

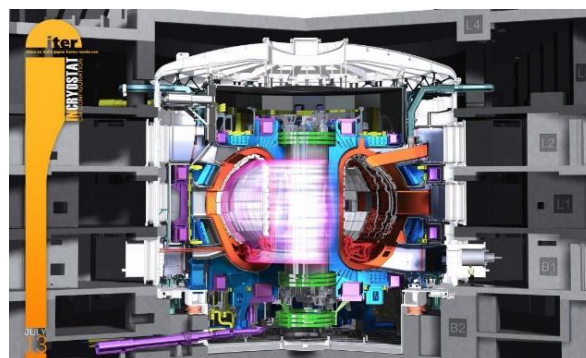
### ***IESF British Section - Autumn Voyage 2025 - Teaser***

Following the questionnaire issued to members in August 2024, the majority preferred the Autumn Voyage in 2025 be a return visit to the ITER experimental fusion reactor site at Cadarache in Provence previously visited by the Society in September 2014 (refer Newsletter Issue 18).

The 5 day & 4 night Voyage will take place from **Wednesday 10<sup>th</sup> to Sunday 14<sup>th</sup> September** based in Avignon with group travel from London St Pancras by Eurostar & TGV via Lille Europe. The technical programme should be of interest to all Voyagers so at present, no alternative partners' programme is planned during this visit. Accommodation is proposed in a Mercure 4 star hotel in Avignon city centre.

The idea for an international joint experiment in nuclear fusion was first launched in 1985 with seven collaborating ITER Members - China, the European Union, India, Japan, Korea, Russia and USA. Now in the post Brexit era, 33 nations are collaborating to build the world's largest Tokamak, a magnetic fusion device that has been designed to prove the feasibility of fusion as a large-scale and carbon-free source of energy based on the same principle that powers our Sun and stars.

In 2014 foundation plinths and base slab for the Tokamak building were under construction. In 2020 the central Tokamak building was handed over and machine assembly began. Subsequently, all building & civil works were completed in 2023.



Rather than just providing finance, the contributing nations fabricate different parts of the whole project which are then shipped to the port of Fos near Marseille and transported to site by lorries for assembly. First plasma was initially planned in 2025 but this has been delayed due to the necessity of disassembling and rebuilding on site the first installed Tokamak segment which was imperfect.

Much knowledge has been gained from this six month exercise. The rings are now being installed correctly and a revised commissioning programme was issued in 2024. Achievement of full magnetic energy is now planned for 2036, a delay of 3 years compared to the initial programme, with the start of deuterium-tritium operation phase in 2039, which represents a 4 year delay.

The walled city of Avignon is further from the ITER site than Aix en Provence where the Society stayed in 2014 but provides alternative cultural activities. Avignon was the centre of western Christianity for nine successive Popes during the 14<sup>th</sup>C & early 15<sup>th</sup>C. The monumental Papal Palace is the largest Gothic palace in the world. Also well-known through the children's song "*Sur le Pont d'Avignon*", the St Bénézet Bridge juts out halfway across the adjacent River Rhone and used to be the old pilgrim route into the city.



The Provence region has a long history dating back to the Roman Empire and there are many landmarks from this period around Avignon. A half day coach tour to the city of Orange is planned to visit the spectacular semi-circular Roman antique theatre which hosts concerts and lightshows during the summer.



A full day coach tour will include visits to the **Pont du Gard** aqueduct built in 1<sup>st</sup>C AD and used for 900 years to carry water into Nimes, **Les Baux de Provence**, the ancient hilltop medieval village where bauxite was first mined, and the archaeological vestiges at **Glanum** close to *St Rémy de Provence*.



The programme comprises four light lunches and dinners including a gala dinner cruise on the final evening. If time permits, wine tasting at *Chateau La Coste* will include a tour of the modern cellars and a walk around the vineyard to admire the art works. A tourist train tour around Avignon is scheduled for the final morning.

An Expression of Interest briefing will be circulated in January 2025 to assess the potential uptake for a maximum of 50 participants. Assuming sufficient interest and following the decision to proceed, further briefings will be issued with costs in March, May & July 2025 to register & collect members' subscriptions in three stage payments. The usual conditions will apply as for previous Voyages with a requirement that participants be in reasonable health and enjoy adequate mobility to cope with the gentle walking involved.

Voyagers from UK who prefer to organise their own travel (eg : direct flights from London to Marseille) will pay a reduced subscription. Marseille airport is 80km from Avignon, allow an additional 75 minute taxi ride.

**Proposed Programme :**

- \* Day 1 - Wednesday : group travel London St Pancras to Avignon TGV via Lille Europe (6hrs+) / welcome cocktail at Avignon Mercure Hotel / dinner Avignon
- \* Day 2 - Thursday : cultural visits am Avignon *Palais des Papes* & *Pont St Bénézet* / lunch Avignon / cultural visit pm Orange Roman Theatre / dinner Avignon
- \* Day 3 - Friday : technical visit ITER Cadarache conference & site visit / lunch ITER / cellar visit & wine tasting *Chateau La Coste* / dinner Avignon
- \* Day 4 - Saturday : cultural tour *Pont du Gard*, *Les Baux de Provence*, *Glanum* near *St Rémy en Provence* / lunch *Pont du Gard* / gala dinner cruise from Avignon on River Rhone
- \* Day 5 - Sunday : Avignon tourist train / packed lunch Avignon TGV / group travel Avignon TGV to London St Pancras via Lille Europe (6hrs+)