PLATOSpec scientific conference1.12.-3.12.2025

Remote	Name	Contribution	Abstract	
No	Antonucci Luca	Talk	PLATOSpec instrument stability and efficiency over a year of operation.	This talk presents an analysis of the instrument's long-term stability, evaluated through temperature and other environmental parameters over one year of operation. The thermal control setup and implemented techniques are described, together with their performance and impact on the instrument's precision. In addition, an assessment of the instrument's efficiency during this first year of operation is presented.
Yes	Ávalos-Vega Catalina	Poster	The Ckoirama-ELT study: Pilot detection of cloudy/hazy atmospheres in Warm Jupiters	We present a pilot study exploring atmospheric influences on warm and hot Jupiters using multi-filter transit photometry from small and medium-sized telescopes. Our sample consisted of seven targets—five confirmed exoplanets and two TESS candidates—observed across 23 datasets with the Chakana 0.6 m (Ckoirama), SARA-CT 0.6 m (CTIO), and Danish 1.54 m (La Silla) telescopes using Sloan and Johnson-Cousins filters. We searched for Rayleigh-like scattering slopes and wavelength-dependent variations in transit depth. For systems observed in at least three filters, synthetic transmission spectra were generated with petitRADTRANS, revealing the best agreement with hazy models for TOI-181 b and WASP-4 b, while TOI-2803 A b is more consistent with a cloudy atmosphere. Despite limitations at short wavelengths, our results show that small telescopes can efficiently identify promising atmospheric targets for future follow-up with facilities such as the ELT.
Yes	Benatti Serena	Talk	The Ariel space mission	The ESA M4 Ariel mission, marks a pivotal shift in exoplanetary science. Ariel is the first mission dedicated to understanding planetary formation and evolution by scrutinizing the atmospheres of a diverse sample of approximately 1000 exoplanets. The mission's primary scientific objectives are to survey a wide range of planets, from gas giants to super-Earths, across various stellar environments. The observational strategy exploits transit spectroscopy in the visible and infrared wavelengths to determine chemical composition, thermal structures, and cloud coverage. The outcome of Ariel's chemical census will provide the statistical data necessary to constrain models of planetary migration and evolution on a galactic scale. I will present an overview of the project, its current status, and the main activities of the Ariel Science Consortium. Finally, I will discuss the synergy with ground-based facilities, highlighting how instruments like PLATOSpec can support the mission both before and after launch.
Yes	Bieryla Allyson	Talk	The TRES Spectrograph - past, present, and future	The Tillinghast Reflector Echelle Spectrograph (TRES) is mounted on the 1.5m Tillinghast Reflector atop Fred Lawrence Whipple Observatory (FLWO) in Arizona, USA. In 2007, TRES saw its first light and since then TRES has been a workhorse, providing radial velocities and stellar parameters for the exoplanet community and beyond. TRES is a fiber-fed echelle spectrograph observing in wavelength range 390-910 nm and yielding a spectral resolving power of R ~ 44,000. TRES has a typical nightly precision of 15-20 m/s and the multiple pipelines allow for a variety of analyses, including challenging targets that are rapidly rotating and cool M-dwarf stars. In this talk, I will provide an overview of operations and highlight some of the features that make TRES so productive. I will mention some of the recent exciting scientific results and the current scientific objectives.
Yes	Bouchy François	Talk	27 years of exoplanet discoveries with CORALIE spectrograph	The CORALIE spectrograph has been in operation for 27 years on the 1.2-meter Euler telescope at the La Silla Observatory. CORALIE is an improved version of the ELODIE spectrograph, which was used at the Haute-Provence Observatory for the discovery of 51 Peg-b. Its primary purpose is to perform high-precision radial velocity measurements to search for exoplanets in the southern hemisphere. I will present its main characteristics, describe its various upgrade phases, and review the different scientific programs dedicated to the search for and characterization of exoplanets.

No	Brahm Rafael	Talk	Warm Jupiters in the TESS era	TESS is allowing us for the first time to systematically discover and characterize in detail the population of warm Jupiters (giant planets with orbital periods between 10 and ~200 days). These systems are key objects to understand some important challenges regarding the formation, orbital evolution, and internal structure of giant planets in general. In this talk I will describe the work that the Warm gIaNts with tEes collaboration has been doing for 6 years to confirm the planetary nature of most of the TESS warm Jupiters reachable from the Southern hemisphere. I will describe the wide diversity of orbital architectures present in the WINE sample including some interesting highly interacting multi-planet systems. I will also report how PLATOSpec is contributing to this effort.
Yes	Csizmadia Szilárd	Talk	The Plato Mission	PLATO (PLAnetary Transits and Oscillation of stars) is an ESA mission to be launched 2026 December/2027 January. The goal is ti find earth-like transiting exoplanets in the habitable zones of sun-like stars. The spacecraft will bring 26 12 cm diameter telescope into the l2 point of the Sun-Earth system and it will perform observations at least for four years. In this talk I will review the design of the space telescope, the scientific goals, the operation and the pipeline, as well as the data policy. Special attention will be given to the determination of planet parameters in presence of stellar activity and how the wavelet technique helps to separate planetary signals from stellar activity.
No	Doerr Hans-Peter	Talk	The Tautenburg Asteroseismic Ultra-high-Resolution Optical Spectrograph (TAUROS)	TauROS, currently in planning stage at TLS, is a visible light (500-660nm), ultra-high-res (R=200.000) high-precision RV spectrograph tailored for asteroseismic studies of bright stars, aimed for deployment at telescopes of the 2m class. The ultra-compact diffraction-limited optical configuration fed with single-mode fibers (SMF) facilitates excellent stability and calibratability, and drastically reduces construction costs compared to a conventional design. However, adaptive optics is required to achieve acceptable coupling efficiencies from the telescope to the SMF. We believe this is the right time for such a development, though, and aim to exploit synergies between astronomy and the laser communication community which relies on essentially the same technology. This contribution briefly introduces the scientific background and presents the technical concept of the instrument. Challenges, benefits and limitations are discussed.
Yes	Eenmäe Tõnis	Poster	Moderate resolution fibre-fed echelle spectrograph at Tartu Observatory	A fibre-fed echelle spectrograph, WHOPPSEL, manufactured by company Shelyak Instruments, is in the early stages of commisioning at Tartu Observatory of Tartu University (TO), Estonia. The instrument will be attached to the 1.5-meter AZT-12 telescope and achieves spectral resolutions approximately R~32000 and R~16000, depending on the fibre used, covering a wavelength range from 380 nm to 910 nm. Based on preliminary test observations, we evaluate its performance characteristics and stability, and assess its capabilities for observing exoplanet host stars among northern PLATO or TESS targets, as well as for long-term monitoring of variable massive stars.
Yes	Flammini Dotti Francesco Maria	Talk	Diffent planets architecture, different environments	In my talk, I will go through the different environments in which a planetary system could form, analysing both field planetary systems and stellar cluster's planetary systems. Moreover, I will also analysis the role of a gaseous disk and how it affects its evolution. The scope of this talk is to ensure which target PLATO can observe giving the results of the analysis I will go through.
No	Guenther Eike	Talk	UY Pic a young, active binary in the PLATO field	It is now established that young planets acquire a large fraction of their mass already when the gaseous disk is still there. During that phase even low-mass planets are likely to acquire a Hydrogen dominated atmosphere. However, this atmosphere is then eroded, because young stars exhibit activity levels that are that exceed those seen on the Sun by over two orders of magnitude. What type of atmosphere the planets have at the end of the formation phase thus depends on the activity level of the host star during that evolutionary phase. We have recently identified a young active star in the PLATO field: UY Pic. We will summarise its properties and point out what we will learn about stellar activity once we have the PLATO data.

No	Guenther Eike W.	Talk	Spectroscopic observations of stars in the PLATO P2-sample	PLATO is the next generation exoplanet mission. In contrast to previous missions, it focusses on much brighter stars which will be observed for at least two years with a very high photometric accuracy. The P2-sample contains 871 F,G,K stars which are observed with a time-sampling of 25 seconds. The photometric dataset that PLATO will obtain allows to carry out many different research projects like studies of the stellar activity, asteroseismology, exoplanet research, and also stellar population studies. However, to take full advantage of the PLATO-survey, it is necessary to determine the stellar parameters. For this purpose, we have begun to take spectra of the stars. The stellar parameters will be determined In close collaboration with PLATO team. The survey builds on the previous experience from the CoRoT mission. We will present the status of the survey and explain what is common and what is new in the spectroscopic survey of the P2-sample compared CoRoT times.
No	Hatzes Artie	Talk	The Future Role of PLATOSpec-type Instruments	In this talk I will give examples of the type of "niche" science that only a PLATOSpec-type instrument on a modest-sized telescope can accomplish. These include Time Domain Astronomy and probing the vertical structure of the atmosphere of pulsating stars. All of these science requires a large number of observations spanning many years, something that cannot be done at a large telescope facility. I also will discuss how such an upgraded PLATOSpec will look like.
Yes	Chanamé Julio	Talk	A PLATOSpec test of the prevalence of binaries among Li-rich giants	The existence of Li-rich giants has remained an open problem in astronomy for decades. One of the solutions commonly discussed involves binary interactions between a giant and a stellar companion. A basic prediction of this scenario is that, if this is the main mechanism of Li-enrichment, then the binary fraction for Li-rich giants should be significantly higher than for Li-normal giants. Despite the importance for stellar evolution of understanding the origin of Li-rich giants, there are not many studies focused on the binary fraction. Given this, we are conducting a radial velocity (RV) monitoring program using PLATOSpec's high-precision RVs, enabling us to detect companions within P < 4000 days, designed to confidently measure the binary fraction over a sample of 70 Li-rich giants in the red clump and the first ascent red giant branch. This will allow us to test the binary enrichment mechanism, and investigate if there is a dependence with evolutionary phase.
No	Jordan Andres	Talk	Ground Based Surveys for Exoplanets	In this talk I will give a brief review of the role ground based surveys for exoplanets have played in the field and how this role has been changing in the era of dedicated space-based missions.
No	Kabáth Petr	Talk	PLATOSpec	December 2025 marks the first year of operations of the PLATOSpec. In the talk, we would like to present the instrument, its performance and briefly summarise its capabilities. We would like to also discuss the PLATOSpec`s capabilities for the ground-based follow-up in context of the space missions PLATO and ARIEL.
No	Kalinowski Kamil K.	Talk	False Positives and True Companions: RV Follow-Up of Gaia’s Astrometric Giants	Gaia’s astrometric detections are opening a new window into the outer architectures of planetary systems, revealing companions inaccessible to Doppler or transit techniques. We report initial results from our NIRPS program to confirm and characterize Gaia DR3’s wide-orbiting companion candidates around low-mass stars. Our observations reveal that roughly two-thirds of the astrometric exoplanet candidate signals turn out to be double-lined spectroscopic binaries. We describe our strategy for disentangling false positives from planets—PLATOSpec will be a powerful instrument to apply this strategy—and present first statistical insights derived from the validated systems. Looking ahead to Gaia DR4 (expected end of 2026), we anticipate not tens but thousands of exoplanet and brown dwarf detections through astrometry, enabling comprehensive demographic and architecture studies of giant planets and brown dwarfs at wide separations.
Yes	Köhler Jana	Talk	Update on PLATOspec RVs	Newest results from observations with the iodine cell, plus a short introduction to viper.

No	LEE Jae Woo	Poster	The Pre-Helium White Dwarfs in Post-Mass Transfer Eclipsing Binaries	Extremely low-mass white dwarfs (ELM WDs) with masses below ~0.3 M$_\odot$ are the stellar remnants that cannot burn Helium in their cores. Unlike most other more massive WDs, the ELM WDs cannot be formed from isolated stars, and the best explanation for them is the binary evolution channel. Observationally, their companions are A/F main-sequence stars, millisecond pulsars, and WDs. EL CVn-type stars are post-mass transfer eclipsing binaries in which the primary component is an A/F dwarf and the secondary one is an ELM WD precursor. About 70 EBs have been reported as EL CVn-like stars based on light curve shapes, but most have no or insufficient spectroscopic data to reliably measure their physical parameters. In order to investigate the interesting rare objects, we have been performing their high-resolution echelle spectroscopy using 2-m class telescopes, together with the collection of TESS and VLT/UVES archival data. This poster presents the latest results from this project.
Yes	Lehtmets Alexandra	Poster	Investing Circumstellar Atomic Radiation-driven Dynamics	In our study, we investigate how early-type stars influence the gases escaping from exoplanet atmospheres into space. We focus on two key aspects: how the star's radiation force and gravity affect the path of these gases, and how fast neutral atoms speed up before changing into ions. By combining theories and models, we aim to understand these processes better. Our research not only deepens our understanding of exoplanets but also sheds light on their relationship with the stars they orbit. Additionally, our models could help predict which chemical elements end up accreting onto the host star. For early-type stars, our predictions might even show up as observable patterns in their spectra, because one of the unique features of early-type stars is that material accreting onto them can easily “pollute” the photosphere.
No	Leitzinger Martin	Talk	Spectroscopic monitoring of the southern fast rotator CC Eri - Infering the superflare activity of a highly active binary	The most energetic activity phenomena known from the Sun are outbreaks of radiation (flares) and outbreaks of mass (coronal mass ejections/CMEs). In the more recent past it has been found that very energetic flares, so-called superflares, seem to be a rather common phenomenon on solar-like stars even if they rotate slowly. As the nature of superflares is still under debate, we aim to investigate their spectroscopic signatures, as usually superflares are observed with broad-band photometry. Probably spectroscopy may tell us more about the nature of this phenomenon. For this purpose we select CC Eri as target star which is one of the most frequently flaring stars from TESS. We present the results of Echelle spectroscopy taken during 70 nights at the ESO152 telescope hosted by the PLATOSpec consortium with the precursor Echelle spectrograph of PLATOSpec, named PUCHEROS+.
Yes	Lipták Jozef	Talk	Continuum enhancement during stellar flares from cross-correlation function	Continuum enhancement during stellar flares is usually detected by broadband photometry. In cases when photometry is not available one can try flux calibrating the spectra. In instruments without ADC as PLATOSpec this is not possible because of chromatic losses at the fiber injection. I will show an effect of flare on the ccfs and a novel method of deriving per-order photometry of continuum flare emission from the ccf profiles.
No	Lo Curto Gaspare	Talk	The HARPS/ESPRESSO ecosystem and the search for Earth-like planets	ESPRESSO and HARPS are among the most precise radial-velocity spectrographs in the world, consistently achieving sub m/s precision. This is made possible not only by their design, but also by an operation model tailored to monitor closely their stability and react in case of problems. In this talk, I will present some of the most challenging recent detections and provide an overview of the status of ESPRESSO, HARPS, and NIRPS as expected at the start of the PLATO mission operations. I will also discuss the synergy among these facilities and how it may extend to other radial-velocity spectrographs.
No	Makhtich Salma	Poster	Direct Imaging of Exoplanets using Coronagraphy	Direct imaging is a crucial method for studying planetary systems beyond our Solar System. However, it is challenging because exoplanets are extremely faint and located very close to their bright host stars. Coronagraphy is an effective optical technique that suppresses starlight, making it easier to detect these faint planets. This work provides a comprehensive review of various coronagraphic methods, including phase masks, Lyot coronagraphs, and vortex coronagraphs. Recent advancements in these techniques are discussed, along with their applications in cutting edge instruments like the James Webb Space Telescope (JWST) and future observatories such as the Extremely Large Telescope (ELT). Finally, the study highlights the current limitations and technical challenges in improving exoplanet imaging.

No	Mulders Gijs	Talk	The Architectures of Planetary Systems with both Giant Planets and Super-Earths	Giant planets play a crucial rule in shaping the architectures of planetary systems. While hot Jupiter are often single planets, warm and cold Jupiters are frequently accompanied by inner super-Earths. The relation between outer giants and inner super-Earths emerging from transit and radial velocity surveys paint a complex picture of planet formation through pebble accretion and dynamical instabilities. In this talk, I will explore how the properties of the giant planets affect which planets can exist interior to its orbit. Using radial velocity and Gaia astrometric data, I show that the more massive the giant planet, the less likely it is to have an accompanying inner super-Earths. While Saturn-mass planets are approximately five times more likely to have inner super-Earths, super-Jupiters are twice less likely to have inner super-Earths. These correlations may be used to optimize future exoplanet surveys, in particular the longer term radial velocity monitoring of transiting planets.
No	Nielsen Louise	Talk	Disentangling stellar activity with small telescopes	Robust modelling of stellar activity, to detect and characterise temperate, rocky planets around K and G dwarfs, is currently one of the main challenges in the field of pRV. This included the success of the PLATO mission, which hinges on the ability to remove stellar variability from our photometric and spectroscopic timeseries. Small telescopes are well-suited for monitoring stellar activity as they have great scheduling flexibility and can commit to high-cadence observations and long-term monitoring required to disentangle stellar variability induced by (super-)granulation, spots, plage and flares, as well as stellar pulsations and magnetic cycle. In this talk, I will address the main challenges posed by stellar variability when measuring accurate masses of small planets in 100+d orbits around quiet, solar-type stars. I propose that, if used correctly, facilities like PLATOspec can have an edge over larger facilities. These observation strategies can also be applied to planets around young, active stars.
No	Odert Petra	Talk	Flare star observations at the E152 with PUCHEROS+ and PLATOSpec	Space missions like Kepler and TESS provided unprecedented statistics of stellar flares and even superflares, the most energetic radiation outbursts on Sun-like stars; continuation of this research will be enabled also in the future with PLATO. Compared to the wealth of space-based photometry available today, however, spectroscopic observations of flares and superflares are still much rarer, although this is crucial for better constraining their physical parameters. Here we present an overview of an observing campaign targeting flare stars, carried out at the E152 between 2022 and 2024 with the Echelle spectrograph PUCHEROS+. More recently, the prominent young fast-rotating flare star AB Dor has also been observed with PLATOSpec. Preliminary results of this campaign including PLATOSpec, optical photometry, low-resolution spectroscopy, as well as X-ray and UV observations with XMM-Newton are presented, demonstrating the use of the E152 for such coordinated multi-wavelength campaigns.
No	Poch Martina G	Poster	A new transit detection method - preliminary results	Though the last decades BLS has been the primary method for detecting transits in a light curve. Our team proposes a new mathematical method for transit detection that is theoretically better equipped for detecting transits in noisier signals than BLS. This preliminary results show known transits previously detected with BLS and compare them with our method.
Yes	REDYAN AHMED	Poster	TOI-2155\,b: a high-mass brown dwarf near the hydrogen burning mass limit from the \textit{TESS} mission	We present TOI-2155b, a high-mass transiting brown dwarf discovered using data from NASA's Transiting Exoplanet Survey Satellite (TESS) mission and confirmed with ground-based RV measurements from the Tillinghast Reflector Echelle Spectrograph (TRES). TOI-2155\,b is a short-period brown dwarf with $P=3. 7246950 ^{+0.0000029}_{-0.0000028}$~days. The radius and mass of TOI-2155\,b are found to be $R_b = 0.975 \pm 0.008 \,\mathrm{R_J}$ and $M_b = 81.1 \pm 1.1 \,\mathrm{M_J}$, respectively, corresponding to a density of $\rho_b= 110 \pm 3.0$ g cm^{-3}. The effective temperature of the subgiant host star is estimated at $T_{\rm eff} = 6085\pm 78$ K, which identifies it as an F-type star with a radius $R_{\thinstar} = 1.705^{+0.066}_{-0.064}$ $\mathrm{R_\odot}$ and a mass $M_\star = 1.33 \pm 0.008$~M$_\odot$. With a mass close to the hydrogen-burning limit, TOI-2155\,b occupies a high-mass regime in the brown dwarf mass–radius diagram, becoming a valuable benchmark system for testing models of substellar structu
No	Rojas Felipe	Poster	TIC65910228b: A transiting warm super Jupiter with an orbital period of 180 days unveiled by PLATOSpec	We report the discovery of TIC65910228b, a new warm giant planet, orbiting a bright (V=10.22) F-type dwarf star. The planet was identified through a single transit event observed in TESS sector 33, which showed a depth of approximately 3500 ppm. We confirmed the planetary nature of the signal with ground-based observations, including an egress observed with HATPI and radial velocity measurements from FEROS and PLATOSpec. The planet has an orbital period of 180.5 days, a mass of 4.5 M_J, and a radius of 1.05 R_J.

No	Rojas Joanne	Talk	Detecting Long-Period Planets with EMPEROR: A Bayesian Integration of RV and Astrometric Data	The identification of long-period planetary signals remains one of the main challenges in exoplanet characterization through radial velocities, due to the degeneracy between stellar variability, magnetic cycles, and Keplerian motion. I will present a methodological approach combining advanced Bayesian inference and astrometric data to improve orbital precision and robustness. The analysis uses the EMPEROR code (Peña & Jenkins 2025, submitted), which applies MCMC sampling with parallel tempering to explore complex parameter spaces and compare models with different noise sources. Integrating Hipparcos and Gaia astrometry yields more regular posterior distributions and tighter constraints on inclination and minimum mass. These results illustrate how combining multi-instrument RV data (AAT, PFS, HARPS) with precise astrometry anticipates the challenges that PLATOSpec will face in detecting and characterizing long-period exoplanets
No	Saviane Ivo	Talk	La Silla medium term perspective	I will describe the current status of the La Silla observatory and, medium term perspectives, and possible ways forward for the long term future.
No	Sedaghati Elyar	Talk	Synergies between PLATOspec and ESO facilities	In this general talk, I will discuss possible scientific synergies between PLATOspec and various ESO facilities. Such collaboration could include, but not restricted to, building up of a sample of warm Jupiter obliquity measurements through the Rossiter McLaughlin effect, complementing and coordinating RV follow-up campaigns, atmospheric characterization through multiple transit observations, and the study of the stellar activity impact on atmospheric studies as well as RV modelling. I hope to also open a discussion on the possibility of starting a joint working group at ESO and PLATOspec consortium on better organizing follow-up efforts. And finally I will update on the use of PLATOspec in the upcoming La Silla Observing School 2026.
Yes	Skoda Petr	Talk	Platospec Data Management in the ESO Archives	According to the Agreement with ESO the PlatoSpec data will be hosted by ESO Data Archive for raw data and ESO Science Archive for fully reduced and derived products. In order to get approved by ESO, a number of formal requirements concerning the data format and obligatory metadata in FITS headers must be fulfilled before the data streaming to ESO begins. We will give an overview of necessary steps to achieve this goal.
No	Subjak Jan	Talk	Unraveling the Brown Dwarf Desert: Four New Discoveries and a Unifying, Period-Coded Picture	The “brown dwarf desert” is real—but its shape is coded in orbital period. I will present four new brown dwarf companions (three at long periods) that extend the baseline where the census is thinnest. Folded into a homogenized population, these discoveries expose a clear, period-coded structure. This pattern demands a unifying view of formation and survival across the planet–star divide.
No	Valdés Camila Caballero	Talk	Spectroscopic Study of Double-Lined Binary Systems	We present measurements in the context of a survey of southern hemisphere binary and multiple stellar systems observed with the Zorro Speckle dual diffraction-limited optical imaging camera on the 8.1 m Gemini South telescope carried out between 2019 and 2023. We report on the astrometric data that united with the spectroscopic radial velocities for these systems we are able to get a preliminar solution for the orbit and the radial velocity curve. This will allow us to get individual masses for low metalicity binary stars. Our results indicate that the Zorro instrument, when properly calibrated, delivers excellent-quality data for visual binary studies of tight and/or faint companions.
No	Vitkova Michaela	Talk	Warm gas giants and their friends	Warm gas giants provide valuable insight into giant planet formation and migration, particularly when found in multiplanetary systems. I will present new discoveries of warm Jupiters with long-period companions, based on ongoing radial velocity and transit follow-up. I will also highlight updated results for TOI-4504, a system showing clear evidence of interaction between two warm giants. These systems demonstrate the importance of continued, precise spectroscopic monitoring, emphasising the need for facilities such as PLATOSpec, which will significantly enhance our ability to detect additional companions, refine orbital architectures, and probe the dynamical histories of warm gas giants.
Yes	Zak Jiri	Talk	PLATOSpec delivers first results in support of the PLATO and Ariel missions: Spin-orbit angle measurements of three gas giants	Understanding the diverse formation and migration pathways that shape exoplanetary systems requires characterization of both their atmospheric properties and their orbital dynamics. A key dynamical diagnostic is the spin-orbit angle, the alignment between the stellar spin axis and the planetary orbit which provides crucial tests for theoretical models. This angle can be determined using the R-M effect. I will present measurements of spin-orbit angles for 3 planets with PLATOSpec identifying a planet that has likely underwent disc-free migration. I will comment on the synergy between the two approaches and introduce Ariel stellar-obliquity group aiming to provide this dynamical information for Ariel target candidates.