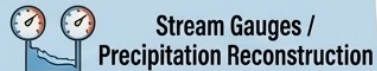
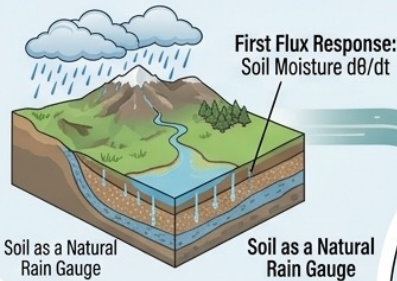


1. INPUT: PHYSICAL GROUNDING & SATELLITE FUSION



SATELLITE ICONOGRAPHY

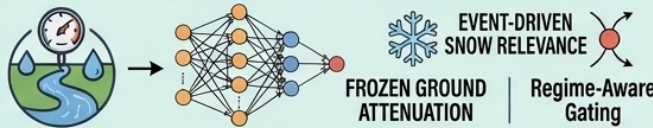
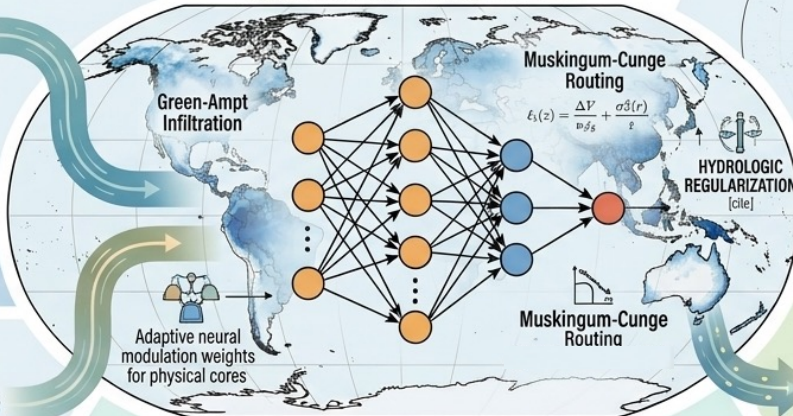
Official NASA EARTH OBSERVATION MISSIONS

ACTIVE & PASSIVE OBSERVATIONS

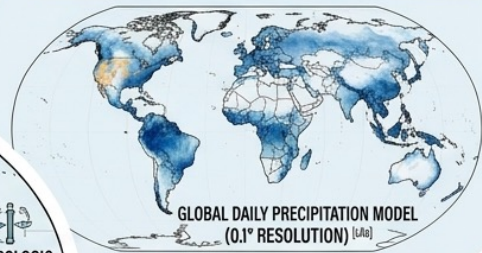
NATIVE 0.1° ERA5-LAND DATA

2. PROCESS: PIDL CORE - COUPLED WATER-ENERGY RETRIEVAL (CWER)

PHYSICS-INFORMED ML with NEURAL ADAPTIVE MODULATION GATED RAINFALL PREDICTION PATH



3. OUTPUT: GLOBAL HYDROLOGICAL RESILIENCE



DATA-SPARSE REGIONS INITIATIVE

COMPLEMENT & EXTEND GPM MISSION in data-sparse regions

MISSION CONTINUITY PLANNING

RELIABLE ESTIMATES for underequipped areas

DROUGHT & FLOOD MONITORING

HYDROLOGICAL prediction