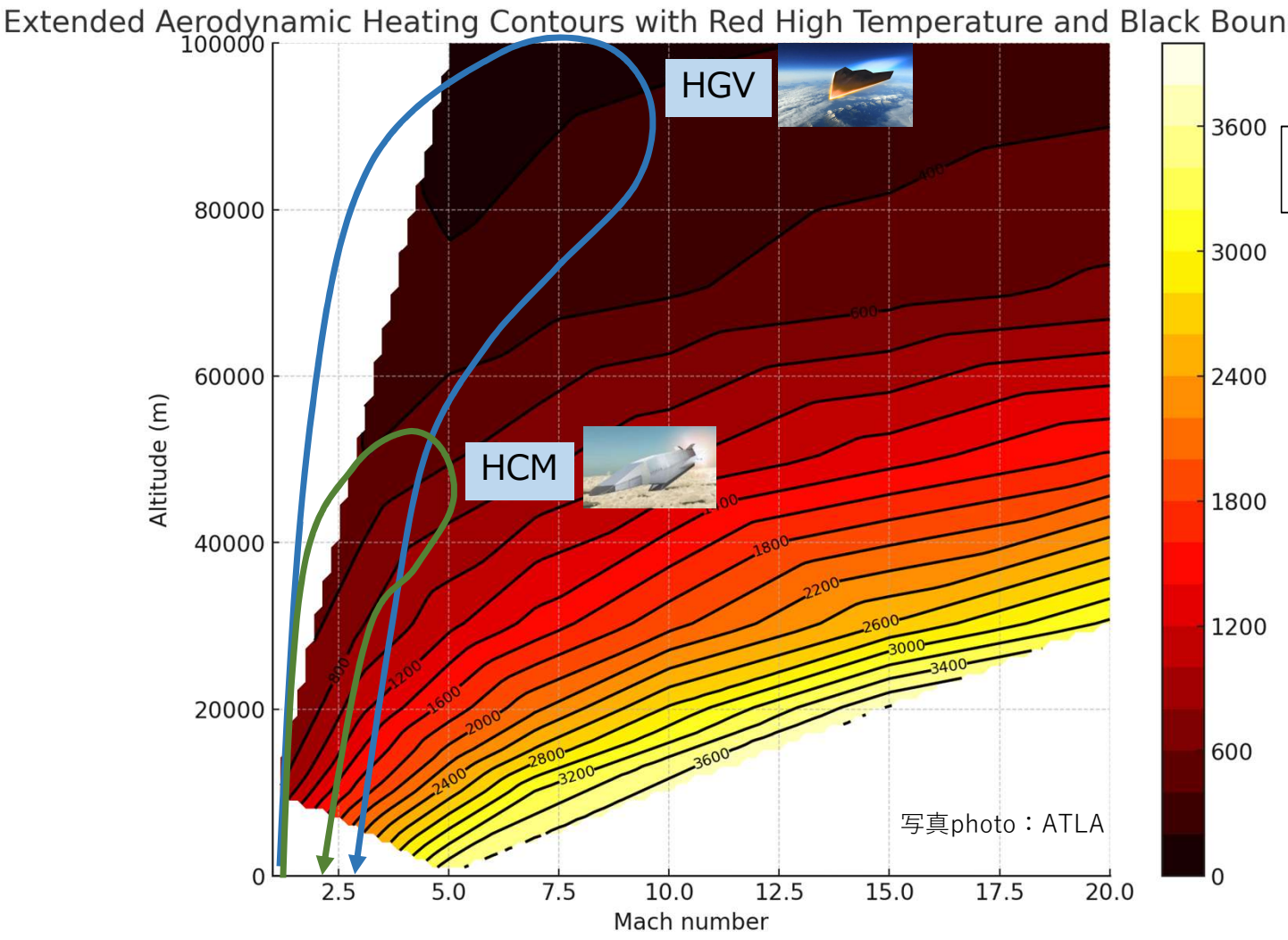
By changing the type and combination of reinforcing fibers and matrix, it is possible to satisfy the required properties of CMC.

Complex shaped CMC can be made using the lamination method that uses prepregs, which is common in CFRP.

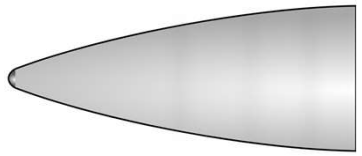
Reinforcing Fiber Roving,Fabric	**Matrix Sandwich Core**	**Performance purpose (Easy workability)**
Alumina fiber (Al_2O_3-Fiber) Roving, Fabric	Al_2O_3	Light weight・high strength・ radio wave transparency
	SiC	Light weight・high strength・ high toughness
Silicon carbide Fiber (SiC-Fiber) Roving, Fabric	Si_3N_4	Lightweight・high heat resistance・ high thermal conductivity・ radio wave transparency
	Al_2O_3-Fiber Nonwoven fabric Al_2O_3	Lightweight, high strength, high rigidity, high heat insulation, radio wave transparency



Hypersonic projectile trajectory and aerodynamic heating



ALMEDIO proposal
Atmospheric reentry nose cone



The trajectory and aerodynamic heating is estimated by ALMEDIO.