

**Definition 0.0.1.** Given a stopping time  $\tau$ , the  $\sigma$ -algebra  $\mathcal{F}_\tau$  defined by

$$\mathcal{F}_\tau = \{A \in \mathcal{F}_T : \text{for all } t \in [0, T], A \cap \{\tau \leq t\} \in \mathcal{F}_t\}$$

is called the  $\sigma$ -algebra of events prior to  $\tau$ .