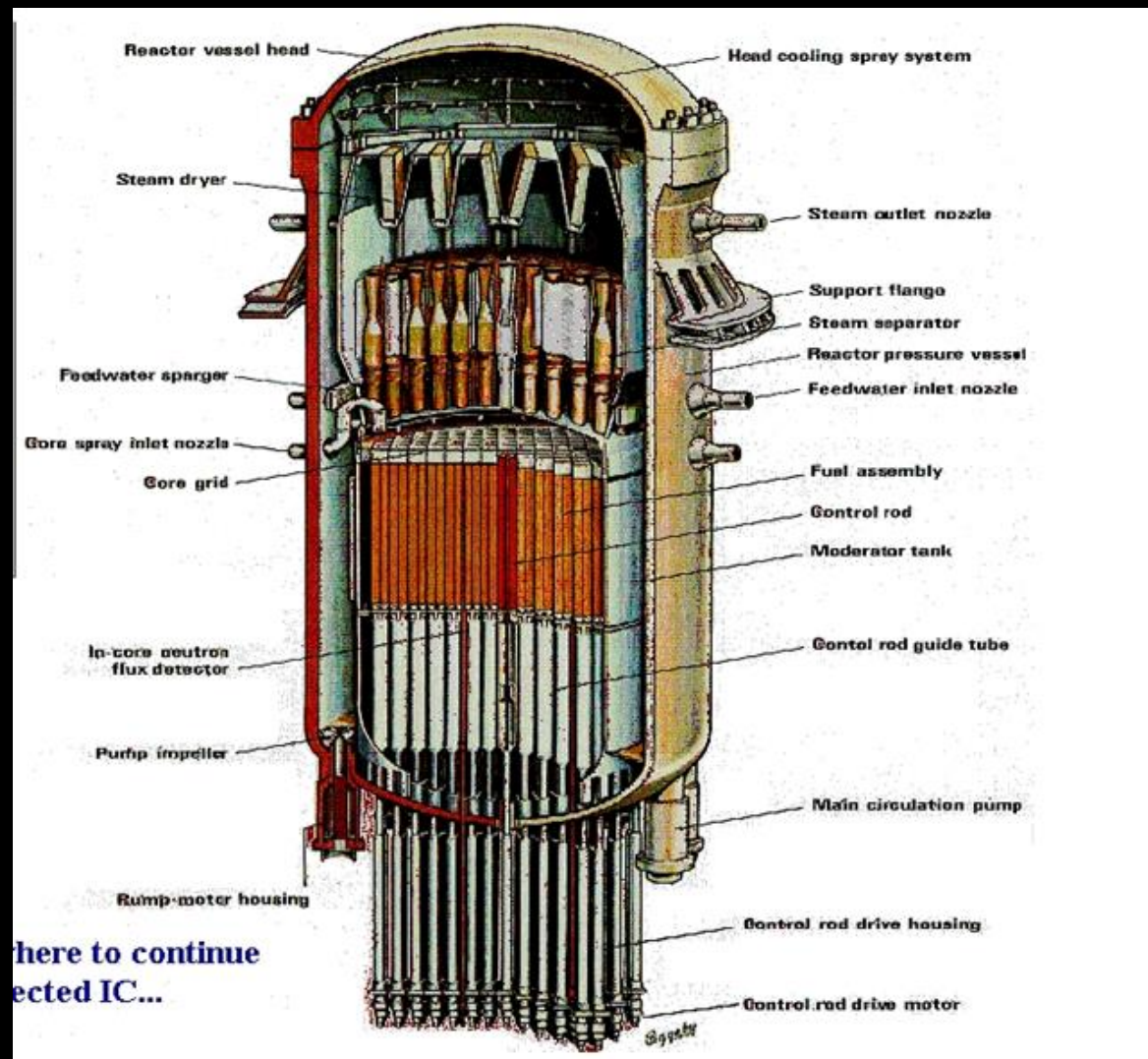


# Simulace provozu JE typu ABWR

Vojtěch Stluka; Arcibiskupské  
gymnázium v Praze

[stlukav@arcig.cz](mailto:stlukav@arcig.cz)



# Jaderné štěpení v reaktoru

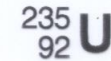
- Makro- a mikro-skopický průřez
- Moderátory

## ŠTĚPENÍ URANU

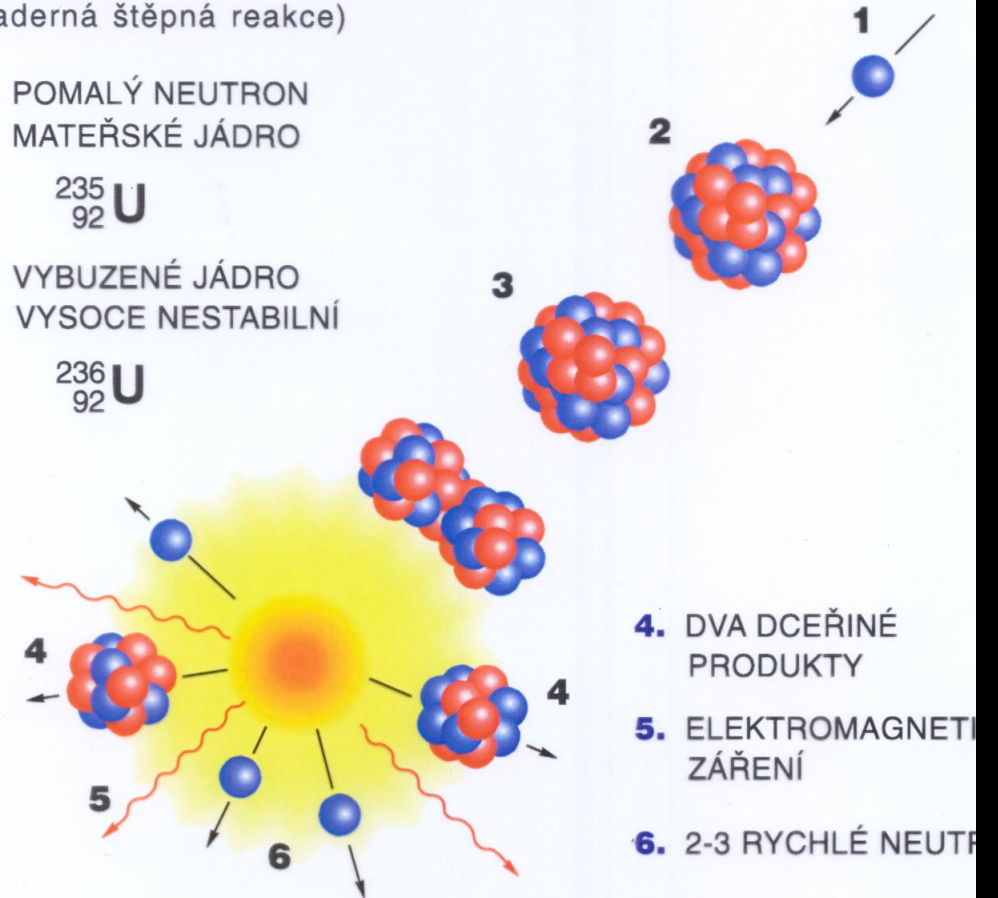
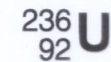
(Jaderná štěpná reakce)

1. POMALÝ NEUTRON

2. MATEŘSKÉ JÁDRO



3. VYBUZENÉ JÁDRO  
VYSOCE NESTABILNÍ



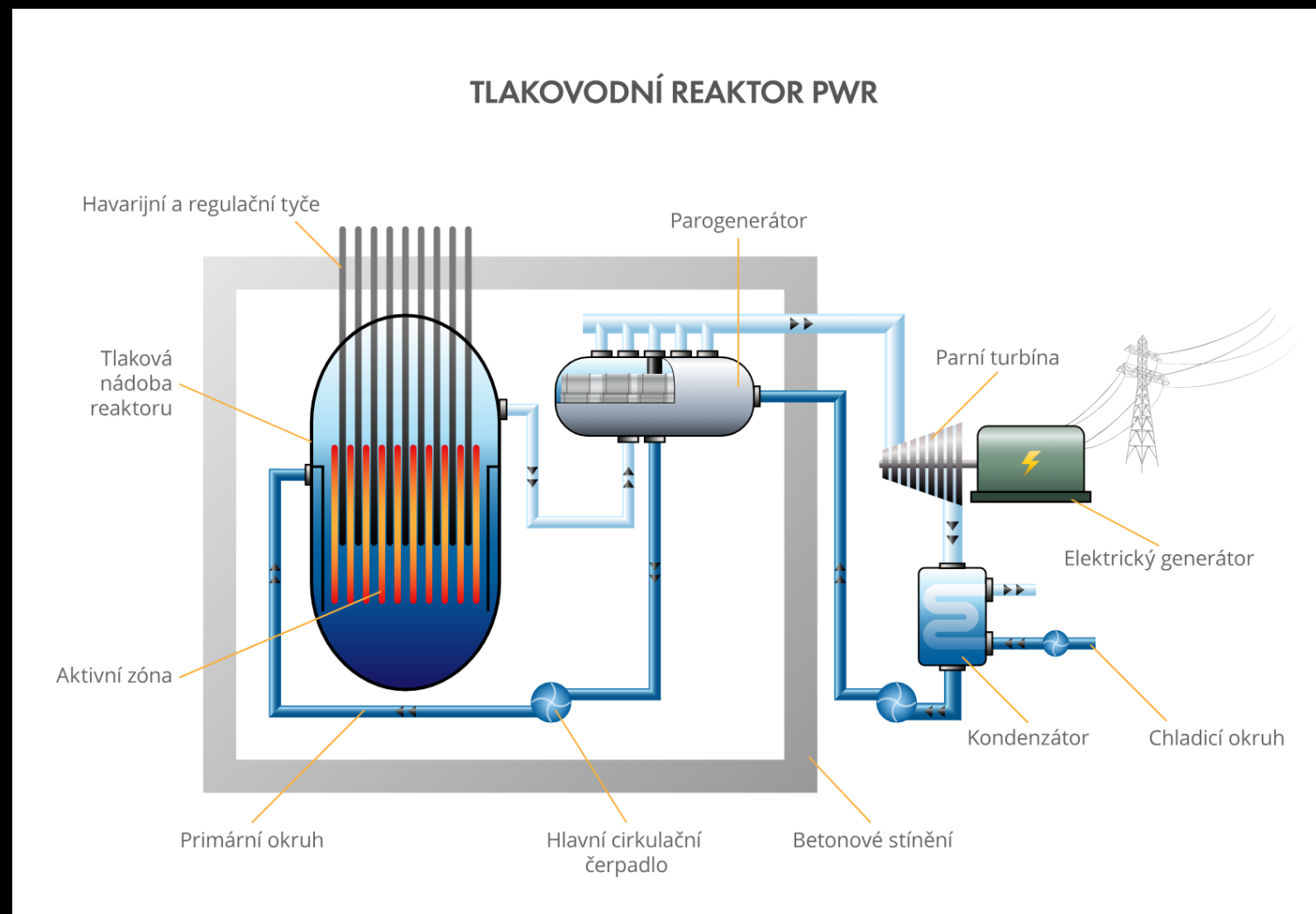
4. DVA DCEŘINÉ  
PRODUKTY

5. ELEKTROMAGNETI  
ZÁŘENÍ

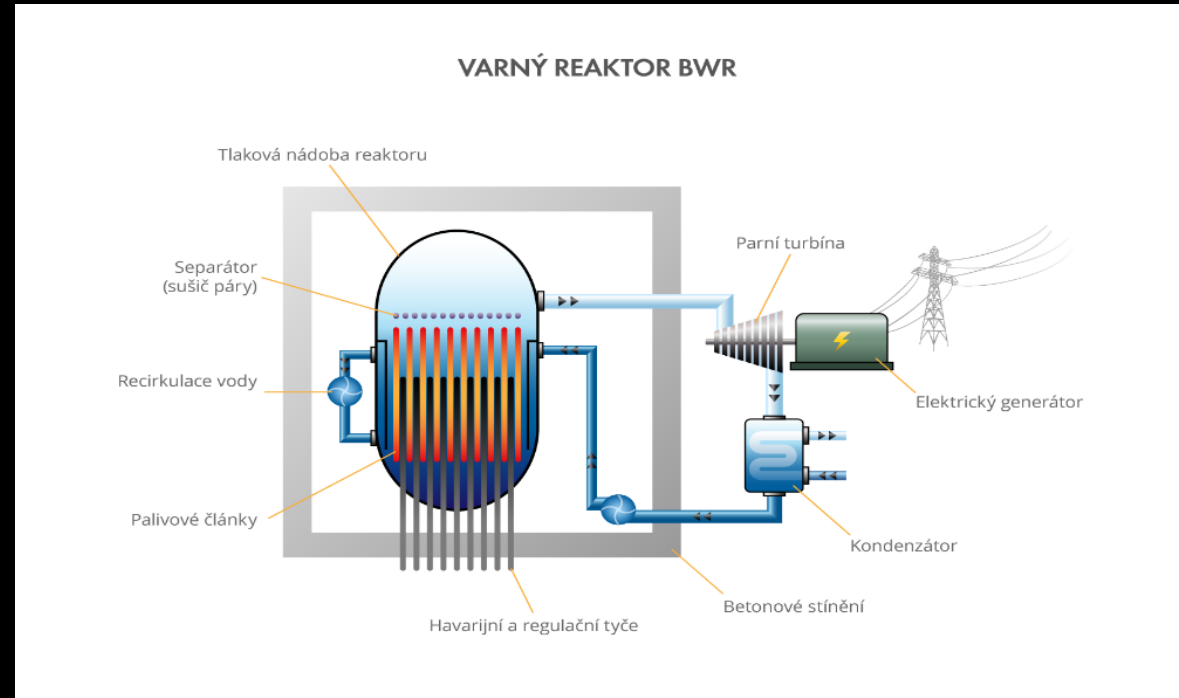
6. 2-3 RYCHLÉ NEUTR

# Tlakovodní X varný reaktor

- Principy JE

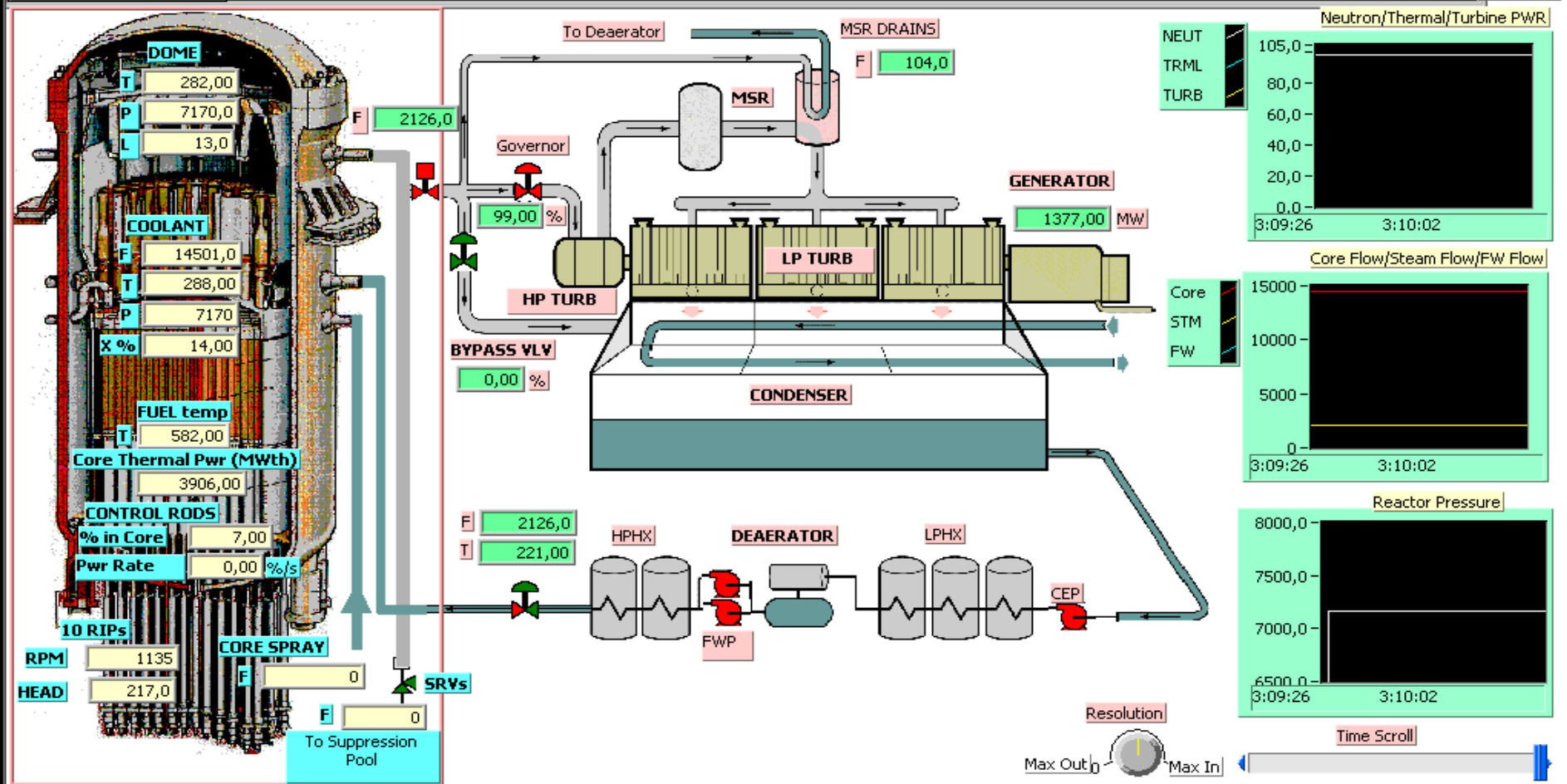


# Reaktor ABWR



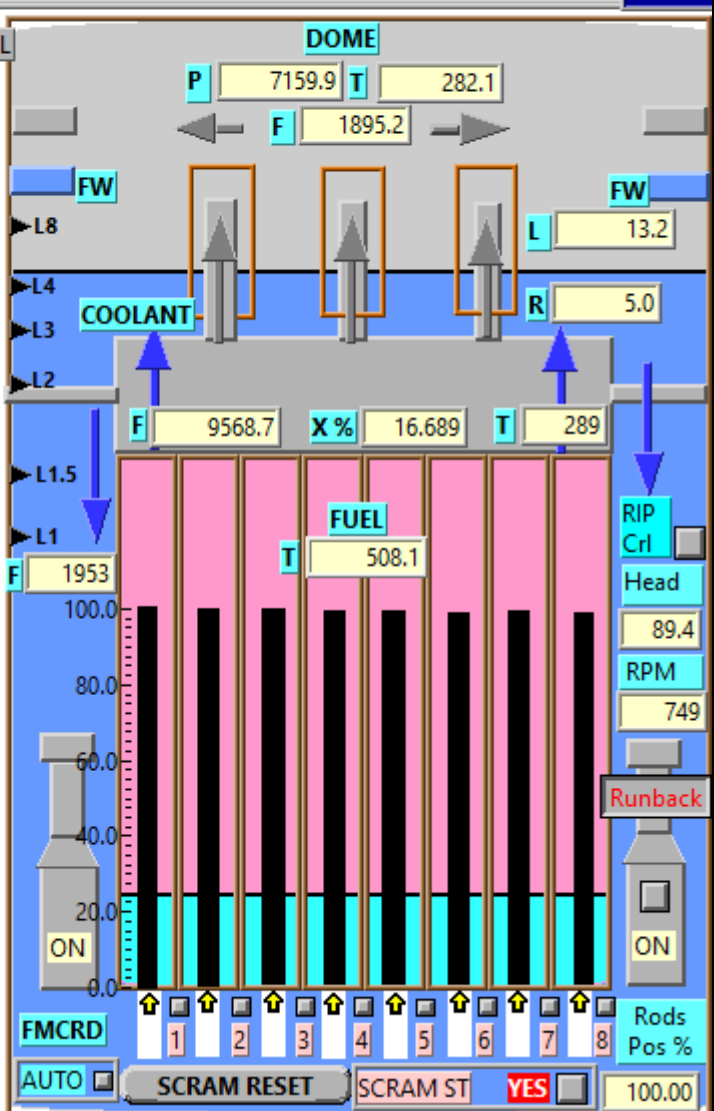
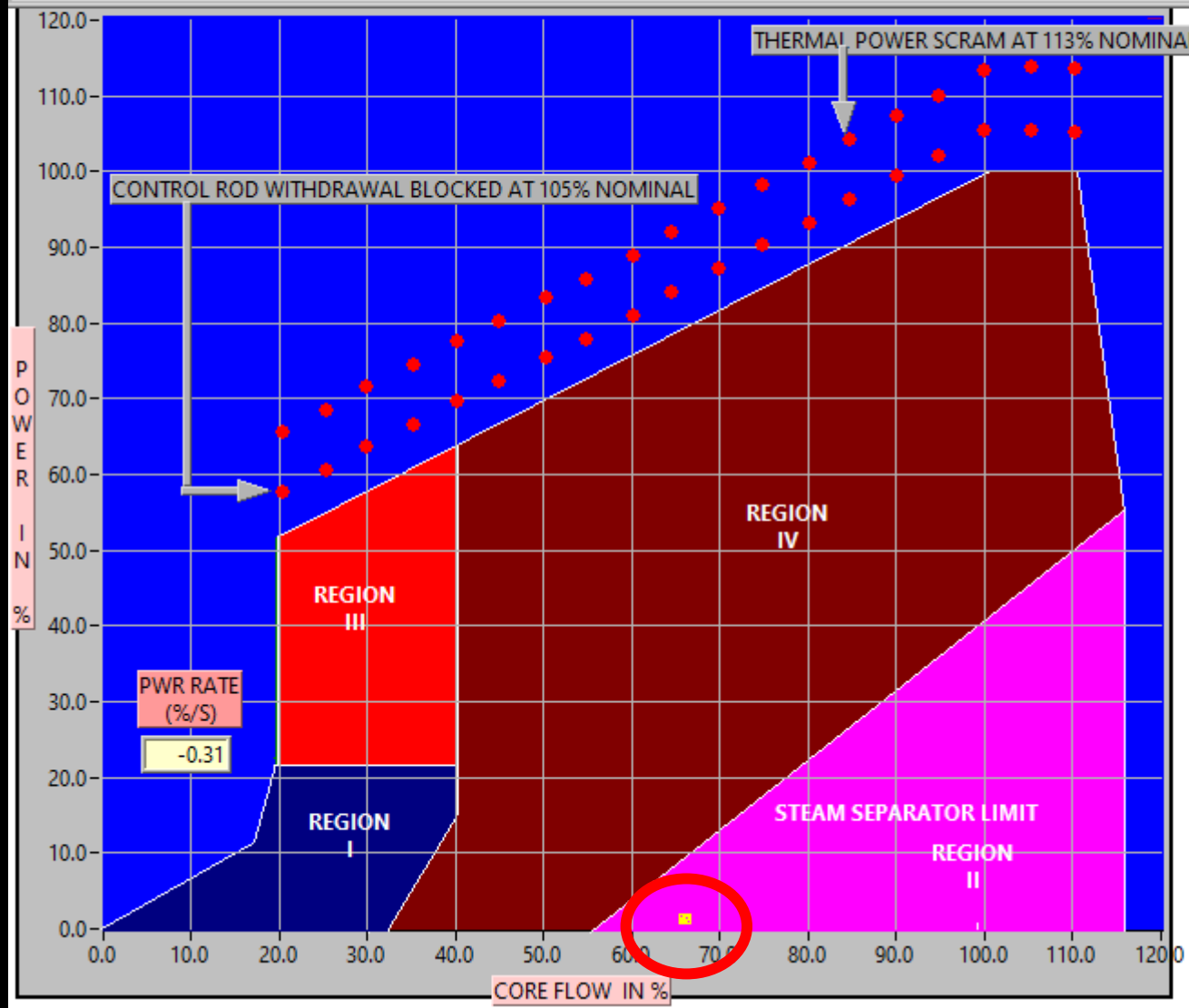
BWR Plant Overview

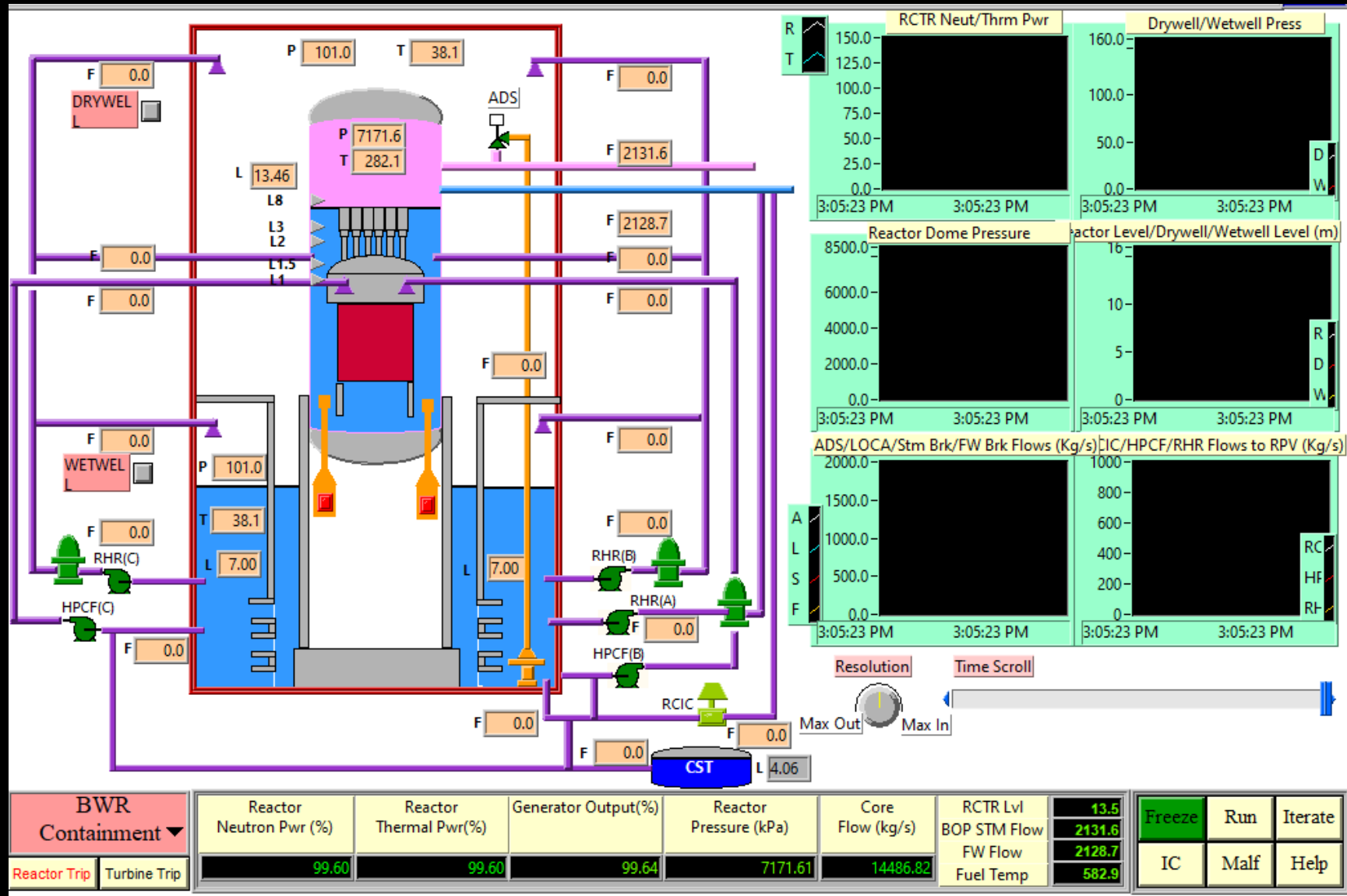
Reactor Scram	Turbine Trip	Reactor Pres V. Lo	Rods Run-in Req'd	Hi Dryw P/LOCA	Turbine Runback	Gen Breaker Opn	Labview
Hi Neut Pwr vs Flow	Reactor Pres V. Hi	Reactor Pres Lo	Reactor Level Lo	Reactor Lvl V. Lo	Lo Turb Fwd Pwr	FW Pump(s) Trip	73
Reactor Isolated	Reactor Press Hi	Core Flow Lo	Reactor Level Hi	Spdr Gear in Man	Loss RIP Pmp(s)	Malfunction Active	CASSIM
							1



BWR Plant Overview		Reactor Neutron Pwr (%)	Reactor Thermal Pwr(%)	Generator Output(%)	Reactor Pressure (kPa)	Core Flow (kg/s)	RCTR Lvl	BOP STM Flow	FW Flow	Fuel Temp	Freeze	Run	Iterate
Reactor Trip	Turbine Trip	99,00	99,00	99,00	7170,00	14501,00	13,0	2126,0	2126,0	582,0	IC	Malf	Help

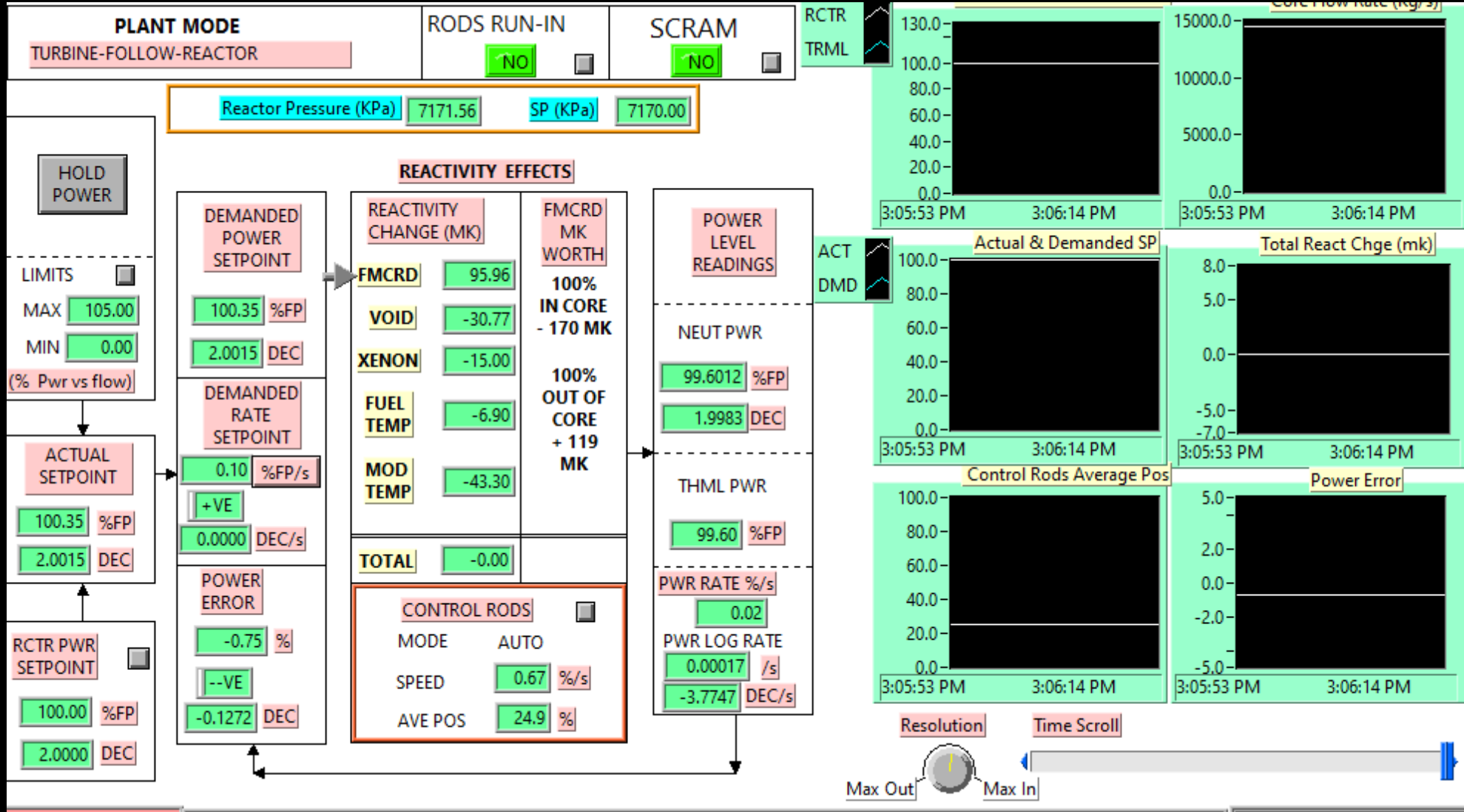
Reactor Scram	Turbine Trip	Reactor Pres V. Lo	Rods Run-in Req'd	Hi Dryw P/LOCA	Turbine Runback	Gen Breaker Opn	Labview
Hi Neut Pwr vs Flow	Reactor Pres V. Hi	Reactor Pres Lo	Reactor Level Lo	Reactor Lvl V. Lo	Lo Turb Fwd Pwr	FW Pump(s) Trip	501
Reactor Isolated	Reactor Press Hi	Core Flow Lo	Reactor Level Hi	Turbine Gov. in Man	Loss RIP Pmp(s)	Malfunction Active	CASSIM
							26392





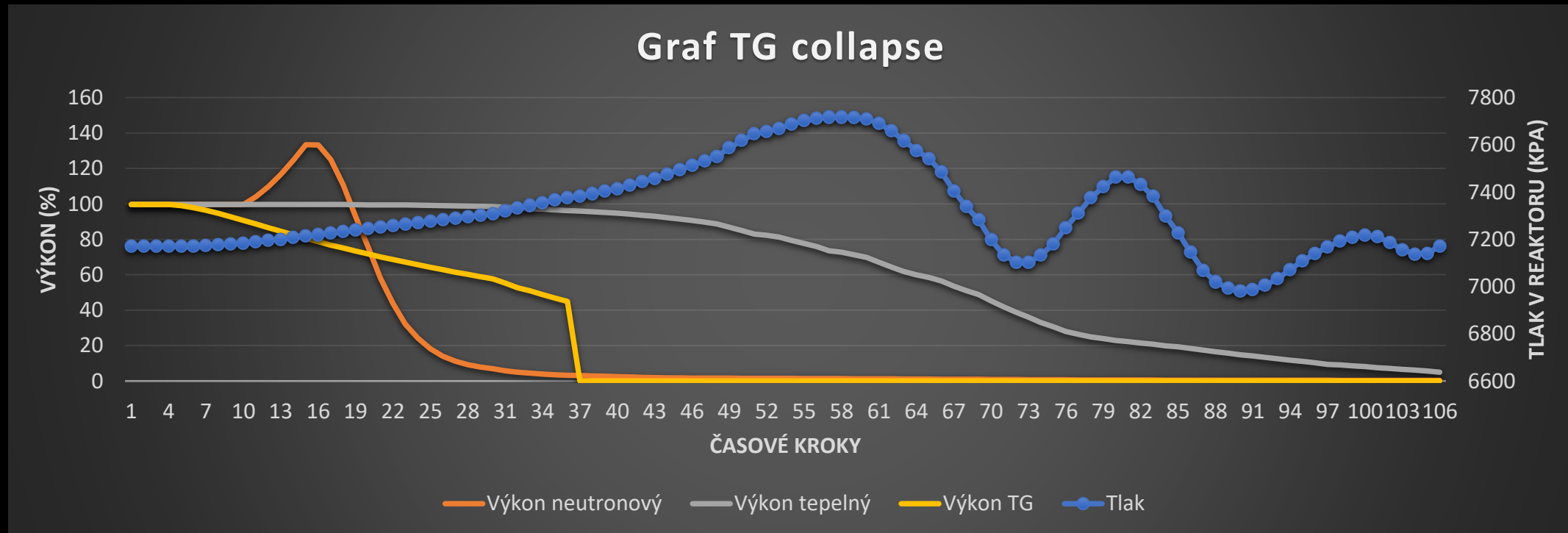
**BWR Containment** ▼  
 Reactor Trip    Turbine Trip

Reactor Neutron Pwr (%)	Reactor Thermal Pwr (%)	Generator Output (%)	Reactor Pressure (kPa)	Core Flow (kg/s)	RCTR Lvl	BOP STM Flow	FW Flow	Fuel Temp
99.60	99.60	99.64	7171.61	14486.82	13.5	2131.6	2128.7	582.9





# Odstavení turbogenerátoru



# Děkuji za pozornost

A těším se na vaše dotazy 😊

Zdroj: SVĚT ENERGIE: Vzdělávací portál ČEZ. (online) c2020. cit. 18.6.2024 Dostupné z:  
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